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The Transtheoretical Model and Stages of Change: Predicting the Accuracy of the Stages of Change Scale for Early Education and Care 2.0 Self-Report Form

Lynn M. Lubecki
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Abstract

Challenging behaviors in preschool are of great concern to both preschool teachers and the social and emotional development of children who exhibit those behaviors. Evidence-based responses to challenging behaviors exist, but are only effective when implemented as response strategies by preschool teachers in the classroom. Professional development in-services are the often the source of delivery for evidence based practices, and the adoption and implementation of those practices often depend upon teachers' readiness and willingness to change their practice. For this study, a comparison was conducted between the Stage of Change Scale for Early Care and Education 2.0 self-report and qualitative data gathered through interviews of UPK preschool teachers working with children who exhibit moderate-to-severe challenging behaviors. The research question addressed in this study was: How do teachers' scores on the Stage of Change Scale for Early Care and Education 2.0 compare with the selfdescriptions of their own readiness to change? Results indicated that teacher descriptions and the results of the scale were in agreement for 4 out of 10 teachers, which lends partial support to the Scale. Four of 10 varied by one stage, and 2 of 10 varied by two stages. These results suggest that caution must be used when using the Stage of Change Scale self-report form as the only source for measuring a preschool teachers' readiness to change. However, combined with teacher interviews, the results provide valuable insight that may impact the way professional development in-services are designed, with teacher readiness to change in mind.

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The Transtheoretical Model and Stages of Change: Predicting the Accuracy of the Stages
of Change Scale for Early Education and Care 2.0 Self-Report Form

by

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Submitted in partial fulfillment
of the requirements for the degree
Ed.D. in Executive Leadership

Supervised by

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Dedication

I am grateful to those who believed in me throughout this process. We are never alone, and our accomplishments, great or small, are the result of the many touches that occur throughout a lifetime. Thank you Drs. Michael Wischnowski and Christine Nelson-Tuttle for your support through this process. Thank you to Dr. Dirk Hightower for your belief in me, encouragement, and support. Thank you to Dr. Poonam Dev, who through her high expectations and belief, inspired this early childhood educator to consider this path. I am eternally grateful.

To everyone at the Children's Institute, Inc. for providing the field of early childhood education with the tools for continuous quality improvement and for deepening our knowledge in the field of early childhood education through support and innovative ideas. I would also like to acknowledge The Children's Institute, Inc. for the support they've provided to me in data collection, the Stage of Change Scale for Early Care and Education 2.0, and for the support and guidance throughout the process. I would also like to acknowledge the urban city school district in which the research was conducted for the support they provided in this study.

Thank you to the preschool teachers who participated in this study and who never stop believing in young children and their potential. Thank you for the work you do each day to help children develop in all domains of development. Teaching is a calling, it is difficult, and often requires multiple disciplinary approaches. I would also like to

acknowledge all those who support teachers on a daily basis—this work is noble, and differences are made in the lives of children each day.

Finally, thank you to my children who provided me with a deep understanding of unconditional love and the importance of positive interactions in early childhood, and who, as beautiful adults, support and inspire me every day.

Biographical Sketch

Lynn M. Lubecki serves as the Executive Director of Rochester Childfirst Network, an organization dedicated to providing innovative programming to young children in the surrounding communities for 158 years. Prior to becoming the Executive Director, Ms. Lubecki was the Director of Children's Programs at RCN, supporting Universal Prekindergarten, Toddler, and School Age programs. Previously, Ms. Lubecki provided support for Family Child Care Providers through quality programs at the Child Care Council, Inc. as both a professional development professional and nutrition monitor.

Ms. Lubecki has worked in the field of early childhood education for 22 years. She attended Monroe Community College and completed her Bachelor's at SUNY Empire, majoring in Early Childhood Education. Ms. Lubecki received her Master of Science in Early Childhood Education from Nazareth College and was certified in both special and general education ages birth through second grade. She is an advocate for the appropriate development of young children, and believes that every adult/teacher-child interaction has the strong potential of changing lives. She came to St. John Fisher College in the summer of 2011 and began doctoral studies in the Ed.D. Program in Executive Leadership. Ms. Lubecki pursued her research in the transtheoretical model and stages of change under the direction of Dr. Michael Wischnowski and Dr. Christine Nelson-Tuttle and received the Ed.D. degree in 2014.

Abstract

Challenging behaviors in preschool are of great concern to both preschool teachers and the social and emotional development of children who exhibit those behaviors. Evidence-based responses to challenging behaviors exist, but are only effective when implemented as response strategies by preschool teachers in the classroom. Professional development in-services are often the source of delivery for evidence based practices, and the adoption and implementation of those practices often depend upon teachers' readiness and willingness to change their practice. For this study, a comparison was conducted between the Stage of Change Scale for Early Care and Education 2.0 self-report and qualitative data gathered through interviews of UPK preschool teachers working with children who exhibit moderate-to-severe challenging behaviors. The research question addressed in this study was: How do teachers' scores on the Stage of Change Scale for Early Care and Education 2.0 compare with the self-descriptions of their own readiness to change? Results indicated that teacher descriptions and the results of the scale were in agreement for 4 out of 10 teachers, which lends partial support to the Scale. Four of 10 varied by one stage, and 2 of 10 varied by two stages. These results suggest that caution must be used when using the Stage of Change Scale self-report form as the only source for measuring a preschool teachers' readiness to change. However, combined with teacher interviews, the results provide valuable insight that may impact the way professional development in-services are designed, with teacher readiness to change in mind.

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Chapter 1: Introduction

Challenging behaviors in preschool children ages 3 to 5 years have increased in both frequency and severity in recent years (Benedict, Horner, & Squires, 2007; Kim, Stormont, & Espinosa, 2009; Rose & Gallup, 2006). These behaviors include prolonged tantrums, destruction of property, physical aggression, and other signs of the lack of self-regulation, and often have a negative impact on a child's learning at a critical time in a child's development (Quesenberry, Hemmeter, & Ostrosky, 2011; Strain & Joseph, 2004). Without effective interventions, preschool children are three times at risk of being expelled from their early care and education setting than children in elementary school. Expulsion has a negative impact on children who could most benefit from a quality preschool experience (McLaren & Nelson, 2009; Quesenberry et al., 2011). Instead, children with challenging behaviors are often excluded from prevention and early intervention opportunities through expulsion (Kim et al., 2009; McLaren & Nelson, 2009; Quesenberry et al., 2011). The Division of Early Childhood (DEC), a division of the Council for Exceptional Children (CEC) (1999), posited that many children exhibit challenging behavior as they develop in the early years. Although the majority of these children respond to developmentally appropriate response strategies, the focus of this dissertation study is on those who do not.

Children with moderate-to-severe challenging behaviors can frustrate even the most skilled and seasoned professionals. For example, Kaiser and Rasminsky (2007) described Andrew, a 2 ½-year-old child. Both Andrew's teachers and his preschool

program were well established. However, during the three years Andrew was in the program, his behavior exhausted the skills the team had developed over many years. The teachers or administrators could not help him understand or regulate his own behavior. The teachers could not keep Andrew or his peers safe. The inability of the teachers to help Andrew resulted in a cyclical pattern of negative behaviors and responses that escalated in severity and impacted an entire classroom:

Because they could not keep Andrew from hurting them or the other children, many of the children no longer felt safe, and several became anxious, copied his behavior, or were too scared to do much of anything. Three or four children managed to cope when the activity went as planned, but became very nervous or agitated when Andrew lost control and the adults didn't know how to respond. These "borderline" children, as the staff called them, sometimes tried to provoke Andrew when things were calm. If they could make him angry and get him to scream, hit, or throw things, they knew what to expect. When they were in need of attention themselves, they saw what worked for Andrew and followed the example. (Kaiser & Rasminsky, 2007, p.1)

As Andrew's case suggested, teachers, administrators, and related service professionals in early childhood programs are often not adequately prepared to respond effectively and consistently to children with moderate-to-severe challenging behaviors (Gettinger, Stoiber, & Kosciak, 2008; Hemmeter, Santos, & Ostrosky, 2008). Moreover, multiple studies indicated that challenging behaviors are teachers' greatest concern (Dobbs & Arnold, 2009; Gettinger et al., 2009; Kim et al., 2009). Because teachers often revert to traditional, ineffective discipline strategies in the heat of the moment, they

become frustrated and respond negatively (Gettinger et al., 2009; Vartuli, 1999). These unconscious, often developmentally inappropriate responses have a negative impact on the relationship between teacher and child, a key component of a quality preschool experience (Dobbs & Arnold, 2009, Hamre, Pianta, Mashburn, & Downer, 2012; Kim et al., 2009).

To compound the problem, when a child exhibits moderate-to-severe challenging behaviors, those behaviors are external, and sometimes result in defining of the child to the exclusion of some of the child's strengths. Often, teachers do not see their response as part of the problem and unintentionally attribute the behavior to the family, child, or other external factors (Dunlap & Fox, 2011; Kim et al., 2009; Quesenberry et al., 2011; Vartuli, 1999). However, while teachers may not be the direct cause for the behavior, they often have the power to either ignite or defuse a situation when they respond. Pianta et al. (2005) argued that it is the moment-to-moment interactions that are important in the teacher-child relationship. If teachers believe the cause of the behavior has little to do with their response, they may be resistant to changing their practice. Best practices suggested by The Council for Exceptional Children (CEC), Division of Early Childhood (DEC) indicate that by simply changing adult behavior, the need to engage in challenging behaviors will be prevented (Sandall, McLean, & Smith, 2000). Recommended practices include recognizing when children act appropriately, ensuring that natural reinforcers are part of the routine, and for problem behaviors, assess the behavior in context to identify its function, "and then devise interventions that are comprehensive in that they make the behavior irrelevant (Hemmeter, Joseph, Smith, & Sandall, 2001, p. 53).

In fact, positive and proactive intervention strategies have been recommended as an effective response to challenging behaviors (Ducharme & Shecter, 2011; Hemmeter et al., 2001). These include teaching strategies that concentrate on skill development, guide and teach new, appropriate behaviors, and ensure the learning environment is designed in a way that prevents disruptive behaviors (Kim et al., 2009). Effective strategies for promoting the development of social skills and responding to challenging behaviors include positive teacher-child interactions, good relationships with parents and families, and positive interactions with colleagues (Hemmeter & Fox, 2009). For example, planned activities and predictable routines are linked to the reduction of challenging behaviors in preschool (Duda, Dunlap, Fox, Lentini, & Clarke, 2004; Kim et al., 2009). These are considered classroom preventive practices, practices that communicate to children exactly what to do, when to do it, and how it should be done (Hemmeter & Fox, 2009). A safe and engaging environment is the foundation for preventing the need of children to engage in challenging behaviors.

In addition to creating an engaging and predictable learning environment, Kim et al. (2009) posited, “consistently acknowledging when children have behaved appropriately is also a positive strategy for supporting appropriate behaviors” (p. 228), a practice consistent with DEC recommendations (Hemmeter et al., 2001). While behavior-specific praise for appropriate social behaviors has been widely recognized as an effective positive practice for working with young children with challenging behaviors, teachers are often observed providing more attention to inappropriate behaviors and using negative feedback more frequently than praise or encouragement (Dobbs & Arnold,

2009; Kim et al., 2009; Stormont, Covington, & Lewis, 2006). This inadvertently reinforces negative behaviors, contributing to the problem overall.

Admittedly, it is difficult to engage in proactive, positive response strategies under extreme stress. As a result, teachers sometimes revert to traditional responses that provide immediate, short-term results, but do not modify the behaviors or develop needed skills that result in improvement (Dobbs & Arnold, 2009). Compounding the issue, sometimes teachers are reluctant to change their approach despite their struggle and evidence of the effectiveness of new strategies (Burke, Guck, Robinson, Powell, & Fichtner, 2006). Nonetheless, strategies for reducing challenging behaviors exist, and it is a matter of developing those skills in preschool teachers providing direct care to children. However, in order to develop skills, teachers must be willing to try new things, and be ready to change their responses.

In order to frame the problems facing teachers in respect to behavioral issues among preschool age children, this chapter first examines the history of intervention strategies followed by an examination of the regulations pertaining to early childhood education, special education, and challenging behaviors. A section will discuss the role of professional development in supporting teachers' developing skills in managing challenging behaviors. The chapter also presents the theoretical framework used to guide the dissertation research.

History of Intervention Strategies

Andrew's story illustrated how behavior has a clear impact on learning, and demonstrated how challenging behaviors can interfere with the ability of individual children, and sometimes their peers, to learn and develop. Behavior refers to observable

actions that individuals do or say (Maag, 2004). Challenging behaviors are defined as being highly aggressive and include prolonged tantrums, lack of self-regulation, destruction of property, and physical aggression (Quesenberry et al., 2011; Strain & Joseph, 2004). For example, a preschool child may suddenly begin to scream, run across the room, and pick up a heavy, wooden block. He then, with all of his strength, throws the block at a target. In some cases, the target is random, in other cases the block may be aimed at another child. Thus, the block becomes dangerous. These behaviors are often not exclusive to children with disabilities or special needs, but are exhibited by children considered typical in their development.

Historically, the field of special education has examined the function of a specific, repeated behavior, why it occurs, what influences it, and how to modify undesired behaviors (Maag, 2004). This is done through an effective, evidence-based process called Functional Behavior Assessment (FBA), an assessment that examines what environmental factors affect the behavior, and what purpose the behavior serves for the child. FBA also helps with the development of replacement behaviors that do not interfere with learning (Maag, 2004). These intervention strategies are well established in theory in the United States.

Theories and intervention strategies in the United States designed to modify behavior date back to the late 19th and early 20th centuries. The study of problem behaviors, and how to respond to them, was rooted in the work of Edward Lee Thorndike (Dewsberry, 1998). Thorndike was instrumental in the evolution of comparative psychology and greatly informed the work of B. F. Skinner, who has had the greatest influence on effective behavior interventions (Maag, 2004). In his seminal work,

Thorndike (1898) examined the associative processes in animals, primarily cats. The result was the development of the concept of the Law of Effect, which posits that a response immediately followed by a positive experience will reoccur under the same circumstances. Thorndike also argued that if a situation is followed by an unpleasant or negative response, the connections between the two stimuli become weaker, reducing the likelihood of the situation repeating. This idea of stimulus-response is more commonly known from the work of Ivan Pavlov, a contemporary of Thorndike, who independently developed the concept of classical conditioning when he paired the provision of food with a concurring bell sound—the pairing of two stimuli that sought to have a specific result (Cummings, 1999).

However, Skinner's work has had the greatest influence on the development of effective interventions to modify behavior and the understanding of how behavior and learning are interconnected. Skinner took the approach of pairing stimuli, like Thorndike and Pavlov, but focused on the functional relationship between independent and dependent variables (Skinner, 1953). Morris, Smith, and Altus (2005) posited that Skinner's research established a science of behavior through the experimental analysis of behavior. Skinner applied the science of behavior to psychology and applied behavior analysis (ABA) was the result.

Skinner's most fundamental contribution to behavior analysis was the way he approached behavior as a science. He used experimental design and empirical epistemology to deepen understanding of behavior. According to Morris et al. (2005), five characteristics were included in Skinner's research. He first defined knowledge as an action, not a thought. Capturing action or behavior included a reliable description of the

action, predicted the behavior, and included experimental control. Additionally, prediction and control were not based upon a correlation between an independent and dependent variable but the functional relationship between them, thus involving a functional analysis. Third, the identified relationships were compared using an individual research design. Fourth, the relationships emerged as basic principles of behavior, and finally, when the principles were integrated, a theory or system of behavior resulted (Morris et al., 2005). These five integrated steps serve as the foundation of applied behavior analysis (Maag, 2004).

The premise of applied behavior analysis, then and now, assumes that all behavior serves a purpose or function. Skinner believed that through careful observation and analysis, the understanding of the function or purpose of a behavior could lead to the development of effective behavior interventions, the FBA (Maag, 2004). Furthermore, because behavior is overt and observable and occurs within the context of an environment, Skinner asserted that what preceded the behavior, the behavior itself, and the consequence of the behavior could be systematically captured.

Part of an FBA includes capturing what precedes and follows the targeted behavior. What happens prior to any behavior is called the antecedent, a stimulus that includes the circumstances that exist in the environment before the behavior is exhibited (Maag, 2004). This includes sounds, materials, actions of peers and adults, and the required tasks or demands. For example, it is time for lunch in a preschool classroom. The teacher verbally tells the children, in a loud, clear voice that it is time to line up and wash their hands. One 4-year-old child is fully engaged in play in the block area and does not respond to the first verbal cue. The teacher moves toward the child, takes his hand,

interrupting his play, and attempts to guide him to the sink to wash his hands. The child's negative behavior erupts. He begins to tantrum, throwing blocks across the room and screaming obscenities at the teacher. He is kicking, screaming, and inconsolably crying. The tantrum lasts for over 25 minutes. In this scenario, the teacher's actions served as the stimulus or antecedent for the challenging behavior. A behavior is defined simply as what individuals do, what actions are observed, whether verbal or non-verbal (Maag, 2004). In this case, the teacher placed a demand on the child, disrupting his play, requiring the task of hand washing. As a result, the child exploded, resulting in a display of challenging behaviors.

Following the behavior, in this case the tantrum, is the consequence. Behaviors are either strengthened or weakened by the consequences that follow (Maag, 2004). The momentary relationship between these events is referred to as the contingency, the stimuli of the behavior, which is the antecedent, and the behavior itself, a tantrum, swearing, kicking, screaming, followed by the consequence, which might include the way the teacher responds to the child in that very moment (Maag, 2004; McLaren & Nelson, 2009). In this case, the contingency that contributed to this child's explosive behavior lacked intention and did not meet his needs. Had the contingency included a 5-minute warning or prompt such as, "Joseph, there are 5 minutes left before hand-washing time" with a visual support (such as a sand-timer), Joseph may have had the chance to prepare himself for the transition resulting in compliance with the direction. This is a positive contingency that is often developed after careful observations of antecedents, or events that occur before a child exhibits challenging behaviors through the FBA process.

Discovering what works takes time and careful observation. When a child exhibits

challenging behavior, a strategy to capture the behavioral series of events is called an A-B-C analysis. The analysis simply involves observing and writing down the sequence of events, the contingency, beginning with antecedents (A), objectively capturing the behavior (B), and determining the consequences (C). When done correctly, patterns of behaviors will emerge thus allowing the observer or teacher to gain valuable information as to what interventions are effective and ineffective for modifying the behavior (Gettinger et al., 2008). In the example provided, Joseph needed something more than verbal cues and physical assistance during transitions. His explosive behavior was his way of communicating, “Hey, I need more notice, this doesn’t work for me.” The functional behavior approach, as its name implies, assumes every behavior has a function. As such, behavior analysis helps to determine whether the behavior is in need of an intervention and whether the intervention strategy is effective (Maag, 2004). When conducting an A-B-C analysis, it is important to note that the environment includes both the adults and tasks within it.

It is imperative that preschool and early childhood educators be aware of behavioral concepts and have a basic understanding of the FBA and A-B-C processes. If a child like Joseph, whether typically developing or with special needs, is responded to by a teacher who lacks an understanding of the function of his behavior, the behavior will not only continue, but may increase in severity. The resulting behavior would have a negative impact on Joseph’s development and learning, his classmate’s learning, and often would result in teacher frustration. Teacher frustration, according to Perry, Dunne, McFadden, & Campbell (2008) may result in suspension and expulsion of children from quality early childhood settings, further excluding children like Joseph from the help and

intervention needed.

McLaren and Nelson (2009) discussed how FBA is applied to children exhibiting challenging behaviors in special education settings. They suggested that recent approaches focus more on proactive preventative strategies as opposed to reactionary responses. Proactive approaches have been designed to address problems before they escalate into crisis situations. However, if classroom management strategies and developmentally appropriate approaches have not been effective in preventing challenging behaviors in an individual child with special needs, the Individuals with Disabilities Education Improvement Act recommends the use of a FBA to create an effective intervention (McLaren & Nelson, 2009).

Behavior modification has contributed to many different aspects of behavior management for adults and children alike. Some examples include the promotion of recycling, medical treatment compliance, maintenance of health conditions, the improvement of education practices, and the behavior of individuals with developmental disabilities, including autism and schizophrenia (Morris et al., 2005). Behavior modification has been embedded in special education services. When a child with special needs exhibits challenging behaviors, it has become accepted practice to conduct an FBA followed by a behavior intervention plan (BIP). The purpose of the BIP is to help children gain the skills needed to exhibit the desired behavior, allowing them the opportunity to learn and develop (Maag, 2004).

Despite the overall agreement on the usefulness of the FBA and BIPs, there remains inconsistency in expectations for responding to challenging behaviors. Specifically, early care and education programs are required to follow regulations from

multiple, sometimes conflicting regulatory bodies. The next section highlights the regulations as they relate to responding to challenging behaviors.

Regulations on Responding to Challenging Behaviors

Early care and education programs are highly regulated, sometimes through multiple sets of regulations overseen by multiple governmental agencies. Often, the regulations are vague, unclear, and open for interpretation. Many of the regulations focus on what cannot be done, as opposed to what should be done. In New York State, early care and education programs are simultaneously regulated by the New York State Department of Education, the New York State Office of Children and Family Services, and sometimes Universal Prekindergarten regulations. Which regulatory agency a childcare facility is responsible to depends on funding sources, who the facility is serving, or whether the facility is considered a childcare program or a school. For instance, if a program receives Head Start funding, which is a federal grant, additional regulations apply. Furthermore, there are different approaches for children who qualify for special education with an Individualized Education Plan (IEP). Children who have an IEP receive a classification that helps special educators narrow the approach strategies as well as provide access to services not accessible without that classification (Maag, 2004). It is important to note that children who are typically developing do not have a classification, and therefore, do not have access to the same services as their peers in special education. The next subsections highlight federal and state regulations with regard to responding to challenging behaviors.

United States federal law. Federal regulations must be followed for all children who qualify for special education. The Individuals with Disabilities Education Act

(IDEA) requires public schools to make available to all eligible children with disabilities a free and appropriate public education in the least restrictive environment appropriate to their individual needs. IDEA requires public school systems to develop appropriate Individualized Education Programs (IEPs) for each child. The specific special education and related services outlined in each IEP reflects the individualized needs of each student (IDEA, 2004). In addition, IDEA has mandated that IEPs be developed by a team of qualified, relevant people and reviewed annually. This federal law includes parent procedural safeguards in order to ensure due process review is available to families of children with special needs (IDEA, 2004). IDEA regulations are in place for the protection of children with special needs and contain explicit recommendations for responding to challenging behaviors.

New York State Education Department. The New York State Education Department (NYSED) is responsible for the development, implementation, and enforcement of federal and state laws as they pertain to education in New York State. The regulations that apply to preschool, middle school, and high school for both general and special education are referred to as Part 100 and Part 200 of the law. Part 100 of the regulations specify requirements for elementary, middle, and secondary school programs. Part 200 is based upon the IDEA federal act of 2004, and is directly related to special education.

These regulations provide clear guidance and processes that help professionals respond to children with IEPs who struggle with challenging behaviors. Because preschool children with special needs are subject to the federal laws of IDEA, as implemented in Part 200 of the NYS ED regulations, specific mandates apply. When a

child with special needs exhibits challenging behavior, the Committee on Preschool Special Education (CPSE) authorizes an FBA. This assessment must include multiple sources of data and include the frequency, severity, and duration of the behavior, observations of the child across activities, settings, and through interactions with different people throughout the day (NYSED, 2012).

The regulations set for by the New York State Commissioner of Education in Part 200 of the statute make it clear that the FBA is intended to capture the current behavior and should not be based solely upon prior challenges. If a child's behavior persists and it impedes learning for the child or other children, the regulations mandate the development of a BIP. The BIP is developed as an action plan based on the data collected in the FBA. The regulations require that baseline measures are included to measure the effectiveness of the intervention. According to the regulations, progress of the targeted behaviors must also be monitored, according to the regulations, and the use of a time out room may be used with the intention of teaching and reinforcing alternative appropriate behaviors when included in the BIP. Part 200 regulations also provide guidelines on emergency interventions including staff training for restraint and documentation of behaviors. This process is clear and prescribes a treatment or response strategy that is individualized for that child.

Response strategies are missing from many of the other regulations, as described below. This complicates the expectations of teachers as the FBA and subsequent BIP must be ordered through the CPSE, conducted by specialized professionals for children with special needs, and is often a lengthy process that puts the focus on the individual child as opposed to the adult-child interactions or other environmental factors. Typically

developing children who exhibit challenging behaviors do not have access to this formal process.

New York State Office of Children and Family Services (NYS OCFS). Many preschools are a part of childcare programs or centers. Such programs are mandated by yet another governmental agency as outlined in this subsection. New York State requires that anyone providing childcare services to children age birth through 12 follow the regulations mandated by the NYS OCFS. In fact, under Social Services Law § 390 of 2010, childcare providers must be either licensed or registered with NYS OCFS, the governing body for these regulations.

Many preschools in the state of New York are not schools under Article 89 § 4410 (NYS OCFS, 2012), and thus, are not required to provide special education services. One of the problems for preschools is the fragmentation of governmental agencies serving young children resulting in conflicting regulations. While children enrolled in the childcare programs may have IEPs and classifications that allow them access to special education services, the preschool is under a different set of regulations.

Specifically related to challenging behaviors, the NYS OCFS (2012) regulations require that a childcare program have written disciplinary guidelines and that all staff know them. The regulations require that responses to challenging behaviors are designed to help children gain control and use clear and consistent rules that are age-appropriate. The regulations forbid the isolation of a child, but if a child's behavior "harms self, others or property, the child may be separated from the group only for as long as it takes to regain control" (NYS OCFS, Part 418.1.9[a]). When isolated, the child must be seen at all times, and the regulations state that corporal punishment is prohibited (NYS OCFS,

2012, Part 418). Staff must use acceptable techniques and approaches to help guide children and solve problems.

In essence, regulations on discipline from NYS OCFS and NYS ED are often vague and open to interpretation. For instance, the NYS OCFS regulations forbid the isolation of children from their peers, not to mention in a contained space, for any reason. However, the New York State Education Department Part 200 permits the use of a time out room. This room intentionally isolates a child in a designated space designed to keep both the child and the adults safe. An adult is close by, a window is often in the door; this method is used to help the child self-regulate. However, this same regulated method used for children with special needs, in a special education setting, is forbidden under NYS OCFS regulations for all children.

Universal Prekindergarten and Head Start. If a program receives federal funding from either Universal Prekindergarten (UPK) or Head Start, additional regulations apply. These regulations are described in the following paragraphs. UPK is a program administered through local school districts that allows any resident child to attend a quality 2.5 hour preschool program for free. Head Start was developed in the 1960s as an effort to provide high-quality preschool programs to children in poverty (Richmond, Stipek, & Zigler, 1979). In order for children and families to qualify for Head Start, they must meet strict income guidelines.

Interestingly, UPK regulations mention little with regard to responding to children with challenging behaviors. However, the UPK regulations require that the environment and curriculum promote and increase inclusion and integration of preschool children with disabilities (NYSED, Subpart 152-1). The UPK regulations provide many guidelines

designed to regulate the implementation of a UPK program, as well as the application process for districts and other community-based organizations.

Head Start regulations require teachers and staff to use positive methods of child guidance, forbid corporal punishment, and again, forbid isolation (Richmond et al., 2012). There is nothing mentioned in the regulations that prescribe processes to respond to or eliminate moderate-to-severe challenging behaviors, which can result in difficulties in preschool classrooms.

Challenges for Preschool Programs

Preschools in New York State can be governed by all of the described regulations at once. A childcare center overseen by NYS OCFS could also have a UPK embedded in the program. If integrated services are offered, Part 200 regulations are relevant to the children with special needs. Additionally, federal dollars are connected with Head Start, which requires close attention be paid to those regulations.

To make things more complicated, NYS OCFS is part of the Social Service Law, while UPK and special education fall under NYSED. Head Start is under the United States Department of Health and Human Services. As such, the system is fragmented, and the regulations provide guidelines that are vague and sometimes inconsistent with one another. Furthermore, early childhood educators are not provided with proactive and positive strategies that tell them how to respond effectively to children with challenging behaviors.

As stated, the regulations do not provide the guidelines needed for early childhood educators to effectively and consistently respond to children with challenging behaviors. Furthermore, many teachers were not taught effective response strategies in

teacher preparation courses and consistently have felt behavioral issues are the most difficult challenge they face in teaching (Quesenberry et al., 2011). Additionally, professional development workshops that include content with new strategies often are not implemented in the classroom despite the effectiveness or evidence presented (Fabiano et al., 2012). Most professional development experiences are designed based on the assumption that all participants are prepared to change their practice. One of the major problems in this assumption is that these sessions are not designed to meet the individual needs of teachers. All participants receive the same information, in the same manner, for the same amount of time—and each is expected to adopt new, evidence-based practices as a result of this experience (Peterson, 2012).

Teacher Response to Behavioral Challenges and the Role of Professional Development

Despite a wealth of evidence and research supporting the effectiveness of proactive approaches such as positive behavioral supports (PBS) and functional assessments, many educators lack the specific knowledge and understanding to successfully respond to children with moderate-to-severe challenging behaviors (Dunlap & Fox, 2011; Gettinger et al., 2008). In addition, when presented with evidenced-based strategies, methods, and techniques, some teachers remain reluctant to adopt and implement new strategies (Burke et al., 2006; Peterson, 2012b; Wagner & French, 2010). This reluctance has been attributed to a variety of reasons such as a perceived lack of time, intervention difficulty, lack of tools, philosophical incompatibility, or perceived ineffectiveness of the intervention (Burke et al., 2006).

Addressing challenging behaviors early is especially important given that a wealth

of research over the past 30 years has indicated that if children's challenging behaviors are not resolved in the early years, these behaviors become predictors of academic and behavior challenges through adulthood (Dunlap & Fox, 2011; McLaren & Nelson, 2009). Pianta et al. (2005) asserted that in preschool, it is the interactions between children and their teachers that are critical to the quality of the experience and the development of foundational skills for children in all domains, including social and emotional. They stated, "process quality in the classroom setting involves social, emotional, physical, and instructional elements that are reflected at several levels of the classroom environment: moment-to-moment displays of discrete behaviors as well as global characterizations of the overall setting" (p. 145). It is, therefore, critical for children who are still developing self-regulation and coping skills to be responded to with positive, proactive, and consistent response strategies based in skill-development. While teacher response may not be the root cause of a child's behavior, the way the teacher responds can influence skill development.

Sadly, many early care and education professionals do not feel adequately prepared to respond to children with challenging behaviors and often react in frustration in moments of stress with negative and sometimes harmful responses (Hemmeter et al., 2008; McLaren & Nelson, 2009). Effective ways to respond to children with challenging behaviors can be learned either in teacher education programs or through professional development. As discussed in the historical overview of this chapter, the field of special education has provided evidence-based strategies that have been shown to be successful for children with moderate-to-severe challenging behaviors. Informed by applied behavioral analysis, the FBA and A-B-C response strategies focus on the root cause, or

function of specific behaviors.

Effective professional development. Effective strategies are often presented to teachers as professional development workshops or sessions after they complete their teacher preparation courses. However, Hamre et al. (2012) asserted that little evidence exists that support typical professional development sessions as leading to improvement or sustained changes. In fact, most of the successful approaches for effective change in student behaviors include both curriculum and classroom support. Nonetheless, because professional development is the way most in-service teachers learn new strategies, it is important to examine what constitutes effective professional development.

Like practitioners in other fields, educators must keep current in their practice as new knowledge and understandings emerge. Guskey (2000) defined professional development as a “process designed to enhance the professional knowledge, skills, and attitudes of educators so they might, in turn, improve the learning of students” (p. 16). He asserted that when done correctly, professional development serves as the opportunity to renew or refresh skills, a key strategy for skill development and improvement (Guskey & Huberman, 1995). Guskey’s (2000) framework for determining the effectiveness of a professional development experience is described in this section.

In order to determine whether or not a professional development workshop is effective, Guskey (2000) asserted that the experience must be created with intention, have clear goals and objectives, and be systematically evaluated. Additionally, he asserted that organizational support is strongly linked to successful implementation and the merit of the content. Guskey (2000) presented five critical levels of evaluation as a framework for a successful professional development. The evaluation process must be a systematic,

thoughtful, and intentional process that is not random or without goals. Guskey's (2000) five critical levels of professional development evaluation include (a) participants' reactions, (b) participants' learning, (c) organizational support and change, (d) the participants' use of new knowledge and skills, and (e) student learning outcomes.

Participants' reactions. The first critical level of professional development evaluation measures participants' initial reactions to professional development sessions. This information is often gathered through surveys or questionnaires immediately following the presentation, and is often an indicator of participant satisfaction. This information is useful as it has the potential to provide valuable feedback with regard to the design, delivery, and activities included in the professional development experience. More importantly, according to Guskey (2000), positive reactions from participants are usually a necessary prerequisite to higher-level evaluation results.

Participants' learning. Once participant satisfaction is measured, level two attempts to capture what participants have actually learned. What are the knowledge, skills, and attitudes that have been gained or altered as a result of the professional development experience? This content must be intentional, and directly aligned with the goals and objectives of the professional development session. Guskey (2000) asserted that this type of information is not gathered through a standardized feedback form at the end of a session. Rich information can be gathered at this stage through personal reflections, written assessments, and portfolios—something that requires participants to express their learning. It is important to be aware of “unintended learnings,” both positive and negative, in this level of evaluation (Guskey, 2000, p. 83). Again, participant

satisfaction combined with the acquisition of knowledge, skills, or attitudes serves as a foundation to higher-level evaluations results.

Organizational support and change. Organizational support is critical to the success of a professional development effort, and is level three of Guskey's approach. Guskey (2000) made a critical point that gains made in levels one and two are essentially cancelled out if organizational practices are not in alignment with the goals and objectives of the professional development experience. Evaluating organizations is complicated, and depend upon the content of the professional development and the context of the organization. However, Guskey's (2000) position was that this information can be captured through questions that address whether or not the advocated change is in alignment with the mission of the organization or if the change was encouraged or supported. A deliberate effort should be made to include organizational support, especially when the professional development experience is geared toward changing practice in the classroom.

Participants' use of new knowledge and skills. Level four, then, places the focus on whether or not participants' learning made a difference in their practice with children. This cannot be measured through an evaluation form immediately following a professional development experience. Participants need the time to reflect on the knowledge and skills, as well as the chance to implement the content in practice. While a challenging task, if appropriate indicators and behaviors are identified, insight into practice can be captured (Guskey, 2000). Data for this level is gathered through journals, portfolios, oral reports, but the most effective way that this can be captured is through direct observation.

Student learning outcomes. Student learning outcomes are the focus of the final level, level five, of critical evaluation according to Guskey (2000). This level of evaluation is concerned with how students benefited from the practices presented in the professional development. These results are gathered through cognitive instrument results through psychomotor outcomes with a focus on skills and behaviors.

Overall, evaluation at all five levels is important and can have a positive impact on professional development design, implementation, and activities. Each level plays an integral part in creating and evaluating quality, effective professional development experiences. It is clear, however, that changing practice involves more than exposing teachers to new strategies. In order to influence change, participants must approach the change in practice or behavior willingly and with confidence, and they must be receptive or ready to change (Peterson, 2012b). The next section discusses the transtheoretical model, a theory that supports the need for participants to be willing and ready to change behaviors before they are successful. This is the theory upon which the study was based upon.

Theoretical Framework

Prochaska and DiClemente (1983) presented five stages of change and aligned those stages with levels of readiness to change. The premise of the theory is that if one is not ready to change, then the adoption of new strategies or approaches will be a challenge. Prochaska and DiClemente (1983) argued that a person must be receptive to new ideas before they try to implement them. The approach has been well researched within the healthcare field and has recently been applied to early and elementary education. As stated previously, teachers are sometimes reluctant to implement effective,

evidenced-based strategies for classroom management (Burke et al., 2006; Peterson, 2012). Reasons for the reluctance include a perceived lack of time and a perception of ineffectiveness of the strategy. Peterson's (2012a) research, however, explored what happens when early childhood educators are unwilling or not ready to undertake change in practice. The following section presents the transtheoretical change model (TTM), a theory that allows the examination of individual readiness to change using characteristics in the five stages of change.

Transtheoretical Model (TTM)

Rooted in social cognitive theory, the transtheoretical model (TTM) of behavior change originated as a framework to help understand the process of change in individuals with unhealthy or addictive behaviors (Bandura, 1977). Prochaska and DiClemente (1983) viewed behavior change as a series of stages, each requiring different interventions or strategies to help individuals meet challenging goals successfully. Prochaska and DiClemente (1983) asserted that if an intervention is not in alignment with the stage of change of an individual, then the likelihood of failure significantly increases. While the model had its beginnings in the psychology and health fields, it has recently been applied to education as a way to explain "change in a teacher's behavior from initial opposition to fully implementing a specific classroom management program" (Burke et al., 2006; Peterson, 2012b). Similarly, Peterson (2012b) translated TTM to early childhood education as a way of understanding teachers' confidence and willingness, in essence their readiness to change. She stated,

Those of us who have facilitated professional development programs for early childhood educators know from experience that some participants seem more

open to taking in new information, reflecting on their practices, and trying new behaviors, whereas others may seem uninterested, unmotivated to change, or unaware of what they do in the first place. (Peterson, 2012b, p. 147)

There are four aspects of the TTM theory: (a) stages of change, (b) processes of change, (c) markers of change, and (d) context of change (DiClemente, 2003; Prochaska & DiClemente, 1983). Research indicated that across a range of behaviors, only one in five people are ready to engage in immediate change (Peterson, 2010; Prochaska & Velicer, 1997). Stages of change and subsequent processes of change was the focus for the dissertation study.

Stages of change. Regardless of the type of behavior, people pass through five common stages of change: (a) pre-contemplation, (b) contemplation, (c) preparation, (d) action, and (e) maintenance (Burke et al., 2006; Prochaska et al., 1994). TTM is not a linear or successive process, but a progression in a spiral pattern. Peterson (2012b) explained that as an individual progresses through the stages, he or she might regress to earlier stages before moving forward over time. Table 1.1 shows the stages of change as it applies to early childhood education.

Pre-contemplation. Pre-contemplation is the first stage of change. Individuals in this stage of change are not receptive to change. In fact, an early childhood educator in this stage might respond to a new approach to responding to challenging behaviors by saying, “I already know this.” According to the theory, this participant does not have the willingness to accept new knowledge, skills, or attitudes, despite participation in a well-designed professional development experience (Peterson, 2012b).

Contemplation. In the second stage of change, contemplation, participants begin to think about, or contemplate change. A participant in this stage may be willing to learn new skills, but lacks the confidence needed to be successful. This person could be heard saying, “I don’t have time for this.”

Preparation. Participants in Stage 3, the stage of preparation, begin to express the willingness and confidence of someone interested in changing a particular behavior. He or she will begin to use language of inquiry, such as “What will it look like?” Table 1.1 shows language that lacks resistance and indicates readiness to change.

Action. Those in the action stage, Stage 4, are actively engaged in change. In early education, this participant may be heard saying, “I’ve been doing this for a week.” Notice that as an individual progresses through the stages, the language appears to become more receptive.

Maintenance. Stage 5 is the maintenance stage. During this stage, participants are fully engaged in change, but may need to reinforce their new knowledge, skills, and/or attitudes. An educator in this stage may be heard saying, “I wonder how I can make this work even better.”

Significantly, the TTM assumes that most learners are not likely to be ready to change. As such, TTM indicates that traditional action-oriented professional development experiences may not be effective when change is required (Peterson, Baker, & Weber, 2010).

Table 1.1

Stages of Change

Stage	Description	What you might hear
1 Pre-contemplation	Not ready to change.	<p>“There is nothing I can do about it.”</p> <p>“I don’t think it is a problem.”</p> <p>“I already know this.”</p>
2 Contemplation	Thinking about change, but overwhelmed by obstacles.	<p>“I don’t have time for this.”</p> <p>“I tried it and it doesn’t work.”</p>
3 Preparation	Ready to change.	<p>“I want to try...”</p> <p>“What will it look like?”</p> <p>“What do I need in order to do this?”</p>
4 Action	Actively engaged in change.	<p>“I’ve been doing this for a week...”</p> <p>“What could I do when ... happens?”</p>
5 Maintenance	Maintaining change with vigilance.	<p>“I’ve found a new way to remind myself...”</p> <p>“I’m wondering how I can make this work even better.”</p>

Note. Adapted from “Understanding early educators’ readiness to change,” by S. M. Peterson, 2012, *NHSA Dialog*, 15(1), p. 95. Copyright 2012 by Taylor Francis. Adapted with permission.

Processes of change. Equally important are the 10 processes of change commonly experienced as individuals progress through the stages of change (Prochaska

& Velicer, 1997). Table 1.2 illustrates how the stages of change and processes of change align. It is important that facilitators of professional development or mentors working with individuals in the first two stages begin with consciousness raising strategies prior to introducing new knowledge, skills, or intervention strategies. Doing so helps individuals begin to develop a willingness to change behavior or practice, raises their awareness of the problem, and helps them to envision the possibility of change (Peterson et al., 2010; Prochaska & DiClemente, 1983). The process may include the examination of values and discrepancies between those values and behaviors. Pros and cons of adapting the new behaviors versus keeping things as they are might be explored prior to entering a professional development experience.

Relating to others in the same situation is beneficial for increasing awareness of the need to change. This is where behavioral processes are effective as they involve grouping participants who are in similar situations. Using grouping assists those who may be lacking confidence to make interpersonal connections with others with the same concerns (Peterson, 2012b).

Dramatic relief and self-evaluation begin as individuals move through the stages from contemplation to preparation. Reflection on current practices and considering the possibility of adapting new strategies would be included in professional development experiences tailored to participants in this stage. Once an individual commits to change through the behavioral process of self-liberation, goal setting, planning, and sharing are the behaviors that are expressed. As participants progress, the processes move from experiential-focused, to behavioral-focused (Prochaska & Velicer, 1997). Table 1.2

illustrates the processes of change, effective support strategies, and alignment with the appropriate stage of change.

Table 1.2

Processes of Change

Process of Change	Examples of Supportive Strategies	Stages When Most Effective
<i>Experiential Processes:</i> Consciousness Raising	Reflecting on one's own situation Weighing Pros and Cons Provide descriptive information	1-2
Dramatic Relief	Acknowledge negative emotions such as fear and anxiety	1-2
Self-Reevaluation	Active listening, open ended questions	1-2
Environmental Reevaluation	Considering worst/best scenarios Reflecting on discrepancies between one's values and one's current behavior	1-2
Social Liberation	Joining groups of people in similar situations Talking about one's values & beliefs	2-3
<i>Behavioral Processes:</i> Self-Liberation	Setting goals and making plans Telling others about one's resolution	3
Stimulus Control	Changing the environment to support the new behavior Posting physical reminders Mental checklists	4
Countering Conditioning	Using relaxation in response to triggers Journaling or talking to a friend when feeling uncomfortable emotions	4
Reinforcement Management	Rewarding oneself for meeting a goal Receiving positive feedback	4-5
Helping Relationships	Talking to a friend or co-worker Joint problem-solving Engage in relationships that support change	5

Note. Adapted from “Understanding early educators’ readiness to change,” by S. M. Peterson, 2012, *NHSA Dialog*, 15(1), p. 95. Copyright 2012 by Taylor Francis. Adapted with permission.

Consciousness raising. This experiential process of change is aligned with the earliest stages of change. Those who are in Stages 1 or 2, according to Prochaska and Velicer (1997), benefit from this experiential process as a way to initially increase their internal motivation to change. This experience may include reflecting on one’s own situation, weighing the pros and cons of current behaviors and practices, and may include observing others (Peterson, 2010). A person experiencing this process may experience an increase in emotion with regard to the change.

Dramatic relief. Dramatic relief, or emotional arousal, according to Prochaska and Velicer (1997), includes an increased emotional experience, often negative. This process moves people emotionally, and contributes to a person’s realization for the need to change behavior. Emotions may include anger, frustration, or disappointment. According to Prochaska and DiClemente (1983), effective strategies for a person in this process include role-playing exercises and testimonies. This process best aligns with the first two stages of change (Peterson, 2010).

Self-reevaluation. In this experiential process, an examination and reflection occurs between one’s values and the discrepancies that may exist in one’s current behavior or practice. This also tends to occur in earlier stages, and contributes to the progression through the stages. Effective strategies, according to Peterson, Baker, and Weber (2010) include motivational interviewing to help with values clarification.

Environmental reevaluation. Characteristics that align with this process of change include recognition of the impact of current behavior on self and on others. This process is experiential, and recommended strategies for early childhood educators, according to Peterson (2010) include talking with the educator about the impact of practice on children's development. Reflective practice exercises may be helpful in this process, and this process is best aligned with individuals in the first two stages of change, precontemplation and contemplation.

Social liberation. This final experiential process of change involves the awareness of social values and resources to support change. Individuals in this process of change may benefit through the involvement in a community that supports change (Peterson, Baker, & Weber, 2010). While this process increases internal motivation, it also results in the movement from one stage to the other (Peterson, 2012a). According to Prochaska and Velicer (1997), the process of social liberation benefits those in stages one through four.

Self-liberation. This is the first behavioral process of change that begins to impact shifts in behavior. According to Prochaska and Velicer (1997), goal setting is key in this process of change. Plans are made to implement changes, and a person begins to share their intention to change behavior. This is notably different from the earlier processes of change, and takes place in later stages: preparation, action, and maintenance. Once goals are set and met, rewards follow. Recommended strategies for this stage is to help the learner set an attainable goal, and the take responsibility to achieving it.

Stimulus control. This behavioral process involves altering the environment as a way to support new behavior. Visual cues such as signs, for example, may be strategically placed around the environment as a reminder of new habits and behaviors.

Sometimes mental cues are used such as visualizing step-by-step actions. At times, internal reminders to take a deep breath may be used. This process typically occurs in the later two stages of change, action and maintenance.

Counter conditioning. Once a person has actively committed to change, he or she may face moments of stress or revert to old, undesired behaviors. Countering involves preparing for challenges or situations that trigger old patterns and behaviors. This might involve using relaxation in response to triggers, journaling, or reaching out to a friend when feeling uncomfortable with emotions (Peterson, 2010).

Reinforcement management. Positive feedback and external rewards encourage positive change in behavior. This behavioral process of change involves both celebrating successes through rewards, and sharing successes with others. This process typically occurs in Stage 4, the action stage. Again, this process of change occurs in the two later stages of change, action, and maintenance. Because change is a process, however, moments of struggle may occur, and the process of countering helps people in active change keep from reverting to old behaviors.

Helping relationships. The final behavioral process of change involves interpersonal relationships such as talking with a friend about the change or working through problems with another person. This process also occurs in the final stages of change, which are action and maintenance (Peterson, 2012a). Prochaska and Velicer (1997) suggested that if an intervention, in this case professional development, is tailored to someone's stage of change, supporting the processes may benefit an individual's progression through the stages of change.

According to TTM, goal setting is most appropriate for a person in stages three through five, preparation, action, or maintenance. These are people who are receptive to change and are not as resistant to change as those in the earlier stages. If the person is in Stage 1 or 2, he or she may not even realize that there is a problem and setting goals would be a premature action (Peterson et al., 2010). However, if the support strategies and the stages of change are in alignment, it may be possible to tailor professional development experiences with the needs of the individual in mind. This may, in turn, impact the person's willingness to implement a new response strategy.

TTM reveals why some teachers may choose to adopt effective strategies to respond to challenging behaviors and why some teachers do not. The model may help individual teachers and those who support them identify the stage of change or receptivity to change a teacher is in. With this knowledge, professional development experiences could be designed to be more in alignment with the level of receptivity of individual teachers (Burke et al., 2006; Peterson, 2012a).

Statement of Purpose

Challenging behaviors in preschool often interfere with children's learning and impact classmates' learning as well. Often, teachers are not prepared to respond effectively and consistently to moderate-to-severe challenging behaviors despite evidence-based strategies such as the FBA process (Dobbs & Arnold, 2009; Kim et al., 2009; Quesenberry et al., 2011). Using the Stage of Change Scale for Early Education and Care 2.0 (Peterson et al., 2010), the dissertation research measured readiness to change in preschool teachers who must respond to moderate-to-severe challenging

behaviors. The study compared the results of the instrument to teachers' self-descriptions of readiness to change.

Research Question

How do teachers' scores on the Stage of Change Scale for Early Education and Care 2.0 (Peterson et al., 2010) compare with the self-descriptions of their own readiness to change?

Significance of the Study

The number of preschool children who exhibit challenging behaviors is on the rise. If these children do not develop self-regulation skills, research has indicated that these behaviors will continue and cause challenges throughout their educational experiences. While teachers may not be the cause of the behaviors, their response is critical to a child's development. Effective strategies to respond to challenging behaviors have been developed, and these strategies can be implemented by teachers who are willing to incorporate them into their practice.

Because teachers are sometimes frustrated when dealing with a child's immediate needs, they may respond to young children who exhibit moderate-to-severe challenging behaviors with strategies that are not evidence-based or ineffective. Unfortunately, teachers are sometimes resistant to new strategies because it means changing their practice. If the Stage of Change Scale for Early Education and Care 2.0 (Peterson et al., 2010) accurately identifies a teacher's stage of change, professional development strategies could be better aligned to meet their individual professional development needs. Being able to identify teachers' stage of change and implementing professional development appropriate for that stage may have a positive impact on teachers'

willingness to implement new, evidence-based and effective strategies. This in turn could benefit children who are excluded from quality preschool programs based on their behaviors and their teachers' inability to respond effectively. The study's findings may benefit those who participate in professional development experiences on challenging behavior. Specifically, the findings may be used to help those who support teachers as they design or tailor workshops and courses specifically to individual learners by differentiating learning based on readiness.

Definition of Terms

A-B-C Analysis. A process that captures the reciprocal sequence of events in a classroom that begin with antecedents (A), are followed by behavior (B), followed again with consequences (C) (Maag, 2004).

Antecedent. The circumstances that exist in the environment before a behavior is exhibited (Maag, 2004).

Applied Behavior Analysis (ABA). Explains the interaction between human behavior and environmental factors—antecedents and consequences—that affect behavior expression (Maag 2004).

Behavior. Overt and observable behaviors or actions; what children or people do (Maag, 2004).

Behavioral Intervention Plan (BIP). A student-specific intervention linked to the function of a child's targeted behavior, a plan that results from the FBA data. The BIP focuses on changes needed in both the environment and the adults in the classroom (McLaren & Nelson, 2009).

Behavior modification. In the classroom, behavior modification involves identifying maladaptive behaviors that interfere with learning and assisting students in developing more adaptive behaviors (Maag, 2004).

Challenging behaviors. Moderate-to-severe behaviors that include prolonged tantrums, lack of self-regulation, destruction of property, and physical aggression (Quesenberry et al., 2011; Strain & Joseph, 2004).

Consequences. A new stimulus that is added or presented into the environment, or an already present stimulus that is avoided, terminated, or removed from the environment (Maag, 2004).

Contingency. The relationship between events; identified through the sequential relation between antecedents and consequences that prompt and maintain behaviors (Maag, 2004).

Expulsion. The complete and permanent removal of a child from an educational system or program (Gilliam & Shahar, 2006).

Functional Behavior Assessment (FBA). A multi-step process designed to help determine the function of an undesired behavior. The result is the development of effective interventions designed to reduce, replace, or eliminate undesired behaviors (Magg, 2004).

Individual Education Plan (IEP). A written educational plan for children with special needs created by a team of special educators, general educators, and specialists with input from parents and families. The plan specifies students' academic goals and specific methods to obtain the goals (Maag, 2004).

Professional development. A process intentionally designed to enhance the professional knowledge, skills, and attitudes of educators with the goal of improving the learning of students (Guskey, 2000).

Ready to change. The combination of internal (internal motivation, values, beliefs, and self-efficacy) and external resources (such as organizational and social support) available to support sustained intentional change in a particular behavior (Peterson, 2012).

Self-regulation. A child's ability to manage powerful emotions and maintain focus and attention. The growth of self-regulation is the cornerstone of early childhood development and is visible in all areas of behavior (Gillespie & Seibel, 2006).

Suspension. A temporary version of expulsion, one where the child may be allowed to return to the educational program after the child has been removed for a certain number of days (Gilliam & Shahar, 2006).

Chapter Summary

This chapter highlighted the importance of using effective strategies to respond to children who exhibit challenging behaviors in preschool. FBA practices have been proven effective in responding to children with challenging behaviors. This approach can be presented as an evidence-based strategy through professional development programs already embedded in early childhood settings. Teacher receptivity may be the key to designing effective professional development programs as predicted by the Stage of Change Scale for Early Education and Care 2.0 instrument (Peterson et al., 2010). This study explored the teachers' stage of change score with self-descriptions of readiness to change practice.

The next chapter contains a comprehensive review of the literature about readiness to change and the theoretical framework upon which this study is built. Chapter 3 includes an explanation of the methodology used to investigate the research question. Chapter 4 provides the data analysis, and Chapter 5 covers the discussion of the findings, limitations of the study, and implications for research, practice, and policy.

Chapter 2: Review of the Literature

Introduction and Purpose

This literature review focuses on challenging behaviors in preschool, the negative impact it has on child development, and the importance of consistent and effective teacher response. Research is presented that explores effective, evidence-based practices, specifically the successful implementation of the functional behavior assessment (FBA) and subsequent behavior intervention plans (BIPs) as a recommended response to challenging behaviors. Research then is presented on how these strategies can be learned by teachers through professional development experiences. Finally, research is presented on the stages of change and the transtheoretical model (TTM) of change in areas of health, addiction, and education. The review of education research focuses specifically on the implementation of response strategies and acquisition of new skills. The chapter concludes with a summary that synthesizes the literature and makes a case for a study that applies the TTM model to teachers learning new evidenced-based practices for addressing challenging behavior with preschoolers.

FBA/BIP as an Effective Evidence-Based Strategy

The FBA process is an effective and evidence-based response strategy for children who exhibit moderate-to-severe challenging behaviors because it helps teachers find the function or purpose of a behavior. The FBA process is recommended by the Division of Early Childhood (DEC) as a best practice, and often results in a significant decrease in moderate-to-severe challenging behaviors. Reducing these behaviors provides

children with the opportunity to develop critical self-regulation skills in the early years (Sandall et al., 2000). Moreover, this is the recommended approach for children in need of intensive and individualized interventions (Hemmeter & Fox, 2009). The following research is included as it has demonstrated the need for clear policies and procedures that require evidence-based responses to children who exhibit challenging behaviors. The research also highlighted the effectiveness of the FBA process in reducing challenging behaviors, as well as the importance of providing teachers with quality professional development, specifically in the area of documenting challenging behavior for FBAs and for creating a subsequent behavior plans based on that data collected.

In an ethnographic qualitative study, Quesenberry et al., (2011) examined the quality of Head Start programs' ($n = 6$) policies and procedures designed to support children's social and emotional competence. They also reviewed the strategies used by teachers to address young children's challenging behavior. Data were collected, organized, and analyzed through interviews and document analysis. Five items were included in the rubric that aligned with program-wide positive behavioral support. They included (a) social and emotional teaching curriculum strategies; (b) screening, assessment, and ongoing monitoring of children's social and emotional development; (c) involving families in supporting their child's social emotional development; (d) supporting children with persistent challenging behavior; and (e) providing training, technical assistance, and ongoing support to staff when addressing social emotional competence and challenging behaviors.

In order to score the rubric, Quesenberry et al. (2011) created interview questions in alignment with each rubric item. The interview transcripts were analyzed to assess

how the program's policies were implemented in alignment with the rubric. Each item on the rubric was analyzed and program results were described based on their mean score on the rubric. The scores ranged from 6.4 to 1.4, and sample quotes were provided in the study. The researchers highlighted the inconsistencies between programs, and when one item was scored high, the other items were also high. The same correlation appeared for the lower scores. For the purposes of this dissertation, the focus is on two result areas: the first relates to supporting children with persistent challenging behaviors and the second relates to how Head Start provides training, technical assistance, and ongoing support to staff when addressing social emotional competence and challenging behaviors.

In order to support children who exhibit moderate-to-severe challenging behaviors, it is beneficial that clear policies and procedures exist. After a careful review, Quesenberry et al. (2011) found only one of five Head Start programs had a policy that forbid the expulsion of children for behavioral issues. This program had extensive written policies that provided clear guidelines of how to support young children with behavioral issues. These procedures and policies included the importance of a sound routine, ways to build good relationships through positive adult-child interactions, and the importance of developing individualized behavior plans based on the function or purpose of the child's behavior.

The procedures and policies designed to support children with challenging behaviors were introduced and reinforced through professional development and ongoing staff support. While there were policies and procedures in place to help support children, there was no evidence that indicated teachers were provided with professional development on objective documentation of behavior and how to create a subsequent

behavior plan based on this documentation (Quesenberry et al., 2011). Research suggested that this is the most effective way to respond to children with challenging behaviors as it helps teachers understand the function of the behavior and focuses the teachers' efforts on helping those children develop needed skills.

The Quesenberry et al. (2011) study indicates the need for enhanced professional development that includes effective and evidence-based response strategies to respond to children with challenging behaviors. Because effective response strategies are closely linked to a quality preschool experience, poor responses could result in the removal, or expulsion, from quality early childhood programs. The researchers concluded that effective response strategies must be explicitly taught to teachers, supported by strong leadership, and be reinforced in the classroom. Moreover, DEC best practice has suggested that teachers assess children in their most familiar environment (Sandall et al., 2000). The dissertation study examined which teachers will adopt the effective evidence-based strategies presented in an in-service format and which will not due to their readiness to change.

The Quesenberry et al. (2011) study demonstrated the need for programs to have clear policies and procedures that support evidence-based responses to children who exhibit challenging behaviors. Some children with challenging behaviors receive special education services as a part of their program in preschool, and FBAs often are conducted to help better understand the reasons, or function, behind a child's behavior. In a mixed methods study, McLaren and Nelson (2009) examined the effectiveness of a functional assessment-based intervention designed to decrease inappropriate behaviors in preschool children. They posed two questions: (a) will a behavior intervention plan effectively

reduce inappropriate behavior in preschool children, and (b) will teachers perceive assessment-based interventions to be acceptable and feasible?

The child participants ($n = 3$) for McLaren and Nelson's (2009) research included preschool children selected by their teachers based on the level of challenging behaviors exhibited in the classroom. The children were: Anthony, 44 months; Brian, 40 months; and Carlos, 38 months old. The children exhibited moderate-to-severe behaviors that included pinching, poking, hitting, grabbing, wrestling, kicking, and crawling, kneeling, or lying on their stomachs. Two teachers and three assistant teachers, all female, ($n = 5$) were selected to participate in the study. Both teachers had at least three years of experience and held a bachelor's degree. Each of the assistant teachers had an associate's degree in child development, and none of the participants had direct experience working with FBAs in the past (McLaren & Nelson, 2009).

In order to form a hypothesis, McLaren and Nelson (2009) conducted interviews with teachers and assistants, followed by direct observation of children. Baseline A-B-C documentation was collected methodically to capture the antecedent, behavior, and consequence of each child's behavior. Once the observation was completed, data for each child was collected and analyzed. Anthony's mean rate of inappropriate touching was 0.28 behaviors per minute during the baseline but showed an improvement to only 0.07 behaviors per minute after the intervention. Brian's behavior also decreased from the baseline, 0.32 per minute to 0.11 per minute, and Carlos' inappropriate behavior decreased from a mean of 46.5% to a mean of 2%. These results demonstrated the effectiveness of the FBA process to reduce challenging behaviors in preschool children.

McLaren and Nelson's (2009) research also suggested that the successful implementation of the FBA process is not enough to ensure that teachers incorporate these strategies into their practice. However, their results did suggest that the teachers' feelings about the FBA process may impact its success. McLaren and Nelson referred to this as treatment acceptability, and measured it using the Treatment Acceptability Rating Form-Revised (TARF-R), a 20-item scale that measures whether or not teachers accepted the process. The Cronbach's alpha coefficients for internal consistency for the TARF-R ranged from .89 to .96, with a mean of .92. Results indicated a mean for teacher willingness at 33 (range = 29-35) out of 35 (94%), for effectiveness, 23 (range = 21-25) out of a possible 28, and for perceived disadvantages, 35.3 (range = 26-41), out of a possible 42 (84%). Teachers in the study valued the process, which supported the notion that a relationship exists between how teachers feel about a process and the likelihood of their implementing effective response strategies to children with challenging behaviors. This finding is relevant to the dissertation study because it explores teacher readiness to change, which may also impact implementation of new strategies.

Two additional studies highlighted the effectiveness of the FBA process as an evidence-based response to challenging behaviors. The field of special education has conducted the most comprehensive examination of the FBA process as an effective response strategy to children with challenging behaviors. Wood, Ferro, Umbreit, and Liaupsin (2011) examined the implementation process in an integrated preschool setting. They asserted that in order to reduce challenging behavior, the process must be implemented correctly.

In the Wood et al. (2011) study, participants ($n = 3$) included three preschool students with IEPs who exhibited challenging behaviors that disrupted learning: Mark, a 45-month-old African American child, Doug, a 48-month-old Caucasian child with Down syndrome, and Paul, a 57-month-old Hispanic child with autism. The researchers began by conducting an FBA on each of the participants, gathering baseline data through direct observation. Researchers documented the antecedents, the behaviors, and the consequences (A-B-C) of Mark, Doug, and Paul. The data indicated that the children all had similar functions for their behaviors. These were behaviors that provided them with adult and peer attention. Mark and Doug exhibited challenging behavior when they were asked to do things they did not want to do, and Paul's behavior occurred during times of transitions. When triggered, the children would cry, scream, lay on the floor, grunt, or touch a friend. These behaviors clearly disrupted the children's and peers' learning, so the goal was to introduce positive replacement behaviors. Successful replacement behaviors included sitting, engaging in an activity, looking at the teacher, and following directions. These behaviors were used to replace grunting or yelling. It was determined that the function of the behavior for the child was to gain the attention of the teacher or the peer, but it was important to determine whether the child was able to learn new behavior and to consider the effectiveness of the learning environment.

The implementation of the FBA process showed impressive improvement in all three children's behaviors from the baseline data (Wood et al., 2011). Mark's mean of on-task behavior during the baseline was 37% (range = 20%-53%) and improved to 68% (range = 3% - 93%). Doug's behavior went from 12% on-task to 81%, and Paul's on-task behaviors went from 11% to 99%, with a follow-up average of 73%. These results

highlighted the FBA process as an effective way to methodically capture the frequency of disruptive or challenging behaviors using the A-B-C approach. Additionally, it showed that when interventions, or responses were aligned with the function of that behavior, the disruptive behaviors lessened. While the Wood et al. study focused on children with special needs, the process can be transferred to any child exhibiting challenging behaviors.

Despite the small sample size, this study suggested that with careful implementation, there is a reduction in undesired behaviors. While the teachers in the Wood et al. (2011) study were trained in special education, one adult, Mark's grandmother, was not highly trained and implemented the intervention well enough for his behavior to show improvement. It has become important to widen the circle of professionals who have the knowledge and skills to conduct an FBA (Wood et al., 2011). Another similar study demonstrated the ability of general educators to fully implement the FBA process after training, resulting in a decrease in challenging behaviors in preschool children.

The previous studies discussed provided evidence that the FBA process is an effective response strategy to children who exhibit moderate-to-severe challenging behaviors. Research by Nahgahgwon, Umbreit, Liaupson, and Turton (2010) suggested that the process is effective in preschool settings. Nahgahgwon et al. examined both the effectiveness of the FBA process in children at risk of developing emotional and behavioral disorders in inclusive programs, and measured the social validity of the process. The participants ($n = 3$) included three children: Josh, a 6-year-old Hispanic child in first grade; Zane, a 5-year-old Caucasian child in kindergarten; and Ian, a 6-year-

old Caucasian child in kindergarten. None of the children had IEPs, but all were at risk for developing emotional or behavioral disorders based on aggressive and disruptive behaviors that interfered with their own and others' learning experiences. All three children exhibited challenging behaviors that resulted in the need of Tier 3 services, which included a FBA and subsequent BIPs. In addition to qualifying for Tier 3 services, the children were screened using the *Behavior Assessment System for Children—Second Edition*. In order to be accepted in the study, results of the assessment needed to yielded results for at-risk or clinically significant scores on two of the scales used. These scales included: Attention, Conduct Problems, Hyperactivity, Social Skills, or Adaptability. In addition, the children's teachers were asked to complete the Teacher Rating Scale (TRS) portion of the assessment. Cronbach's alphas for these instruments ranged from .91 to .96.

The Nahgahgwon et al. (2010) study was conducted in three phases. The first phase included conducting an FBA for each student to identify the antecedent conditions that contributed to the problem behaviors, and the consequences reinforcing the behaviors. Data were collected through the review of files, interviews of both teachers and children, and direct observation of the children using the A-B-C process. This data helped to identify the function of each of the children's behaviors. The function of Josh's behavior was to avoid tasks that were challenging for him. This finding made sense because he had low-average skills for a first grade student based upon his report card and other school assessments. Zane, the second participant, gained social attention from his teacher when he exhibited disruptive and challenging behaviors. Zane's behavior was disruptive throughout the day, but mostly during large group gathering times. Zane would

roll on the carpet, cry, and call out during other children's turns in order to gain teacher attention. Finally, Ian, the third participant had a history of challenging behaviors beginning preschool. His academic skills were "well below grade level" (Nahgahgwon, et al., 2010, p. 543), and there was suspicion that Ian had difficulty processing information. Structured A-B-C observations revealed that Ian's disruptive behavior accelerated when he was required to write independently. Ian did not know any letter sounds and could not identify more than three to five letters of the alphabet. The function of Ian's behavior was determined to be avoiding a difficult task and gain adult attention. Ian's disruptive behaviors gained him the teacher's attention while also allowing him to avoid tasks that were too difficult for his ability.

Phase 2 of the Nahgahgwon et al. (2010) study involved the development of intervention plans that helped address the function of the three children's disruptive or target behaviors. Before the interventions were designed, two questions were posed: (a) can the student perform the replacement behavior, and (b) do the antecedent conditions represent effective practice?

Phase 3 of the research focused on the implementation of the intervention. Nahgahgwon et al. (2010) determined that Josh could be successful if he was given tasks that he could do quickly and easily. Because the instructional practices in the classroom were not designed to address Josh's limitations, improvements in the learning environment were made. As a way of reinforcing on-task behavior, Josh was given smaller units of work supported with prompt feedback, which was followed by free time. When Josh was off-task, he was redirected to the task (escape-extinction) or was prompted to ask for assistance.

In order to design an appropriate intervention for Zane, his strengths were used to help him develop the skills he needed (Nahgahgwon et al., 2010). Zane was able to engage in assigned tasks as he exhibited high accuracy, could sustain attention, and engage in appropriate behavior during large group time. It was determined that for Zane, contingencies needed to be adjusted. In order to increase on-task behavior for Zane, the teacher reminded the entire class of the expectations before the large group experience. She also provided Zane with appropriate attention when he answered questions appropriately. When Zane was off-task, he was ignored (attention-extinction).

Ian was unable to complete most Kindergarten tasks, so the intervention design had two critical adjustments (Nahgahgwon et al., 2010). First, his work was individualized and modified based on his ability. Also, each lesson began with brief instructions as a way of prompting him. The teacher stated the behavioral expectations to all children, and then repeated them individually for Ian. In order to reinforce on-task behaviors, attention was provided throughout the group-time experience, and free time was given after success. Ian was redirected to appropriate behaviors when off task.

The results of the interventions were successful. Each child made progressively better progress in their on-task behaviors as long as the teachers implemented the intervention consistently. During the first four baseline observations, Josh's on-task behavior averaged 33%, but after the function-based intervention were implemented, his on-task behavior increased to an average of 92%. His teacher's level of treatment integrity averaged 99%. Zane's on-task behavior improved from an average of 65% to an average of 89%. Zane's teacher's level of treatment integrity averaged 98%. Finally, Ian's on-task behavior improved from 53% to 86%, his teacher's level of treatment

integrity 93%. Social validity was measured in this study using the Treatment Acceptability Rating Form-Revised, an instrument that includes items that have correlation coefficients result above .90. The teachers' social validity of their practices were measured pre- and post-interventions. All three of the teachers' scores indicated a higher social validity result for the function-based interventions after the improvements with an improvement of 20, 35, and 27 points higher than the baseline.

The Nahgahgwon et al. (2010) study confirmed the effectiveness of the FBA process as a way to reduce moderate-to-severe challenging behaviors in young children. Because it is so important to provide effective interventions early in a child's life, the study also argued that children who are at risk for emotional or behavioral disorders benefit from the FBA process. Social validity scores have continued to suggest that when teachers experience positive results in the classroom, they become more invested in the process. However, the Nahgahgwon et al. (2010) study did not investigate teacher readiness to change, which is a gap in the literature. To develop a way to fill this gap, studies examining the transtheoretical model of change as it applies to changing health practices, and the adoption of classroom management strategies, and to early childhood practices are reviewed.

Effectiveness of Professional Development to Teach FBA as an Evidence-Based Practice

Previous studies have focused on the effectiveness of clear policies for responding to children with challenging behaviors, as well as evidence-based practices that reduce challenging behaviors in preschool children. In order to gain the essential response skills, teachers learn developmentally appropriate practices (DAP) and effective response

strategies through professional development sessions. The National Professional Development Center defined professional development (PD) for early childhood educators as, “facilitated teaching and learning experiences designed to enhance practitioners’ knowledge, skills, and dispositions, as well as their capacity to provide high quality learning experiences for young children” (Snyder et al., 2012, p. 188). Snyder et al. systematically reviewed multiple empirical research studies ($n = 256$) in order to identify key PD characteristics for early childhood educators. For the meta-analysis, there were three aspects examined: (a) the study had to describe a type of PD, (b) involve early childhood practitioners working with children birth through age 5, and (c) provide empirical evidence of outcomes for either teachers or children as a result of the PD (Snyder et al., 2012).

In order to compare the studies, Snyder et al. (2012) used the codes “who, what, and how” of PD and identified the research design of each. The “who” of each study identified the learning environment and with whom the participants interacted. The “what” was the content of the PD presented, and the “how” focused on the teaching and learning experiences of the participants. Additional categories were created for practices that supported the implementation of knowledge and skills, such as coaching, communities of practice, and consultation.

Relevant articles ($n = 256$) were initially identified through a two-step search procedure from scholarly databases. Characteristics of studies focusing on instructional practices ($n = 63$) were compared with the larger group ($n = 256$). Of the studies, an unexpected 74.1% of the participants reported working with children with disabilities. This was surprising given only 10% of the studies were identified as special education

preschool classrooms. According to Snyder et al. (2012) this finding likely reflects the diversity found in typical inclusive settings, and the finding is relevant to the dissertation study as it highlights the challenges teacher face in a typical inclusive setting.

Of the 256 studies examined, Snyder et al. (2012) noted that 68% included a specific description of the strategies presented in the PD, and coaching was the most frequently mentioned strategy (51.6%). All but three studies included sufficient information about who was responsible for providing follow-up. Research staff was reported to follow-up most frequently (49.1%) followed by consultants (28.3) and supervisors (12.6%). Colleagues and peers were reported to be providers of follow-up (11.9%), and practitioners were reported to provide follow-up in 8.2% of the studies. Lead teachers were reported to receive the most follow-up at 71.1%. When the dose and frequency of the interventions were examined, “not reported” was frequently coded. According to Snyder et al. (2012), the absence of this information impeded the ability to calculate and examine cumulative intervention intensity.

The Snyder et al. (2012) review of the literature examined the key characteristics of early childhood PD in order to help advance the quality and evolving science of effective teaching. The researchers posited that high quality PD has the potential of impacting teachers’ knowledge and skill with regard to child development outcomes. While the results indicated the need to better define characteristics of early childhood PD, the researchers strongly suggested teacher and child outcome data should be clearly defined and included in PD. This is relevant to the dissertation study as a PD experience will be designed to present evidence-based strategies to early childhood educators. Historically, the FBA process has been conducted by special education professionals,

with input from general educators. Although FBA is typically lead by special educators, research has demonstrated the ability of a general educator to learn and implement the process.

Snyder et al. (2012) demonstrated the effectiveness of delivering critical skills through professional development sessions, increasing teachers' knowledge base and impacting child outcomes. In a quasi-experimental study, Christensen, Renshaw, Caldarella, and Young (2012) did the same. The Christensen et al. (2012) study focused on teaching general educators the principles and procedures of the FBA process through professional development with the goal of developing subsequent behavior interventions, resulting in positive behavioral outcomes. Interestingly, the study once again incorporated teacher acceptance as critical to a successful FBA process.

For the case study, Mrs. Cox ($n = 1$), a 25-year-old Caucasian fourth-grade teacher with a bachelor's degree in elementary education was selected (Christensen et al., 2012). Mrs. Cox was asked to choose one student without an IEP ($n = 1$) who exhibited disruptive behavior that interrupted the learning process. The study took place in an elementary school in suburban Utah and was culturally and socio-economically diverse. Mrs. Cox participated in a 10-week PD workshop with her peers. The PD design included group instruction, reading assignments, consultation, and practical application activities. The principles and procedures of conducting an FBA were presented. In order to check for understanding, participants demonstrated their knowledge against a preset rubric that was aligned with the content of the PD.

Following the PD session, Christensen et al. (2012) had Mrs. Cox collect frequency data on one child's targeted behavior for 15 minutes. A treatment fidelity

checklist was designed in alignment with the proposed behavioral support plan (BSP) focused on improving the behavior of the student. Mrs. Cox's data was determined to be adequately reliable. The researchers then measured Mrs. Cox's social validity and feasibility perceptions using the Social Validity Questionnaire, a 16-item survey. For this instrument, scores below 43 indicated unfavorable perceptions, 44 to 55 favorable, and 55 to 66 very favorable (Christensen et al., 2012). Mrs. Cox's composite social validity score was 58, which suggests that she valued the process and the training, and thought it was valuable to her practice.

Overall, results indicated that the training and implementation process was a success (Christensen et al., 2012). The child's behavior improved and the teacher's knowledge of the process increased. Furthermore, the results of the social validity measure indicated the importance of the teacher's belief in the process. The dissertation study examined teacher readiness to change their practice as an attempt to help teachers see the value in the process prior to engaging in the type of training that Mrs. Cox experienced.

The studies discussed thus far have demonstrated how PD can be an effective way to help teachers develop skills and knowledge of the FBA process. FBAs are often conducted by a team of highly educated and specialized professionals in special education, often with limited participation of those who provide direct care to children. Because of the scope of the problem and the importance of the teacher-child interaction, Maag and Larson's (2004) study was chosen to explore whether a general education teacher could effectively conduct an FBA and develop a subsequent intervention strategy. The study took place in a medium-sized Midwestern city in the United States. The

participant ($n = 1$), Ms. Gomez, had 15 years of teaching experience and was a leader of a fifth- and sixth-grade teaching team in elementary school (23.3% minority, 62.1% received free and reduced lunch). Ms. Gomez selected students ($n = 2$) who exhibited challenging behaviors in her classroom.

The first participant was Allen, who frequently disrupted academic lessons by laughing, touching peers, getting out of his seat, talking without permission, and refusing to follow directions (Maag & Larson, 2004). Allen had a classification of an emotional behavioral disorder (EBD), and was in low-average range with regard to his IQ. Bruce had a learning disability (LD) and exhibited behaviors such as making animal noises, getting out of his seat, refusing to follow directions, and drawing pictures during lessons. These behaviors disrupted his and other's learning.

Through a PD workshop, Ms. Gomez was provided with five and one-half hours of training on the functional assessment process. Training included theory, the when and why an FBA would be conducted, the exact procedures, and how to formulate a hypothesis. Ms. Gomez was asked to formulate a hypothesis as a way to check for her understanding. Then, as part of her practice, Ms. Gomez completed a Functional Assessment Hypotheses Formulation Protocol (FAHFP), whereby she identified and defined target behaviors, put the behaviors in context, documented behaviors, identified the function or motivation of the behavior and then created a hypothesis. Ms. Gomez used an A-B-C chart to gather baseline data, and observations took place during the learning day.

The documentation that Ms. Gomez gathered suggested that the function of Allen's behavior was based around his desire for peer attention. To meet this need, Ms.

Gomez provided Allen with a choice of where he wanted to sit during lessons. Bruce, she noted, responded very well to praise. Ms. Gomez began praising Bruce for desired behaviors as an intervention to the challenging behaviors. Data collection continued throughout the implementation process.

Improvements in the behaviors of both children resulted from the FBA process. The baseline data indicated that Allen exhibited undesired behaviors an average of 13 times during 45 minutes of academic lessons. Allen's behaviors decreased to an average of two during the same 45 minutes. Bruce's behaviors decreased from an average of seven during the baseline, to an average of one. During six of eight subsequent observations, no disruptive behaviors occurred.

The Maag and Larson (2004) study not only demonstrated that the FBA and A-B-C processes are effective strategies to reduce challenging behaviors, but also suggested that general educators can learn how to effectively implement the process through PD sessions. One factor to consider is that Ms. Gomez volunteered for the study, which may have indicated an initial high level of motivation to learn new strategies. The results of the Maag and Larson study pertain to the dissertation study because the results demonstrated the ability of preschool teachers to learn the skills needed to implement the FBA process, implement it with fidelity, and ultimately decrease undesired behaviors in preschool classrooms. The dissertation study attempted to measure the readiness of teachers like Ms. Gomez in order to individualize the PD experience, moving away from a one-size-fits-all approach to learning.

Teacher Perception and Response to Challenging Behaviors

Previous studies have focused on the effectiveness of professional development as a way to help teachers develop knowledge and skills with regard to responding to challenging behaviors. These studies also included social validity as a measure because what a teacher believes and feels might impact how they interact with children. Because preschool teachers play such an important role in the lives of the children, it is important that teachers have evidence-based practices to respond to children with moderate-to-severe challenging behaviors. Pianta (1999) noted that throughout the typical preschool day, there are many adult-child interactions that communicate acceptance, approval, and belonging, as well as interactions that indicate what behaviors are socially acceptable. At their best, these interactions form trusting relationships; at their worst, the interactions can become a source of conflict and risk (Pianta, 1999). Dobbs and Arnold (2009) explored how preschool teachers' perceptions of children impacted the way they interacted with them. For the study, preschool children ($n = 107$) were recruited from six childcare centers in the Northeastern United States. The sample included an equal distribution of male ($n = 57$) and female ($n = 50$) children, of which 34% were Puerto Rican, 33% Caucasian, 31% African American, and 3% multicultural.

In order to measure teacher perception, the Teacher Report Form (TRF) of the Child Behavior Checklist was used (Dobbs & Arnold, 2009). The TRF is normed for children between 4 and 18 years and is used extensively with preschool children. Cronbach's alpha ranged from .90 to .97, and test-retest reliability over 15 days ranged from .91 to .95. The researchers were interested in capturing the frequency of commands and praise within teacher-child interactions, and how the frequency aligned with how the teacher perceived the child with whom he or she was interacting.

Dobbs and Arnold (2009) conducted direct observations using video-recordings during both unstructured and structured learning time in the classroom. Commands and praise were coded for frequency, and multiple regressions were run to determine the effects of more than one independent variable on the outcome. The standardized coefficient of the target teachers' ratings was .29 ($p = .01$), which indicated a relationship exists between teachers' perceptions of children's behaviors and the number of verbal commands that a child is given. Commands were used as a variable because they sometimes are used unconsciously to control children as a way to prevent serious behavior from occurring, when in fact this method often contributes to further behavioral issues. In recognition of this fact, the DEC Code of Ethics (Feeney & Freeman, 1999) calls for professionals who work with young children to demonstrate through behavior and language, a respect and appreciation of the unique value and human potential of each child. This is communicated to young children through those many interactions that occur daily.

Although Dobbs and Arnold (2009) used a small sample size, the findings suggested that teacher perceptions, when negative, could result in additional behavioral problems in children. Although teacher perceptions in the study were measured, the teachers' readiness to change or adopt new, evidence-based practices for responding to challenging behaviors were not included. A study that measures teachers' readiness to change their responses to challenging behavior could be helpful for addressing this issue in early childhood education.

Just as Dobbs and Arnold (2009) tested teacher perceptions of children and their impact on teacher response to challenging behaviors, another study examined teacher

interactions with young children who exhibit challenging behaviors. Factors that impacted teachers' response strategies included frustration due to job stress, adult-child ratio, and other external factors. Gilliam and Shahar (2006) examined the relationship between teachers' feelings of job satisfaction and the likelihood of preschool expulsion. The researchers examined whether the combination of teacher frustration and their inability to appropriately respond to children with challenging behaviors was correlated with a higher expulsion rate. As with the previous studies, teacher beliefs and how teachers interact with children were part of the study.

In Gilliam and Shahar's (2006) quantitative study, a random sample of preschool classrooms ($n = 185$), serving children age 3-5 was selected from a list of licensed childcare providers ($n = 542$) from six geographical regions of Massachusetts. Lead teachers completed the measures ($n = 119$). First, preschool expulsion and suspension data were collected from primary teachers ($n = 185$) using a comprehensive 15-page survey. In order to measure practices in the preschool classrooms, teachers were asked about their expulsion and suspension practices over the past year.

Gilliam and Shahar (2006) then used the Child Care Worker Job Stress Inventory to measure how much control teachers feel they have over things that happen in the workplace. The survey consisted of 56 items rated using a 5-point Likert scale. In the study, the Cronbach alpha for job control, job demands, and job resources were reported as .81, .86, and .84, respectively. As a final step, the researchers used the Pre-K Survey of Beliefs and Practices to measure teachers' pedagogical beliefs on a continuum scale from 1 to 10. The 7-item beliefs scale had a Cronbach alpha of .77 and the practices scale

Cronbach alpha of .78. There was a high correlation between the two scales ($r = .85$, $P < .001$).

Interestingly, class size was associated with a 103% increased likelihood of preschool expulsion. When job demands and group size were high, the percentage of teachers who reported expelling preschoolers was 45.71% to 50.00%. However, when both group size and job stress were low, the percentage of teachers who reported expelling children was low (12.00%). In other words, when preschool teachers were under high levels of stress, combined with low job satisfaction, there was a higher chance of expulsion for children. The fact that children were expelled at such a high rate indicated a problem in preschool response to challenging behaviors. The results of this study indicated that preschool programs seemed to move toward a quick and permanent solutions using expulsion as a response strategy (Gilliam & Shahar, 2006). This research made important connections with teachers' beliefs and external stressors related to their response to challenging behaviors, but again, did not look at the teacher's readiness to change their practices related to response strategies in order to keep children in quality care. According to the DEC (1999), many of the moderate-to-severe challenging behaviors can be eliminated by adjusting the behavior of the adults surrounding them. This is a strong position, one that suggests that what teachers believe impacts their response.

The studies reviewed thus far examined teacher perception and job satisfaction. A group of Korean researchers also studied teacher beliefs related to developmentally appropriate practice (DAP), an accepted and well-known approach in early childhood education and in the United States. Kim et al. (2009) conducted a comprehensive study in

South Korea that highlighted the complex nature of the problem that exists with regard to responding to children with challenging behaviors internationally. Three different factors were examined in the study that included program factors, teacher factors, and child factors. Program factors included the school climate, quality professional development, teacher-child ratios, and access to behavior specialists. These factors have been shown to directly impact teacher practices in the classroom. Teacher factors included the years of experience, levels of education, and how teaching beliefs impact classroom practices. Child factors considered the severity of the child's behaviors and the teacher's communication with parents and families. All of these factors, according to Kim et al., impacted the practices that occur in the classroom. For the purposes of the dissertation literature review, the focus will be on the teacher factors identified by Kim et al.

Kim et al. (2009) selected participants from a list of preschool and childcare centers from 16 districts across South Korea ($n = 109$; $n = 54$ preschools; $n = 55$ child care centers). In order to measure teacher factors, teachers ($n = 236$) were surveyed using two instruments. The first was called the Korean Version of the Teacher Beliefs Scale (K-TBS). The original Teacher Beliefs Scale was designed to measure the beliefs teachers have about Developmentally Appropriate Practice (DAP) (Bredekamp, 1987). This was a 30-item, 5-point Likert Scale measure. The items were in alignment with the five constructs of developmentally appropriate practice (DAP), which are common concepts in early childhood education. The overall consistency of the K-TBS was .76, while in the study the internal consistency was .88.

The second instrument used by Kim et al. (2009) was the Teacher Strategy Questionnaire (TSQ). This instrument measures strategies teachers use to address

children with challenging behaviors in the classroom. The TSQ also measures how often behavioral strategies are implemented in classrooms. Experts in early childhood development from both United States and South Korea reviewed and classified items into categories. The final questionnaire included 34 items using a 5-point Likert scale that rated the frequency that each strategy was implemented. A factor analysis was conducted on the final version of the TSQ in order to determine whether the theoretical constructs were valid using the Kaise-Meyer-Olkin (KMO) test, and Bartlett's test of sphericity verified that the TSQ items were appropriate (KMO = .81; Bartlett's test, $\chi^2(561) = 2559.92$ $p < .001$). Cultural analysis was also conducted on the instrument using the translation-back-translation process.

Through multiple regressions, the researchers identified three predictors of positive and proactive strategies that explained 25% of the variance positive response strategies used in the classroom. They included DAP integrated curriculum beliefs at 18% ($p < .001$), DAP social beliefs at 22% ($p < .001$), and the consultation with specialists. Results of the Kim et al. (2009) study suggested that there is a strong association between what a teacher believes is developmentally appropriate, what the teacher believes to be socially acceptable, and how he or she responds to children with moderate-to-severe challenging behaviors. However, the DAP framework places a strong emphasis on social interactions and child-initiated activities, which may not be the best framework for all children in early childhood programs, especially those with challenging behaviors (Kim et al., 2009). Based on these concerns, the researchers suggested the need for alternative approaches to children with challenging behaviors. These alternatives

included positive behavioral interventions, evidenced-based practices such as the FBA and subsequent BIPs.

Thus far, the studies discussed have included teacher belief, social validity, and teacher perceptions as factors in how teachers respond to children who exhibit challenging behaviors. The studies reviewed in the next section explore the transtheoretical model of behavior change first in the area of health habits, then with regard to adopting new teaching practices.

Teacher Readiness to Change

The transtheoretical model (TTM) was initially developed as an application for understanding the process of changes in health behavior. The model captures change as it happens over time through five stages: (a) pre-contemplation, (b) contemplation, (c) preparation, (d) action, and (e) maintenance (Norcross, Krebs, & Prochaska, 2011; Prochaska & DiClemente, 1983). Since its inception, the model has evolved from an application that applies to individual health behavior change to a model that can be applied to teachers' readiness to change. The literature presented on TTM first examines smoking cessation and is then generalized to 12 health behaviors. Finally TTM is applied to the adoption of classroom management strategies in middle school and then to early childhood education practices.

TTM and smoking cessation. In the original TTM study, Prochaska and DiClemente (1983) examined smokers who wanted to change their smoking habits. Participants varied in their stage of change, and the researchers found that those in pre-contemplation, the very first stage of change, were the least open to feedback from others and demonstrated an unwillingness to change their smoking behaviors. The researchers

also found that as the participants progressed through the stages, the behaviors they exhibited showed an increased interest or openness to information about smoking. Participants also reported an increased awareness of the problem and sought social reinforcement to change the behavior. This research is the foundation for TTM.

The Prochaska and DiClemente (1983) study included participants ($n = 872$) from the northeast and southern United States. Each participant completed the *Process of Change* test, a 40-item questionnaire that measures 10 processes of change, an instrument with Alpha coefficients ranging from .78 to .91. These groups were labeled and defined as Long-term quitters ($n = 247$), Recent Quitters ($n = 134$), Contemplators ($n = 187$), Immotives ($n = 108$), and Relapsers ($n = 196$). Participants were asked self-report the frequency they exhibited the behavior in the past month using a 5-point Likert scale (1 = not at all; 5 = repeatedly). They completed the same survey every six months. Participants were also interviewed to determine the stage of change they were in at the time of the interview. The data was used to align each participant's stage of change with the corresponding processes of change. Alignment was determined done through a multivariate analysis of variance (MANOVA), and the results were significant $F(1, 40) = 11.199, p = < .001$. The significant MANOVA was followed up by separate ANOVAS for ease of communication, and because the 10 change processes were found to be independent. The significance for the 10 processes of change related to the five stages of change were: consciousness raising ($p < .0001$), self-liberation ($p < .0001$), social-liberation ($p < .001$), self-reevaluation ($p < .0001$), environmental reevaluation ($p < .001$), counterconditioning ($p < .0001$), stimulus control ($p < .0001$), reinforcement management ($p < .0001$), dramatic relief ($p < .0001$), and helping relationships ($p < .05$).

The ANOVAS indicated that there were significant differences in how frequently the 10 processes of change were used by each group. The results indicated that each group differed from each other at a $p < .05$ level or greater.

The results of the Prochaska and DiClemente (1983) study provided a framework for understanding the process of behavior change and individual readiness to receive new information. Prochaska and DiClemente found that once participants entered the contemplation stage of change, they were much more receptive to actions that led to further change than when they were in the pre-contemplation stage. Those in the pre-contemplation stage used 8 of the 10 processes significantly less ($p = .05$) than any other group. Those participants in the contemplation stage used consciousness-raising and the self-evaluation processes between contemplation and action. Self-liberation, helping relationship, and reinforcement management was strong for those in the action stage.

The Prochaska and DiClemente (1983) research informs the dissertation study as it highlighted the importance of individualizing treatment for the study participants based on their readiness to change their behavior rather than make the assumption that all of the participants were coming for treatment were ready change or in the action stages. Many behavior-change treatments at the time of the Prochaska and DiClemente study were designed to fit in the action stage of change, resulting in unsuccessful treatments for those participants who were not yet ready to take action.

Transferring the knowledge gained from Prochaska and DiClemente (1983), it becomes apparent that adjustments to PD should be taken to account for teacher behavior changes. Specifically, the action teachers take as they respond to preschool children exhibiting moderate-to-severe challenging behaviors is a behavior in itself. The goal is

for the teacher to take an action that helps children develop critical self-regulation skills. It is possible that the same approach can be used when the goal is to improve teachers' skills in responding to children with challenging behaviors. The dissertation research considered how the Stage of Change Scale for Early Education and Care 2.0 could be used to align a teacher's stage of change with an individualized PD session that teaches effective response strategies.

The TTM and the notion that change was found to be a process consisting of stages of readiness for smoking cessation, but questions arose as to whether it was applicable to all behavior change. In order to answer this question, Prochaska et al. (1994) conducted a cross-sectional comparative study to examine whether this approach could be generalized to behavior change. For the study, the researchers targeted 12 problem behaviors that included smoking cessation, quitting cocaine, weight control, high-fat diets, adolescent delinquent behaviors, safe sex, condom use, radon gas exposure, exercise acquisition, mammography screening, and physicians' preventative practices with smokers (Prochaska et al., 1994). While the behaviors varied in severity, all were understood to impact health and clearly required behavior change.

For the integrative research study, data from participants were gathered from 12 separate samples ($n = 3,858$): smoking cessation ($n = 764$), weight loss control ($n = 123$), quitting cocaine ($n = 156$), high fat diet ($n = 180$), adolescent delinquency ($n = 159$), safer sex ($n = 213$), condom use, ($n = 345$), sunscreen use ($n = 227$), radon gas exposure ($n = 698$), exercise acquisition, ($n = 717$), mammography screening, ($n = 141$) and physicians' practices ($n = 153$) (Prochaska et al., 1994). Each component was analyzed using a varimax rotation on the decisional balance for all 12 behaviors. The analysis was

based upon a sample of participants who completed a questionnaire for one of the problem behaviors. The alpha reliability ranged from .75 to .95, and the probability that 12 of the 12 studies would yield a two-component structure was .0002. The probability that at least 11 of the 12 studies would result in a two-component structure on the decisional balance was .003.

Remarkably, the results indicated generalizations and common themes did exist among the 12 behaviors (Prochaska et al., 1994). One critical strategy that emerged from the study was that simply asking participants to consider the pros and cons for behavioral change within the earlier stages of change helped to move them forward. The results of the study are interesting because it suggests that teachers who are initially resistant or unwilling to adapt new response strategies to respond to challenging behaviors might be moved forward in their receptivity if the PD experience begins with listing the pros and cons of current strategies. A critical factor appears to be to determine what stage of change an individual is currently in before introducing the response strategies. Such a determination is necessary in order to align the content with his or her readiness to change.

The prior study examined how the transtheoretical model of change was generalized for 12 behaviors, resulting in common themes. The next longitudinal study focused on exercise behavior in older adults as a test of the transtheoretical model. The results indicated that the stage of change did not predict the adoption of exercise in seniors, but did predict walking behavior among the participants.

Cheung, Wyman, Gross, Peters, Findorff, and Stock (2006) conducted a secondary analysis from a pilot study designed to test how various types of exercise

reminders impacted walking behavior and adhering to a routine for seniors enrolled in a 16-week walking program. Participants ($n = 86$) were randomized into one of three groups: self-monitoring, live-person phone calls, and computerized phone calls designed to monitor and prompt exercise. The researchers found no differences between the intervention groups, and as a result, the groups were combined to test the reliability of the instruments and the validity of the TTM constructs in predicting behavior change. For this study, the focus is placed on the experiential and behavioral process of change results.

Participants ($n = 86$) included in this study were adults 55 years or older, who resided in senior centers, apartment complexes, and throughout the community where the study was conducted. Initially, a physical assessment was conducted using the Mini Mental State Examination score (>23) to ensure that participants could walk at least 30 feet without stopping, were free from serious health conditions that may have interfered with low-to-moderate intensity exercise participation. This study targeted older adults not currently engaged in a regular exercise routine for 20 minutes, 3 times per week.

Sociodemographic data were gathered through a self-administered questionnaire that included age, education, income level, and gender. Stage of change was measured by an adaptation of the Exercise Stage of Change Questionnaire consisting of five true-or-false questions that assessed current and past involvement in regular exercise, as well as the intent to exercise for the next 6 months. The Kappa index of test-retest reliability used with middle-aged adults over a 2-week period was .78. For this research, the questions were modified to a yes/no format, and regular exercise was defined as 3 times each week for 20 minutes. Processes of change were assessed by a modified Exercise Processes of

Change Questionnaire that consisted of 40 items aligned with the processes of change. The first 20 items measured the experiential processes, and the second 20 measured the behavioral processes. The reliability coefficients of both processes were high as measured by Cronbach's alphas of .89 and .91 as baseline, and .89 and .92 for the follow-up.

Participants were asked to keep an exercise log in order to keep track of the days and duration of the exercise, and three home visits were conducted during the study. Based on this information, participants were assigned a Stage of Change level: Stage 1: Precontemplation, Stage 2: Contemplation, Stage 3: Preparation, or Stages 4 & 5: Action/Maintenance. The hypothesis posited in the study predicated that participants in Stage 3: Preparation would be more likely to engage in exercise after the intervention than would those in the first two stages of change: Precontemplation or Contemplation. The results did not support this hypothesis. While 78% of those in Preparation became adopters of the exercise program, 82.8% of those in Stage 1: Precontemplation and Stage 2: Contemplation also adopted the 16-week exercise program.

This longitudinal study was one of the first to examine the relationship between the TTM construct in predicting behavior change in older adults related to exercise. In general, the results indicated partial support to various aspects of TTM with regard to adopting exercise programs for older adults. Similar to the current study, participants showed motivation as they volunteered for the study. Therefore, the authors' were suspicious of the fact that any participant was actually in Stage 1: Precontemplation, the stage that indicates an individual is not ready to change. According to the researchers, the instrument used to measure stage of change in this study was suspect. The researchers also reported that participants used behavior processes more often as they progressed to

higher stages of change from baseline to follow up, which is consistent with the model predication and other recent health behavior studies. Cognitive processes of change did not decline, and the results suggested that the processes of exercise-behavior change be incorporated when designing exercise interventions, similar to the application of the stage of change model on professional development. “Interventions designed to promote continue use of behavioral processes might be a promising strategy to enable more participants to remain in maintenance” (Cheung, et al., 2006, p. 115).

In addition to their recommendation of using the processes of change to inform the design of an intervention, the results indicated that cons of walking played an important role with older adults throughout each of the stages. The TTM approach posits that in order for progression from Stage 3: Preparation to Stage 4: Action, the cons must be lower as a sign that an individual is prepared for Action. These results are similar to another study on obesity.

This study explored the TTM model of change related to the adoption of exercise in older adults, and concluded partial support for the model. The stage of change instrument used may have been problematic as it was adopted from the one used with smoking cessation. For exercise behavior of older persons, the instrument did not appear to accurately capture the participant’s stage of change when an interest was shown to participate in an exercise program. The following study also examines the adoption of exercise in an adult African American sample, as discussed below.

Blaney et al. (2012) conducted a study to validate the use of TTM measures to increase exercise and physical activity with African American adults. Results suggested that the use of the TTM measures also be used as a guide when designing tailored

interventions, but again, concern arose around the cons scale, as mentioned in the previous study.

This cross-sectional, quantitative research study included African American adults ($n = 521$) who were part of a larger intervention study that examined both organ donation and exercise. All participants were 18 years or older, and they were included in this study only if their answers on a medical questionnaire were affirmative, eliminating any medical concerns related to exercise. Participants in the exercise group were assessed using the process of change for exercise, which is the focus of this review.

All of the participants in this study were provided with a definition of exercise as any planned, moderate, or intense exercise performed to increase their physical fitness. A 30-item measure was given to in the exercise group ($n = 255$) that included a 30-item measure that assessed both experiential and behavioral processes of change. Participants were asked to rate how often they used the processes of change strategies to encourage their own engagement in exercise. An example provided was, "I keep a set of exercise clothes conveniently located so I can exercise whenever I get the time" (Blaney et al., 2012, p. 3). This measure previously reported internal consistency with coefficient alphas for the 10 subscales with a range of .64 to .86. In order to assess the relationship between decisional balance and the processes of change, two multivariate analysis of variances (MANOVA) were conducted to examine the mean differences across the stages of change. The 10-factor model was determined to be the best fit, and coefficient alphas ranged from .62 to .91 using the ten-factor correlated model for the processes of change exercise measure for exercise.

Results indicated that the processes of change varied across the stage of change, consistent with other TTM applications and supporting the external validity of this measure. As expected, participants that reported they were further along in their readiness to change also reported using behavioral processes of change more often. Adversely, the study suggested that those individuals in precontemplation used the processes of change less often than those in preparation, action, and maintenance. This study, as well as the previous study, demonstrates the value of the processes of change in designing interventions for exercise in particular. Frequency and duration data is used in order to determine the behavior in both of these studies. The next section examines TTM applied to education, specifically teacher response to challenging behaviors.

Transtheoretical Model Applied to Education

The previous studies have examined how the TTM model has been applied as a way to understand behavior change as it impacts health habits. The first study discussed in this section was an exploration of how the theory can be used to understand behavior change in teachers' practices, specifically in the way they respond to children who exhibit challenging behavior. In their research, Burke et al., (2006) applied the transtheoretical model of change to an experienced, urban middle-school teacher, Mrs. Brooks ($n = 1$), who was faced with implementing new evidence-based classroom management strategies. While extensive literature exists on effective classroom management strategies for children, many teachers continue to use ineffective strategies such as ignoring students' appropriate behaviors and reinforcing negative ones (Burke et al., 2006). This study was chosen for this literature review because it demonstrated the movement of an

experienced teacher through all five stages of change, including pre-contemplation, which indicated that she was initially resistant to change.

In the beginning of the school year, all of the teachers in the school participated in a two-day PD workshop for a program called Girls and Boys Town Well-Managed Classroom (Connolly, Dowd, Criste, Helson, & Tobias, 1995). According to Burke et al. (2006), Mrs. Brooks perceived herself as an experienced and competent teacher fully capable of managing the students in her classroom. She said that her initial reaction to the PD workshop was that it was irrelevant to the students she worked with, a stance consistent with comments heard from those in Stage 1 of the stages of change, pre-contemplation.

The PD workshop included strategies designed to reduce and prevent behavior problems, reinforce desired behaviors, and consistently and effectively respond to misbehaviors. Prior to the PD workshop, a pre-training survey on the stages of change was given to Mrs. Brooks and her colleagues to determine what stage of change they were in with regard to class discipline practices. The format included three questions in alignment with the stages of change. They included (a) do you intend to change class discipline practices in the next six months, (b) are you planning to make changes in class discipline in the next 30 days, and (c) are you currently changing your classroom discipline practices (Prochaska et al., 1994). If the participants answered no to all the questions, the stage of change was determined to be pre-contemplation. If the participants answered yes to the first question and no to second and third question, the stage of change was considered to be contemplation. If the participants answered yes to the third question, the stage was determined to be the action stage. It was determined that Mrs.

Brooks was in the first stage of change, pre-contemplation, in which an individual is unwilling or unable to see the need for change.

During 10 days of direct classroom observation of Mrs. Brooks, Burke et al. (2006) recorded that she often raised her voice to discipline the students in her classroom. A raised voice was defined as a loud voice that interfered with the implementation of material in the classroom. The data collected served as baseline for behavior change. The researchers then observed Mrs. Brooks over three years, and analysis showed that she moved through all five stages of change. The first transition, the researchers noted, resulted from the consciousness-raising experience of becoming aware of vocal hoarseness after a week of teaching. In essence, Mrs. Brooks first needed to recognize the problem. This finding is critical to the dissertation study because it provides insight into what might move participants into a state of awareness of the effectiveness of their current approach to responding to children with challenging behaviors.

Through consciousness-raising, Mrs. Brooks' initial awareness led to the implementation of the four new classroom strategies presented in the Girls and Boys Town (GBT) classroom management approach (Burke et al., 2006). As a result of the implementation of these strategies, there was a decrease in the frequency of Mrs. Brooks' behavior of "raising her voice to discipline" from the baseline of 20.70 times each day ($SD = 3.27$), which is once every 18 minutes, to 3.70 times per day ($SD = 4.47$). During the 3-year follow up, results indicated that Mrs. Brooks reduced the time she raised her voice to 8 times during the 10 days of data collection ($M = .33$; $SD = 0.58$). In essence, Mrs. Brooks changed her behavior, which resulted in the decrease of challenging behaviors in the classroom.

The Burke et al. (2006) study demonstrated the value of applying TTM to the educational setting, specifically prior to implementing any action-based strategies, especially those that require change in behavior. As shown in the study, Mrs. Brooks moved through all five stages of change once she was able to see the benefits of the recommended change. Those who provide PD in any topic know that among participants, some appear to be more receptive than others to reflecting on current practices, adopting new strategies, and changing their behaviors. The findings from Burke et al. indicated that professional development experiences designed on individual needs and readiness can have impressive results.

Additionally, Burke et al. (2006) showed that after Mrs. Brooks became aware of the need to make changes, she became more receptive to new, evidence-based response strategies for effective classroom management. In addition, the undesired or ineffective practices observed decreased in her classroom. Peterson (2012b) extended the work of Burke et al. by applying TTM to early childhood educators in order to determine the type and intensity of PD most likely to benefit an individual and ultimately lead to behavior change. Peterson (2012b) also linked early childhood educators' readiness to change directly to the quality of early care and education children received.

Peterson (2012b) recruited participants ($n = 214$) from early care and education centers serving infants, toddlers, and preschool children in a mid-sized city in upstate New York. Education levels included 23% held high school diplomas, 22% had some college, 16% held an associate's degree, 27% held a bachelor's degree, and 18% held a master's degree. Approximately 26% held a Child Associate Development (CDA) credential. Moreover, 87% of the sites served children from primarily low-income and

lower middle-class families. Mentors were recruited through advertisements in local publications and through word of mouth ($n = 30$). The mentors stayed with the teachers for a period of three years. Mentors were provided with 45 hours of training on mentoring, adult learning styles, cultural competence, and communication skills. Mentors also participated in a 12-week research-based Early Literacy Project. A PD session was held for mentors on the TTM of behavior change, introducing mentors to the supportive strategies aligned with each stage of change.

The Stage of Change Scale for Early Education and Care 1.0 was developed as a simple measure of an early childhood educator's readiness to change practices. It was a seven-item measure that showed high internal reliability (.95). Version 1.0 was the pilot version, and the current version is Stage of Change Scale for Early Education and Care 2.0. Peterson's (2012b) research measured the learners' intention to make a change and was used as an indicator of the early childhood educator's (ECE) stage of change. Mentors completed the Stage of Change measure twice.

Peterson (2012) used a grounded theory approach to analyze the qualitative data. Continuous coding and interpretation of the data was conducted throughout the data collection period and open coding was used to create categories. The categories were consolidated through discussion and member checking was conducted to increase validity. Four major themes emerged: (a) building the relationship, (b) role of the mentor, (c) readiness to change, and (d) mentor reflection and professional growth. The focus of Peterson's (2012b) study was on the stage of change and the characteristics of those ECE's who were and were not ready to change.

The results of the first assessment of readiness to change included 14% of participants who were in Stage 1 (pre-contemplation) and 20% in Stage 2 (contemplation) (Peterson, 2012b). This indicated that one-third of ECE's (34%) were not ready to change their practice. After one year, there was a major shift, resulting in 0% in Stage 1 and 19% in Stage 2, Stage 5 showed a gain from 19% to 38%.

Peterson (2012b) found that participants who were ready to change exhibited behaviors indicating eagerness to learn. Specifically, they welcomed the assigned mentor into their classrooms and expressed interest. This behavior, in turn, encouraged the mentor to further assist them. On the contrary, participants not ready to change exhibited behaviors such as not being interested in new information, and not making any changes after two years of mentoring. Furthermore, participants who voluntarily signed up for the study showed more growth than those who were signed up by their director. Mentors assigned to those who were unwilling or not open to new strategies expressed frustration. It was noted that the length of time in the field of early childhood was shown to have an impact on the participants' readiness for change. While some of the participants were described by mentors as being in survival mode, educators who had been in the field for a substantial amount of time showed evidence of growth and change in practices.

Mentors were introduced to the stages of change and TTM midway through the mentoring program, positively impacting the mentors' experiences (Peterson, 2012b). Using the stages of change framework, the mentors adjusted their expectations for their mentees, and one reflected,

I knew change took time but it takes longer than I generally think that it takes . . . and change is small too. I mean small changes happen before big changes. You

know, it's like caregivers take baby steps. And so I had to learn that it's their priority, what gets changed, not mine, even though I might have a priority or goal. (Peterson, 2012b, p. 107)

Peterson's (2012b) research suggested that early educators' readiness to change was an important issue for the mentors who participated in the study. With 34% rated by their mentors as not ready to change their childcare practices at Time 1, and with 19% of mentees rated as not ready to change one year later, it was unsurprising that mentors were focused on this area.

Limitations of Peterson's (2012b) study included the attrition of participants between Time 1 ($n = 97$) and Time 2 ($n = 21$). As such, growth results cannot be attributed to the presence of a mentor because it may be that only those who were committed to change stayed in the study. Additional research is needed to determine the impact of readiness to change on participants' receptivity to changing practice. Nonetheless, Peterson's (2012b) study provided support for the implication that considering ECEs' readiness to change may contribute to important insights in the development, implementation, and evaluation of professional development programs designed to impact practice.

Chapter Summary

The review of literature presented in this chapter focused on the effectiveness of the FBA process as an evidence-based response strategy to children who exhibit challenging behaviors. Multiple studies were presented that showed how teachers' use of FBA and BIPs resulted in a decrease of challenging behaviors that disrupted learning for the individual child as well as for their peers. The research also demonstrated that the

skills needed to effectively conduct and implement FBAs and BIPs can be presented through PD workshops, and effectively implemented by general educators in the preschool setting. The research also suggested that teachers who are resistant to changing their practices might be more receptive once their consciousness is raised or they become aware through reflection. As such, those who support teachers or provide professional development experiences may be better able to design instruction tailored to individual teachers.

The dissertation study attempted to discover whether the Stage of Change Scale for Early Education and Care 2.0 instrument could predict whether teachers implement at least one evidence-based strategy, the ABC chart or frequency chart, as presented in a PD workshop on responding to challenging behaviors. The results of the dissertation study will help teachers gain effective and evidence-based response strategies proven to reduce moderate-to-severe challenging behaviors. Supporting teachers' development of effective response strategies may result in an increase in positive child outcomes in social and emotional learning, self-regulation, and positive child-teacher interactions. Furthermore, the research indicated that preschool expulsions may decrease as a result of effective response strategies, ultimately resulting in fewer at-risk students being excluded from receiving the support they need.

The next chapter, Chapter 3, discusses the methodology used to investigate the congruence between preschool teachers scores on the scale and the statements they made during in-person interviews.

Chapter 3: Research Design Methodology

Introduction

This chapter describes the methodology used to explore preschool teachers' readiness to change their practice when responding to children who exhibit challenging behavior. Evidence-based response strategies have been well established, yet some teachers have continued to be resistant to changing their approach, while others appear more receptive to new practices and ideas. The purpose of the dissertation study was to examine teachers' readiness to change. The Stage of Change Scale for Early Education and Care 2.0 (Peterson et al., 2010) was used to identify the stage of change for each teacher. Semi-structured interviews were also conducted in order to capture teachers' perceptions of their readiness to adopt new approaches for addressing challenging behavior in the preschool classroom (Kvale & Brinkmann, 2009). The results of the instrument were compared to the teachers' perceptions as expressed in the interviews.

In this chapter, the general perspective as it relates to the proposed study first is presented. Then, the research context is established followed by an explanation of the method for selecting research participants, the last section of the chapter describes the data collection and analysis procedures.

General Perspective

The dissertation study used a mixed methods approach that involved the collection of both quantitative and qualitative data. Creswell (2009) stated that mixed methods procedures are used when either quantitative or qualitative procedures are

insufficient when used alone, and when one approach is not enough to explore the complexity of the problem. The mixed method process combines both approaches as a way to gain deeper insight into the research problem and allows examination of the problem from multiple perspectives (Creswell, 2009).

Using a sequential exploratory strategy, the research study included two phases of data collection. The first involved the collection and analysis of quantitative data from the Stage of Change Scale for Early Care and Education 2.0 instrument (Peterson et al., 2010), an instrument that has been tested for validity and reliability. The second phase included the collection and analysis of qualitative data through semi-structured focused interviews based on the theme of readiness to change practice related to challenging behavior in preschool students. The qualitative results were compared with the results of the quantitative data to determine whether there was an alignment between the data and the themes (Creswell, 2009).

A focused interview, according to Kvale and Brinkmann (2009), concentrates on a particular theme. For the dissertation study, the theme of the focused interviews was teachers' readiness to change their practice using evidence-based approaches to respond to children with moderate-to-severe challenging behaviors. In the qualitative phase of the study, the researcher was the instrument. Teachers' readiness to change their practice was selected as the theme given the research indicating that effective responses by teachers reduces challenging behaviors, but teachers need to be ready to change their practice if professional development (PD) efforts are to be successful.

Problem Statement

Challenging behaviors in preschool often interfere with children's learning and impact others' learning as well. Often, teachers do not feel prepared to effectively and consistently respond to moderate-to-severe challenging behaviors despite evidence-based strategies such as the functional behavior assessment (FBA) process (Maag & Larson, 2004). Because changing practice is based on the willingness to try something new, readiness to change appears to make the difference between the successful and unsuccessful implementation of evidence-based practices (Peterson, 2012b). Using the Stage of Change Scale for Early Care and Education 2.0 (Peterson, Baker, & Weber, 2010) instrument, the research was intended to measure readiness to change in preschool teachers, followed by a qualitative exploration of their readiness to change practice using evidence-based strategies. This was done through semi-structured interview of 10 questions that are in alignment with the processes of change, with purposefully selected participants (Creswell, 2009).

Research Question

The research question guided the research: How do teachers' self-ratings on the Stage of Change Scale for Early Care and Education 2.0 (Peterson et al., 2010) compare with the self-descriptions of their own readiness to change?

Research Context

This study was conducted in a mid-sized city in the northeastern United States with one of the highest child poverty rates in the nation. More than half of the children live below the poverty line (U.S. Census Bureau, 2012), and only 5.1% of children are college or career ready when they graduate high school, compared to 41% across the

State (U.S. Census Bureau, 2012). One-quarter of the children in the local urban district pass the third grade math and English language arts assessments, indicating the need for quality early education. Quesenberry et al., (2011) explained that children living in poverty often lack basic foundational skills such as sharing, making friends, and problem solving. According to Quesenberry et al., when young children fail to develop these skills, they often have skill deficits that manifest as expressions of extreme frustration and forms of challenging behaviors. These behaviors include physical aggression, tantrums, and property destruction, which cause an interruption in learning for both the child and peers (Duda et al., 2004; McLaren & Nelson, 2009).

One program designed to provide children with foundational skills is the Universal Prekindergarten (UPK) program. UPK is a free, state-funded program for residents of the city where the research was conducted. School districts apply for funding, and then allocate those resources to preschool programs so that they may provide high-quality early education. Some classrooms are located in the district schools, and some are embedded in community-based organizations that have childcare programs. The UPK program is designed to provide children with foundational skills that lead to school success, and include strategies that increase social and emotional skills, including self-regulation. The Kim et al. (2009) research strongly suggested that self-regulation skills reduce the frequency and severity of challenging behaviors in young children. It is the adult-child interaction that is critical for skill development in children, and the willingness to try something new might be a key (Pianta et al., 2005).

Indeed, adult-child interactions are critical during the preschool years, and are especially important between children and their preschool teacher (Burke et al., 2006). In

the UPK program at the research site, the curriculum included strategies designed to help children develop self-regulatory skills, and also included conflict resolution skill development, self-regulation practices, and problem solving (Evans, 2009). When children exhibit moderate-to-severe challenging behaviors, however, different approaches are more effective response strategies (Duda et al., 2004). One such approach is the use of FBAs, which include different ways of tracking behavior for frequency, cause or function, severity, and for charting the time of day the behavior occurs. However, these strategies, while effective, are time consuming and often not implemented into practice.

Nonetheless, if a teacher is willing to try a different approach and is ready to change practice, the chances of any evidence-based strategy being effective increases (Burke et al., 2006; Peterson, 2012b). However, problems occur when there is a mismatch between teachers' readiness to change and the need to try a different practice or program, such as using a frequency chart to capture the occurrences of a child's extreme behavior (Pianta, Mashburn, Downer, Hamre, & Justice, 2008). UPK in the city where the research was conducted has consistent requirements of the program, and teachers who are consistent across the school district and community-based organizations (CBOs).

UPK regulations (NYSED, 2012) require that an evidence-based curriculum is used in all UPK classrooms, both district and CBOs. UPK teachers must be certified in early childhood education and must implement the chosen curriculum with fidelity. HighScope was the evidence-based curriculum used in the district studied and was implemented in 29 schools and 28 community-based organizations (Partner, 2013). The school district served 1,926 preschool children in the 2012-2013 school year, and reported that 88% of the children received free and reduced lunch, the highest in the State

(Partner, 2013). Additionally, the district reported that 89% of children in the district are racial or ethnic minorities and 11% are White.

Research Participants

Research participants included UPK teachers certified in early childhood education ($n = 102$) who were teaching in a UPK classroom in the urban district. Teachers were recruited through purposeful sampling, a process in which specific participants were selected based on particular criteria or demographics (Creswell, 2009). For the purposes of the dissertation study, the participants selected were working in a UPK classroom, had a master's degree in early childhood education, and worked in the local urban school district. Research has suggested that teachers who teach in an urban school district with high poverty will have experienced more children who exhibit moderate-to-severe challenging behaviors compared to other districts in the surrounding area (Benedict et al., 2007).

Teachers were recruited from the local city school district as well as an early childhood quality council that supports the community-based organizations. Participation was voluntary, and all of the UPK teachers were asked to complete an online instrument that measured their readiness to change.

Data Collection Instruments

This section describes the two instruments used for data collection. Quantitative data was collected using the State of Change Scale for Early Care and Education 2.0 (Peterson et al., 2010). Qualitative data was collected through focused, semi-structured interviews.

Stage of Change Scale for Early Care and Education 2.0. The Stage of Change Scale for Early Care and Education 2.0 (Peterson et al., 2010) was developed to assess early childhood education teachers' readiness to change practices. The instrument is based upon the transtheoretical model of change (TTM) and was developed with the intention of increasing the effectiveness of early childhood initiatives and programs by recognizing educators' readiness to change both their attitudes and behaviors as they work with young children (Peterson & Cairns, 2012). Peterson and Cairns (2012) asserted that a mere one in five people (20%) are ready to change behavior. They purported that when programs or approaches are mismatched with a teachers' stage of change, there is less of a chance for the desired impact despite effectiveness. When an educator is in Stage 1 or 2 of the stage of change, outcomes are worse, and quality decreases (Peterson & Cairns, 2012). This finding is consistent with research that suggests that children's negative behaviors increase despite the existence of evidence-based strategies (Dobbs & Arnold, 2009). Peterson and Cairns suggested that if those who support early childhood teachers were able to determine teachers' readiness to change their practice, professional development can be individually tailored and adjusted based teachers' stage of change rating. This alignment, according to Peterson and Cairns could increase outcomes for both early educators and children. The concept behind the change approach is to "increase the effectiveness of early childhood change initiatives by providing people in the early stages of change with the necessary supports to increase awareness, internal motivation, self efficacy, and commitment to change" (Peterson & Cairns, 2012, p. 2). The change approach may improve outcomes for children who exhibit challenging behaviors if teachers are ready to change their practice. The Stage of Change Scale for

Early Education and Care 2.0 (Peterson et al., 2010) may be an effective tool that provides insight into a teachers' readiness to change.

The Stage of Change Scale for Early Care and Education 2.0 (Peterson et al., 2010) is a 7-item, 5 point Likert scale instrument designed to assess a teacher's stage of readiness to change child care practices (Baker & Peterson, 2011). The pilot version of this measure used 90 preschool and infant-toddler teachers through a mentoring program in a mid-sized northeastern city. Exploratory factor analysis revealed a single latent factor, indicating that the items could be explained by an underlying construct. The measure's psychometric measures revealed a high internal consistency (Cronbach's alpha = .95). The pilot measure indicated a statistically moderate correlation (.39) between those who progressed through the stages of change with an increase in the quality of early care practices. This may suggest there is a connection between a teachers' readiness to change and appropriate responses to the children in their care.

Peterson (2010) provided a table that illustrates the stages, a description of key characteristics of each stage, and phrases that early childhood teachers used with regard to changing their practice (Table 3.1).

Table 3.1

Stages of Change in Early Childhood Education

Overall Score	Stage	Description	ECE Report
1.0 – 1.4	1-Pre-contemplation	Do not intend to make any change	“There’s nothing I can do about it.” “That would never work with these children.”
1.5-2.4	2-Contemplation	Would like to improve behavior, but are overwhelmed by obstacles	“I would like to but...” “I tried but it didn’t work...” “I don’t have the time...”
2.5-3.4	3-Preparation	Have an active intent to make a change; creating a plan of action; are aware of resources.	“I want to try...” “What will it look like?” “What do I need to do?”
3.5-4.4	4-Action	Actively engaged in change; persist with the new behavior over time; problem solve when challenges occur	“I’ve been doing this for a week...”
4.5-5.0	5-Maintenance	Work to maintain changes and integrate them into their lifestyle; continually reflect on their behavior.	“I’ve found a new way to remind myself...”

Note. Adapted from “Understanding early educators’ readiness to change,” by S. M.

Peterson, 2012, *NHSA Dialog*, 15(1), p. 95. Copyright 2012 by Taylor Francis. Adapted with permission.

Historically, the transtheoretical model of change emerged from the health field, specifically related to smoking cessation (Prochaska & DiClemente, 1983). As presented in the chart above, pre-contemplation is the first stage of change and describes a person who is not ready to change or may not see the need for change. Peterson (2012b) suggested that this person might say, “There’s nothing I can do about it.” If a teacher in this stage was presented with an evidence-based strategy to address moderate-to-severe challenging behaviors, the teacher is likely to resist, using phrases like, “My administrator is making me do this.”

The second stage of change in the transtheoretical model is called contemplation (Prochaska & DiClemente, 1983). A teacher in this stage of change, according to Peterson (2012b), would like to change behavior, but appears overwhelmed by obstacles. This person might say, “I don’t have time.” Ducharme and Shecter’s (2011) findings are with this stage. They stated that teacher resistance is one of the primary reasons that effective strategies involved in FBAs are not widely accepted or sufficiently practiced by teachers in the classroom. Peterson (2012a) suggested that a teacher in the contemplation stage of change may require a different approach when learning a new skill or changing practice. However, once a teacher moves from the contemplation stage, there is a notable difference in behavior.

A teacher in the third stage of change has an active intent to make a change in behavior (Peterson, 2012b). There is a commitment, an internal motivation, and an intentional plan in development. This teacher is more likely to implement a new practice than a teacher in stages one or two. The teacher may say something like, “What do I need to do in order to do this?” or “I want to try it.” People in this stage, according to

Prochaska and DiClemente (2001), are making small changes in their behavior toward the action stage, which is Stage 4.

According to the transtheoretical model, a person in the fourth stage of change, the action stage, is ready for action. Behavior is modified more visibly, there is a greater commitment of energy, and problem solving is an integral part of the behavior change (Prochaska & DiClemente, 2001). Peterson (2011) applied this stage to early educators as shown in Table 3.1. A teacher in the action stage will be actively engaged in a behavior change, continue with the new behavior, and will problem solve when challenges occur. When presented with an evidence-based response to children with moderate-to-severe challenging behaviors, this teacher may be ready to incorporate it into practice. This would be evidenced, according to Peterson (2012b) through phrases like “I’ve been doing this for a week.”

The fifth and final stage is the maintenance stage. This is the stage where people work to maintain the behavior change and integrate it into their life or their practice (Burke et al., 2006; Peterson, 2012). As indicated in Table 3.1, a teacher in this stage might say, “I’ve found a new way to remind myself...” or “I’m wondering how I can make this work even better.” It is in this stage that a teacher would have incorporated the behavior change or response strategy into their practice.

Identifying where a teacher is in the stages of change can be accomplished in two ways: completion of the Stage of Change Scale for Early Education and Care 2.0 (Peterson et al, 2010) and through an analysis of the teacher’s perceptions and attitudes toward change. The Stage of Change Scale for Early Education and Care 2.0 (Peterson et al., 2010) is an instrument designed to provide insight into a teachers’ readiness to change

behavior or practice. The 7-item stage of change instrument takes about 10 minutes to complete and is designed to measure teachers' intentions to make changes, awareness of the need to make changes, assesses the teachers' desire to learn new information about practice, assesses the teachers' beliefs with regard to overcoming obstacles, assesses the teachers' beliefs about their social support, and asks teachers whether they see themselves as a professional (Peterson et al., 2010).

For this study, the Scale was modified to focus on responding to children who exhibit challenging behaviors. The lead question: "When it comes to responding to children who exhibit challenging behaviors..." Participants were required to answer all of the questions. Once teachers completed the instrument, semi-structured interviews were conducted with 10 participants purposely selected by the researcher.

Semi-structured interview. The second phase of the study included a face-to-face, semi-structured interview with participants ($n = 10$) who completed the Stage of Change Scale for Early Care and Education 2.0 (Peterson et al., 2010). Interviewees were selected based on the results of the Stage of Change Scale by a third party. Three participants were selected who scored in Stage 3, preparation, five participants were selected who scored in Stage 4, action, and two participants were selected in Stage 5, maintenance. None of the 21 participants who completed the survey scored in the first two stages of change, pre-contemplation and contemplation (Peterson et al., 2010). This is a limitation of the study, and will be discussed in Chapter 5.

Procedures Used

Participants were recruited from the UPKs in the local school district in the mid-sized city in the northeastern United States. Permission was granted from the school

district that implements UPK in the area. Informed consent was secured from all participants ensuring transparency (Glatthorn & Joyner, 2005). Recruitment and consent was done through email. The consent included the topic of study, the purpose of the study, the methods, the attributes of the participants, the potential benefits of the study, the potential risks, and the commitment required (Roberts, 2010). All IRB guidelines were complied with and IRB approval was obtained (Roberts, 2010).

Once consent was granted, participants ($n = 102$) were asked to complete an online version of the Stage of Change Scale for Early Care and Education 2.0 (Peterson et al., 2010). Teachers included their names on the survey so they could be contacted for the second phase of the research. Confidentiality was kept through a third party employed by the organization that created the instrument.

Based upon the results of the Stage of Change Scale for Early Care and Education 2.0 (Peterson et al., 2010), 10 participants were purposely selected to represent different stages for the semi-structured interview. The original research design called for two participants in each stage of change, but the resulting scores were in stages 3, 4, and 5. Participant selection was done anonymously, and the interviews were conducted blindly, meaning the interviewer did not have access to the results of the instrument before conducting the interviews. The purpose of the interview was to gain perspective on how participants perceived their readiness to change practices when faced with responding to children who exhibit moderate-to-severe challenging behaviors. Their descriptions were compared to the descriptions listed in Table 3.1 (Peterson, 2011). A comparison of the Stage of Change Scale score and the descriptions that the teachers provided through the interviews were conducted.

Each interview lasted between 35 and 75 minutes and included 10 questions aligned with the stages of change and designed to inquire about practices related to responding to children with challenging behavior (Appendix A). The semi-structured interview included questions and scenarios related to teachers' readiness to change their practice by adopting a new approach or strategy that is evidence-based and proven to reduce challenging behaviors in the classroom (Kvale & Brinkmann, 2009). The researcher was the instrument during interview process, and as such, the questions were open ended. The interviews were recorded and transcripts were created. The transcripts were coded for themes. The processes for analyzing data collected are described in the next section.

Data Analysis

This section describes how the data were analyzed. Analysis was conducted using three separate, but inter-related processes; analysis of the Stage of Change Scale for Early Care and Education 2.0, analysis of data from the 10 interviews, and an analytic comparison of the results from the two data sources.

Stage of Change Scale for Early Care and Education 2.0. Participants completed the Stage of Change Scale for Early Care and Education 2.0 (Peterson et al., 2010) online. The results were calculated automatically to produce a score. The scores ranged from 1.0 through 5.0, and were aligned with the stage of change. Scores that ranged from 1.0 to 1.4 indicated that the teacher was in stage one: pre-contemplation. If the score ranged from 1.5 to 2.4, this indicated that the teacher was in stage two: contemplation. A score ranging from 2.5 to 3.4 indicated Stage 3: preparation; 3.4 to 4.4 was Stage 4: action; and 4.5 to 5.0 indicated the teacher was in Stage 5: maintenance.

Once the scores were tallied, interview participants were selected by a third party in order to maintain confidentiality and allow the researcher to conduct the interviews and qualitative analysis without bias. The selection procedure was intended to separate the participants into two categories: low scores consisting of participants who scored in stages one and two, and high scores consisting of participants scoring in stages 3 through 5. However, the participants' ($n = 10$) scores were all 3.0 through 5.0 (preparation, action, and maintenance). Therefore, participants were randomly selected from the three groups and were participants were invited for an interview. The interview process is described in the next section.

Semi-structured interviews. Through face-to-face, semi-structured interviews, teachers were asked 10 questions (Appendix A) related to changing their practice when responding to children with challenging behaviors. Interview questions were aligned with the various stages of change and involved intention, awareness, seeking information, effect on children, overcoming obstacles, social support and professional identity (Peterson et al., 2010). Member checking, a process that allows the participants to verify their statements, was done with nine of the 10 participants immediately following each interview (Miles, Huberman, & Saldana, 2014). One participant declined due to an appointment immediately following the interview, and did not return follow-up phone calls. The conversations were audio-recorded, and the recordings were sent to a professional transcriber. Once the transcripts were received from the transcriber, the first cycle in vivo coding process began (Miles, Huberman, & Saldana, 2014).

In the first phase of analysis, the transcribed interviews were carefully read by the researcher (Kvale & Brinkmann, 2009). In vivo coding was used for the first cycle coding

process. During the in vivo coding process, the researcher segmented statements and phrases throughout the transcripts prior to attaching meaning to the phrases (Creswell, 2009). Once all of the transcripts were read and coded, the codes were reviewed and categorized by emergent topics. The second cycle of analysis involved a review of the data in search of topics in alignment with the 10 processes of change. Analysis revealed 15 codes (Appendix C). In order to test reliability of the coding, a master-level social worker, employed as a behavioral health consultant and familiar with TTM, reviewed each of the 150 teacher responses. The researcher did not include sensitive information in the teacher description matrix that may have identified two of the participants in the community. The consultant agreed with the coding of all but four of the statements. The researcher and consultant discussed the four incongruent statements, and the consultant agreed with the coding of two statements after they were placed in context. This resulted in 148 statements in agreement and two not in agreement for a 98% inter-rater reliability score.

Once the data was thoroughly examined and coded, a comparison of the score from the Stage of Change Scale for Early Care and Education 2.0 (Peterson et al., 2010) with the interview codes and themes was completed. For example, a score placed in the preparation stage lead to an examination of the coded data for statements that resembled, “I want to try...” Finding such statements indicated an alignment between the stage of change and what teachers might say if they were in the third stage of change. However, if the coded data revealed language that indicated the teacher was actively engaged in change, but the score on the Stage of Change Scale for Early Care and Education 2.0

(Peterson et al., 2010) indicated that the teacher was in a different stage, the results would not be in alignment.

The goal for the dissertation study was to gain insight into teacher readiness to change through the use of the stage of change measure and semi-structured interviews and to search for alignment between the scores and teachers' perceptions. Understanding teachers' readiness for change measured either through the scale or by interviews could assist those who support teachers as they design professional development experiences that present effective and evidence based practices to respond to children with challenging behaviors. The PD content thus could be designed with specific support strategies in place to individualize the learning experience.

Conclusion

Preschool children who exhibit moderate-to-severe challenging behaviors are in need of skill development. In order to develop critical skills, children need to have a positive relationship with their preschool teacher. This can sometimes be a challenge, especially if teachers' responses to challenging behavior are ineffective, inconsistent, or outdated (Benedict et al., 2007). The dissertation study examined teachers' readiness to change their practice with regard to responding to children with these behaviors.

The Stage of Change Scale for Early Education and Care 2.0 (Peterson et al., 2010) was specifically designed to identify teachers' readiness to change, and can be used to support teachers practices by helping them to reflect on their own beliefs and attitudes. The basic premise of TTM is based upon the notion that "teachers as learners are not ready to change, "and will not be well-served by traditional action-oriented interventions" (Peterson, et al., 2010, p. 1). The dissertation research examined the instrument results

and compared those scores with what the teachers say about their readiness to change. The comparison answered the research question, how do teachers' self-ratings on the Stage of Change Scale for Early Education and Care 2.0 (Peterson et al., 2010) compare with the self-descriptions of their own readiness to change. The research provides insight as to how preschool teachers describe their readiness to try evidence-based approaches to address moderate-to-severe challenging behavior in their practice. The results of this study also provides additional insight into the concept of behavior change, and reminds teacher educators that PD and response strategies must be comprehensive and tailored to individuals, not presented in a one-size-fits-all format (Quesenberry et al., 2011).

Chapter 4: Findings

This chapter presents an analysis of the quantitative and qualitative data gathered from the Stage of Change Scale for Early Care and Education 2.0 (Peterson et al., 2010) and through 10 focused interviews with Universal Prekindergarten teachers who work in preschool classrooms in an urban setting. This study explored the following question: How do teachers' self-ratings on the Stage of Change Scale for Early Education and Care 2.0 compare with the self-descriptions of their own readiness to change?

The chapter is divided into three sections (a) quantitative results, (b) qualitative results, and (c) comparisons. The quantitative results include the teachers' scores on the Stage of Change Scale for Early Care and Education 2.0 (Peterson et al., 2010), and the qualitative results identify the major themes that emerged from the semi-structured interviews with 10 preschool teachers. The comparisons section compares the alignment of the quantitative results of Stage of Change Scale for Early Care and Education 2.0 with themes that emerged through the semi-structured interviews. The next section begins with the demographics of the preschool teachers who took the Stage of Change for Early Care and Education 2.0 Self Report Form survey.

Quantitative Results

An electronic version of the Stage of Change Scale for Early Care and Education 2.0 (Peterson et al., 2010) was distributed to 102 preschool teachers in an urban school district located in a mid-sized city in the Northeastern United States. Of the 102 teachers, 21 completed the survey, resulting in a 21% return rate. Results were tabulated through

an independent researcher, who was asked to select participants based on the results of the instrument, blind to the primary researcher. According to the original research protocol, two participants were to be selected from each of the five stages of change, for a total of 10 participants. However, all of the participants who completed the survey scored in stages 3, 4, or 5; no one scored in the first two stages of change. As a result, the independent researcher randomly selected 10 participants from those who completed the survey. Table 4.1 shows that four participants scored in Stage 3, four in Stage 4, and two in Stage 5.

Table 4.1

Participant Numbers, Individual Stage of Change Score, and Years of Teaching Experience

Participant	1	2	3	4	5	6	7	8	9	10
Score	3	3	4	3	5	5	3	4	4	4
Experience	8	2	>20	<1	20	3	14	>20	18	12

Each participant was assigned a number from 1-10 in order to safeguard identity. Their years of teaching experience varied (Table 4.1). Nine of the selected preschool teachers self-identified as White, not Hispanic, and one self-identified as American Indian/Alaska (Appendix B). They were all female and teaching in Universal Prekindergarten (UPK) settings within an urban setting in a mid-sized city in the northeastern United States. Of the 10 participants, three were teaching UPK in Head Start settings, three in the local school district, and three were in community-based organizations that had contracts with the local city school district.

According to the demographics data, all of the teachers had experience with moderate-to-severe challenging behaviors in their classrooms. Participants 2, 4, 5, and 10 indicated they had a high level of comfort when responding to challenging behaviors. The corresponding stage of change values for these four teachers ranged from Stage 3: Preparation to Stage 5: Maintenance. The remaining participants indicated they were either varied in their comfort level based each situation, or were uncomfortable responding to children with challenging behaviors as a general rule.

Qualitative Results

The qualitative results presented in this study were developed from in-depth, focused interviews using 10 questions derived from the processes of change literature and aligned with the stages of change. The 35-75 minute interviews included introductory questions, follow-up questions, probing questions, and silence. The participants answered questions pertaining to both experiential and behavioral processes as defined by TTM (Table 4.2 and Table 4.3).

Open-ended teacher descriptions were coded from the interviews, and each participant was given a score based on the number of positive and negative responses they gave to each of the 10 questions aligned with the 10 processes of change. Statements that supported the question were coded as positive, and negative statements were either statements that did not support the process of change or were missing an answer were coded as negative. For example, using the awareness of personal values, if a teacher indicated they were aware of their own personal values, the statement was coded as a positive statement in support of the process of change. An example is a response provided by participant 1 who said, “Yes, kids should be respectful toward adults, but I

also think they have their own individuality.” The systematic process of coding resulted in a score of a 3, 4, or 5 as an indicator of the stage of change each participant was in based on their positive statements in support of the processes of change. The intent of this systematic approach was to identify qualitative data to compare with the results of the Stage of Change Scale for Early Care and Education 2.0.

Table 4.2

Interview Questions Aligned with Processes of Change and Stage of Change:

Experiential Processes

Process of Change	Description	Interview Question	Stage
Consciousness Raising	Awareness for the need to change a behavior or response.	Describe how you reflect on your practice with regard to responding to children with challenging behaviors.	1-2
Dramatic Relief (Emotional Arousal)	Emotional reaction emerges that indicates the need to change.	Challenging behaviors in a preschool classroom can be very difficult. What emotions have you experienced when managing challenging behaviors in your classroom?	1-2
Self-Reevaluation	Emerging awareness of personal values and goals	Do you feel your responses to children with challenging behaviors are in alignment with your values? Describe your values and beliefs about how children should behave.	1-2
Environmental Reevaluation	Recognizing effects of behavior on self and others	Describe how you feel a teacher’s response to a child with challenging behaviors impacts you as well as the child, other children or the classroom environment.	1-2
Social Liberation (Values Clarification)	Awareness of social values and resources that support desired change	Describe how you sought support from others, if at all, when you experienced challenging behaviors in your classroom.	2-3

Table 4.3

*Interview Questions Aligned with Processes of Change and Stage of Change: Behavioral**Processes*

Process of Change	Description	Interview Question	Stage
Self-Liberation (Commitment)	Committing to and taking responsibility for change	Describe how you set yourself up for success when responding to children with challenging behaviors. What goals, if any, do you set for yourself?	3
Stimulus Control	Altering the environment to encourage new behaviors	When responding to children with challenging behaviors, what do you do, if anything, to remind yourself of effective strategies? Describe how you alter the environment in the classroom.	4
Counter-Conditioning	Changing responses to triggers for old behaviors	How do you keep yourself from resorting to older responses to challenging behavior, if at all, and make sure that you implement newer strategies?	4
Reinforcement Management	Giving oneself positive reinforcements to maintain the change	What do you do when things go well, when a strategy is effective? What did/do you do to celebrate the successes?	4-5
Helping Relationships	Engaging in relationships that support the change	Do you rely on others to help you maintain your current practice? Describe how you do this.	5

Data Analysis and Findings

The qualitative data indicated a close relationship between the results of the Stage of Change Scale for Early Care and Education 2.0. As shown in Table 4.2 and 6, each of the 10 questions were designed to be in alignment with the processes of change, which are either experiences or behaviors linked to the stages of change, within TTM (Prochaska & DiClemente, 1983). There was sufficient evidence in all 10 interview

transcripts to show positive statements aligning with stages 1 and 2 of the stages of change. The next section shows the results from the qualitative analysis. Results are organized by the types of processes (experiential and behavioral).

Stages 1 and 2: Precontemplation and contemplation (experiential processes).

This section includes the data relating to aspects of stages 1 and 2: consciousness raising, dramatic relief, self-reevaluation, and environmental reevaluation

Consciousness raising. Teachers were asked whether and how they engaged in reflective practice with regard to responding to children who exhibit challenging behaviors. In order to confirm a positive statement, two distinct themes emerged during coding that supported the experiential process of consciousness-raising. The first code, awareness to change (A2C), indicated that the participants demonstrated an awareness of the need to change practice. The second code, reflection (REFL) indicated whether participants reported engaging in reflective practices. Consciousness-raising is aligned with the first stage of change, precontemplation. Participant 5 provided an example of a positive statement,

I begin by teaching my paraprofessionals how to respond to children with challenging behaviors. I tell them, this is the emotion piece [language] we're going to use [this language] in this classroom. So at the end of the day my paraprofessional and I will talk about, okay, so what did you notice that worked for X...what did you say that worked for X, what didn't work, did you see anything? And we go right at it—when did you see it start, you know, what started the misbehavior or what started [the] meltdown, or what started [before she was] throwing things, or what was the antecedent to this behavior?

Because Participant 5 demonstrated an awareness to change her response strategies by reflecting with her paraprofessional on what worked and what did not work, and also demonstrated an awareness to change practices, her statements for the first question were coded as positive—supporting the experiential process of consciousness-raising. Her statements suggested that she understood the value of re-examining practices, reflecting, and potentially changing her approaches.

Another example was provided by Participant 1, who said,

I do a lot of thinking and reflecting on my time and how I've interacted with the kids and what I can do differently...but also in conversations with other people I am working with. I usually try to record the events of the day and that helps somewhat, but really, more conversations of, oh yeah, I noticed this worked today...and definitely the success of it has kept me doing it throughout the year.

Like Participant 5, Participant 1 highlighted that she reflected on her interactions with children. Within her statement, she placed a focus on what can be done to change her own responses to children who exhibit difficult behaviors. This awareness to change behavior (A2C), as well as the practice of reflection (REFL) corresponded with the first stage in the Stage of Change Scale for Early Care and Education 2.0 (Peterson et al., 2010).

Similarly, Participant 6 indicated that she “should journal. They told me when I went to [college], but I feel like, I mean like, I started at the end of October.” This reflection indicated an awareness to change behavior, but did not necessarily capture reflective practices. However, she followed up with this positive statement about reflection later in the interview:

We're always bouncing ideas off of each other trying different strategies. Well, we document a lot and so I've got a big binder of things that have happened in the room, and how we've dealt with that, so I reflect back on that, oh geez, that didn't work, we'll try this, we'll phase this out.

All 10 of the participants made positive statements in support of their awareness to change behaviors. They also provided positive statements with regard to reflective practices, and therefore, all demonstrated the experiential processes of consciousness-raising. This finding demonstrated that the participants' responses corresponded with the results of the Stage of Change Scale for Early Care and Education 2.0 results, as none of the participants scored in Stage 1 of the Stage of Change: Precontemplation.

Additionally, all 10 participants provided positive statements supporting an emotional reaction to the challenging behaviors in their classrooms. Those reactions were reported from all of the teachers who were interviewed and are reported in the next paragraphs.

Dramatic relief. Similar to consciousness-raising, the experiential process of dramatic relief (emotional arousal) was mentioned by all 10 participants. The researcher asked, "What type of emotions, if any, have you experienced when managing challenging behaviors in your classroom?" Teachers consistently responded by stating that they experienced anger, frustration, and tears, "a lot of tears." This process of change is called dramatic relief, and is sometimes referred to as emotional arousal. In the qualitative coding process, this theme emerged across all of the interviews and was coded ER. This element of the experiential process, according to TTM, is aligned with both stages 1 and 2 of the stages of change (Peterson, 2012b). To illustrate dramatic relief, or emotional arousal, three participants' statements, which were coded as positive, are presented:

Emotionally, I stiffen up...when I'm really frustrated or really angry or I can't, I'm trying to solve a situation, I go like this and bite the bottom of my lip to gain control. I will say, "I'm so angry right now." (Participant 9)

[I feel] self-blame, but definitely a lot of self-questioning like what am I doing wrong? Because you're supposed to be the person in control of the situation, in control of the classroom. Sometimes you have to laugh...sometimes anger at the child, sometimes anger at yourself, sometimes anger at other children who are...not improving the situation because they do not know how to react. Angry or frustrated; It is a range of emotions, it is a very emotionally fraught situation, I think. (Participant 10)

Tears, a lot of tears. There wasn't a predictable time. I felt as though the classroom [was] in a state of chaos, it was very scary, very scary because I had no idea who the next victim was going to be...So yes, I had remnants of it [anxiety] myself after he wasn't here...powerless...I feel anxiety, strong anxiety.

(Participant 3)

When Participant 3 shared this information, the researcher noted that her physical appearance changed. She looked into the distance and she appeared to feel ashamed and disappointed.

Self-reevaluation. Self-reevaluation is the third experiential process in the process of change (Prochaska et al., 1992). Self-reevaluation is the clarification or awareness of values, and was coded A-VB for awareness of values and beliefs. This process is in alignment with Stage 1: Pre-contemplation and Stage Two: Contemplation. Question 3, do you feel your response to children with challenging behaviors is in alignment with

your values? If so, describe your values and beliefs about how children should behave, was designed to explore each individual participants' values clarification.

Once again, all 10 participants made statements that supported this process of change. For example, Participant 4 expressed the conflict she felt in her daily classroom practice: "I do think my personal values and beliefs conflict with what I know I'm supposed to be doing in my classroom...sometimes my personal beliefs overtake what I know I should try to do." This statement emphasized a key point in teacher response to children who exhibit moderate-to-severe challenging behaviors. Participant 4 appeared to be aware of evidence-based practices; however, she reported that her values and beliefs were in conflict with what she knows she is expected to do when faced with a child who exhibits challenging behaviors. Similarly Participant 5 discussed the conflict she felt between what she believed and how she responded to children. She articulated her attempt to set her beliefs aside.

Participant 4, who struggled with balancing her personal beliefs and her practice had been teaching for 6 months and scored at Stage 4. Participant 5, who had the skills to set her beliefs aside, had been teaching for 20 years, and scored in Stage 5. Participant 5 added,

So, you know... you're thinking about, is this my judgment piece or is this my moral value [gun play] [that's] going on here, except that I am the one in the classroom running it, and these are my ethical boundaries. So, it's that emotion piece too, I think. I've been doing this for so long, my values are beliefs are really, I try to keep them...aside because my values and beliefs aren't really what's important at that moment.

Likewise, Participant 6 shared her values and beliefs, stressing her vision of a strong community where children engaged in respectful behavior and are respected, and in a community where they strive to please their teacher:

I had the vision that when you create a loving environment...the kids are going to want to please their teacher, and you know, just do what they need to do, and [then] it [classroom] runs like a well-oiled machine...that's what I value, like community, the sense of community in the classroom and getting along with one another. I believe that they [children] should get along with each other and share.

When responding to the question asking how she felt (emotional arousal) when she experienced the behavior of children who exhibited moderate-to-severe challenging behaviors, Participant 6 said,

"I feel frustrated because I mean these kids, I mean I definitely, I feel frustrated at times because these kids, they feed off each other too, so it's not just one single incident, and then when you help that child get over what they're stuck on, there's 16 different things going on at one time.

These two statements from Participant 6 highlight the difficulties teachers face when responding to children with challenging behaviors, and draw attention to the importance of teacher values and beliefs in that process. The next experiential process of change assesses whether or not teachers recognized effects of their behavior on self and others, a process called environmental reevaluation.

Environmental reevaluation. All participants provided positive statements that indicated they recognized the effects of their response to children with challenging behaviors on themselves, the child who exhibits the behavior, and the children in the

classroom. Two codes were used during the qualitative analysis: (a) recognized effects on self (Rec Eff/S), and (b) recognized effects on others (Rec Eff/O). Teachers were asked to describe how they felt a teachers' response to a child with challenging behaviors impacted that teacher, the child, and other children in the classroom environment, if at all.

For example, when asked about the impact of teacher response to challenging behaviors on herself, Participant 2 said, "I feel like maybe I don't know enough about challenging behaviors, sometimes I feel like maybe I'm not getting enough support...I feel like I cannot grow as a teacher." In response to the same question, Participant 1 said she

[Feels] just frustrated, it's hard to hold back for that half second and figure out what your response is going to be, is it going to be the one today when you snap at the kid and say you shouldn't be doing that, and that sets them off for the rest of the day, or is it going to be a planned ignoring or... [a] calming strategy?

Similarly, Participant 3 reported, "Sometimes I feel powerless," while Participant 4 stated, "I thought about it, and it's like when I get angry and frustrated, it makes my whole day...off kilter." Moreover, all teachers provided positive statements about how teacher response impacted the child who expressed the challenging behavior as well as the other children in the classroom. The following statements demonstrate the experiential process of environmental reevaluation, which is best aligned with stages 1 and 2 of the stages of change.

Children know that when a child is going to have an explosive episode, that everyone needs to move away, and it has to be, we have to let this [happen], some

children have to explode...[if there is] success, then that child feels good about themselves.

To illustrate the recognition of the impact of teacher response on others,

Participant 10 described the impact from her perspective:

I think if a child with a challenging behavior has one [outburst] in the middle of the classroom, and then the teacher handles it very punitive, [in a] very disrespectful fashion, it [the behavior] can often get worse. The other children see this and sometimes they tend to respond in kind to the child...they kind of pick up on the teachers' attitude towards the child, and I don't think that is helpful at all.

Participant 8 spoke of removing a child from the classroom as a consequence after he "clocked another child across the head with his fist, right in front of the class." When asked how the child who exhibited the challenging behavior reacted to this response, Participant 8 said, "Sometimes they will cry depending on where they're coming, you know, if they're overtired. I think they're concerned and surprised, they know that that [the behavior is] totally not okay." The next step in TTM is social liberation, which aligns with Stage 2: Contemplation and Stage 3: Preparation. The next section contains the findings germane to this process.

Stages 2 and 3: Contemplation and preparation. This section contains the findings pertaining to contemplation and preparation. The specific processes of change discussed in this section is social liberation. It is the final aspect of the experiential processes.

Social liberation. The next process of change in the TTM progression is the last of the experiential processes of change, according to Peterson et al., (2010). Social

liberation is defined as the awareness of social values and resources that support the desired change (Peterson et al. 2010). This is the first process aligned with both Stage 2: Contemplation, and Stage 3: Preparation. This process of change was coded in the data analysis process as awareness of social values and resources to support change (ARSC). All of the participants in this study had positive statements in their transcripts concerning this area. Three of the 10 teachers stated they relied on professional development opportunities to learn evidence-based response strategies for children who exhibit challenging behaviors. This response was an indicator of their awareness of social values and resources to support change. Interestingly, Participant 2 referred to the available professional development as professional reiteration at times, and indicated that she sought her professional development through higher education because she felt that she benefited by “Having conversations with other people who are in your position, so that we’re all growing from each other.” Two participants demonstrated awareness of support through engaging behavioral specialists, three used teammates and colleagues, and one consulted her supervisor for support. In the following statement, Participant 5 revealed her social values and the experience of using resources to support change using current research:

I really try to keep up on the reading and what is research based, and what works and doesn’t work. I think this is where I really use my colleagues and I’ll say, you know what, I’ve done this, does anybody else have a different idea?

Although some teachers had strong support systems available within their programs, three participants felt they were not supported. Participant 8 expressed this

when asked to describe whether or how support was sought from others when she experienced challenging behaviors in her classroom. She responded,

Some have nothing [support], that happens to be here... [so] I go to [a trusted]...[colleague]...she's someone that I feel has some really good strategies. I ask her for help or to come to help me. I rely on other colleagues as well.

While recognizing a perceived lack of support in her program, Participant 8 self-reported that she pursues resources she feels are trustworthy, an experiential process that supports desired change, according to TTM.

The next behavioral process of change is referred to as self-liberation, a process aligned with Stage 3: Preparation to Change. This next stage of change, according to Prochaska and DiClemente (1983) and Peterson et al. (2010), indicates when individuals are ready to change. It is the stage when a clear commitment is expressed, is the sixth process of change, and is the first behavioral process in the process of change. In the dissertation research, this is the process where differences between participants began to emerge.

Stage 3: Preparation (behavioral processes). This section contains the findings pertaining to preparation. The specific processes of change discussed in this section is self-liberation. It is the first aspect of the behavioral processes.

Self-liberation. Self-liberation involves making the commitment to change behavior. This process includes actual behaviors that reinforce the idea that the individual has committed to taking responsibility to change. In the case of the dissertation study, the focus was change response strategies toward children who exhibit moderate-to-severe challenging behaviors. For this study, the researcher used two codes to determine

commitment: making commitment to change (MCC) and taking responsibility (TR). The researcher applied these codes using a yes to indicate a positive statement, and no to indicate negative responses. During the interviews, teachers were asked to describe how they set themselves up for success, if at all, when responding to children with challenging behaviors. They were asked, what goals, if any, do you set for yourself?

Analysis of the responses to these questions revealed differences between the participants. For example, Participant 1 said, “I’ve done it for so long not the way you’re supposed to do it, like how can I even start to incorporate this...so I felt like I only got a little bit of it right after the training.” This statement was coded MCC N, to denote a negative response to making a change. However, as Participant 1 continued talking, her statements began to show a commitment to change her practice, as evidenced in this when she said she asks herself, “What am I going to do that is going to make this better? What can [I] do now [to] just kind of remind myself that there are other options [available]?” This statement received two codes: MCC N, and positive for TR. While it appears Participant 1 moved through the self-liberation process because she expressed a commitment to change her response behavior by taking responsibility (TR), the interview did not reveal a positive statement indicating she made a commitment to change (MCC).

Participant 2 was coded positively for both MCC and TR because her statements of commitment were clear. While Participant 2 expressed frustration for the lack of perceived support in her program, she demonstrated commitment to change her practice through outside sources. She indicated a commitment to change when she said,

I had been putting off starting my schooling and finally I did because if they’re not helping me grow, I have to help myself grow. So, I help myself [MCC Y].

Well, I feel I can't grow as a teacher. I can only use what I know if their not giving me new things to use, how am I going to be successful in managing this and how is this child going to be successful in me helping him...I have to help myself grow [TR Y].

In contrast, Participant 6 did not provide positive statements that supported her commitment to change behavior through self-liberation. The data indicated a frustration with the lack of consequences for children when using the conflict resolution process, an evidence-based practice, to respond to challenging behavior. She stated, "I don't want to come to school feeling like that...so I can't do the visual charts with the kids, you know, there's really is no consequence [for them]." This statement indicated that this teacher put the responsibility on a flawed process rather than on her individual practice. Additionally, the following response by Participant 6 was coded TR N:

By June, it was our goal to have the kids start to go through the steps [of conflict resolution] on their own, but I still haven't seen too much success with them doing it on their own. Right, because we use the same language every single time, you know...but nope, not this group.

Participants 1 and 2 scored in Stage 3 of the stage of change instrument, and Participant 6 scored in Stage 5. These findings are analyzed in more detail within the comparisons section of this chapter. The negative codes in this section indicated the participants were not progressing through the stages of change as the TTM research indicated taking responsibility and making the commitment to change practice is vital to the progression to Stage 5: Maintenance. Three of the 10 participants did not demonstrate a commitment to change or take responsibility for changing. One participant did not

provide a supporting statement for making the commitment, but did provide a positive statement that indicated taking responsibility. One participant indicated she had made the commitment, but did not provide evidence that indicated she took responsibility for changing practice. The researcher determined that positive statements were required for both making the commitment to change (MCC) behavior and taking responsibility to change (TR) in order to progress from preparation to action.

The next behavioral process of change is stimulus control, a process closely aligned with Stage 4: Action. The results are presented in the next section.

Stage 4: Action. This section contains the findings pertaining to action. The specific processes of change discussed in this section are stimulus control and counter-conditioning.

Stimulus control. Stimulus control, according to TTM, is the act of changing the environment to support new behavior. These include behaviors such as posting physical reminders or using the strategy of mental or visual cues to remind one of effective strategies (Peterson et al., 2010). This behavioral process of change aligns with Stage 4: Action. One of the interview questions asked, “When responding to children with challenging behaviors, what do you do, if anything, to remind yourself of effective strategies? If so, describe how you alter the environment in the classroom?” Two codes emerged during the analysis process. The first was altering environment (AE) and the second was mental/visual reminders (MVR). Eight of the 10 participants provided statements that were positive and supported these practices. Two participants provided positive statements for one or the other. Participant 8 said, “I’ve arranged the room like this [for] the third time, to try to keep it so there isn’t an opportunity for running, except

around the rug. Although this statement provided minimal evidence of altering the environment, when prompted about mental or visual reminders, Participant 8 said, “I think it’s important to read some of my trade books to remind me of what some of these strategies are.” However, this statement did not support the behavior of utilizing mental or visual cues to support a desired change according to the TTM model.

Conversely, Participant 10 provided multiple statements that supported stimulus control, or action, which corresponds to Stage 4 descriptions. Participant 10 said,

The other children see that [explosive behaviors] and sometimes they tend to respond in kind to the child where they kind of pick up on the teachers’ attitude towards the child...you’re the focus of the classroom and how you handle things is very much, you know, you hear it with young children, you hear them parroting your phrases and how you speak to the other children and with each other...so I think that keeping that flow [of the classroom] in mind I think is a way to be successful. If you create an environment where they feel as independent as possible they are a lot more willing to meet you in that way.

Furthermore, when asked about mental or visual cues, Participant 10 said,

I have a step chart in my head where...this strategy, I start with if the child is angry, this is the first strategy I have. If they continue to be angry, this is the next strategy I have. I’ve worked on engraining that [mental process] in myself because I don’t want to go back to that [negative or ineffective] place.

Likewise, Participant 5 indicated that she uses mental cues to maintain a calm demeanor when responding to children with challenging behaviors. The next statement

demonstrates how she uses cues to control her response while emphasizing how her response may impact the child:

So you have to think about it, you have to really talk to yourself...and say you know, this is what he hears, this is what she hears, this is, you know, you just have to keep being clam and [remind this child that] this is not preschool talk [violent swearing].

When asked about altering the environment, Participant 1 said, “I don’t really use anything to remind me or anything. It’s just, I guess, your values and your training...those things work together to help you respond to each situation.” These examples appear to indicate a behavioral progression through the stages of change, and as in the previously discussed behavioral processes, responses became less consistent among the participants as the stage progression continued.

Counter-conditioning. Counter-conditioning, another behavioral process of change aligned with the Stage of Change 4: Action, involves changing responses when faced with triggers of old behaviors. The focused question for this process of change involved how teachers kept from resorting to old responses, if at all, in order to ensure that newer response strategies were implemented when responding to children with challenging behaviors. One code emerged for this process of change, change trigger response (CTR). Participants were assigned a yes for positive statements, and no for negative statements. Six of 10 participants provided positive statements indicating that they changed their responses when faced with triggers in the classroom. For example, Participant 10 provided positive statements regarding her action of counter conditioning. She stated, “instead of resorting to old behavior, I will literally look at a teacher and say, I

need five minutes,” indicating the need to leave the situation. She then followed-up by saying, “I have a big bag of tricks, and sometimes, you have to reach for another.”

On the other hand, Participant 8 answered the question with a statement coded as negative. She said, “I think we have to practice it [strategies], I think it is repetition, somebody said 16 repetitions [until it is habit], somebody else said 10.” Conversely, Participant 4 said, “I have to always remind myself, they’re only 4 [years], only 4...I look at the signs I have in the back, the signs are my most effective way to remind myself what to do.” Noticeably, Participant 8 answered the question by referring to the need for repetition to develop new habits, which is more of an experiential process. Additionally, Participant 4 indicated she implemented behaviors that are both mental (“they’re only four”), and visual cues (“signs in the back”), to support implementing evidence-based response strategies. Thus, Participant 4’s responses were aligned with action, a behavioral process.

Stages 4 and 5: Behavioral processes. This section contains the findings pertaining to the behavioral processes. The specific process of change discussed in this section is reinforcement management.

Reinforcement management. Reinforcement management is linked with Stage of Change 4: Action, and Stage of Change 5: Maintenance (Peterson, 2012). This behavioral process of change contains indicators of positive reinforcement to maintain the behavior change. Two codes emerged for this process of change, and they involved celebrating successes (CS) and sharing successes (SS). As before, positive statements were marked with yes, and negative ones marked with a no. Interestingly, one of 10 participants did

not engage in either celebration of success or sharing success. Five of the participants indicated that they did one or the other, and four indicated that they did both.

A positive statement is illustrated in the words of Participant 10. She scored a 4 on the Stages of Change Scale for Early Care and Education 2.0, and analysis of the qualitative data indicated she was in Stage 5. She said,

I write it down, and I put a star on it and usually talk to the team. I usually say, hey, did you realize, did you see me...It's not bragging, it's more you're doing it with the kid in mind. I celebrate [success] by doing a happy dance.

In contrast, Participant 2 said, "I don't think we do [celebrate] because at the end of the day that's it...we have the notebook and we say this worked today, let's try it tomorrow, but it...doesn't work the next day, so...we're not celebrating yet." She continued describing how she shares success: "I did celebrate the fact that we've got him all kinds of services, and he's out of the room for a longer period of time, which he needs."

However, when asked about celebrating success, Participant 1 responded, "I don't know, probably just say in my head, oh yeah, that worked, and then...try to remind [myself], okay, well next time I'm in this situation I'm going to do the same thing." This statement was coded as negative (no); yet, when asked about sharing success, Participant 1 replied, "Yeah...I enjoy talking with her [supervisor] and...if something went really well, or I felt, I don't know it's hard...but I do say what worked for me so if it's an extremely challenging behavior."

Stage 5: Maintenance. This section contains the findings pertaining to the behavioral process of maintenance. The specific process of change discussed in this section is reinforcement management.

Helping relationships. Helping relationships is the final process of change and is solidly aligned with Stage 5: Maintenance. Helping relationships involve the behavior of talking to a friend or relative, or a co-worker or supervisor to engage in problem solving to maintain the desired behavioral change. Four of the 10 participants indicated that they do not engage in helping relationships. All four of those participants (1, 4, 6, 8) had at least one negative response within the reinforcement management process of change, which involves celebrating and sharing successes, and is the process that precedes maintenance. This indicated an interruption in the progression through the stages of change between Stage 4: Action and Stage 5: Maintenance.

Examples of positive statements included, “So I think it is having conversations with other people who are in your position so that we’re all growing from each other and that’s how we could develop professionally” (Participant 2). Similarly, Participant 3 said, “Collegial groups are so important, I love to share my experiences with other teachers...they really get the struggle.” Examples of negative responses included, “Not always, just because between family life and work life, I mean, I don’t really have time to do that” (Participant 1), and, “I don’t because the other person in the classroom really doesn’t practice them, so I really just work on myself...So, I mean I probably should depend on somebody to help me...but really have not been able to do that” (Participant 4). Thus, the findings indicated that some of the participants were within Stage 5, but many had not progressed to that level.

Summary. This section presented the 10 processes of change and examples of each. The experiential processes were presented first followed by the behavioral processes theorized in TTM. The researcher has provided statements that support or refute the participants' progression within each process. These findings were the result of a methodical coding system. The next section compares the qualitative findings with the results from the Stage of Change Scale for Early Care and Education 2.0.

Comparisons

The comparison between the results of the Stage of Change Scale for Early Care and Education 2.0 and the qualitative results based on the participant interviews resulted in four of the participants in agreement, and six in disagreement. The results of the analysis of Participants 1, 3, 4, 5 responses across instruments were in agreement, while results for participants 2, 6, 7, 8, 9, and 10 were not (Table 4.4). The relationship between the instrument results and the qualitative findings are discussed in this section and is organized by participant.

Table 4.4

Comparison of Stage of Change Scale Results with Qualitative Findings

Participant	Stage of Change Scale Results	Qualitative Findings
1	3	3
2	3	4
3	4	4
4	3	3
5	5	5
6	5	3
7	3	5
8	4	3
9	4	3
10	4	5

Participant 1–Stage 3: Preparation. The results of the Stage of Change for Early Care and Education 2.0 survey (self-report) placed Participant 1 in Stage 3: Preparation, indicating that this participant was ready to change. Moreover, the results of the qualitative data gathered through interviews showed the same results suggesting an alignment between the Stage of Change Scale for Early Care and Education 2.0 and the qualitative analysis.

Both the stage of change scale, and the qualitative data indicated that this participant exhibited an awareness to change practice when responding to children with challenging behaviors. On the scale, Participant 1 indicated that she was currently

working to change something, which meant that she had awareness to change her practice. During the interview, Participant 1 reinforced her readiness to change when she said, “I do a lot of thinking and reflection on my time, and how I’ve interacted with the kids, and what I can do differently.” She also indicated that she knew what needed to be changed when she said, “I noticed this worked today...and definitely the success of it kept me doing it throughout the year”.

As the interview continued, Participant 1 demonstrated how she moved through the experiential processes of change by expressing her awareness to change, as well her practice of reflection, and consciousness-raising to dramatic relief. She showed evidence of her readiness to change stage in her statement that she experienced frustration and anger when a child exhibited moderate-to-severe challenging behaviors. She stated, “Everything I’ve done to this point is not working, and I’m angry that they’re not listening to me or and not doing what I’m asking.”

Next, the experiential process of self-reevaluation was demonstrated Participant 1’s statement, “Kids should be respectful toward adults, but I also think they have their own individuality” (P1). This statement was coded as positive for this process for change, advancing her through Stage 1: Precontemplation, and Stage 2: Contemplation. The next process of change, environmental reevaluation, as demonstrated by Participant 1 is discussed in the next paragraph.

In the semi-structured interview, Participant 1 indicated that she recognized how her response to children who exhibit challenging behaviors affect her and others:

I feel just frustrated, it’s hard to hold back for that half a second and figure out what your response is going to be, is it going to be the one today when you snap

at the kid and say you shouldn't be doing that, and that sets them off for the rest of the day, or is it going to be planned ignoring, or a calming strategy?

She continued to demonstrate her awareness of the impact on others, "This effects the whole class...it effects the whole class and other children get scared." These statements demonstrate the experiential process of environmental reevaluation, as defined by TTM.

On the Stage of Change Self-Report survey, Participant 1 indicated that she found new information on her own. This was supported by the following statement in the semi-structured interview, "Training and professional development...sometimes that can help give you those other strategies to either calmly approach or deal with a child." Participant 1 also indicated that she believed that when she made a change, it would help the children, and on the self-report, she indicated that she was aware of someone to support her change. These similarities suggested an alignment between the stage of change scale and the qualitative analysis through Stage 2: Contemplation of Change and Stage 3: Preparation to Change.

For Participant 1, the qualitative results indicated that she was prepared to make a change. However, her statements indicated that she was not at Stage 4: Action. This finding was based upon statements were coded as negative in self-liberation, which includes making a commitment to change, a behavioral process based in action. When asked the question, "Describe how you set yourself up for success, what goals to you set for yourself," Participant 1 answered, "I've done it for so long not the way you're supposed to do it, like how can I even start to incorporate this...what am I going to do to make this better." A person at the stage of self-liberation is willing to make the commitment to change, and while Participant 1 indicated that she took responsibility for

this process, she did not indicate that she took actions to support making the change. She did, however, demonstrate that she took responsibility to change her practice, “What am I going to do to make this better...what can I do now and just kind of remind myself that there are other options.” Her self-reported behaviors are characteristic of someone in Stage 3: Preparation. However, evidence of moving into Stage 4: Action required evidence of altering the environment (AE) and using mental and visual cues (MVR) to reinforce changes. These behaviors align with the process of stimulus control, and Participant 1 did not report that she altered the environment to support changes in practice; however, she did indicate the use of mental cues to improve practices. Because Participant 1 did not code positive for both AE and MVR, analysis indicated she had not progressed to Stage 4: Action.

For counter-conditioning, a behavioral process also aligned with Stage 4: Action, Participant 1 indicated that she responded when faced with triggers by, “building a repertoire of what might work in a situation, and then being able to call on it when you need it again.” However, she indicated that she does not celebrate successes, a key behavior characteristic of the process of reinforcement management. Although Participant 1 indicated she sometimes shares successes with her immediate supervisor, she said she did not engage a community that supported maintaining her practices. Specifically, she said, “not always, just because between family life and work life, I mean I don’t really have the time to do that.”

For Participant 1, results reflecting the first five experiential processes of change indicate she is someone in Stage 3: Preparation to change. Results showed that she had

not progressed to Stage 4: Action. These findings were consistent with the self-report survey results on the Stage of Change Scale for Early Care and Education 2.0.

Participant 2–Stage 3: Preparation, Stage 4: Action. The qualitative data suggested that Participant 2 exhibited behaviors consistent with a person in Stage 4: Action. However, the results of the stage of change scale self-report placed Participant 2 in Stage 3: Preparation. The disparity, it appeared, began to emerge in Participant 2’s answer to Item 6 on the Scale. Participant 2 indicated she did not know whether anyone would support her in making a change, an answer associated with someone in Stage 2: Contemplation. However, the qualitative data indicated she felt she had some level of support for the process of social liberation. She said, “so the only support I get is to be able to go into my supervisor’s office at the end of the day and let it all out and then walk out with a fresh outlook on the next day.” Yet, when prompted further, Participant 2 stated, “I started my [educational program] so that I could be among other teachers who want to consistently grow.” These answers were coded as positive in the qualitative analysis process and in alignment with social liberation, the awareness of resources to support change.

Overall, within the process of consciousness raising, the qualitative data indicated that Participant 2 had an awareness to change, engaged in reflective practice, and expressed indicators that supported the experiential process of change referred to as dramatic relief or emotional arousal. Participant 2 showed movement through the processes within her statements that indicated she understood and had an awareness of her own values and beliefs. In both the scale and the qualitative interview data, Participant 2 indicated that she recognized the impact of her response to challenging

behaviors on children. This signifies an alignment between the scale and the qualitative findings for environmental reevaluation, which is aligned with Stage 1: Precontemplation and Stage 2: Contemplation. Evidence to support this finding is provided in the participant's response to the scale question, "I see how a change that I made helped the children" (Item 4). Additionally, the qualitative data demonstrated this awareness through her statement, "I have found that since this specific child has come into our classroom, other children who didn't have challenging behaviors have started to act out because they see all of my attention going to this child." Participant 2 was aware of how her responses impacted the other children. The disparity between the results in stage of change scale and that of the qualitative data for is apparent in the process of social liberation, which is described in the next paragraph.

The qualitative analysis suggested that Participant 2 was aware of resources to support change when she stated she found support through pursuing a higher degree of education. On the scale, however, she selected the answer that indicated she did not know who would support her in change (Item 6). Furthermore, she indicated that she felt she could not grow as a teacher within her current program placement, but said, "I have to help myself grow." There is a relationship between this statement and the behavioral process of change of self-liberation: although Participant 2 did not feel supported in her current position within her current program, she was aware of social resources that supported the changes she desired to make. While self-liberation is in Stage 3: Preparation, her statements demonstrated evidence of movement through the processes into the behavioral processes associated with Stage 4: Action (active change). She demonstrated this through statements consistent with the process of stimulus control.

Stimulus control is a behavioral process that involves altering the environment to encourage new behaviors. In the process of coding, two themes emerged. Two codes were assigned to capture these emerging themes: altering environment (AE) and mental, visual reminders (MVR). The statements provided by Participant 2 strongly showed she was active in this process. Therefore, her reported actions indicated that she was enacting behaviors associated with Stage 4: Action. For AE, Participant 2 described how she altered the environment to support change: “Sometimes...we have class meetings...instead of just talking about them, we act them out.” Evidence of MVR was in Participant 2’s statement, “If I find that things aren’t working, I have to step back, everybody needs a breather...I know I need to stop.”

Furthermore, Participant 2’s data showed that she engaged in the action of counter conditioning (CTR), a behavioral process of change that is also action-based. She said, “if it’s not working, you cannot just keep going, so you have to completely stop, do something different, and come back to it.” In other words, Participant 2 stopped her response and changed her response strategy, which is an action illustrative of Stage 4: Action behaviors. This is where her progression through the stages of change stopped. Reinforcement management is the next process of change and is associated with the action of celebrating successes and sharing successes with others. The result of the qualitative analysis is presented in the next paragraph.

The qualitative analysis suggested that Participant 2 had not yet progressed to Stage 5: Maintenance. When asked whether and how she celebrated successes (CS) when she changed her practices, or how she shared success (SS), Participant 2 said, “We will say this worked today, let’s try it again tomorrow, but it usually doesn’t work the next

day so I don't think we're celebrating yet." For both CS and SS, this qualitative data was coded as negative, which indicates Participant 2 had not yet moved into Stage 5: Maintenance. The qualitative data indicated there were elements that did not support changes in her practice with regard to responding to moderate-to-severe challenging behaviors. These included her perception of the lack of support in the program, and the strong feeling that there is no room for growth in her current placement. These findings contribute to the incongruence between the stage of change scale result and the qualitative result.

Participant 3–Stage 4: Action. The qualitative results and scale results for Participant 3 were congruent. Both placed the teacher in Stage 4: Action. On the Stage of Change Scale for Early Care and Education 2.0, the preschool teacher indicated that she was planning for a change at the time of the survey, which is an answer that aligns her with Stage 3: Preparation. However, she also selected the answer that indicated that she, “thinks about how to keep up changes she’s made,” an answer aligned with Stage 5: Maintenance.

Comparatively, the qualitative analysis suggested Participant 3 is also in Stage 4: Action. This preschool teacher was coded positively for 14 of the 15 codes. From the beginning of the processes, Participant 3 indicated an awareness to change and reflected on her practice. Her statements demonstrated the use of dramatic relief, the emotional arousal of “tears, a lot of tears” when referring to her emotional response. Participant 3 also recognized and was aware of her values and beliefs, which is in alignment with the progression of the processes of change, specifically self-reevaluation. Furthermore, the data demonstrated her movement through the processes, as evidenced in her statement, “I

had a lot of anxiety around that time... There were actual facts of [children] getting hurt.” This is an expression of this participant’s awareness of the effect of her behavior on self and others (Eff/O and Eff/S) and demonstrates she enacts the process of environmental reevaluation.

Additionally, on the stage of change scale, Participant 3 selected that answer that indicated that she was active in a community that supports change, an action that, according to the scale, is aligned with Stage 5: Maintenance of Change. Moreover, the qualitative data supports this. She said, “I go to teacher meetings and talk about what happens, and that helps, but mostly, I rely on my partner. Overall, the qualitative data for Participant 3 illustrated her progression through all five of the experiential processes of change and her transition into the behavioral processes of change.

Self-Liberation, or commitment, is the next process of change where there appeared to be a relationship between the qualitative findings and the results from the scale. In the interview, Participant 3 indicated she would make the commitment to change when she said, “Every day is a new day, and I need to be ready for that child. I need to learn new things because I am the teacher, it’s like a doctor, I need to keep my practice new.” Correspondingly, on the scale, Participant 3 selected, “I think about how to keep up changes that I’ve made” with regard to responding to children with challenging behaviors.

Participant 3 also expressed her commitment to altering the environment (AE) by articulating that she utilized mental and visual reminders to support deploying appropriate strategies in the classroom. She indicated on the scale that she has made changes before, even though they were not always easy. This answer is aligned with

Stage 4: Action. Although Participant 3 provided evidence of experiences and behaviors characteristic of processes aligned with Stages 1: Precontemplation, through Stage 4: Action, the qualitative data did not support that she was firmly in Stage 5: Maintenance.

As stated, Participant 3 had moved the first four stages of change; however, for the purposes of this study, the researcher determined that all 15 questions had to be positive, or receive a yes in order for a participant to be considered in Stage 5: Maintenance. There was some evidence that Participant 3 was in Stage 5. For instance, when asked about celebrating successes, she said, “We dance and smile when something works,” which is a clear indicator of celebration. However, the data did not show evidence of Participant 3 sharing experiences to support success. She said, “Our model has changed and we really don’t share as much as we should.” As such, the data analysis placed her in Stage 4: Action, which was congruent with her results from the Stage of Change Scale for Early Care and Education 2.0.

Participant 4–Stage 3: Preparation. According to the qualitative analysis, Participant 4 had progressed to the Stage of Change 3: Preparation. The qualitative results were congruent with the results of the self-report form survey in the Stage of Change Scale for Early Care and Education 2.0.

The results from the scale placed Participant 4 in Stage 3, Preparation, when it comes to children who exhibit challenging behaviors. An item analysis, however, revealed a range of responses. On the scale, Participant 4 indicated that she was aware of the need to change her practices in response to challenging behaviors. She selected the item, “I am working on something right now, and I know what I need to change.” While this answer is aligned with Stage 4, Action, Participant 4 also indicated that at the time of

the survey, “She doesn’t know anyone who would support me in change” an answer aligned with someone who is in Stage 2: Contemplation. This response aligns with the experiential process of social liberation, which is an awareness of resources to support change. Nonetheless, Participant 4 also indicated that she was interested in learning new information, as opposed to selecting, “I often learn about this things I want to change,” which is more aligned with Stage 5: Maintenance. This disparity between answers may have contributed to the result of Stage 3 on the Scale, which was in congruence with what the qualitative data suggested.

The qualitative data indicated that Participant 4 had progressed through the experiential process of consciousness raising. The evidence included statements that indicated she had an awareness to change and reflected on her practice related to responding to children with challenging behaviors. She said, “I like to reflect by talking to other people...I had someone videotape me going through the steps of [conflict] resolution.” She showed evidenced of having progressed through dramatic relief when she explained, “I get frustrated, and so it’s very hard for me to flip it around and not get frustrated” with children who exhibit challenging behaviors. Additionally, Participant 4 continued to provide evidence that she had an awareness of her values and beliefs as they related to her response to children who exhibit challenging behaviors:

I do think my personal values and beliefs conflict with what I know I’m supposed to be doing in my classroom. Sometimes, my personal beliefs overtake what I know I should try to do. I believe that, but I also believe that children aren’t always capable of that [behaving the way they’re told] even though I think that’s what they should be doing.

Furthermore, Participant 4 provided evidence that she recognizes the effects of her responses on children with challenging behaviors, on herself, and other children. The qualitative data suggested that this preschool teacher had progressed through Stages 1 and 2, and because she expressed an awareness of resources to support her change, she had experienced social liberation, an experiential process associated with Stage 3: Preparation. Finally, the qualitative data showed evidence of the process of self-liberation, the first behavioral process of change, which placed her in Stage 3: Preparation.

According to TTM, self-liberation is the first behavioral process and involves making the commitment to change behavior. Although Participant 4 indicated that she was working on changing her response strategies toward children who exhibit challenging behaviors (“So I’m working on it”), the data was negatively coded for TR. The negative code was applied because she said, “I really do believe children should do what adults tell them to do. I try to use the [conflict] resolution steps, and that’s a challenge for me.” Because there were not positive data provided for TR, the qualitative analysis placed this preschool teacher in Stage 3, which was congruent with her responses on the scale.

Participant 5–Stage 5: Maintenance. Based on the results of the Stage of Change Scale for Early Care and Education 2.0, Participant 5 rated in Stage 5: Maintenance. The qualitative data was in agreement with the Scale, with the coding indicating the participant was at Stage 5: Maintenance. This preschool teacher had moved through each of the experiential and the behavioral processes of change, as defined by TTM. The qualitative data indicated that she had an awareness of change, and continually

engaged in reflective practices, which aligned her with the experiential process of consciousness raising. The results of the scale indicated that she was working on something to change at the time of the survey, and revealed that she thinks about how to maintain those changes, a result consistent with the qualitative data.

Furthermore, during the interview, Participant 5 provided rich descriptions of each level. For Stages 1 and 2, Participant 5 expressed her awareness of the need to change practices, and stated that reflection with her paraprofessional is built into her daily practice. She expressed concern about the increase in violent behavior in her classroom, and mentioned that “it wears on you,” an experience characteristic of dramatic relief. Participant 5 demonstrated recognition of the impact of her values and beliefs on her responses to children who exhibit moderate-to-severe and challenging behaviors when she said, “I’ve been doing this for so long my values and beliefs, I try to keep them aside because [they] aren’t really what’s important at that moment.” Moreover, Participant 5 indicated her recognition of the impact on her response to children with challenging behaviors on self and on others: “If the challenging child knows that I’m getting upset, they’ll feed off of your temperament pretty quickly... If I’m getting upset, the behavior escalates.”

Similarly, Participant 5 demonstrated an awareness of resources that support change, “I really try to keep up on the reading and what is research based, and what works and what doesn’t. I think this is where I really use my colleagues.” Additionally, on the stage of change scale, Participant 5 indicated that she is “active in a community that supports change.” This result was congruent with the qualitative data.

Moreover, Participant 5 demonstrated a commitment to change her practice in both the scale and in the interviews. She had made the commitment to change and took responsibility for her responses to children with challenging behaviors. She explained, “We have a six-step...conflict resolution [strategy], and I think it absolutely works, and so if you’re going through those six steps, every other child is hearing you go through the six steps, and they’re following along.” Her statements suggested that she takes responsibility for her response strategies, and again, understands both the impact on the child, and on the other children. This finding was congruent with her self-report on the scale, which confirmed a relationship between her statements, the scale results, and the experiential process of environmental reevaluation.

Participant 5 demonstrated alignment with each behavioral process of change as she altered the environment, used mental and visual reminders to sustain changes in her response strategies, and changed responses when faced with triggers. She said, “I know what to do, I take a deep breath...you have to know yourself.” Her statement, “knowing yourself” may be congruent with the scale statements, “I feel like a professional because I often make changes” and “I often learn a lot about things I want to change.” Participant 5 demonstrated that she was active in the behavioral processes through Stage 4: Action, and had transitioned into Stage 5: Maintenance.

Within Stage 5: Maintenance, Participant 5 acknowledged that she celebrated success as part of her practice as well as shared successes within the active community that supports change. She said, “So, I mean, but that [progress with a child] is at the end of April. I mean we’ve come so far, so that’s huge, I mean that’s huge. [It’s] our job, it’s great to feel successful...you just have to enjoy the moment.” Participant 5 also shared

that she engaged in helping relationships to support change, which is in alignment with those in Stage 5. Therefore, the researcher determined that Participant 5 was in Stage 5: Maintenance and the qualitative findings were congruent with the Stage of Change Scale for Early Care and Education 2.0 self-report form results.

Participant 6–Stage 5: Maintenance, Stage 3: Preparation. The results of the Stages of Change Scale for Early Care and Education 2.0 placed Participant 6 in Stage 5: Maintenance, while the qualitative data results suggested that she was still in Preparation, Stage 3. The incongruence appeared to begin during the transition from experiential processes, to the behavioral process of self-liberation, which includes taking the responsibility to make change when responding to children with challenging behaviors. For this process, two themes emerged. The codes assigned to self-liberation were MCC, making the commitment to change, and TR, taking responsibility. The analysis suggested that this participant had progressed through the experiential processes of consciousness raising, dramatic relief, self-reevaluation, environmental reevaluation, and social liberation. Statements indicative of each of these processes were coded positive. However, her answers to questions about how she set herself up for success when responding to children with challenging behaviors, or what, if any, goals she set to demonstrate her commitment to change, were coded as negative. The incongruence is examined in the next paragraph.

The responses to Stage of Change for Early Care and Education 2.0 placed Participant 6 at Stage 5, and item analysis of her responses on the scale demonstrated consistency. Specifically, Participant 6 indicated that she was working on a change now, thinks about how to keep changes in place, seeks information to learn a lot about things

she doesn't know, and focuses her change efforts on helping children. Participant 6 indicated that she knew several people who could support change, and that she felt like a professional because she made changes. The qualitative data, however, did not supply evidence of her transition from Stage 3: Preparation, to Stage 4: Action, or her progression toward Stage 5: Maintenance.

For example, in the interview, when asked to describe how she set herself up for success when responding to children who exhibit challenging behaviors, and what goals, if any, were set, Participant 6's responses were coded as negative for both making MCC and TR. She said, "I don't want to come to school feeling like that...I can't do visual charts with these kids, I can't you know, there's really no consequence [for them]. I need these kids to see every action has a consequence." Additionally, when asked about taking responsibility to change, she explained:

Right, because we use the same language every single time [conflict resolution steps], you know, like we [all] acknowledge our feelings, all the different steps, but nope, not this group. But then, that's also a problem because then they see it [individual attention to child] as a reward, that they're getting this one-on-one attention, and they get to go into [the] office where there's different toys and books and so...there was nothing we could do in the classroom.

Taking responsibility for change, as well as making the commitment to change, is an important part of the progression in the processes of change. The qualitative data suggested this preschool teacher had not provided statements that indicated that she took responsibility for her responses, nor had she made the commitment to change her practice

with regard to responding to children with challenging behaviors. Therefore, this participant remained in Stage 3: Preparation, according to the qualitative analysis.

Furthermore, while Participant 6 provided positive statements that supported altering the environment (AE), and indicated that she used visual cues (MVR) as reminders of evidence-based response strategies, when asked to describe how she kept herself from responding to older responses to challenging behavior, if at all, to make sure she used newly learned strategies, she said, “I don’t know if I remind myself of anything, I just go with what’s working at the time.” This further supported the notion of behaviors associated with Stage 3: Preparation.

Additionally, when moving forward in the progression of the processes of change, Participant 6 did not indicate that she celebrated successes, and expressed “Well I first off start by telling my partners, I did this today, and it worked, and you know, so [that] you know.” She continued by saying “I don’t really document the good things, I just kind of put it in the [proverbial] filing cabinet back there [in her mind], and move forward.” This is an important behavioral process that, according to TTM, is characteristic of Stage 4: Action behaviors. Moreover, when asked about engaging in helping relationships, a behavioral process aligned with Stage 5: Maintenance, qualitative analysis indicated a negative answer. Participant 6 said,

We don’t really have, I don’t think, there’s [any] mentoring...I wish I had a mentor to [consult with] more frequently, but I don’t really. I just kind of have my partners, and its’ a kind of feeling I get [no mentors, wished she had them].

Data analysis indicated Participant 6 was a Stage 5 according to the scale while qualitative results indicated she was in Stage 3.

Participant 7–Stage 3: Preparation, Stage 5: Maintenance. Similar to Participant 6, the results of the scale were incongruent with the qualitative findings. However, unlike Participant 6, the qualitative findings placed the teacher further along the stages of change than the scale did.

For Participant 7, the qualitative analysis suggested that she exhibits behaviors characteristic of those found in Stage 5, Maintenance. She had progressed through both the experiential and behavioral processes of change as evidenced by the rich descriptions that supported her awareness of change, reflective practices, and emotional arousal. She expressed how her values and beliefs impacted her response to children with challenging behaviors when she said, “Well, I’ve been teaching for 13 years, I grew up in the suburbs, I went to private schools, so when I came into [an urban setting], that was such an eye opening experience. My first couple of years, I couldn’t believe the turmoil the children went through.”

On Item 1 of the self-report form, Participant 7 reported that she did not plan on making any changes to her response to children with challenging behaviors, which is a behavior aligned with someone in Stage 1: Precontemplation. However, her response to Item 2 on the survey indicated that she might need to make a change someday, an answer aligned with Stage 2: Contemplation of Change. Additionally, Participant 7 indicated an interest in learning new information, but she did not select the option on the survey that demonstrated an active pursuit in new information, which is aligned with Stage 3: Preparation. The rest of her answers indicated that she was either in Stage 4 or Stage 5 on the Self Report Survey. These item responses appeared to contribute to the disparity between what the qualitative data suggested and the results from the scale.

Within the qualitative data, the teacher descriptions provided rich content that all were coded positive across each stage of change. For example, Participant 7 indicated that she reflected with her teaching team. She said, “I’ll go back to some of those books and see if something catches my eye, and see if there was a different way I could have approached it [response strategies] rather than right in the moment.” When asked about her reflective practices, she responded, “[I think to myself] was there a way that could have prevented [the outburst or situation], and I talked to other teachers to see if they experienced some of the same situations and how might we have handled that [better]?” Thus, the qualitative data indicated that Participant 7 was willing to make changes regarding her work with children who exhibit challenging behaviors.

As the questions progressed through the processes of change, Participant 7 made statements that supported the notion that she recognized the effect of her response on self and others. She said, “I think it’s helping me, it’s introducing me to a new technique, what they’re feeling [parents] so I mean I think...feeling as anxiety filled as I do sometimes, I have to take it as a learning curve.” This statement was in response to questions aligned with self-reevaluation and supported the idea that she was working on change at the time of the interview.

Statements relating to self-liberation (commitment) also appeared to support her commitment to change her response strategies. Participant 7’s statement, “You just can’t get stuck in your ways, and you can’t just say that there’s only one way to do it” strongly aligned with taking responsibility, which is characteristic of someone in Stage 3, Preparation.

Within the domain of behavioral changes, Participant 7 described behaviors that fall within the processes of stimulus control, counter conditioning, reinforcement management, and helping relationships with rich statements. All of these were coded as positive in the qualitative analysis process. Participant 7's descriptions indicated a willingness to strive to keep a pleasant learning environment because she said she uses mental and visual reminders of appropriate strategies, "I keep that poster right up there and that cues me in." When asked which are behaviors she engages in that change responses when faced with triggers (counter-conditioning), Participant 7 stated, "I've learned not to react too fast, you know...I kind of step back a little bit, before I would have tried to jump in and solve their problems." She recognized the trigger of conflict in the classroom and adjusted her behavior to allow children to work it out themselves. The trigger, as she described it, was her need to solve all of the children's problems, and she instituted a behavioral process that reminded her to slow down and step back. This behavior is aligned Stage 4: Action.

Participant 7 indicated that she celebrated successes, as well as shared them with others. She said, "I maintained it [strategy] and I do it, it's like wow, you've solved that all by yourself, and you did it by talking and you didn't yell, you didn't fight, you didn't argue...we celebrated [success]." As far as engaging in helping relationships, a behavioral process characteristic of someone in Stage 5: Maintenance, Participant 7 utilized an individual who was an important part of her program on a regular basis. This behavior aligned with Item 6 on the scale where she indicated that she was then actively involved in a community that supports change.

In conclusion, the disparity between the survey and the qualitative data for Participant 7 appeared to have occurred in the first two items on the self-report form of the scale, making the commitment to change and taking responsibility for change. During the focused interview, the coded teacher descriptions revealed a teacher who was in Stage 5: Maintenance.

Participant 8–Stage 4: Action, Stage 3: Preparation. The results of the Stage of Change Scale for Early Care and Education 2.0 self-report, and the qualitative data were inconsistent for Participant 8. The scale indicated that Participant 8 was in Stage 4: Action, and qualitative data indicated she was in Stage 3: Preparation. This section begins with the qualitative results for Participant 8, and concludes with the results of the Scale.

Consistent with the other participants, Participant 8, provided statements that demonstrated progress through the experiential processes of change. Specifically, Participant 8 stated that she, “[Tries] different things, tries different techniques in order to see what is effective.” Also, Participant 8 expressed that she, “loses sleep at night thinking about how I am going to change my behavior toward the child to make it effective.” The qualitative data indicated that Participant 8 experienced emotional arousal with feelings of depression and anger and that she had to try to be as positive as she was able. This preschool teacher also made statements that indicated she recognized the impact of her values and beliefs on her responses, which, she indicated, was “something I need to work on.”

Participant 8 made statements that supported her recognition of how her responses affect self and others, characteristic of those experiencing the process of social liberation. While she stated she did not have sufficient support in her program, she was aware of

resources that would support her desire to change. However, when examining the behavioral process of commitment, both of her responses were coded as negative. Specifically, when asked to describe how she set herself up for success, and what, if any, goals she sets for her success, she said:

“I’m pretty stern, yeah, but I’m not going to flip out...my goal is to get through the day without a nervous breakdown...Now I used to say I could take on just about anything for [shorter] hours, now we’re going all day. Oh boy, that is a different world.”

At the time of the interview, Participant 8 had more than 20 years of experience, and the researcher noted in field notes a sense of frustration and discouragement in the participant’s responses. These statements were coded as negative for MCC and TR because she did not indicate an intentional effort to change response strategies when faced with children who exhibit moderate-to-severe challenging behaviors. Analysis revealed that her progress into the behavioral processes and transition to Stage 4: Action, was stalled here. Regarding the process of stimulus control, Participant 8 did indicate that she altered the physical environment to reduce the children’s behavior of running around the carpet, but she did not indicate an effort to alter the environment to support her change in practice. When asked what mental or visual reminders she used to support her desire to change her practice, she stated, “I think it’s important to read some of my trade books to remind me what some of these strategies are,” a statement that was generic. When probed further, her descriptions did not reveal evidence of behaviors characteristic of someone in Stage 4: Action.

Participant 8's statements also did not show evidence of the counter conditioning process. She did, however, refer to the need for practice and repetition when learning new strategies. When asked about the process of reinforcement management, which includes the action of celebrating success or sharing success, Participant 8 said, "I really don't, not anymore." During the interview, the researcher noted body language that could be interpreted as discouragement. However, she did indicate that she shares success when she said, "You know, I have a colleague who we, two colleagues, we sit every day for lunch and that's all we do is talk about it." The data suggested that Participant 8's statements are weaker in the behavioral process of commitment, and placing her within Stage 3: Preparation, which means she may be ready to change, but may not be actively changing her response strategies for children who exhibit moderate-to-severe challenging behaviors at the time of the interview.

Conversely, the scale indicated that Participant 8 was in Stage 4. Her survey responses indicated that she was working on a change at that time and that she thinks about how to keep up changes she has made in her practice. According to the scale, Participant 8 recognized that changes in her practices helped children, and that change is not always easy. She selected the option that said someone would support her in change, and that she feels like a professional because she makes many changes. However, the qualitative data did not support the commitment to change, which resulted in incongruence between the scale and the qualitative results.

Participant 9–Stage 4: Action, Stage 3: Preparation. The results of both the qualitative analysis and the Stage of Change Scale for Early Care and Education 2.0 were incongruent for Participant 9. The scale results placed Participant 9 in Stage 4: Action,

and the qualitative data results placed her in Stage 3: Preparation. As was the case for Participant 8, this preschool teacher provided positive statements during the interview that aligned with all of the experiential processes of change, including consciousness raising, dramatic relief, self-reevaluation, environmental reevaluation and social-liberation. For the first behavioral process of change, self-liberation (commitment), when asked how she sets herself up for success with regard to responding to challenging behaviors, her response focused on the turmoil that some of the children face each day.

Participant 9 said,

I understand it's not about me, it's about what happened [to that child] at 11:30 at night when something's happened. I'm the place where it's safe, so yeah, [I need to] investigate, have an understanding, talk to colleagues, talk to the peer consultant...but when a child went to choke me, and I was trying to calm her down, and...she was linked to my throat, I had to have a conversation.

Participant 9 articulated the difficulties she was facing in her classroom on a daily basis during the interview. The researcher noted that the teacher expressed a sense of trauma or anguish during this portion of the interview. This code MCC was identified as negative, as were the statements supporting TR. The teacher description placed responsibility on external sources exclusively. Participant 9 said,

As much as you think you know what's going on, things happen, and everybody's memory is different, and you think you did this, maybe you didn't. So they're there, they're at the most basic level of emotion and you're just there to make sure they don't hurt themselves, and you can keep the other children safe because you've already established the boundaries, it will escalate, and you have to very

much know the child to understand that there are key words. There was so much in grandma's suitcase [grandma's history] and it went back to her childhood and all of these other things.

Participant 9 appeared to focus on the important external factors that clearly impacted the child who exhibited challenging behaviors. However, what determined a negative versus a positive code was her lack of statements that expressed what she could control. Thus, both of the codes for self-liberation were coded as negative because Participant 9 did not make statements that indicated her commitment to change her practice. However, it should be noted that the participant indicated she felt she was in danger with this 4-year-old child in her classroom when she said, "it wasn't safe for me." The incongruence between the qualitative data and her responses to the scale may be related to her experience in the classroom during the time of the interview, which was focused on a child with severe challenging behaviors that were reported as extremely violent.

Equally important, Participant 9 provided two positive statements that aligned with the behavioral process of stimulus control: altering the environment and using mental and visual reminders to support change. Participant 9 said, "I put them up around the room, I have them up there...so in the moment, I can say, I wonder..." This statement is consistent with behavior in Stage 4: Action. However, Participant 9 did not indicate that she changed responses for triggers of old behaviors, which may suggest that she was not engaged in the action of counter-conditioning. Participant 9 was the most difficult participant to score using the qualitative coding process, and the researcher

defaulted to the coding of the first behavioral process, self-liberation (commitment), to maintain consistency within the analysis process.

The Stage of Change Scale for Early Care and Education 2.0 results indicated Participant 9 was in Stage 4, Action. Consistent with the qualitative results, Participant 9 indicated that she was working on a change at the time she took the survey, and she thinks about how to keep up the changes she made. Participant 9 also indicated that she often learns a great deal about the things she wants to change, and the survey response showed she understood that those changes would result in helping children. Participant 9 indicated that she has made changes before, even though it was not easy, and knew someone to support her in making change. The selected answers were consistent with Stage 4, although the raw score was 4.2, which could explain a portion of the incongruence with the qualitative results.

Participant 10–Stage 4: Action, Stage 5: Maintenance. The results between the scale and qualitative findings were incongruent for Participant 10. The qualitative data indicated that this preschool teacher was characteristic of someone in Stage 5: Maintenance, and the scale results placed Participant 10 in Stage 4: Action. Participant 10 provided rich interview data for all of the processes, resulting in positive coding for all 15 codes in the qualitative analysis.

The Stage of Change Scale for Early Care and Education 2.0 self-report results indicated Participant 10 placed within Stage 4: Action. Participant 10 indicated on the survey that she was changing now, which is associated with Stage 4; however, in Item 2, she selected the option, “I need to make a change,” which is aligned with Stage 3. Participant 10 selected the option that indicated she was interested in learning new

information, which is not associated with an active change, yet she felt she made changes often so she could help children, an answer aligned with Stage 5 on the scale. For Item 4, Participant 10 selected the answer, “I often make changes so that I can help the children,” which is an answer aligned with Stage 5. She also indicated that she knew someone who supported her change (Stage 3), and indicated that, she was beginning to think of herself as a professional (Stage 3).

The field notes of the researcher noted that Participant 10 exhibited humility. She appeared to be very hard on herself, as indicated her statement supporting the practice of celebrating success and sharing success in the behavioral process of reinforcement management, “I usually say hey did you realize, did you see me, it’s not bragging, it’s more you’re doing it with the kid in mind.”

The qualitative analysis indicated that Participant 10 had progressed through all of the experiential processes of change to include consciousness raising and dramatic relief. She said, “[I feel] self-blame, but definitely a lot of questioning, like what am I doing wrong?” In her response to the question about values and beliefs, Participant 10 said, “I think it’s definitely evolved [response strategies], and I do think they’re in line with my values because I understand high emotions, they have to let those emotions out before they can resolve the behavior.”

Moreover, when asked to describe how teacher response to a child with challenging behaviors impacts her, the child, and other children, a focused question aligned with the process of environmental reevaluation, Participant 10 said, “We’re human and lose control, and I think for teachers, I think that’s very scary, intimidating place to be.” She continued “I think if a child has a challenging behavior in the middle of

the classroom, and the teacher handles it in a very punitive, very disrespectful fashion, it often can get worse.” These descriptions are in alignment with experiential processes associated with Stage 1: Precontemplation, and Stage 2: Contemplation. Regarding, social liberation, the final experiential process of change, Participant 10 said,

Well first of all if there’s a challenging behavior...I hope to have a good relationship with the parents...for the extremely challenging behaviors, I obviously talk with the teaching team, try to get the family on board, take advantage of [the] the social worker who often comes in and observes children and then gives them solutions, different ways we can respond to the children.

Her description aligns with the experiences of an individual in Stage 2 or 3 of change, and her statements were coded MCC and TR, which are part of the first behavioral process of change, self-liberation. Participant 10 said,

I think number one [thing] is to not take it personally...like they could explode over anything and you know that it has nothing to do with you, you know, so I think that’s the number one thing you have to do as a teacher is to set yourself up for success because if you take it personally then you’re not in a good emotional place where you can troubleshoot, you can’t really think of [the response strategy] objectively, if you’re thinking what have I done...Is there anything else I can try, and sometimes your result is going to be okay, I just need to remove myself from this situation.

Consistent with the behavioral process of self-liberation, Participant 10 described how she takes responsibility for the change when responding to children with challenging behaviors:

I have a new co-teacher for the first time in 10 years. So that's been actually really helpful to maintain the practice because you're...teaching them how you handle social problems...so I think that has been really important, and...especially with someone new in the room, you're more cognizant of making sure you're handling things the way you know you should be...instead of getting a little lazy as we all do in our practice sometimes. (Participant 10)

Furthermore, Participant 10 provided positive statements that demonstrate the behavioral process of stimulus control. For stimulus control, two codes were used in the analysis process: (a) altering the environment (AE), and (b) using mental or visual reminders to support the change (MVR). For AE, Participant 10 provided this evidence of her process:

The other children see that [challenging behavior] and sometimes they tend to respond in kind to the child where they kind of pick up on the teachers' attitude towards the child and I don't think that's helpful at all...You're the focus of the classroom and how you handle things is very much, you know, you hear it with young children. You hear them parroting your phrases and how you speak to the children and with each other. (Participant 10)

For mental and visual reminders, Participant 10 indicated that she kept a step chart of evidence-based response strategies in her head, and uses this chart to prevent power struggles with children. She indicated that she wanted to do something better, use some mental reminder to prevent old behaviors. Within the qualitative data analysis, themes that supported counter conditioning (CTR) were positively coded to indicate that Participant 10 had strategies she used in the classroom to change responses to address

triggers that might cause her to engage in old behaviors. She said, “So I don’t think I [need to] ever catch myself, unless I’m very fraught and emotional, and instead of doing that, resorting to old behavior, I will literally look at a teacher and say, I need five minutes”.

Consistent with her prior statements, Participant 10 described, in detail, how she celebrated successes in her classroom, and shared those successes with others. This is consistent with behavioral processes in reinforcement management, and is indicative of someone in Stages 4: Action or 5: Maintenance. The qualitative analysis also indicated that Participant 10 participated in helping relationships, the final behavioral process of change that has characteristics of someone in Stage 5: Maintenance. Participant 10 described her helping relationships this way:

I think that has been really important...especially with someone new in the room, you’re more cognizant of making sure you’re handling things the way you know you should be doing instead of getting a little lazy. I think that’s been exciting for me over this past year is the ability to have someone that you’re showing the ropes too, and also kind of acts like a mirror to your own practice because you don’t want to see them developing your habits.

Participant 10 also stated that she relied upon her teaching team, director, family members of the children who exhibit challenging behaviors, the local quality council, and the behavioral health consultant to assist her in supporting change. This behavior is consistent with Stage 5: Maintenance. Thus, the qualitative data indicated Participant 10 had reached Stage 5: Maintenance.

Chapter Summary

Chapter 4 presented the findings from the qualitative analysis, the results of the Stage of Change Scale for Early Care and Education 2.0, and compared the results of the two instruments for each participant. The results were congruent 40% of the time, and incongruent 60% of the time. Of those participants whose results were incongruent, most were within a one stage difference. Two participants, however, demonstrated an incongruence of two stages. Chapter 5 presents the implications of the findings. In Chapter 5, the researcher compares the results with the five stages of change as presented in the TTM model of change, and provides a discussion of the study limitations and recommendations for future research.

Chapter 5: Discussion

Introduction

Challenging behaviors in preschool often interfere with children's learning and impact others' learning as well (McLaren & Nelson, 2009). Often, teachers do not feel prepared to effectively and consistently respond to moderate-to-severe challenging behaviors despite the existence of evidence-based strategies, such as the FBA process (Maag & Larson, 2004; McLaren & Nelson, 2009; Quesenberry et al., 2011). Preschool teachers often develop and learn effective, evidence-based strategies through in-service professional development workshops and trainings (Snyder et al., 2012). Because changing practice is based on the willingness to try something new, readiness to change appears to make a difference between the successful and unsuccessful implementation of evidence-based practices (Burke et al., 2006; Peterson, 2012). The Stage of Change Scale for Early Care and Education 2.0 self-report was designed to measure teacher readiness to change early childhood practices. For this study, the scale was adapted with permission from the developer to identify teacher readiness to change responses to children with challenging behaviors. The lead question on the survey was changed from, "When it comes to changing my child care practices..." to "When it comes to responding to children who exhibit challenging behaviors..." The research question that informed this study was how do teachers' scores on the Stage of Change Scale for Early Care and Education 2.0 compare with the self-descriptions of their own readiness to change? The results are synthesized in the next paragraph.

Overall, the results indicate that the scores of the Stage of Change Scale for Early Care and Education 2.0 and teacher descriptions were congruent for four teachers. Six teachers results were incongruent, four varied by one stage of change, and two differed by two stages. Teachers used the self-report form, and the individual items they selected were at times contradictory to their own descriptions, which were captured in the semi-structured interviews.

In the following sections of this chapter, the results are compared to the constructs within the stages of change model, with a discussion of each stage of change. The discussion on the literature is presented, followed by limitations. The implications of this study on preschool teachers, administrators, and those who conduct professional development are discussed, and the chapter ends with the conclusion.

Discussion

The Transtheoretical Model of Change (TTM) is an integrative model of change created as a way to examine behavior change characteristics as it relates to readiness to change. The model is based on the research of Prochaska and DiClemente (1983) and has its roots in the health field, specifically in behavior related to smoking cessation. The results of the study on teacher readiness to change are discussed according to each stage of change, beginning with Stage 1: Precontemplation.

Stage 1: Precontemplation. Teacher descriptions were congruent with the Stage of Change Scale for Early Childhood Education 2.0 for all 10 participants. The results of the stage of change scale do not indicate that any of the participants' scores placed them in Stage 1. This is consistent with the results of the teacher interview data, and according to Prochaska et al. (1994), 40% of people are typically in Stage 1: Precontemplation.

Moreover, teacher descriptions support the characteristics of the processes of change associated with those in Stage 1 (Prochaska & DiClemente, 1983). These processes consist of consciousness raising, dramatic relief, self-reevaluation, and environmental reevaluation—all processes of change associated with individuals in an early stage of behavior change.

Through the analytic coding process, themes emerged that supported an awareness to change responses to children with challenging behaviors: (a) an engagement in reflective practice, (b) emotional arousal through dramatic relief, and (c) an awareness of personal values and beliefs. Participant 4 captures this awareness in her teacher description, “I do think my personal values and beliefs conflict with what I’m supposed to be doing in the classroom...sometimes, my personal beliefs overtake what I know I should try to do.” According to TTM, these statements are experiential processes characteristic of someone who has moved beyond precontemplation. The same is true for individuals in Stage 2: Contemplation.

Stage 2: Contemplation. The results for both the Stage of Change Scale for Early Care and Education 2.0 and the qualitative data were also congruent for all 10 participants for Stage 2: Contemplation. Themes emerged through the coding process that indicate that all 10 preschool teachers have an awareness of the impact of their teacher values and beliefs on their response practices. The data also indicate that each participant recognized the effect of responses on the child who exhibits the behavior, how it impacts the classroom environment, as well as other children. Additionally, each participant provided a description that supports the recognition of the effect of their practices on themselves. Participant 5 captures this as she talked about response strategies aimed

toward keeping children safe, “[When] children are climbing on bookcases and knocking...and throwing chairs across the room and running on top of tables, jumping from table to table, that elicits an emotion and your adrenalin pops up.” This is an example of how a teacher recognizes the impact of the situation on herself. She highlights the importance of her response through this description, “They’re [the children] watching everything and so you have to be extremely careful in how you deal with challenging behavior.” This shows congruence between teacher descriptions and the results of the Stage of Change Scale for this stage of change.

Stage 3. Preparation. Themes emerged through coding that demonstrated that each of the participants is aware of resources to support change. When asked about those resources, Participant 9 responded, “I would always call on my peer consultant, I’ve done professional development, read some books [in order to gain] understanding of what is the cause and effect of this child’s behavior.” This, according to Prochaska et al. (1994) is characteristic with those in Stage 3: Preparation and is aligned with the experiential process referred to as social liberation. All 10 participants indicated they are aware of resources that support change, stating training and professional development, their supervisors, colleagues, and behavior specialists as resources to support change. However, differences between the results of the scale and the interview data began to arise in the first behavioral process called self-liberation.

Self-liberation is the first behavioral process of change, according to Prochaska and DiClemente (1983), and through the coding process two themes emerged that showed the characteristics of this process of change. The first code, making the commitment to change (MCC), in this case response strategies, and taking the

responsibility to change (TR) behavior are part of the process. The qualitative data indicated six of the 10 teachers made the commitment to change, and six of the 10 also described how they took responsibility for changing their behavior. Three of the teacher descriptions did not support either making the change or taking responsibility for the change. These results indicated that three teachers were in Stage 3: Preparation.

However, the results of the stage of change scale self-report form placed one teacher in Stage 5: Maintenance, which is incongruent by two stages, and the other two scored in Stage 4: Action, a difference of one level.

The results of the scale for the three teachers were incongruent with the qualitative results, which is cause for concern. However, Peterson's (2012) study indicated that TTM, and the processes of change are fluid, are not fixed in time, but occur a spiral. She emphasized that individuals "experience the stages of change recursively, spiraling from maintenance back to contemplation over the course of months, weeks, or even within a day" (p 108). Thus, if the results of the stage of change scale solely were relied on to design appropriate professional development, the results indicate there could be a disparity between where the teacher is and where the scale indicates. Burke et al. (2006) reinforced this point as they highlighted the case of Mrs. Brooks; when she began the training, she indicated that she was not going to change her response strategies for challenging behaviors in the next six months. According to the authors, the processes of change most appropriate for Mrs. Brooks included consciousness raising, dramatic relief, and environmental reevaluation, processes aligned with the first two stages of change. These results are supported by the studies conducted by both Procheska and DiClemente (1983) and Peterson (2012). By aligning the processes with the teacher's readiness, Mrs.

Brooks progressed through the stages, and because she could see the increased benefits and decreased costs of changing her response strategies, she moved through the stages to the point where she was prepared to adopt and implement new, evidence-based practices in her classroom.

The researcher determined that statements for both making the commitment to change (MCC) and taking responsibility for change (TR) had to have a positive score, a description that shows behaviors that indicate commitment toward making change (MCC) as well as descriptions to support taking responsibility for change (TR). Participant 5 described how she takes responsibility for responding to children with challenging behaviors in this description, “Now because we use HighScope, there’s a six-step piece to the conflict resolution, which [I think] absolutely works.” This was coded as a positive statement for TR. An example of a negative statement for making the commitment to change (MCC) response strategies is captured in the words of Participant 8 : “I’m pretty stern, yeah, but I’m not going to flip out [my goal is to] get through the day without having a nervous breakdown.” Participants 1 and 4 each have one positive and one negative description for the process of self-liberation, commitment. Participant 1’s teacher description was coded negative for MCC, and positive for TR. Participant 4’s description was coded as a positive statement for MCC, yet negative for TR. Participant 4’s teacher description for taking responsibility was as follows: “I try and use the problem resolution steps...but I really do believe that children should do what adults tell them do to.” These results, therefore, indicate behaviors aligned with Stage 3: Preparation, but are not indicative of someone in Stage 4: Action. In both cases, the scale and teacher descriptions are congruent.

Stage 4: Action. The qualitative data indicate that Participants 2 and 3 are in Stage 4: Action, while the Stage of Change Scale scores are congruent for Participant 3. The behavioral processes include stimulus control, which consists of altering the environment (AE) and incorporating the use of mental and visual reminders (MVR) to support change. In order to move from Stage 3: Preparation to Stage 4: Action, the researcher determined that positive statements must be provided for all three behavioral processes aligned with Stage 4: Action. An example of a positive teacher description related to altering the environment is, “Sometimes, I have to...hold class meetings...instead of just talk at them about different things, we act them out, and I think this is more effective than me just speaking to them” (Participant 2). On the scale, Participant 2’s scored in Stage 3 on the self-report; however, she provided positive statements for the process of stimulus control (MVR and AE) and counter conditioning (CTR). Counter conditioning is a behavior that supports change of old habits when an individual is faced with triggers. The analysis reveals that Participant 2’s behavior demonstrated counter conditioning when she said, “If I find that things aren’t working, I have to step back, I feel myself getting frustrated...I know I need to stop.”

The difference in the results between the scale and the qualitative analysis appears to be related to Item 6 on the scale. The self-report form indicated that Participant 2 selected, “I don’t know whether anyone would support me in making a change.” According to the scale, this is a selection aligned with someone in Stage 2: Contemplation. This item was the lowest of her scores on the scale and may be related to the fact that she did not feel supported in her program. She said, “I think I’ve consistently said where I work I feel like there’s no room for growth.” However, she indicated in the

interview that, “I started my [educational pursuit] so that I could be among other teachers who want to consistently grow.” This situation may have contributed to the incongruence between the scale and teacher descriptions.

Stage 5: Maintenance. The qualitative data indicated that three participants scored in the highest stage of change, Stage 5: Maintenance. The Stage of Change Scale results are congruent for Participant 5, but are incongruent for Participants 7 (Stage 3) and 10 (Stage 4). Teacher descriptions were coded as positive for each of the experiential and behavioral processes of change, and include reflective practices, awareness to change responses, emotional response, and awareness of values and beliefs. Additionally, positive teachers’ descriptions were coded for recognition of the impact of the responses on self and others. The participants indicated that they were aware of resources to support change, made the commitment to change practices, and took responsibility for their response strategies. Each altered the environment, used mental and visual responses to support their change, and had counter responses when they felt triggered. For example, Participant 7’s said, “I’ve learned not to react so fast...you know, and a lot of times the children...might be yelling, but [I’ve realized that] their communicating...So I kind of stand back a bit.” Additionally, each teacher celebrated and shared successes with others. Participant 10 said, “I write it down, and I put a star on it and usually talk with the team.” Finally, each teacher engaged in helping relationships, Participant 5 said, “I really use my colleagues...I’ve done this, does anybody else have a different idea?”

All three of the participants described using FBA practices as an evidence-based practice to respond to children with challenging behaviors. Participant 5 said, “I have a file folder at home with...notes and articles and...over the years I’ve kept stuff or what

works. I mean for a challenging child I do keep a separate journal [as] the district [requires that for] children [who exhibit challenging behaviors] teachers must complete FBA.” Participant 7 described using FBA practices: “[I examine] what set the child off, what could I have done differently, how could I have stepped in, was there a way that [the severe behavior] could have been prevented?” Participant 10 also used the FBA as a response strategy in her classroom:

Well I think depending on the behavior and depending on the frequency, often I’ll perform [an] informal FBA. I do not have a special education degree but I did attend special education classes so I know how to take one and how to look at it, but then I really don’t know the next step, the next steps I had to call in the professionals for. So I think that’s the first step is really if you notice a consistent behavior but you’re not sure of the trigger, just start documenting, okay, child is really upset for x reason, I think the reason is this.

Interestingly, Participant 10’s description of her practice supports the results of Wood et al. (2011), who concluded that those outside of special education “could and would implement function-based interventions effectively in the classroom” (p. 229). Also, Christensen et al. (2012) proposed the concept of expanding the circle of FBA practices beyond the ability of specific professionals such as school psychologists. Each of these research studies highlights the importance of social validity, teacher belief in the process, as an important aspect to implementation.

The incongruence with the scale for Participant 7 appears to begin with Item 1, the self-report response that measures an individual’s intention to make a change. On the self-report survey, Participant 7 indicated, “I don’t plan on making any changes,” with

regard to her response to challenging behaviors. According to the scale, this is an answer aligned with someone Stage 1: Precontemplation. Furthermore, for Item 2, the item that measures an individual's awareness to change, Participant 7 selected, "I might need to make a change someday," the answer best aligned with someone in Stage 2: Contemplation. Finally, for Item 3, the item that measures a learner's interest in gaining new knowledge or learning new information, she chose, "I'm interested in learning new information," a selection aligned with someone in Stage 3: Preparation. The interview transcripts were coded as positive for her awareness of resources to support change, the experiential process of social liberation. She said, "We have our teammates...mentors we can email or text anything throughout the day...I attend PD meetings [on] difficult children...parent group leaders who see different things." This description shows someone in Stage 3; however, for helping relationships, the process best aligned with someone in Stage 5: Maintenance, she said, "Our [support personnel] was just amazing and I learned so much just from her...and [our colleagues] we validate each other." This indicates that she had a community of support in place. Her selections for Items 4 and 5 are in alignment with someone in Stage 4: Action, and for Items 6 and 7, her selected answers indicate someone in Stage 5: Maintenance. The inconsistency of Participant 7's responses may be demonstrative of the fluidity of the stages of change (Peterson, 2012b).

Finally, results for Participant 5 are congruent between the scale and the qualitative analysis. The behavioral processes of change included reinforcement management and helping relationships. The researcher determined that teacher descriptions had to indicate the behavior of celebrating success, sharing success, and an engagement in helping relationships in order to be in Stage 5: Maintenance. This is the

case for Participants 5, 7, and 10. All three of the participants in Stage 5 provided positive statements that indicate that they celebrate and share successes (CS & SS), and that they are engaged in helping relationships that supported their change. Examples of positive statements that support the celebration of success include descriptions from Participant 5 and 10. Participant 5 said, “So we’ve come so far, so that’s huge, I mean that’s huge...that’s our job, it’s great to feel successful...you just have to enjoy the moment.” Participant 10 said, “I usually say, did you see me, it’s not bragging, it’s more you’re doing it with the kid in mind...I [celebrate] by doing my happy dance.”

Originally based on smoking cessation, TTM was designed to provide insight into how and why people change behavior (Prochaska & DiClemente, 1983). The literature review includes an additional study that suggests that TTM transfers to other behaviors and concludes that there are clear commonalities across 12 behaviors beyond smoking cessation (Prochaska, et al, 1994). While there is a difference between the results of the self-report form on the Stage of Change Scale for Early Care and Education 2.0 and teacher descriptions, the descriptions generally aligned with the characteristics of each of the processes of change, whether experiential or behavioral, as evidenced in the first five stages of change. Each of the participants provided statements that supported characteristics aligned with each process aligned with Stages 1, 2, and 3. The TTM model provides valuable insight into why and how people change, and this insight is valuable for effective adoption and implementation of evidence-based teaching practices through professional development.

Literature Discussion

The results of this study suggest that there is value in exploring characteristics associated with the processes of change and the corresponding stage they align with in the TTM. Peterson's (2012) research has indicated that participants ready to change, in Stage 3: Preparation, exhibit an eagerness to learn. Her study showed that over a one-year period, early childcare professionals progressed from one stage to another, and showed a gain of 38% in their readiness. The work of Peterson and Burke et al. (2006) indicate that over time, there is movement through the processes, and this movement is evidenced by the characteristics of the processes of change, which are aligned with the stages of change (Prochaska & DiClemente, 1983).

Both the teacher descriptions and the results of the scale provide insight into where each teacher is with regard to the processes of change. For example, Participant 4's interview indicated that she did not have a plan to change responses when she was faced with triggers. She stated, "For me, it's like I'm still practicing, it's like...I have a hard time not always reverting, like I did today." This behavioral process is similar to the one that Mrs. Brooks experienced in her classroom with regard to yelling at her students (Burke et al., 2006). Mrs. Brooks first thought her practice was fine, but she then realized that her voice was hoarse each Friday. After that realization, she began to collect data as to how many times she raised her voice, which led her to the next stage of change, using the process of self-reevaluation (Burke et al., 2006). Participant 4 indicated on the scale that she did not know whether anyone would support her in making a change, an answer aligned with someone in Stage 2: Contemplation. Her response was consistent with her statement, "I don't because the only other person really in the classroom doesn't practice

them [effective practices], so I really just work on myself.” Analysis of Participant 4’s experience expands the work of both Burke et al. (2006) and Peterson (2012) as their studies place value on characteristics that indicate how people change. Specifically, Participant 4 indicated that making change sometimes requires that an individual look outside their immediate situation.

Kim et al. (2009) concluded that severe challenging behaviors are closely linked with “negative, reactive strategies” by preschool teachers (p. 244). They suggested that teachers often develop a coercive style that results in an explosive interaction, an outcome that reinforces the need for individualized, effective professional development design. Furthermore, Kim et al. indicated that a strong connection exists between teaching beliefs and response strategies toward children with challenging behaviors. Teacher readiness to change includes an awareness of personal values and beliefs. All 10 participating teachers indicated that they were aware of their personal values and beliefs and how those values and beliefs impacted the response strategies to children who exhibit challenging behaviors. This process is called self-reevaluation and is linked to someone moving through Stages 1 and 2, and into Stage 3: Preparation.

Dobbs and Arnold (2009) also concluded that negative child outcomes result when teachers use reactive responses such as commands as a strategy to control children who exhibit moderate-to-severe challenging behavior. They argued that teacher perceptions of total behaviors problems were connected with specific commands, suggesting that teacher beliefs may be informing their responses. Interestingly, all of the participants in the dissertation study indicated that they rely on professional development, sometimes referred to as collegial circles, to gain or deepen their knowledge of effective

strategies. The results of this study, both through teacher descriptions and the scale, encourage the examination of how the response strategies impact self and others through the process of environmental reevaluation. This recommendation is consistent with Pianta's (1999) work, which indicated that teacher perceptions, when negative, result in additional behavior problems in children. This highlights the need for high-quality professional development designed for individual learners based on readiness.

The qualitative analysis in this study indicates that each of the 10 participants had an awareness of their values and beliefs and how those beliefs impact their practice. Additionally, Item 4 on the scale was designed to assess the teachers' beliefs about the extent to which making a change would impact children. The results of the self-report scale indicated that teachers' scores ranged from Stage 3: Preparation to Stage 5: Maintenance. That no one scored in the first two stages of change on the scale was congruent with the qualitative results. These results may indicate that the participants who took the survey could provide qualitative evidence that demonstrated the processes of consciousness raising, dramatic relief, self-reevaluation, and environmental reevaluation.

Limitations

There are several limitations to this study. First, the Stage of Change Scale for Early Care and Education 2.0 Self-Report form was used to measure teacher readiness to change. The designers of the scale reported that, on average, the score on the Mentor/Coach version of the scale was .6 points lower, of that on the self-report form (Peterson, Baker, & Weber, 2010). This may explain the differences between teacher descriptions and the results of the stages of change score. Second, the qualitative data

were derived through the collection of data in teacher descriptions aligned with the 10 processes of change. These included consciousness-raising, dramatic relief, self-reevaluation, environmental reevaluation, social liberation, self-liberation, stimulus control, counter-conditioning, reinforcement management, and helping relationships. The stage of change scale measured teachers' intention, awareness, seeking information, effect on children, overcoming obstacles, social support, and professional identity. Although there were relationships between each item on the scale, the comparisons of teacher descriptions of their practice appeared to be more in alignment with the 10 processes of change described in TTM.

Another limitation may be attributed to the qualitative data and coding process. As part of the methodology, qualified professionals verified the validity of the codes and data. However, personality differences could have impacted the richness of the data collected in the interview. For instance a talkative person may have shared more, which could have contributed to the determination of positive statements. Additionally, the researcher is known in the community as a long-time early childhood professional, and as the interviewer, could have biased the responses. Specifically, the teachers may have had a desire to please the researcher. Finally, the Stages of Change model was designed to measure very specific actions or behaviors, the frequency and duration of exercise, for example. Teacher behavior is more difficult to track than someone who is increasing exercise or decreasing a smoking habit. For example, the question concerning how often teacher reflects upon his or her values and beliefs as part of the process of change may be more difficult to measure.

Implications of Findings

This section includes a discussion of the implications of the findings for teachers, administrators, professional developers, and researchers. The conclusion follows.

Preschool teachers. Early childhood is the time when young children develop the foundational skills that last throughout their lives. An interaction between a teacher and a child exhibiting challenging behaviors has the power to develop skills or contribute to further setbacks. The DEC (2001) recommended practices for in-service teachers states that practitioners must maintain their skills and expand them through in-service professional development. This is the responsibility of the practitioner, and while there may be the need to advocate for quality, individualized in-service experiences, the responsibility lies with individual teachers to maintain or update current practices, and to be ready to change, to be open to change or update practices.

The results of this study indicated that participants who scored in Stage 5: Maintenance used evidence-based practices as a strategy to respond to children who exhibit challenging behaviors. Other unique characteristics of those in Stage 5 included an engagement in a community that supports change as well as practices associated with celebrating and sharing success. Preschool teachers in Stage 4: Action indicated they did not have a community that supported change and sometimes shared successes, but most of the participants indicated that they were able to get through the moment and move on. Individuals in Stage 3: Preparation demonstrated that they engaged in reflective practices, and were aware of their own values and beliefs, but they did not make the commitment to change behavior or take responsibility for changing their own behavior.

These findings suggest that teachers must not only take the initiative to examine their practices but also reflect on their personal values and beliefs, and assess how these beliefs impact their practice. Teachers in the higher Stages of Change celebrate successes with children, share them, and were actively part of a community that supported change. The research indicates that the process of self-liberation, or commitment is related to changing practice. While high-quality professional development is critical to growth, each teacher must take responsibility to examine their own response strategies when responding to children who exhibit moderate-to-severe challenging behaviors.

Preschool administrators. This study investigated teachers' readiness to change practice with regard to responding to children with challenging behaviors. In order to support children who exhibit moderate-to-severe challenging behaviors, clear policies and procedures must be in place (Quesenberry et al., 2011). Additionally, because in-service professional development is the primary source for the delivery of evidence-based response strategies, an investment must be made to assure that these experiences are both high quality and designed with strategies appropriate for the audience. In other words, the one-size-fits-all approach is not an effective way to change teachers' response strategies. Quality, intentionally planned professional development experiences designed with teachers' readiness in mind may impact the adoption of evidence-based strategies. The understanding that some teachers need time to consider the pros and cons of adapting a new strategy could increase the outcomes for young children in need is a high priority for administration.

The research also indicated that teachers in the higher Stages of Change value a climate and community designed to support evidence-based practices and change.

Administrators may consider collegial circles-style support groups as one way to create that community.

Professional development professionals. Teacher descriptions provide evidence that the participants rely on quality in-service professional development experiences to further develop their practices. Effective and evidence-based response strategies are essential, as children need to develop skills they lack. There is a solid body of research that suggests the one-size-fits-all approach to professional development is often ineffective (Burke et al., 2006; Peterson, 2012). This suggests that professional development is most effective when individualized or differentiated to the audience.

The Stage of Change Scale for Early Care and Education 2.0 can provide insight into individual teachers' readiness to change practice. Although this study was not able to show this, it may be that teachers who score in Stages 1 or 2 require an additional reflective step before providing content to implement. Burke et al. (2006) state that there is some evidence that suggested the practices of self-monitoring of negative practices, or reflection, may move an experienced teacher to change practice. It is the responsibility of the professional development professional to determine what strategy would be most appropriate to meet the teachers at their level of change. For example, if someone is in precontemplation, a place to begin might be to examine what is working and what is not working at that moment in time (Peterson, 2012; Burke et al., 2006). The professional developer and teacher could then work together to list the pros and cons of the current situation. This helps develop, according to Peterson, (2012), an awareness to change. This approach is also supported by Prochaska et al. (1994), who argue, "studying decision-making models across stages can greatly enhance our understanding of how

people weigh the pros and cons of problem behaviors at teach stage of change” (p. 45).

This type of exercise is reflective in nature, and when done internally, may encourage teachers to move through the processes of change, to a stage where the teacher is ready to learn new and effective practices that help young children develop essential life skills.

Research has continued to support this type of result, as captured by the example of Mrs. Brooks described by Burke et al. (2006). Mrs. Brooks was initially resistant to a new approach to responding to challenging behaviors, but over the period of the study, reduced negative response strategies and implemented new, more effective ones.

According to the Burke et al., Mrs. Brooks was an experienced and competent teacher.

She said, “What could someone from Nebraska tell me about discipline in my classroom?

They don’t know my kids or their problems. It’s not going to work” (p. 6). As such, the

strategy Mrs. Brooks engaged in was aligned with her readiness to change. According to

Burke et al. (2006), three months after the start of the school year, she reflected on the

hoarseness of her voice from yelling and began the process of self-reevaluation. This led

her to move into the preparation stage of change. The teacher descriptions of practice in

this study and the results of the scale, provide insight into characteristics of the process of change, which could determine strategies used to promote change. For example,

Participant 4 stated, “I really do believe that children should do what adults tell them to do” does not support that a teacher is taking responsibility for her response strategies.

This statement could provide an avenue into effective practice and proactive measures to prevent challenging behaviors, placing the responsibility on the adults in the classroom.

Finally, most professional development in-services are designed for individuals who are in the final three stages of change, however, most people come to in-services in

the precontemplation or contemplation stages (Prochaska, 1998). It is imperative that those delivering in-services understand the concept of readiness to change and how it impacts receptivity and learning. Professional development trainers must understand how to individualize instruction, and how specific strategies aligned with the stages of change improve engagement, quality of the in-service, and produce a higher rate of return in skill development for teachers. This, in turn, will help young children who exhibit moderate-to-severe challenging behaviors develop.

Implications for future research. Readiness to change is an important attribute to consider when preparing professional development experiences in general, but specifically, when the goal is to help teachers adopt effective practices to respond to children with challenging behaviors. The one-size-fits-all approach results in some teachers adopting practices, some ignoring the content, and some dismissing the practices altogether. Additional research is needed to investigate the effectiveness of using the Stage of Change Scale for Early Care and Education 2.0 prior to creating professional development experiences to assess effectiveness of promoting strategies to support skill development for children who exhibit challenging behaviors.

A second area of research involves the consistency of teacher response strategies. Through the coding process, the theme of consistency between teachers emerged in almost all of the transcripts. Often, the focus in professional development is for lead teachers, but in a classroom with a child with challenging behaviors, consistency in response strategies is imperative. Further research focusing on the development of the teacher and the teaching assistants may contribute to positive child outcomes in the area of challenging behaviors.

Finally, research that examines the impact of individualized professional development based on readiness to change would deepen the understanding of how differentiated learning effects response strategies in the classroom. This understanding would benefit children and preschool teachers. Different levels of readiness require different teaching approaches, and the Stage of Change Scale for Early Care and Education 2.0 provides insight into preschool teachers' readiness to change.

Conclusion

Preschool teachers' interactions with the children in their care are powerful. An awareness of their values and beliefs may impact the way teachers respond to children who exhibit moderate-to-severe challenging behaviors (Gilliam & Shahar, 2006). These responses can result in either positive or negative outcomes for that child. When preparing professional development experiences, teacher readiness to change may impact the way that the workshops are designed, especially when the content provides evidence-based practices designed to develop skills in young children (McLaren & Nelson, 2009).

Professional development is typically the forum for new learning for in-service preschool teachers. Children with moderate-to-severe challenging behaviors benefit from an informed educator who uses evidence-based practices designed to examine the function of the behavior (Maag & Larson, 2004; Quesbenberry et al., 2011). In such circumstances, the responses are not reactive, but proactive, are individualized to each child, and are embedded in the learning environment. The results of this study support reflective practice for preschool teachers (Driscoll & Pianta, 2010; Strain & Joseph, 2004). The results of this study also indicate a need to examine the design of professional development based on teacher readiness to change so that strategies for learning are

relevant to the audience of teachers, thus avoiding the one-size-fits-all model of presenting effective practice.

The results of this study suggested that caution should be used when determining teachers' readiness to change practices with a single method. While the Stage of Change self-report provided initial insight into individual teachers' readiness to change, results were greatly enhanced when combined with a focused-interview process that included questions aligned with the processes of change. Characteristics of both the experiential and behavioral processes of change emerged through the coding process, supporting the TTM model. The Scale provided a baseline for readiness to change, and the interview complimented the results, revealing both relationships and incongruence. Because specific strategies are recommended for early childhood educators in the various stages, accurate results help align those strategies to individual teachers' readiness to change. Adversely, incorrect strategies could contribute to teacher frustration or lack of engagement. Preschool teachers, administrators, and professional development providers clearly benefit from understanding readiness to change. Ultimately, this understanding benefits the child in the classroom who exhibits moderate-to-severe challenging behaviors, possibly contributing to life-changing outcomes for that child.

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Appendix A

Challenging Behaviors in preschool classroom.

1. Describe the moment that you decided that you needed to change your approach to children who exhibited moderate-to-severe challenging behaviors.
2. When you made the change, what kind of support did you receive from others?
3. Challenging behaviors in a preschool classroom can be very difficult. Did you reach an emotional breaking point, how did you feel?
4. What do you know now about challenging behaviors that you didn't know before?
5. How did you set yourself up for success? What goals did you have for yourself?
6. What did you do when things went right? What did you do to celebrate the successes?
7. What strategies, if any, did you use to keep from slipping back into old response patterns?
8. Describe how do you reflect on your practice with regard to responding to children with challenging behaviors.
9. What preventive actions did/do you take to proactively prevent challenging behaviors from occurring in your classroom?
10. Do you rely on others to help you maintain your current practice? Describe how you do this.

Appendix B
Demographics Form

Name:

Address:

City:

State/ZIP:

Phone:

Email:

Gender: Male Female

Ethnicity Asian/Pacific Islander
 Black not Hispanic
 White not Hispanic
 Hispanic
 American Indian/Alaska Native

Level of Degree:A AAS BS/BS MS Ed

NYS Certified: B-2
 1-6
 Special Education
 General Education

How long have you been a preschool teacher?

Do you face challenging behaviors in your preschool classroom?

What is your comfort level in responding to challenging behaviors?

What barriers do you face in your response to challenging behaviors?

Appendix C

Processes of Change: Code Description

Process of Change	Code Description	Code Abbreviated
Consciousness Raising	Awareness to Change	A2C Y
	<i>No Awareness to Change</i>	A2C N
	Reflection	Refl Y
Dramatic Relief (Emotional Arousal)	<i>No Reflection</i>	Relf N
	Emotional Reaction	ER Y
	<i>No Emotional Reaction</i>	ER N
Self-Reevaluation	Awareness of Values & Beliefs	A-VB Y
	<i>No Awareness of V & B</i>	A-VB N
	Recognizes effects of behavior on self and others	Rec Eff/S Y
Environmental Reevaluation	<i>Does not Recog effects</i>	Rec Eff/S N
	Recognizes effects of behavior on others	Rec Eff/O Y
	<i>Does Not Recog effects</i>	Rec Eff/O N
Social Liberation (Values Clarification)	Awareness of social values and resources to support change	ARSC Y
	<i>Not aware of supports</i>	ARCS N
	Making Commitment to change	MCC Y
Self-Liberation (Commitment)	<i>No Commitment to Change</i>	MCC N
	Taking Responsibility to Change	TR Y
	<i>Not Take Responsibility to Change</i>	TR N
Stimulus Control	Altering Environment	AE Y
	<i>No Altering Environment</i>	AE N
	Mental/Visual Reminders	MVR Y
Counter-Conditioning	<i>No Reminders</i>	MVR N
	Change responses when faced with triggers	CTR Y
	<i>Does not change responses</i>	CTR N
Reinforcement Management	Celebrate Success	CS Y
	<i>Does not celebrate</i>	CS N
	Share success	SS Y
	<i>Does not share success</i>	SS N
Helping Relationships	Engage in helping relationships	EHR Y
	<i>Does not engage in helping relationships</i>	EHR N

Not Coded; Additional Themes

Process of Change	Code Description	Code Abbreviated
Functional Behavior Assessment (writing it down)	FBA: Capturing behavior in writing	FBA
Teacher Control		
Quality of PD		
Daycare vs. Professional		
Consistency of Staff Behavior		
PD as a social support		
Differentiated PD		
Family Connection		
Collegial/Peer Support		

Appendix D

Analysis Summary Matrix

				Participant #											
				1	2	3	4	5	6	7	8	9	10		
Consciousness Raising	Stages 1 & 2	A2C	Yes	X	X	X	X	X	X	X	X	X	X	X	
			No												
		REFL	Yes	X	X	X	X	X	X	X	X	X	X	X	X
			No												
Dramatic Relief (Emotional Arousal)	Stages 1 & 2	ER	Yes	X	X	X	X	X	X	X	X	X	X	X	
			No												
Self-Reevaluation	Stages 1 & 2	A-VB	Yes	X	X	X	X	X	X	X	X	X	X	X	
			No												
Environmental Reevaluation	Stages 1 & 2	Rec Eff/S	Yes	X	X	X	X	X	X	X	X	X	X	X	
			No												
		Rec Eff/O	Yes	X	X	X	X	X	X	X	X	X	X	X	X
			No												
Social Liberation (Values Clarification)	Stages 2 & 3	ARSC	Yes	X	X	X	X	X	X	X	X	X	X	X	
			No												
Self Liberation (Commitment)	Stage 3	MCC	Yes		X	X	X	X	X	X	X	X	X	X	
			No	X					X		X	X			
		TR	Yes	X	X	X	X	X	X	X	X	X	X	X	X
			No				X		X		X	X	X		

				1	2	3	4	5	6	7	8	9	10		
Stimulus Control	Stage 4	AE	Yes		X	X	X	X	X	X	X	X	X	X	
			No	X											
		MVR	Yes	X	X	X	X	X	X	X	X		X	X	X
			No									X			
Counter Conditioning	Stage 4	CTR	Yes	X	X	X		X		X				X	
			No				X		X		X	X	X		
Reinforcement Management	Stages 4 & 5	CS	Yes			X		X		X		X	X	X	
			No	X	X		X		X		X				
		SS	Yes	X			X	X	X	X	X	X	X	X	X
			No		X	X									
Helping Relationships	Stage 5	EHR	Yes		X	X		X		X		X	X	X	
			No	X			X		X		X		X		