Preparing Teachers to Work with Students with Emotional Regulation Difficulties

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PREPARING TEACHERS TO WORK WITH STUDENTS WITH EMOTIONAL REGULATION DIFFICULTIES

by

DANA E. GOTTESMAN

A dissertation submitted to the Graduate Faculty in Educational Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

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DANA E. GOTTESMAN

This manuscript has been read and accepted for the Graduate Faculty in Educational Psychology to satisfy the dissertation requirement for the degree of Doctor of Philosophy.

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THE CITY UNIVERSITY OF NEW YORK
Abstract

PREPARING TEACHERS TO WORK WITH STUDENTS WITH EMOTIONAL REGULATION DIFFICULTIES

by

Dana E. Gottesman

Advisor: Helen L. Johnson, Ph.D.

Difficulty with emotional regulation is a symptom common to many child psychological disorders and classroom-related problems. However, many children with emotional regulation difficulties do not receive adequate support in their classrooms. Although a variety of procedures have been used to help students improve their emotional regulation, there are very few studies that focus on training teachers to deliver classroom-based interventions that are designed to target a broad range of children with difficulties in emotional regulation. This current investigation measured the impact of a professional development program on emotional regulation on teachers’ responses to students with emotional regulation difficulties and their beliefs regarding the long-lasting impact of their responses on students’ behavior and how they view their responsibility in helping students learn to manage emotions. This study also examined relevant personal characteristics of teachers (i.e., emotional regulation, empathy, and self-efficacy) as moderators of this impact. Ninety-nine participants were randomly assigned either to the intervention group or to an alternative treatment group. Teachers who participated in the professional development program on emotional regulation endorsed higher levels of emotionally supportive strategies and lower levels of punitive strategies that participants in the alternative treatment group after controlling for pre-test scores. Also, participants in the
treatment group were more likely to report that it is their responsibility to help students learn how to manage their emotions than teachers in the alternative treatment group. Finally, participants in the treatment group report were more likely to report that their responses to students when they are exhibiting regulation difficulties would have a long-lasting impact on students’ behavior than teachers in the alternative treatment group. However, regression analyses yielded no significant differences in teacher characteristics as moderators.
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Chapter I: Introduction

Emotional regulation is critical to academic, behavioral, and social success. Emotional regulation can be defined as “the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one’s goals” (Thompson, 1994, pp. 27-28). Difficulty with emotional regulation is a symptom shared by at least half of all clinical disorders and mental illnesses (Gross & Levenson, 1997) and is common to many child psychopathologies and school-related problems. Problems with emotional regulation also put children at risk for a host of mental health issues, social problems, and academic failure (Bariola, Gullone, & Hughes, 2011; Forbes & Dahl, 2005; Hinshaw, 2002; Wyman et al., 2010).

Emotional regulation is influenced in part by a child’s social environment. Thompson (2011) explains that emotional regulation stems both from a person’s “self-regulatory efforts” (p. 56) and from the “regulatory influences of other people” (p.56). Parenting styles and family environments influence a child’s emotional development (Morris, Silk, Steinberg, Myers, & Robinson, 2007; Repetti, Taylor, & Seeman, 2002). Morris et al. also note that a child’s emotional regulation is affected by the child’s temperament, neurophysiology, and cognitive development. For example, children who: (a) are vulnerable to experiencing negative emotions, (b) have high reactivity, and (c) live in negative family environments are more likely to develop difficulties with emotional regulation. In addition, gender differences are also likely to influence the development of emotional regulation. Morris et al. (2002) found that girls are frequently better regulated than boys, and that this difference can be explained by innate differences in reactivity levels. Understanding the influences on the development of emotional regulation may prove relevant when designing interventions to help children improve their emotional regulation.
Although emotional regulation is influenced by home environment and parental emotional regulation, studies show that there are interventions outside the home that can improve emotional regulation in children. In fact, a variety of interventions at schools have been used to help students improve their emotional regulation during the school day. For example, Wyman et al. (2010) developed a school-based intervention that teaches school-aged children who are at risk for behavioral and emotional difficulties skills that strengthen their emotional self-regulation. Webster-Stratton, Reid, and Stoolmiller (2008) developed an innovative teacher-training program that trained teachers to: (a) increase praise and (b) incorporate proactive behavioral procedures directed at helping all students in their classrooms develop improved emotional and behavioral responses.

Although evidence-based interventions to be utilized in a school setting are available in the literature, many children with emotional regulatory deficits do not receive support in the schools (Macklem, 2011). There are increasing numbers of children who require mental health services, but only a small percentage of these children ever receive this support. In fact, only one in eight children with an emotional or behavioral disorder ever receives treatment in the mental health system (O’Connell, Boat, & Warner, 2009).

There are several factors that may explain the low rates of emotional support available to students. First, schools have difficulty meeting the emotional needs of all of their students (Durlak, Dymnicki, Taylor, Weissberg, & Schellinger, 2011), as they are faced with limited time and resources. Also, many teachers lack training to effectively teach children with emotional and behavioral difficulties (Potgieter-Groot, Visser, & Lubbe-de Beer, 2012), and often do not feel efficacious to help these children.
Further, schools often only provide emotional regulation support for children who qualify for special education services (e.g., children who have an Individualized Education Plan). However, children with emotional regulation difficulties do not always meet specified criteria for mental health disorders or emotional disorders according to state education laws. In addition, there are many children who have severe difficulties with emotional regulation, and do in fact meet specified criteria for mental health disorders, but nevertheless do not receive mental health support because, for example, the student’s parent does not consent to this additional support.

In addition, students with emotional regulation difficulties may not receive emotional support in the classroom because they are more likely to develop impaired relationships with their teachers. Although teacher-child relationships can serve as a potential protective factor for children who are at risk for behavior problems, teachers are generally less sensitive, more controlling, and more likely to have strained relationships with these students (Morrison, 1997). Teachers often view children with emotional regulation difficulties more negatively. Therefore, compromised teacher-student relationships might negatively impact the quality and/or degree of emotional support that teachers offer children.

The goal of the current study was to explore the feasibility of using professional development to increase the likelihood that students with emotional regulation difficulties will receive emotional support in the classroom. Only a handful of studies have focused on classroom-based interventions that were designed to target a broad range of children with emotional regulation difficulties. However, these studies often involved costly projects that are primarily conducted in clinical research facilities and are not easily transported to real settings such as low-income schools (Shernoff & Kratochwill, 2007). Therefore, research that focuses on developing cost-effective universal interventions has the potential to reach many more children.
Improving a teacher’s skill set for helping children develop more adaptive emotional regulation may constitute a cost-effective primary/universal prevention.

Teachers often have the most opportunities to help the greatest amount of students develop adaptive emotional regulation. Teachers have an on-going relationship with their students and are the primary adults interacting with children throughout the school day. However, there are several factors that affect how teachers respond to children with difficult emotional regulation. In fact, several recent studies found that there are specific personal characteristics (i.e., emotional regulation, self-efficacy, empathy) that might influence the type of strategies that teachers are willing to implement in their classrooms (Andreou & Rapti, 2010; Swartz & McElwain, 2012).

Swartz and McElwain (2012) explored how a teachers’ responses to students’ emotions is affected by individual differences in: (a) teachers’ personal emotional regulation strategies, (b) teachers’ empathy or perspective taking, and (c) teachers’ beliefs about children’s emotions. They found that teachers who reported more reappraisal (i.e., reinterpreting or reframing an emotionally provocative situation) when regulating their own emotions were more likely to engage in supportive responses and less likely to engage in non-supportive responses when faced with children’s negative emotions. Swartz and McElwain also found that teachers with greater empathy for students with behavioral and emotional difficulties reported more supportive and fewer non-supportive responses to children’s negative displays of emotions. Finally, they found that teachers with belief systems that reflected acceptance of children’s negative emotions displayed more supportive responses when reacting to students’ negative emotions.

Similarly, different teacher attribution styles and levels of self-efficacy also influence the type of strategies teachers are willing to use with students who present emotional difficulties.
For example, Andreou and Rapti (2010) found that teachers who both reported low self-efficacy and attributed students’ behavior problems to family causes reported using more negative interventions (e.g., threats and punishment) in response to student’s negative emotional displays.

Therefore, to increase the likelihood that teachers will implement proactive strategies when teaching students with emotional difficulties, there is a need for research that focuses on specific teacher characteristics that might influence the types of emotional regulation support that teachers would offer to their students. For example, researchers could develop professional development for teachers regarding emotional regulation that addresses teachers’ cognitive and emotional responses to children (Anderou & Rapti, 2010) and focuses on teachers’ personal emotional regulation when interacting with children with emotional difficulties (Swartz & McElwain, 2012).

The current study extended the work of Anderou and Rapti (2010) and Swartz and McElwain (2012) by exploring the relationship between specific teacher characteristics and how teachers respond to students with emotional regulation difficulties. In addition, this study examined the impact of professional development designed to improve how teachers respond to students with emotional regulation difficulties.

This study developed a cost-effective universal intervention, namely a professional development that aimed to improve pre-service and in-service teachers’ skill set for helping children develop more adaptive emotional regulation, and provided pre-service and in-service teachers with actual strategies that they could use in the classroom.

The purposes of this study were:

1) To develop a cost-effective professional development for teachers that focuses on (a) emotional regulation difficulties in children and (b) best
practices for helping these students improve their emotional regulation;

2) To explore the impact of professional development designed to improve how teachers respond to children with emotional regulation difficulties;

3) To explore the impact of professional development on teacher’s beliefs about his/her role in helping a child develop adaptive emotional regulation; and

4) To investigate the role of specific personal teacher characteristics as moderators of how teachers respond to students with emotional regulation.

The study involved conducting a professional development program primarily in teacher education classes to provide important information for both pre-service and in-service teachers. The study protocol was also conducted in one public school setting to provide a limited case study examination of its applicability to “real world” settings. The professional development had three major components. First, teachers learned about identifying emotional regulation difficulties in students and the relationship between emotional regulation difficulties and student behavioral problems. Second, the training focused on both the centrality and ability of classroom teachers to effect positive change in their students’ adaptive emotional regulation. Third, teachers learned specific interventions that can be used in their classrooms to help students develop more adaptive emotional regulation.
Chapter II: Review of Literature

The following literature review will present an overview of the definition of emotional regulation. In addition, this section will discuss the impact of emotional regulation difficulties on classroom performance and teacher-student interactions. This section will then review behavioral and cognitive behavioral evidenced-based treatments that focus on improving students’ ability to regulate their emotions at school. Next, this review will describe the merits of expanding the use of evidenced-based treatments from the small group or individual settings to whole classroom settings. The review will also highlight specific personal characteristics of teachers that affect how they respond to students with emotional regulation difficulties. Finally, this section will provide a rationale for professional development designed to improve how teachers respond to students with emotional regulation difficulties.

Emotional Regulation Theories

Precursors. The field of emotional regulation is relatively new and has expanded significantly over the past decade (Bariola et al., 2011; Gross, 2013; Southam-Gerow, 2013). Research on emotional regulation has emerged from psychoanalytical theory and the literature on stress and coping (Gross, 1998). According to Gross and Thompson (2007), emotional regulation as a distinct concept was first noted in the literature on human development. Currently, a functionalist perspective is the favored conceptualization among many theorists (Bariola et al.; Campos, Frankel, & Camras, 2004; Gross; Southam-Gerow; Thompson, 2004).

Functionalist perspective. Functionalist approaches emphasize the important role that emotions play in behavioral responses, decision-making, and enhancing memory for significant events (Campos et al., 2004; Gross & Thompson, 2007). According to the functionalist approach, emotions are viewed as “flexible, contextually bound, and goal directed” (Campos et
Emotional regulation can therefore be defined as “the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one’s goals” (Thompson, 2004, pp. 27-28). Emotional regulation is also defined as the process by which we influence what emotions we experience, when we experience them, and how we express them (Gross, 1998).

This functionalist definition of emotional regulation is based on several assumptions. First, this definition assumes that one’s emotional regulation is influenced in part by one’s social environment (Thompson, 2011). Thompson explains that emotional regulation stems from a person’s “self-regulatory efforts” and from the “regulatory influences of other people” (p. 56). The development of emotional regulatory strategies is shaped by external regulatory forces (e.g., parent-offspring relationship, social relationships) (Thompson). For example, a parent regulates his or her infant’s emotions when he or she monitors, interprets, and modulates the infant’s arousal state. As a child develops, parents, friends, and others in the social environment continue to influence the child’s emotional regulation. For example, parents might coach their children to remain calm when feeling angry, or friends might make jokes to cheer up friends who are sad (Thompson).

In addition, emotional regulation involves the enhancement or inhibition of both positive and negative emotional experiences (i.e., emotional self-management) for some strategic purpose (Thompson, 2011). For example, a person reenacts a pleasant experience as a way of managing negative feelings, or a person dwells on guilt to motivate oneself to act appropriately (Thompson). In addition, there are “temporal” features of emotions such as the speed of onset, the persistence, and the duration of recovery from an emotional response (Thompson, p. 56).
Problems in one’s ability to regulate the intensity, onset, and duration of emotions can lead to dysfunctional behaviors (Thompson).

This functionalist conceptualization of emotional regulation also explains emotional regulation in terms of multiple component processes (Thompson, 2004). For example, emotional regulation involves the monitoring, evaluation, and modification of emotions (Thompson). Children must first develop the skills to monitor and evaluate emotions before they are able to successfully modify them (Thompson, 2011). Therefore, young children have difficulty managing emotions because they lack the “meta-emotional skills to monitor their feelings” to meet goals (Thompson, p. 57). Their emotional evaluations are based more on “how they want to feel” and less about the consequences of their emotional reactions (Thompson, p. 57).

Further, emotional monitoring and evaluation are likely to be significantly different for children who differ temperamentally or have experienced trauma or chronic stress (Thompson). These children become hypersensitive to anticipatory cues or threats of danger, a situation that causes difficulty in managing negative emotions when stressful events occur (Thompson).

Emotional regulation is a process that one uses to “make things either better or worse, depending on the context,” and therefore should not be viewed as “adaptive or maladaptive” (Thompson, 2011, p. 54). In fact, more emotional regulation is not necessarily better (Thompson).

Indeed, excessive emotional regulatory strategies may lead to less adaptive functioning (Bariola et al., 2011). Alternatively, a child may struggle because of using strategies that are ineffective or inefficient - e.g., a child may demonstrate inhibition rather than participation during a class discussion (Bridges, Denham, & Ganiban, 2004). Thus, emotional regulation should be viewed less in terms of quantity, and more in terms of the quality of the styles,
strategies, or modes of emotional regulation that are employed in a given situation (Bariola et al.). These strategies and styles should be viewed in terms of their effectiveness, and this effectiveness may also vary with context or setting (Bariola et al.; Thompson, 2004). As an example, Thompson offers a hypothetical situation in which a child gets angry with a peer who has wronged her. Thompson explains that effective and adaptive emotional regulation in this situation depends on many factors. Specifically, “optimal” (p. 45) emotional regulation depends on the “child’s goals” in the situation (e.g., establishing power in this relationship vs. reestimating good relations). In addition, other factors, such as the values of the adults to whom the child might turn or the behavior of the other children in the setting, influence what type of emotional reaction is considered optimal. In one case, telling an adult might be the optimal behavior, whereas in another instance, avoiding the perpetrator or insisting on an apology might be considered more optimal. Thompson explains that “optimal” means what response will most likely lead to the child’s goal attainment in that particular situation.

Students’ Emotional Regulation in the Classroom

Effective emotional regulation impacts a child’s success in the classroom and throughout the school day (Lopes et al., 2012). In the classroom, children need to cope with frustration, stay on task, persevere, initiate demanding tasks, comply with classroom rules, and transition between tasks. Children’s emotional experiences affect their motivation, learning strategies, self-regulation, and academic achievement (Pekrun, Goetz, Titz, & Perry, 2002). Emotional regulation is linked with social, emotional, and academic adaptation such that students who cannot effectively regulate emotional reactions have difficulty adjusting to schoolwork and social environments (Lopes et al.) and therefore struggle with basic classroom routines, procedures, and expectations.
**Emotional regulation and teacher-student interactions.** Students’ emotional regulation difficulties might also impair their relationships with teachers. A student’s ability to respect school rules and interact positively with teachers influences teachers’ capacity to teach effectively (Lopes et al., 2012). Teachers often have difficulty handling classroom disruption caused by students who struggle with emotional regulation difficulties (Lopes et al.). These negative struggles and behavior problems often impair the student-teacher relationship and can lead teachers to have negative perceptions of these students.

Teachers’ perceptions of students with emotional difficulties influence the nature, degree, and frequency of their interactions with these students (Soles, Bloom, Heath, & Karagiannakis, 2008). In fact, teachers often interact differently with students who exhibit either internalizing or externalizing behavior problems when compared to children considered average in emotional development (Roorda, Koomen, Split, Thijs, & Oort, 2013). In a recent study, 48 teachers and 179 kindergarten students with different externalizing and internalizing behaviors were observed in a small group task setting in their classrooms (Roorda et al.). Independent observers rated teacher-child interactions. The study found that teachers interacted with more control (i.e., “taking complete control over situations without acknowledging and permitting any independent contribution from the child”) when dealing with students who were high in externalizing problems (Roorda et al., p. 148). Teachers also and reported that they felt less connected to children high in externalizing problems (i.e., teachers rated their interactions with these children as “defensive, morose, or unfriendly to the child”) (Roorda et al., p. 148). In addition, teachers also interacted with more control when responding to children who were high in internalizing problems. Unfortunately, increased teacher control for children with internalizing issues often leads to less initiation and more passivity in the classroom (Roorda et al.). Therefore, students
with both externalizing and internalizing emotional regulation difficulties are at risk for impaired student-teacher relationships and poor classroom outcomes.

**School Based Interventions for Children with Emotional Difficulties.**

Although emotional regulation difficulties put children at risk for difficulties in the classroom, several studies have found that school-based interventions that target emotional skills can produce positive effects on children’s behavior (Durlak, Dymnicki, Taylor, Weissberg, & Schelligner, 2012). This section discusses behavioral and cognitive-behavioral approaches that have been adapted for teachers and clinicians to use in the school setting. This section will also give examples of programs that have been developed and empirically supported.

**Behavioral approaches.** Many school-based programs incorporate behavioral strategies based on Skinner’s operational conditioning theory (i.e., the effects of consequences of a particular behavior on the future occurrences of that behavior). Common behavioral techniques often involve the daily administration of positive reinforcement to students (e.g., token economies or group contingencies).

Musser, Bray, Kehle, and Jenson (2001) developed a classroom-based study in which teachers delivered behavioral interventions to help students with emotional and behavioral difficulties. The teachers in this study placed a list of classroom behavior rules on each student’s desk and administered positive reinforcement (e.g., stickers, verbal praise) when students followed each of the rules posted for 30 minutes. In addition, teachers were instructed to use a “quiet unemotional tone of voice” (p. 298) when making their original request for a student to follow a directive (Musser et al.). This study also incorporated behavioral consequences for noncompliance. For example, after five seconds of noncompliance the students received verbal redirection; when students complied with the second request they were given verbal praise; and
students who did not comply after this second request lost a sticker. In addition, the intervention included a “mystery motivator” (i.e., after a specified number of stickers earned, students received an envelope with a reward card that they exchanged for a prize at the end of the school day).

Musser and colleagues (2001) found that a multi-component intervention that included precision requests, mystery motivators, token economy, response cost, and antecedent strategies (e.g., teacher modifications such as tone of voice) reduced disruptive behaviors in students with emotional and behavioral disorders. This study was viewed by the teachers as relatively easy to implement and effective because it produced immediate reductions in disruptive behaviors for all students. However, this study has several limitations. The results of this study cannot be generalized to regular education classrooms or to other students because the intervention was conducted in a self-contained classroom and used a single-subject design. In addition, the long-term effects of the intervention are unknown since the follow-up phase was conducted for only two weeks (Musser et al.). It is also uncertain whether teachers would continue to incorporate the intervention strategies into their classrooms. A final limitation of this study is that the intervention did not employ any cognitive behavioral interventions.

Cognitive behavioral approaches. Although behavioral strategies help students with emotional and behavioral difficulties, Daunic et al. (2012) suggest the use of cognitive-behavioral interventions to supplement behavioral strategies. Cognitive behavioral approaches include a large body of strategies and methods that can be used to change behaviors through active engagement of clients in understanding and taking control of their thoughts, feelings, and behaviors (Van Acker & Mayer, 2008). Cognitive behavioral approaches go beyond only changing behaviors by helping students make changes in thoughts and by teaching students self-
regulatory processes (Van Acker & Mayer; Polsgrove & Smith, 2004). Children with emotional issues can benefit from a cognitive behavioral approach because cognitive behavioral strategies help children develop control over their own behaviors and emotions (Van Acker & Mayer). Although cognitive behavioral approaches have traditionally occurred in clinical settings, students with emotional difficulties can benefit from learning and practicing these strategies in the school setting (Van Acker & Mayer).

Daunic et al. (2012) developed a social problem-solving intervention (Tools for Getting Along) that incorporated a cognitive behavioral approach that was implemented in the classroom to help children in grades 4-5 at risk for emotional and behavioral difficulties. The program’s goal was to teach children to use problem-solving strategies when faced with emotionally stressful situations. The intervention used instruction, cognitive modeling, and role-play lessons with practice opportunities for the students. The lessons followed a problem-solving sequence with the following six steps: (a) recognizing a social problem situation, (b) calming down to engage cognition, (c) defining a social problem in terms of goals and barriers, d) brainstorming solutions, and (e) selecting, implementing, and evaluating a response choice (Daunic et al.).

Prior to implementing the program, teachers and guidance counselors received training for 10 hours over two days. Teachers then taught the lessons to their entire classes at the rate of one to two lessons per week. The researchers analyzed pre-intervention and post-intervention teacher report and student report data. The study found that students who were taught the Tools for Getting Along lessons demonstrated improved problem-solving skills, increased executive functioning, and improved anger management (Daunic et al., 2012).

Augustyniak, Brooks, Rinaldo, Bogner, and Hodges (2009) also developed a school-based cognitive behavioral group intervention directed at increasing students’ behavioral and
interpersonal skills. School-based mental health providers trained by the researchers followed the Prepare Curriculum (i.e., a manualized treatment for both internalizing and externalizing behavioral issues) (Goldstein, 1981). The Prepare Curriculum focused on the following skill areas: Skill Streaming, Situational Perception Training, Anger Control, Moral Reasoning Training, Problem Solving training, Cooperation Training, Empathy Training, and Understanding Groups (Augustyniak et al.). The participants in this study included elementary, middle, and high school students attending 13 different public schools, ranging from ages 8-17. Students were selected if they displayed moderate aggressiveness, low frustration tolerance, and a history of conflicts with adults or peers. In this study, students met with school-based counselors in groups outside the classroom for 10 weekly sessions (Augustyniak et al.). Students in the treatment group reported decreases in internalized distress and anxiety.

Wyman et al. (2010) also developed a school-based cognitive behavioral intervention in which children learned and practiced behavioral and cognitive skills designed to improve their emotional self-regulation (i.e., monitoring emotions, decreasing emotional reactivity, increasing self-calming). The program involved teaching children self-control and how to prevent the escalation of their emotions through the use of cognitive behavioral strategies taught in a developmentally appropriate manner. The children learned self-monitoring and how to establish and meet personal goals.

Participants included 226 kindergarten through third grade students who were identified by their teachers as displaying behavioral and social classroom problems. Prior to the intervention, students were randomly assigned to intervention or control conditions. The classroom teachers attended an orientation regarding the intervention during a faculty meeting and met with the mentors within two weeks after the beginning of the treatment. The purpose of
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these meetings was to establish behavioral goals for the children receiving the intervention. For the duration of the study, teachers received bi-monthly updates of the students’ self-monitoring skills during regularly scheduled grade-level meetings.

The treatment was delivered by paraprofessionals who worked in the school district in which the intervention took place. These paraprofessionals, or “resilience mentors,” received training to deliver the intervention. These mentors taught the children a hierarchically ordered set of skills over 14 weeks (Wyman et al., 2010). The children also met individually with their mentors for 25 minutes each week in a private setting during the school day.

The intervention involved three phases. During the first phase, the resilience mentors worked with children in groups and in natural settings on three skills: (1) monitoring emotions, (2) self-control, and (3) maintaining control (Wyman et al., 2010). The project taught students to label and identify a broad range of emotions, to identify cues to their feelings and the feelings of others, and to monitor the intensity of their emotions. Children learned cognitive behavioral techniques such as how to use a “feeling thermometer” to monitor the intensity of their emotions or “imaginary umbrellas” to shield themselves from hurtful words. In addition, the project taught children concepts such as “gaining control to stop feelings from entering a hot zone” (p. 711).

The project also taught children how to use breathing exercises and cognitive strategies such as “stepping back” from emotionally intense emotions. The children were taught to take control over their lives and to develop realistic assessments of their abilities to control aspects in their lives. In addition, coaches used real life situations and feelings. They helped children express reactions to problems and develop alternative and more adaptive behaviors.

The study found that teachers rated the children who participated in this study as exhibiting fewer problems. These children also showed improvements in behavioral control,
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peer social skills, and reductions in shy-withdrawn and off-task behaviors as compared to the children in the control group (Wyman et al., 2010). In addition, children receiving the intervention had a significant decrease in disciplinary referrals and suspensions.

Although all the studies described above were effective in treating children with behavioral problems who would most likely not receive mental health services outside the school, these studies did not emphasize teacher involvement in the actual delivery of the interventions and did not incorporate a universal approach (i.e., an approach in which all students received the intervention). Research that focuses on a universal approach and teacher involvement in the development of emotional regulation in their students will therefore add significant value.

The following sections will: (a) discuss the benefits of a universal approach, (b) detail the advantages of using teachers to implement strategies to increase emotional regulation, and (c) present two recent universal programs. The universal programs that will be discussed include teacher training and teacher implementation of strategies to increase emotional regulation, and in particular use a cognitive behavioral ecological approach for students with emotional regulation difficulties.

A universal framework. While there are increasing numbers of children who require mental health services, only a small percentage of these children actually receive these services. As a response to this alarming concern, some researchers have recently expressed interest in providing mental health interventions in schools (Attwood, Meadows, Stallard, & Richardson, 2012; Van Acker & Mayer, 2008). School-based interventions have typically been provided in two ways: (a) universally, to all children, in order to promote emotional growth and prevent
disorders on a school-wide or classroom-wide basis or (b) in a targeted way that focuses on children who have already been identified with emotional issues (Attwood et al.).

There are several benefits to universal interventions. As stated earlier, many children with mental health issues do not receive any type of mental health service. Of those children actually receiving mental health services, 70-80% receive this care at schools (Van Acker & Mayer, 2008). However, schools have limited resources to address the emotional needs of all of their students and teachers have limited time to focus on social emotional growth due to pressures to enhance academic performance (Durlak et al., 2011). Teacher training to deliver universal school-based interventions is therefore needed so that more children’s needs can be met with lower cost and less use of already limited resources.

In addition, children with emotional regulation difficulties are likely to have impaired relationships with their teachers (as discussed earlier in this review) and therefore are less likely to receive critical emotional support from them. Many of these students would not necessarily qualify or be identified by teachers to receive targeted interventions, although their emotional regulation difficulties may be impairing their academic and social functioning. Universal approaches tend to use a positive approach that focuses more on systemic changes, positively stated behavioral expectations, and classrooms that encourage social competence and positive interaction patterns between teacher and students (Lohrmann & Talerico, 2004). Therefore, teacher training to deliver school-based universal interventions may increase positive student-teacher interactions and may thereby increase the likelihood that these students will receive more support toward their development of emotional regulation.

**Teacher Implementation of Strategies.** Teacher delivery of interventions also offers advantages. First, it is more cost-efficient for classroom teachers to deliver interventions than to
assign separate teachers or school personnel to deliver the interventions in separate settings (Polsgrove & Smith, 2004). Schools do not always have school psychologists or guidance counselors available to work directly with all students; therefore, more students will receive interventions when teachers implement them.

Second, teachers play a very important role in students’ ability to generalize skills learned outside the classroom (Powell et al., 2011). Teachers can encourage and reinforce students’ use of these new skills in a natural setting such as the classroom. Teachers can help students set goals for interventions and then provide feedback on student progress. Students with emotional and behavioral difficulties also benefit from observing socially appropriate peers using strategies in real world settings such as in the classroom. In addition, when teachers model emotional skills, they themselves become better attuned to the emotions manifested by their students (Daunic et al., 2012). Wentzel (2002) explains that teachers who model emotional skills often find it easier to help students develop social competence and a sense of classroom community.

Furthermore, classroom programs delivered by teachers are also more effective than programs administered by non-school personnel (e.g., research staff) (Durlak et al., 2011). Finally, when teachers deliver interventions there is improved collaboration among clinicians and teachers (Powell et al., 2011).

**Examples of Teacher-Conducted Universal Programs.** Webster-Stratton et al. (2008) developed a universal intervention that taught teachers how to use cognitive-behavioral strategies to help foster the development of emotional regulation in children. This study adapted the Incredible Years (IY) Child Training curriculum (the Dinosaur School) to train teachers to help all students enrolled in Head Start, kindergarten, or first grade classrooms in schools selected based on high poverty rates among the student body. The Dinosaur School was originally
prepared to treat clinic-referred children diagnosed with Oppositional Defiant Disorder. The interventions in this curriculum are based on Bandura’s (1989) cognitive social learning theories and interventions, which include role-playing, video modeling, skill practice, and reinforcing desired behaviors.

This study was unique because it: (a) incorporated intensive teacher training as part of the intervention and (b) was designed to target all students. Teacher training consisted of four days of training spread out in monthly workshops (Webster-Stratton et al., 2008). Teachers learned effective behavior management strategies such as developing positive relationships with students, using praise and encouragement effectively, implementing incentive programs, and developing individual behavior plans for children with behavior problems. Teachers also learned to use incentive-based discipline programs for select students with high levels of oppositional defiance to prevent the development of conduct problems. In addition, teachers learned how to help students improve emotional self-regulation by employing social peer coaching. The coaching involved teaching children to problem-solve and increase social competence. The teachers learned how to use the strategies in both structured and unstructured settings.

The teachers in Webster-Stratton and colleagues’ (2008) study implemented 30 lessons over the course of the year. The curriculum consisted of the following seven units: (a) learning school rules, (b) how to be successful in school, (c) empathy and perspective taking, (d) interpersonal problem solving, (e) anger management, (f) social skills, and (g) communication. Teachers taught each content area at least twice a week through both large group and small group practice activities. The teachers also promoted the skills taught during the lessons throughout the day in unstructured settings such as the playground and lunchroom.
Webster-Stratton et al. (2008) also aimed to increase parental involvement. Teachers involved parents in their children's education and behavior planning by inviting them to the classroom, helping them set up home-school behavior plans, sending home letters about the Dinosaur School, and giving out weekly homework assignments for parents and children to complete together.

Webster-Stratton et al. (2008) found that teachers’ management style changed as a result of the intervention. For example, teachers who received the training became less harsh/critical, less inconsistent/permisive, more warm/affectionate, and placed greater emphasis on social/emotional teaching. Teachers who participated in the training also used specific teaching strategies to address social emotional functioning, and fewer harsh statements when compared to controls. Their students demonstrated improvement in emotional self-regulation and social competence and exhibited fewer conduct problems compared to controls.

Lochman and Wells (1996) also developed a program (the Coping Power program) based on a cognitive-behavioral approach that included a universal framework in which teachers received training and implemented strategies in their classrooms. This program was based on a contextual social-cognitive model that addressed potential risk factors (e.g., a child’s social-cognitive pattern, family, peer-group, neighborhood, and classroom environment (Powell et. al., 2011). The Coping Power program is a manualized behavior therapy for adolescents who present with aggression and other conduct problems. The program teaches students to develop awareness of emotions such as anger, disappointment, and frustration and to recognize the physiological cues of anger and triggers of their behavioral difficulties. Understanding one’s personal triggers and the emotions that follow often increases the likelihood that one will use effective coping strategies (Powell et al). The Coping Power Program teaches children how to
cope effectively with strong negative feelings and how to control anger (Lochman & Wells, 1996; Powell, Lochman, Boxmeyer, Barry, & Young, 2010). Interventions often involve teaching coping strategies (e.g., deep breathing, distraction, coping statements, and relaxation). In addition, this program incorporates lessons and role-play exercises in problem-solving, and in social skills to help children understand the consequences of their decisions (Powell et al.). Finally, Coping Power uses positive reinforcement for engagement in positive goal setting (Lochman, Wells, & Lenhart, 2008). Positive goal setting involves students choosing a long-term goal and then identifying the short-term goals that need to be met in order to meet their long-term goals. The students receive positive reinforcement for meeting their goals.

Lochman, Coie, Underwood, and Terry (1993) tested the effects of the Coping Power program on 183 aggressive boys in the fourth through sixth grades. Boys were selected based on rating scales that teachers completed. The students were assigned to one of the following three groups: (a) a group in which the child receives training, (b) a group in which both the child and parents receive the training, and (c) a control group in which neither the child nor parents receive the training. This original Coping Power program consisted of a 34-session intervention administered to students in small groups during the school day across two school years within the fourth to sixth grade time frame. The parent component consisted of 16, 90-minute sessions. At a one year follow-up, children who participated in the child group plus parent training component showed less aggressive behavior and improvement in their teacher-rated functioning when compared with the untreated group.

The Coping Power program has since evolved, and the most current research on the Coping Power program now includes the effects of a universal intervention program. The universal intervention includes parent meetings and teacher in-service meetings. Lochman and
Wells (2002) tested the effects of this additional universal component on 245 male and female aggressive fourth graders. The teacher component of the universal intervention consisted of five, 2-hr. meetings. The meetings consisted of a didactic presentation of information and time for the teachers to problem solve around the topic presented. Topics included: (a) encouraging positive parental involvement, (b) helping students improve their study skills, (c) children’s self-control, (d) homework issues, and (e) helping children develop improved self-control and self-regulation. Lochman and Wells found that children who received Coping Power plus the universal intervention (teacher training) demonstrated lower rates of substance abuse and teacher-reported aggression. In addition, teachers rated students as having more prosocial behavior when compared to controls.

**Teacher Characteristics that Influence Teacher Interventions**

As described above, teachers often have the most opportunities to help the greatest number of students develop adaptive emotional regulation strategies; and research indicates that teacher-led interventions can be effective in helping students with emotional regulation difficulties. However, there are several factors that affect how teachers will respond to children with emotional regulation difficulties. This section will review studies that have investigated different personal characteristics (i.e., emotional regulation, acceptance about student emotional expression, empathy, and self-efficacy) that influence teacher responses to children with emotional and behavioral issues.

**Teachers’ emotional regulation.** A teacher’s individual emotional regulation strategies can impact the way he or she responds to a student’s emotional expression. As described earlier in this review with respect to students, emotional regulation plays a role in behavioral responses and decision-making (Campos et al., 2004; Gross & Thompson, 2007). Likewise, the type of
emotional regulation strategies that a teacher personally employs (with respect to the teacher’s own emotional regulation) can also affect that teacher’s response to students with significant emotional regulation difficulties. Gross and John (2003) operationalized two different types of emotional regulation strategies: reappraisal (the extent that one engages in cognitive reframing) and suppression (avoiding cognitive expression). According to Gross (1988), reappraisal involves reinterpreting an emotionally provocative situation that changes the emotional impact. For example, during a job interview a candidate may view the process as an opportunity to learn something about the place of employment rather than as test of one’s competency (Gross & John, 2003). Another example is where a teacher views a student’s angry outburst as an opportunity to teach the child (e.g., help the child label emotions and think about what happened) rather than as a sign of disrespect (Swartz & McElwain, 2012). Suppression involves the inhibition or avoidance of emotional expression (Gross, 1988). Suppression occurs, for example, when a teacher does not address a student’s emotional difficulty.

Swartz and McElwain (2012) investigated the relationship between: (a) pre-service teachers’ self-reported emotional regulation (i.e., reappraisal and suppression) and (b) the type of responses those teachers used when interacting with students’ negative emotions. Swartz and McElwain observed the responses of 24 pre-service teachers to children’s emotions during their practicum hours. The observations occurred during several different times throughout the school day (e.g., free play, snack time, transitions, outdoor play). The teachers also completed a measure (the Emotional Regulation Questionnaire, developed in 2003 by Gross & John) that evaluates an individual’s emotional regulation strategies. Swartz and McElwain found that teachers who reported more reappraisal when regulating their own emotions were more likely to
engage in supportive responses to children’s negative emotions and were less likely to engage in non-supportive responses.

**Teachers’ accepting beliefs about emotions.** Swartz and McElwain (2012) also examined the effects of teachers’ inclination to accept a child’s expressing his or her emotions in the classroom. In the study mentioned above, Swartz and McElwain examined the extent to which teachers viewed expressing negative emotions as either: (a) an opportunity to help a child develop skills or (b) an experience harmful to a child. Teachers completed the Caregivers’ Beliefs about Feelings Questionnaire (Hyson & Lee, 1996) that was developed to assess parents’ beliefs about their children’s feelings and modified by the authors to assess teachers’ inclination to accept a child’s expressing his or her emotions in the classroom. The study found a correlation between: (a) teachers’ inclination to accept a child’s emotional expression in the classroom and (b) teachers’ personal emotional regulation. Specifically, teachers’ accepting beliefs about students’ emotions were associated with supportive strategies (e.g., labeling emotions); that is, when reappraisal was also high.

**Teacher empathy.** In addition, Swartz and McElwain (2012) measured teachers’ empathy or “perspective taking” (i.e., imagining oneself in another’s place) as a predictor of the types of responses teachers have to children’s emotional expression. The authors administered the Interpersonal Reactivity Index (Davis, 1983) to measure the extent to which teachers reported feelings of empathy towards others. This study found that teachers with higher reported perspective taking also reported more supportive and fewer non-supportive responses to children’s negative displays of emotions.

**Teacher self-efficacy.** Finally, a teacher’s self-efficacy (i.e., a teacher’s judgment of his or her capabilities to achieve specific goals or outcomes in his or her classroom, or motivate and
engage difficult learners) (Bandura, 1977; Tschannen-Moran & Hoy, 2000) influences the way in which that teacher may respond to students with emotional and behavioral difficulties (Andreou & Rapti, 2010). Andreou and Rapti (2010) measured the predictive value of perceived efficacy for class management for different types of classroom interventions for children with behavioral difficulties. They found that teachers who reported low-self efficacy and attributed student negative behavior to family causes reported increased use of negative responses. In addition, this study found that as teacher self-efficacy increased, teachers were more likely to attribute student behavioral difficulties to school-based factors.

**Teacher Training**

As discussed earlier, how teachers respond to students with emotional regulation may have a critical impact on student behavior. However, many teachers lack training to effectively teach children with emotional and behavioral difficulties (Potgieter-Groot et al., 2012) and often do not feel efficacious in helping these children. In addition, teacher characteristics (as described above) influence the type of interventions that teachers will implement in response to students with emotional and behavioral difficulties. Only a few studies thus far have incorporated teacher training into interventions designed to help students improve emotional regulation (Lochman & Wells, 2002; Webster-Stratton, Reid, & Stoolmiller, 2008). Further, there are currently no studies that have addressed these specific teacher characteristics during teacher trainings.

**Example of a recent teacher training study.** Recently, a team of researchers in South Africa developed an in-service training program for teachers that focused on helping teachers gain skills in working with children with emotional and behavioral issues (Potgieter-Groot et al., 2012). Forty-nine teachers participated in this three-session program. The training focused on school and classroom practices that foster positive teacher-student relationships, classroom
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structure and management, and rules and established routines that provide consistency, safety, and security for all students. The training also covered specific strategies such as positive reinforcement, token economy, time out, and strategies to develop self-regulation. Results of the training indicated that teachers felt more competent in teaching children with emotional difficulties after participating in the sessions. In addition, teachers reported increased gains in their repertoire of useful strategies to help students struggling with emotional and behavioral issues. Finally, attitudes of the teachers in this study changed. Teachers reported feeling more empathy, caring, and desire to build positive relationships with these students.

**Social validity issues and future directions.** Although it appears that studies are beginning to focus on training teachers to improve their skills in working with children with emotional regulation issues (Potgieter-Groot et al., 2012), there is still a large gap in the research on the optimal ways to train teachers to improve the type of strategies to use in response to students with emotional regulation difficulties. There is also a gap in the research on how to design effective, socially valid, universal programs that focus on teacher responses to children with emotional difficulties (Polsgrove & Smith, 2004). Unfortunately, many teacher trainings and school-based interventions (for children with emotional difficulties) that are available in the literature have social validity issues (Conroy et al., 2008). Teachers and school communities often do not find these training acceptable because they either are too costly, time intensive, or require strict research protocols that are not always feasible to maintain in a classroom.

To increase social validity, teacher training programs should consider how to modify teacher characteristics (e.g., attributions about children with emotional regulation issues, attitudes about classroom management, discipline style, openness to new practices) (Polsgrove & Smith, 2004). For example, teachers’ judgments about interventions as reasonable and
appropriate often affect a treatment’s utility. Although teachers often rate interventions as successful while participating in a treatment study, they are not likely to continue the intervention after the research project has concluded (Sutherland, Adler, & Gunter, 2003).

In fact, teacher training that changes teacher perception about students has been shown to lead to positive outcomes (Daunic et al., 2006; Ollendick & King, 1999; Sutherland & Oswald, 2005). Therefore, training teachers to develop an understanding of their students’ difficulties and perspectives when interpreting a child's emotional behavior and belief system (Swartz & McElwain, 2012) might alter teachers’ perceptions about these students. Teacher training that provides effective and reasonable strategies that could easily be implemented in the classroom may increase teacher self-efficacy in working with these children, and thereby increase the likelihood that they help students develop more adaptive emotional regulation.

**The Role of School Psychologists in Teacher Training.**

One way to address the growing need to provide social-emotional support to students in a realistic and feasible manner is by having mental health professionals who work in schools deliver teacher trainings that focus on social-emotional development, teacher-student interactions, and specific classroom interventions (Soles et al., 2008). School psychologists qualify as appropriate clinicians to lead such specialized training. According to the National Association of School Psychologists’ Model for Comprehensive and Integrated School Psychological Services, school psychologists are trained to play several key roles in universal interventions (Splett et al., 2013). School psychologists have specialized training to help schools select and implement evidence-based social emotional learning curricula, and train and support those implementing the program (Durlak et al., 2011; Dvorsky, 2013).
Therefore, school psychologists are positioned to provide contextualized professional development that would occur within the school setting and during school hours. When professional development is delivered in this way, the teacher has a dual role. The teacher is learning about his/her students’ emotional regulation difficulties and about how his/her personal attributions, perceptions, and acceptance of students affect his/her responses and interactions. In addition, the teacher serves as the deliverer of enhanced support for children’s emotional regulation development. This approach has pragmatic value in fiscally difficult times.

**Statement of the Problem/Hypothesis**

This literature review highlights the importance of developing effective and socially valid cognitive behavioral classroom-based strategies to help students with emotional regulation difficulties. Since teachers are the primary adults interacting with children with emotional and behavioral difficulties throughout the school day, there are many benefits for both students and teachers when teachers are involved in implementing strategies that help students develop adaptive emotional regulation.

However, there appears to be a gap in the literature on universal evidence-based treatments designed to help students with emotional regulation difficulties and the degree to which teachers: (a) understand emotional regulation, (b) are prepared and feel efficacious when working with children with severe emotional regulation difficulties, and (c) are willing to implement these strategies. In addition, many of these treatments lack social validity, have high costs, require intensive professional training, and are therefore, not easily accessible to many community schools, especially in the inner-city.

Therefore, this study developed a professional development program that was conducted by a school-based psychologist and focused on helping teachers to: (a) develop an understanding
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of emotional regulation in students, (b) recognize their role in teaching students to develop more adaptive emotional regulation, and (c) learn specific strategies to use to help students learn more adaptive emotional regulation. This study also adopted a universal approach as a strategy to increase access to emotional regulation support for all students. In addition, the study explored the influence of teacher characteristics on how teachers respond to students with emotional regulation difficulties. Finally, this study attempted to accomplish these goals using “real world” conditions, by creating a professional development for teachers in a cost effective way.

Research Questions

The hypotheses have been divided into two sets. The first set of set of research questions concerns the impact of a professional development program on emotional regulation on pre-service and in-service teachers’ beliefs and behaviors. The second set of hypotheses concerns the influence of different teacher characteristics on the impact of a professional development program on emotional regulation on pre-service and in-service teachers’ beliefs and behaviors.

Impact of PD. The following set of research questions concerns the impact of a professional development program on emotional regulation on teachers’ beliefs and behaviors.

Research question 1. Does a professional development (PD) program on emotional regulation (PDPER) impact how teachers respond to students with emotional regulation difficulties?

H1a: Teachers in the PDPER group will endorse higher levels of emotionally supportive strategies in response to children who are exhibiting emotional regulation difficulties compared to teachers in the alternative treatment (AT) group after controlling for pre-test scores.

H1b: Teachers in the treatment group will endorse lower levels of punitive strategies
in response to children who are exhibiting emotional regulation difficulties, compared to teachers in the AT group after controlling for pre-test scores.

**Research question 2.** Does the PDPER impact the degree to which teachers view their responsibility in helping students learn how to manage emotions controlling for pre-test scores?

**H2:** Teachers in the PDPER group will view themselves as more responsible to help students learn how to manage their emotions than teachers in the AT group after controlling for pre-test scores.

**Research question 3.** Does the PDPER impact the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior after controlling for pre-test scores?

**H3:** Teachers in the PDPER group will view their responses as having a long-lasting impact on students’ behavior to a greater degree than teachers in the AT group after controlling for pre-test scores.

**Teacher Characteristics.** The following set of research questions concerns the influence of different teacher characteristics on the impact of the PDPER on teachers’ beliefs and behaviors.

**Research question 4.** Do teacher characteristics moderate the impact of a PD on emotional regulation on how a teacher responds to students with emotional regulation difficulties?

**H4a:** Self-efficacy moderates the impact of the PDPER on teachers’ emotionally supportive responses to students.
H4b: Empathy moderates the impact of the PDPER on teachers’ emotionally supportive responses to students.

H4c: Reappraisal moderates the impact of the PDPER on teachers’ emotionally supportive responses to students.

Research question 5. Do teacher characteristics moderate the impact of the PDPER on the degree to which teachers view their responsibility in helping students learn how to manage emotions?

H5a: Self-efficacy moderates the impact of the PDPER on the degree to which teachers view their responsibility in helping students learn how to manage emotions.

H5b: Empathy moderates the impact of the PD on the degree to which teachers view their responsibility in helping students learn how to manage emotions.

H5c: Reappraisal moderates the impact of the PD on the degree to which teachers view their responsibility in helping students learn how to manage emotions.

Research question 6. Do teacher characteristics moderate the impact of the PDPER on the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior?

H6a: Self-efficacy moderates the impact of the PDPER on the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior.

H6b: Empathy moderates the impact of the PDPER on the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior.

H6c: Reappraisal moderates the impact of the PDPER on the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior.
Chapter III: Method

The present study investigated the impact of a professional development program on how teachers respond to children with emotional regulation difficulties. The study also investigated the impact of a teacher’s personal characteristics on how he/she responds to children with emotional regulation difficulties. This chapter describes the methodology that was used to collect and analyze the data for the research questions developed for this study. This chapter includes the following sections: participants, description of the instruments, design, procedures, and data analysis.

Participants

Pre-service and in-service teachers who took a graduate level course in the Education Department at Queens College in the Fall or Spring semesters in 2014-2015 were recruited for participation in this study. Graduate students were chosen as the participants in this study because graduate classes are comprised of a more heterogeneous sample as compared to teachers who work in the same school building.

Graduate students Data were collected from 7 classes over 2 semesters for a total of 120 participants. A total of 120 individuals gave consent for participation, but 21 participants were excluded because they had missed one of the three professional development sessions.

Queens College is an urban college serving 19,000 undergraduate and graduate students. The racial and ethnic demographics of the graduate students in the Fall of 2014 were as follows: 0.2% American Indian/Alaska Native; 17.3% Asian/Pacific Islander; 9.0% African-American; 15.3% Hispanic; and 58.3% White. Sixty-nine percent of the students were females and 30.6% were male. The College of Education at Queens College has nine different graduate programs leading to New York State initial teacher certification.
A majority of the participants in the study were Caucasian (i.e., 66. % Caucasian, 15% Asian, 8% African-American, and 10% Hispanic). A majority of participants were between the ages 20-29 years (i.e., 85.9% ages 20-29; 7.1% ages 30-39, 4% ages 40-49, and 3% ages 50-59). Most participants were also female (i.e., 97% female and 3% male). Participants reported a range of training and teaching experiences. A majority reported that they taught between 1-5 years (83.8% taught between 1-5 years, 1% between 11-15 years, 1% taught between 20-30 years, and 5% between 6-10 years). Nine percent reported no teaching experience. Approximately half of the participants had received previous training on emotional regulation (i.e., 52% had received training, 47% had never received previous training). The teachers also varied by grade taught (i.e., 23.2% pre-k-K, 41.6% indicated that they taught grades 1-5, 8% grades 6-8, 13.1% high school, and 13% indicated that they taught all grades). One person reported that she was working as a director of a school. Table 1 reports the frequency distribution of the sample’s demographic information regarding the teachers’ gender, ethnicity, age, years of teaching experience, grade currently teaching, level of education, and previous training on emotional regulation.
Table 1

**Teacher Demographics**

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<tr>
<td>Pre-K</td>
<td>7</td>
<td>7.1</td>
</tr>
<tr>
<td>K-2</td>
<td>36</td>
<td>36.3</td>
</tr>
<tr>
<td>3-5</td>
<td>15</td>
<td>15.2</td>
</tr>
<tr>
<td>6-8</td>
<td>7</td>
<td>7.0</td>
</tr>
<tr>
<td>9-12</td>
<td>13</td>
<td>13.1</td>
</tr>
<tr>
<td>All grades</td>
<td>13</td>
<td>13.1</td>
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<tr>
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<td>15</td>
<td>15.2</td>
</tr>
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<tr>
<td>Masters</td>
<td>13</td>
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<td>ER Training</td>
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<tr>
<td>Received training</td>
<td>52</td>
<td>52.2</td>
</tr>
<tr>
<td>No previous training</td>
<td>46</td>
<td>46.5</td>
</tr>
</tbody>
</table>
Instruments

Participants were asked to complete a series of instruments prior to the intervention. The instruments consisted of the Teacher Response Survey (TRS), the Teacher Personal Characteristics Survey, and the Teacher Background Questionnaire, and were administered in that order.

Teacher Response Survey (TRS). The primary investigator developed the Teacher Response Survey (Appendix A) for the purpose of this study. The TRS served as both the pre-test and post-test measure. Therefore, the primary investigator developed two different versions of the TRS (i.e., the TRS-A-B and the TRS-B-C). To control for order effect, half the participants were given the TRS-A-B as a pre-test and TRS-C-D as the post-test; the other half were given TRS-C-D as pre-test and TRS-A-B as the post-test.

The TRS measures a teacher’s self-reported: (a) probable responses to a student’s behavior, (b) beliefs about the long-lasting impact of their responses on students’ behavior, and (c) views regarding their responsibility in helping students learn how to manage their emotions. The TRS is comprised of two brief vignettes that describe a child with emotional regulation difficulties. The vignettes are followed by a series of three questions. Participants were asked to read these vignettes and then to indicate to how they would respond.

Development of the Vignettes. The behaviors depicted in the vignettes reflect items on the Emotion Regulation Checklist (CRC) that was developed by Shields and Cicchetti (1997). This scale reflects two different types of emotional regulation factors, “Negative/Lability” and “Emotion Regulation.” The Negative/Lability subscale describes a child’s flexibility, mood lability, and regulation of negative affect and consists of items such as, “Exhibits wide mood swings,” “Is prone to angry outbursts,” “Responds negatively to neutral or friendly overtures by
peers,” and “Is easily frustrated.” In contrast, the Emotion Regulation subscale reflects a child’s appropriate displays of emotions and is comprised of items such as, “Is empathic toward others,” and “Can say when she or he is feeling sad, angry or mad, fearful or afraid.” This subscale also includes items such as, “Responds positively to neutral or friendly overtures by adults” and “Is empathic towards others.”

For the purpose of creating valid vignettes, the primary investigator wrote eight vignettes to be tested, each depicting a situation in which a student experiences difficulty with his/her emotional regulation. Four of the vignettes described a student who acts aggressively toward a peer’s neutral overtures; the other four described a child whose frustration leads to disruptive behavior. These two aspects of emotional regulation were selected because teachers are more likely to rate behaviors that are disruptive, aggressive, or disobedient as challenging behaviors that cause the most stress (Clunies-Ross, Little, & Kienhuis, 2008).

To ensure for content validity, the primary investigator employed the following process to select the most valid four out of the eight potential vignettes. Each vignette was piloted with a sample of 10 doctoral students studying educational and school psychology. The primary investigator developed a rating tool. For each vignette, doctoral students rated on a 1-10 scale the degree to which the description indicates emotional regulation difficulties according to the definition of emotional regulations described by Thompson (2004) and Gross (1998) (i.e., “the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions” (Gross, p. 275).

According to this scale, 1 represents a poor description of a child with emotional regulation difficulties and 10 represents an excellent description of a child with emotional regulation difficulties. Based on this scale, each vignette yielded a total possible average score
of 10. Vignettes were eliminated if their total average score was less than an 8.0. A high degree of reliability was found between the raters. The average measure ICC was .902 with a 95% confidence interval from .793 to .970 $F(10, 70)= 11.681, p<.001$).

In addition, the doctoral students rated the severity of the behavior (low, moderate, and severe). From the vignettes that passed the first criterion, the primary investigator chose two pairs of vignettes. To qualify as a pair, the vignettes had to have at least a 75% agreement in the severity ratings and also reflect similar aggressive or disruptive behavior (based on the Emotional Regulation Checklist described above). Descriptive feedback from the doctoral students was also considered in determining which vignettes reflected similar behavior. In addition, to ensure similarity across each set of vignettes, the primary investigator utilized an essentially identical word count (differences of only 5 words or less). Also, each vignette described the same number of behavioral problems viz., two problems. Finally, gender was removed by referring to the child in the vignettes as “Child A.” At the completion of this process, the primary investigator had two pairs of vignettes (one pair describing frustration that leads to disruption; the other pair describing a student who acts aggressively).

As mentioned above, each vignette in the TRS is followed by a series of questions. These questions were developed in order to evaluate a teacher’s self-reported: (a) probable responses to a student’s behavior, (b) beliefs about the long-lasting impact of their responses on students’ behavior, and (c) views regarding their responsibility in helping students learn how to manage their emotions. The TRS format and content were based on surveys created by Poulou and Norwich (2002), Andreou and Rapti (2010), and Clunies-Ross, Little and Kiehhuis (2008).

Poulou and Norwich (2002) asked participants to rate (on a 5-point Likert scale) how likely they would be to use one of 12 possible strategies (e.g., rewards and positive incentives,
punishments, threats, supportive behavior, counseling) in response to a vignette that described a child with disruptive behaviors. Similarly, the TRS asked participants to rate on five-point scale (1 = unlikely and 5 = very likely) how likely they would respond in a particular manner to a child described in each vignette. Samples responses on the TRS included, “Reprimanding Child A,” “Telling Child A that I will call his/her parents,” or “Providing individual instruction to Child A regarding how to control emotions.” Each TRS included two vignettes, and each vignette was followed by twelve questions: five questions related to emotionally supporting strategies, five questions related to punitive strategies, and two neutral questions, for a total of forty-eight questions. Each TRS yielded two scores: one score based on the questions related to emotionally supportive strategies and one score based on the questions related to the punitive strategies. The neutral questions were not scored. Each question was scored on the given five-point scale.

Teacher Personal Characteristics Survey (TPCS). Participants also completed the Teacher Personal Characteristics Survey (Appendix B) that was used to assess their: (a) emotional regulation, (b) empathy, and (c) self-efficacy. This 28-item survey consisted of three subsections drawn from measures used in previous research: (a) Emotional Regulation Questionnaire (Appendix C), followed by (b) The Interpersonal Reactivity Index (Appendix D), followed by (c) Teachers’ Sense of Efficacy Scale- Short Version (Appendix E). See Table 2 below for a summary of these instruments.
Table 2

Summary of the Instruments that Comprise the Teacher Personal Characteristics Survey

<table>
<thead>
<tr>
<th>Name of Instruments</th>
<th>Number of Items</th>
<th>Population</th>
<th>Construct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal Reactivity Index (IRI)</td>
<td>7</td>
<td>Undergraduate students</td>
<td>Empathic Concern</td>
</tr>
<tr>
<td>Emotional Regulation Questionnaire (ERQ)</td>
<td>6</td>
<td>Undergraduate students</td>
<td>Emotional Regulation: Reappraisal</td>
</tr>
<tr>
<td>Teachers’ Sense of Efficacy Scale-Short Version (TSES)</td>
<td>4</td>
<td>Study 1: 146 preservice teachers and 78 inservice teachers and Study 2: 70 preservice teachers and 147 inservice teachers</td>
<td>Self-efficacy: classroom management</td>
</tr>
</tbody>
</table>

*Emotional Regulation Questionnaire (ERQ; John & Gross, 2003).* The Emotion Regulation Questionnaire (John & Gross, 2003) is a 10-item measure that was developed to assess an individual’s use of two types of emotional regulation (i.e., reappraisal and suppression strategies). Participants rate each item on a 7-point scale (with 1 representing *strongly disagree* and 7 representing *strongly agree*). Total scores can range from 10 to 70. John and Gross created the scale by averaging ratings across items. Gross and John (2003) conducted exploratory and confirmatory factor analyses that indicated that the ERQ’s two factors (i.e., reappraisal and suppression) are independent of one another. The reappraisal subscale ($M = 5.16; SD = 1.26$) contains six items such as, “I control
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my emotions by changing the way I think about the situation I’m in.” The suppression subscale 
\(M = 3.17; SD = 1.26\) contains four items including questions such as, “I keep my emotions to
myself.” Scores on this subscale have demonstrated adequate internal consistency across four
separate administrations with alphas = .73, .68, .75, and .76. There is also evidence of high
internal consistency within the subtests (reappraisal, \(r = .80\); suppression, \(r = .73\)). Test-retest
reliability (administrations three months apart) for both the reappraisal and suppression factors
was .69. For the purpose of this study, only the reappraisal subscale (6 items) was administered.
In this study, the scale had a high level of internal consistency, as determined by a Cronbach's
alpha of 0.826.

*Teachers’ Sense of Efficacy Scale- Short Version (TSES; Tschannen-Moran & Hoy, 2001).* To evaluate teacher self-efficacy in managing student behaviors in the classroom, The
Teachers’ Sense of Efficacy Scale (TSES) – Short Version was administered. The scale was
previously titled the Ohio State Teacher Efficacy Scale (OSTES) because it originated at The
Ohio State University. The measure has two forms, a long form that contains 24 items and short
form that contains 12 questions. The TSES consists of a series of statements describing a
teacher’s experiences. The scale produces individual scores for three subscales, and in addition,
a Generalized Efficacy score, which represents the total score. The three subscales are student
engagement \(M = 7.3, SD = 1.1\), instructional strategies \(M = 7.3, SD = 1.1\), and classroom
management, \(M = 6.7, SD = 1.1\). The Generalized Efficacy score ranges from 12-108 with
higher scores representing higher scores of efficacy for teaching. On the long version, each
factor or subscale has eight questions pertaining to its categories. Both the long and the short
measures use a 9-point Likert scale with choices ranging from 1 (*Nothing*) to 9 (*A great deal*).
Sample items include, “How well can you respond to defiant students?” and “How well can you
implement alternative strategies in your classroom?” Tschannen-Moran and Hoy (2001) conducted three separate validity and reliability studies and found that both forms were valid and reliable for measuring teacher efficacy. Internal consistencies for the scale were high with Cronbach’s alpha ranging from 0.87 to 0.94. For the purpose of this study, only the classroom management subscale (4 items) was administered. The scale had a high level of internal consistency, as determined by a Cronbach's alpha of 0.899.

The Interpersonal Reactivity Index (IRI; Davis, 1980, 1983). To assess teacher empathy or “perspective-taking orientation” (Swartz & McElwain, 2012), participants completed the Interpersonal Reactivity Index (Davis, 1983). The IRI assesses global empathy and defines empathy as a multidimensional construct. The scale is made up of four scales, the Perspective-taking (PT) subscale, The Fantasy subscale (FS), the Empathic Concern scale (EC), and the Personal Distress subscale (PD). The Perspective-taking scale evaluates the extent an individual tends to see things from the point of view of others (e.g., “I sometimes try to understand my friends by imagining how things look from their perspective”). The perspective-taking index of the IRI consists of six items. The Fantasy subscale consists of questions that evaluate an individual’s tendency to identify with characters in movies, novels, plays and other fictional situations (e.g., “When I am reading an interesting story or novel, I imagine how I would feel if the events were happening to me”). The Empathic Concern subscale includes items that measure the individual’s feelings of concern for others, compassion, and warmth (e.g., “I often have tender, concerned feelings for people less fortunate than me”). The Personal Distress subscale consists of items that assess the discomfort and anxiety that one feels when witnessing others experiencing distress (e.g., “Being in a tense emotional situation scares me”). Participants rate items according to a 5-point Likert scale with 0 representing does not describe me well to 5
representing *describes me very well*. Scores on each subscale range from 0 to 28, with higher scores representing higher levels of dispositional empathy.

Davis (1980) initially developed the IRI by pooling together 50 items and testing the items on over 400 participants. Davis used both original and borrowed or adapted items from other empathy scales. The initial factor analysis on the items revealed the four factors mentioned above. Davis next developed a second version of the measure using 45 items from the original version. He administered these items to over 400 undergraduate students. He conducted four separate factor analyses and found the same four factors that had emerged in the first test trial. The final version of the IRI consists of 28 items. Test-retest reliability correlations for the four subscales for males range from $r = .61$ to $r = .79$ and for females from $r = .62$ to $r = .81$. For the purpose of this study, only the Empathic Concern (7 items) subscale was administered. Cronbach’s alpha for Empathic Concern in this study was .698.

**Teacher Background Questionnaire.** In addition, participants completed the Teacher Background Questionnaire that was developed by the experimenter (Appendix F). This questionnaire included questions regarding gender, grade taught by teacher, years of teaching experience, nature of prior training, and ethnicity.

**Research Design**

This study used a pre-test post-test experimental design with one treatment group and one alternative treatment group. The TRS served as both the pre-test and post-test measure. As described above, the primary investigator developed two different versions of the TRS (i.e., the TRS-A-B and the TRS-B-C). To control for order effect, half the participants were given the TRS-A-B as a pre-test and the TRS-C-D as the post-test; the other half were given TRS-C-D as a pre-test and TRS-A-B as the post-test.
The independent variable was the type of Professional Development Program. There were two types of Professional Development Programs: a professional development program on Emotional Regulation (PDPER) and a professional development program on psycho-educational assessment (PDPA). The PDPER was considered the treatment group. The PDPA was considered the alternative treatment group (AT). Graduate classes were randomly assigned to either condition. The dependent variables were post-test scores on the TRS (i.e., levels of emotionally supportive strategies; levels of punitive strategies; the degree to which teachers view their responsibility in helping students learn how to manage emotions; and the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior).

In addition, the study protocol was also conducted in one public school setting to provide a limited case study examination of its applicability to “real world” settings. Within the case study, open-ended questions were used to obtain more in depth information about teachers’ views on handling emotional regulation issues in their classrooms.

**Procedures for Research Conducted in Graduate Classes**

The PI emailed a letter to professors teaching graduate courses in teacher education programs to obtain permission to utilize graduate students in their classes for this study. In addition, the PI prepared a brief description of the study/professional development program for professors to share with colleagues who were teaching graduate classes in teacher education programs. After the professor agreed to participate, the administration of the professional development program was scheduled. Students were asked to consent to use of their responses (pre/post) assessments for research (Appendix G).

The primary investigator administered a series of instruments. The instruments consisted of the Teacher Response Survey (TRS); the Teacher Personal Characteristics Survey (a packet of
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three questionnaires including (a) the Emotional Regulation Questionnaire, (b) The Interpersonal Reactivity Index and (c) Teachers’ Sense of Efficacy Scale- Short Version; and the Teacher Background Questionnaire. The instruments were administered in that order. Participants completed the questionnaires (approximately 20 minutes). To ensure confidentiality, the study did not record, collect, or store any personal information from the participants. Each consent form, pre-test, and post-test was assigned a study identification number in order to link pre- and post-test data. This list was created after the pre-test and was destroyed immediately after the post-test. After the post-test was complete, all survey data whose respective consent form (as identified by the study identification number) indicated that the participant did not consent to having his/her data used in the study was shredded and discarded.

The total time needed for this study was 90 minutes, over the course of three graduate classes. The first class consisted of 20 minutes of survey activities (i.e, TPCS, TRS pre-test, and Teacher Background Questionnaire in that order). The second class consisted of 60 minutes of professional development. The third class consisted of 10 minutes of survey (i.e., TRS post-test).

Procedure for Research Conducted in Public Schools (“Case Study”)

The primary investigator sought approval from the Institutional Review Board at the City University of New York Graduate School and University Center and the NYC Department of Education. Upon receipt of such approval, the PI contacted via telephone the principals of several elementary schools in New York to obtain permission to utilize their teachers for the study. Once the principal agreed to participate, the principal sent a faculty memo describing the study to be conducted in his/her school. The administration of the professional development program was scheduled during an officially designated staff development time slot. The PI
obtained informed consent at the onset of the professional development program (Appendix H).

The primary investigator administered a series of instruments. The instruments consisted of the Teacher Response Survey (TRS); the Teacher Personal Characteristics Survey (a packet of three questionnaires including (a) the Emotional Regulation Questionnaire, (b) Teachers’ Sense of Efficacy Scale- Short Version and (c) The Interpersonal Reactivity Index; and the Teacher Background Questionnaire. The instruments were administered in that order. Teachers completed the questionnaires (approximately 20 minutes). Each consent form, pre-test, and post-test were assigned a study identification number in order to link pre- and post- test data. This list was created after the pre-test and was destroyed immediately after the post-test. After the post-test was complete, all survey data whose respective consent form (as identified by the study identification number) indicated that the participant did not consent to having his/her data used in the study was shredded and discarded.

The professional development program (PDPER: Professional Development on Emotional Regulation) consisted of two 40-minute sessions and one 10-minute session (over the course of three days). The first session consisted of 20 minutes of survey, followed by 20 minutes of professional development. The second session consisted of 40 minutes of professional development. The third period consisted of 10 minutes of survey (i.e., TRS post-test with three open-ended questions).

Treatment Component

The following is a description of the professional development program on emotional regulation. This three-session program was considered the “treatment” component of this study. (See Appendix I for a detailed outline of the professional development program).

The Professional Development Program on Emotional Regulation (PDPER). The
professional development began with brief introductory remarks. Next, a motivational scenario was presented. The scenario described a child who was having difficulty regulating his or her emotions in the classroom. A discussion was led based upon several questions including, “If this were your student, what would your immediate response be?” and “What would be your long term plan for dealing with this student?” This discussion segued into a presentation that focused on the definition of emotional regulation, examples of typical manifestations, and relevant research. Risk factors associated with emotional regulation difficulties were highlighted. In addition, different factors that serve as underlying causes of emotional regulation were discussed (Webster-Stratton, 1999). Further, an overview of emotional regulation challenges at different stages of development were presented (Thompson, 2004; Webster-Stratton, 1999).

The next part of the session was a presentation of a second scenario describing a student with emotional regulation difficulty. The scenario included a teacher’s response to the child that ultimately led to an escalation of negative behaviors. Following this scenario, participants were asked to discuss their beliefs regarding how effective the fictitious teacher’s response was. The primary investigator then asked the participants how they would have handled the same situation. The primary investigator positively reinforced those responses that are supported by the research, viz., the positive effects of supportive teacher-student interactions and the negative effects of punitive and confrontational interactions.

The third part of the professional development consisted of a discussion of specific research-based strategies that teachers can use in their classrooms to help students learn more adaptive emotional regulation. Many of the strategies were adapted from Webster-Stratton’s Incredible Year Program, the Rochester Resiliency Project, and the Coping Power program.
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One of the strategies that was taught to participants was the “anger or feeling thermometer” (Webster-Stratton, 1993; Wyman et al., 2010). The feeling thermometer is a behavioral technique that helps children develop self-evaluation, self-awareness, and self-control. Children with emotional regulation difficulties often have difficulty appraising anger and the intensity of their feelings. With this technique, teachers can help students to learn how to evaluate their emotional states and to use thoughts, words, or actions to reduce anger; and to understand that emotions exist on a continuum (Buron & Curtis, 2003). The feeling thermometer can be shown to students individually or can be presented to the entire class. To demonstrate the “feeling thermometer,” the primary investigator provided a sample of a completed thermometer and provided instruction on how to create one (Buron & Curtis; Kuyper, 2011).

Another strategy that was discussed was the creation of a break corner or a designated calming corner for children to use when they are experiencing emotional distress. Break corners are meant to help students learn how to manage their emotional distress by providing them with a safe and socially appropriate place to gain calmness and regulate their emotions. In a break corner, teachers provide students with a variety of relaxation tools such as soft blocks, a bean bag chair and pillow, soft music with headphones, pictures of nature. The contents of the break corner are determined by the teacher to meet his/her students’ needs. Participants brainstormed different tools to put in the break corner and pictures of sample break corners were presented.

A third strategy that was presented was the “Turtle Technique” for controlling anger (Webster-Stratton, 1998, p. 303). This technique focused on helping a student learn how to control physiological arousal so that the student can calm down when overwhelmed. The child is directed to imagine that he or she has a turtle shell. Children are taught that they could go inside their shells when they are angry. Children are then guided to take three deep breaths while inside
their shells. They are taught to focus on breathing and relaxing their muscles. Participants learned about this strategy through excerpts from the book, “Wally Learns a Lesson” (a book published by Webster-Stratton designed for teachers to use to teach students how to control their anger with the Turtle Technique). Participants were asked to brainstorm or cite from their experience other images or creative ideas that could be useful.

In addition, participants learned about praising children’s efforts to regulate their emotions. Children with behavioral difficulties often receive less praise and more critical or confrontational feedback about their behaviors (Webster-Stratton, 1993). Unfortunately, these children often need positive feedback even more than other children because they do not always notice or process the little praise that they might receive (Webster-Stratton). Participants were encouraged to use praise statements that positively reinforce adaptive regulation (Kersey & Masterson, 2013; Webster-Stratton, 1999). For example, teachers should praise behaviors that involve self-control, persistence, and appropriate emotional expression. Examples of such praise statements were presented. Other techniques that were presented included: (a) modeling adaptive emotional regulation, (b) leading students in role-playing and problem-solving, and (c) working collaboratively with parents (Webster-Stratton, 1998).

The concluding part of the professional development session involved an application of materials presented. The participants were broken up into small groups. Each group was presented with a challenging scenario. The groups were asked to discuss how they would use the material presented should such an event occur in their classroom. One person from each group shared with the large group the conclusions gleaned from their small group discussions.
Figure 1. *Summary of Professional Development Program on Emotional Regulation*

<table>
<thead>
<tr>
<th>Section</th>
<th>Approximate Time for Each Section</th>
<th>Description</th>
<th>Materials/Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>2 minutes</td>
<td>Purpose of presentation</td>
<td>PowerPoint slide</td>
</tr>
<tr>
<td>Motivational Scenario</td>
<td>3 minutes</td>
<td>Teachers will read a brief scenario about a student displaying emotional outburst in the classroom</td>
<td>Hand-out PowerPoint slide</td>
</tr>
<tr>
<td>Thought provoking questions</td>
<td>2 minutes</td>
<td>Participants will be asked to respond to the scenario based on several questions</td>
<td>PowerPoint slide Discussion</td>
</tr>
<tr>
<td>Definition of emotional regulation</td>
<td>3 minutes</td>
<td>Definitions developed by Gross and Thompson</td>
<td>PowerPoint slide didactic</td>
</tr>
<tr>
<td>Overview of emotional responses and regulation difficulties</td>
<td>2 minutes</td>
<td>Brief description of: emotional responses; emotional regulation difficulties; challenges at different stages of development (Thompson, 2004; Webster-Stratton, 1999)</td>
<td>PowerPoint slide Didactic</td>
</tr>
<tr>
<td>Risk factors</td>
<td>3 minutes</td>
<td>Impaired teacher-student relationships; decreased academic achievement; poor social outcomes</td>
<td>PowerPoint slide Didactic</td>
</tr>
<tr>
<td>Impact social environment on</td>
<td>5 minutes</td>
<td>Family and social environment;</td>
<td>PowerPoint slide didactic</td>
</tr>
<tr>
<td>Time Table</td>
<td>Description</td>
<td></td>
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<td>------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>development of</td>
<td>Teacher’s ability to make a difference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>emotional</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>regulation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Second scenario</strong></td>
<td>5 minutes</td>
<td>Teachers evaluate effectiveness of fictitious teacher and then propose alternative responses</td>
<td>PowerPoint slide</td>
</tr>
<tr>
<td><strong>Discussion of strategies</strong></td>
<td>15 minutes</td>
<td>Break corner; enhancing teacher-student interactions anger thermometer; label emotions; increase praise; calming-techniques; consequences vs. punishment; non-confrontational language</td>
<td>PowerPoint slides Discussion Didactic</td>
</tr>
<tr>
<td><strong>Application</strong></td>
<td>10 minutes</td>
<td>Participants will be presented with scenario. Participants will break into small groups and discuss how they would respond based on today’s learning. One member from each group will share key points from these discussions.</td>
<td>Small group and large group discussion</td>
</tr>
</tbody>
</table>
Alternative Treatment Component

The following is a description of the professional development program on psycho-educational assessment. This three-session program is considered the “alternative treatment” component of this study. (See Appendix J for a detailed outline of the professional development program).

Professional Development on Psycho-educational Assessment. The professional development began with brief introductory remarks. Next, a motivational scenario was presented. The scenario described a true case in which a child was placed in a special education class based on a single IQ score. A discussion was led based upon several thought provoking questions. For example, the participants were asked, “What did the IEP team or school psychologist do wrong?” This discussion segued into a presentation that focuses on the psycho-educational assessment process. The purpose of a comprehensive psycho-educational assessment was highlighted. Different areas that should be included in the assessment were reviewed. There was a brief overview of the assessment of cognition, language, academic, emotional and behavioral, and physical functioning. In addition, this review highlighted the importance of gathering information from different sources and using various methods.

The next part of the session was a presentation of a second case describing a student who was struggling academically. The scenario included results from a psycho-educational evaluation. Following this scenario, participants were asked to discuss their beliefs regarding the results and recommendations of the psycho-educational assessment. The primary investigator then asked the participants to critique the assessment.

The third part of the professional development consisted of a discussion of specific assessment tools that school psychologists use to make evaluations. For example, the WPPSI-III
and WISC-IV, the Conners’-2, the CARS-2, the BASC and the ADOS were discussed in detail. The concluding part of the professional development session involved an application of materials presented. The participants were broken up into small groups. Each group was presented with a student who was struggling academically. The groups were asked to discuss how they would evaluate the child. One person from each group shared with the large group the conclusions gleaned from their small group discussions.

**Data Analysis**

Descriptive statistics were used for analyzing the demographic information gathered, such as: personal information (age, socioeconomic status, type of school), participants’ level of schooling, years and type of experience, and prior training for working with children with emotional regulation difficulties. Additional analysis will be described per research question and hypothesis.

**Does a PD program on emotional regulation (PDPER) impact how teachers respond to students with emotional regulation difficulties?** The PI analyzed the data by using a one-way ANCOVA to determine whether post-test levels of emotionally supportive strategies were significantly different between the AT group and the PDPER group, after controlling for participants’ pre-test scores. In addition, the PI analyzed the data by using a one-way ANCOVA to determine whether post-test levels of punitive strategies were significantly different between the AT group and the PDPER group, after controlling for participants’ pre-test scores.

**Does the PDPER impact the degree to which teachers view their responsibility in helping students learn how to manage emotions controlling for pre-test scores?** The PI analyzed the data by using a one-way ANCOVA to determine whether post-test levels of the degree to which teachers view themselves as responsible to help were significantly different
Does the PDPER impact the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior after controlling for pre-test scores? The PI analyzed the data by using a one-way ANCOVA to determine whether post-test levels of the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior were significantly different between the AT group and the PDPER group after controlling for participants’ pre-test scores.

Do teacher characteristics moderate the impact of a PD on emotional regulation on how a teacher responds to students with emotional regulation difficulties? To examine this research question a moderation analysis was conducted to assess if self-efficacy, empathy, and reappraisal moderates the relationship between treatment group and teachers’ responses to students. To examine for moderation, a multiple linear regression was conducted. The independent variables of the regression were treatment group, self-efficacy, empathy, and reappraisal, and the interaction between treatment and the three moderators. The interaction was created by multiplying treatment and with each moderator. The dependent variable of the regression was post-test levels of emotionally supportive responses (using post-test levels). If the interaction was significant, then moderation was supported.

Do teacher characteristics moderate the impact of the PDPER on the degree to which teachers view their responsibility in helping students learn how to manage emotions? To examine this research question a moderation analysis was conducted to assess if self-efficacy, empathy, and reappraisal moderates the relationship between treatment group and the degree to which teachers view their responsibility in helping students learn how to manage emotions. To examine for moderation, a multiple linear regression was conducted. The independent variables
of the regression were treatment group, self-efficacy, empathy, and reappraisal, and the interaction between treatment and each moderator. The interaction was created by multiplying treatment with each moderator. The dependent variable of the regression was the degree to which teachers view their responsibility in helping students learn how to manage emotions (using the post-test levels). If the interaction was significant, then moderation was supported.

**Do teacher characteristics moderate the impact of the PDPER on the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior?** To examine this research question a moderation analysis was conducted to assess if self-efficacy, empathy, and reappraisal moderate the relationship between treatment group and the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior. To examine for moderation, a multiple linear regression was conducted. The independent variables of the regression were treatment group, self-efficacy, empathy, and reappraisal, and the interaction between treatment and each moderator. The interaction was created by multiplying treatment and self-efficacy together. The dependent variable of the regression was the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior (using post-test levels). If the interaction was significant, then moderation was supported.
Chapter IV: Results

The primary aim of this study was to explore the impact of a professional development program designed to improve how teachers respond to children with emotional regulation difficulties. The study investigated the impact of a professional development program on how teachers respond to children with emotional regulation difficulties and explored the impact of the professional development on a teacher’s beliefs about his/her role in helping in a child develop adaptive emotional regulation. Further, the study investigated whether specific personal teacher characteristics moderated the impact of the professional development program on teachers’ responses.

This chapter first presents descriptive statistics of the Teacher Response Survey (TRS) and the Teacher Personal Characteristics Survey (TPCS). This is followed by the data analyses performed for each research question and hypotheses posed in Chapter II.

Descriptive Statistics

TRS Descriptives. Descriptive statistics of participants’ pre-test and post-test scores on the Teacher Response Survey can be viewed in Tables 3 and 4. The scores set forth in such Tables are presented by applicable group: (a) the professional development on emotional regulation (PDPER) and (b) the alternative treatment (AT).
Preparing Teachers to Work with Students

Table 3
Descriptive Statistics for Teacher Response Survey (TRS) Pre-test Scores

<table>
<thead>
<tr>
<th>Outcome variable</th>
<th>Treatment</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotionally Supportive Responses</td>
<td>AT</td>
<td>50</td>
<td>37.72</td>
<td>4.291</td>
<td>29</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>PDPER</td>
<td>49</td>
<td>38.31</td>
<td>5.899</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>Punitive Responses</td>
<td>AT</td>
<td>50</td>
<td>31.18</td>
<td>5.958</td>
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<tr>
<td></td>
<td>PDPER</td>
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<tr>
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<td>8.58</td>
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<tr>
<td></td>
<td>PDPER</td>
<td>49</td>
<td>8.90</td>
<td>1.311</td>
<td>6</td>
<td>10</td>
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<tr>
<td>Levels of Impact</td>
<td>AT</td>
<td>50</td>
<td>7.72</td>
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<tr>
<td></td>
<td>PDPER</td>
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<td>8.02</td>
<td>1.738</td>
<td>3</td>
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</tbody>
</table>

Notes. AT= Alternative treatment group; PDPER = Professional development on emotional regulation

Table 4
Descriptive Statistics for Teacher Response Survey (TRS) Post-test Scores

<table>
<thead>
<tr>
<th>Outcome variable</th>
<th>Treatment</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotionally Supportive Responses</td>
<td>AT</td>
<td>50</td>
<td>36.90</td>
<td>4.455</td>
<td>29</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>PDPER</td>
<td>49</td>
<td>40.92</td>
<td>4.252</td>
<td>34</td>
<td>50</td>
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<tr>
<td>Punitive Responses</td>
<td>AT</td>
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<td>PDPER</td>
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<td>PDPER</td>
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<td>8.98</td>
<td>1.216</td>
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<td>Levels of Impact</td>
<td>AT</td>
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<td>1.531</td>
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<td>PDPER</td>
<td>49</td>
<td>8.83</td>
<td>1.395</td>
<td>6</td>
<td>10</td>
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</table>

Table 3 displays the pre-test score for each of the dependent variables: (a) levels of emotionally supportive strategies, (b) levels of punitive strategies, (c) the degree to which teachers feel responsible to help students, and (d) the degree to which teacher feel that they can impact students. Table 4 displays the post-test score for each of the outcome variables: (a) levels of emotionally supportive strategies, (b) levels of punitive strategies, (c) the degree to which teachers feel responsible to help students, and (d) the degree to which teachers feel that they can impact students. Higher scores for the emotionally supportive strategies indicate strategies that are more positive and higher scores for the punitive strategies indicate strategies
that are more punitive.

Overall, results revealed that teachers in the PDPER group reported using strategies that were more emotionally supportive than teachers in the AT group. The mean difference in emotionally supportive strategies post-test scores between the PDPER group was 4.018, 95% CI [2.281-5.755]. Further, teachers in the PDPER group reported using strategies that were less punitive than participants in the AT group. The mean difference in punitive strategies post-test scores between the PDPER group and AT group was 6.364, 95% CI [3.811-8.917]. Participants in the PDPER group also viewed themselves as more responsible to help students with emotional regulation difficulties than participants in the AT group. The mean difference in post-test scores between the PDPER group and AT group was .820, 95% CI [1.325-.314]. Finally, participants in the PDPER group believed that their responses will have a long-lasting impact on students’

**TPCS descriptives.** Table 5 presents descriptive statistics for the TPCS subscales scores. It should be noted that these scores do not have norms and therefore it is not possible to interpret the scores except as they relate to other variables. The data for the full sample was used when it was available. For the independent variable, self-efficacy, there were two data points missing. So $n = 99$, unless self-efficacy was included in the model, then $n = 97$.

**Table 5**

<table>
<thead>
<tr>
<th>Descriptive Statistics of the Teacher Personal Characteristic Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristic</td>
</tr>
<tr>
<td>Self-efficacy</td>
</tr>
<tr>
<td>Empathic Concern</td>
</tr>
<tr>
<td>Reappraisal</td>
</tr>
</tbody>
</table>

**Correlations**

Pearson correlation analyses were conducted between pretests, posttests, moderators, and outcomes. According to Cohen’s 1988 guidelines, $0.1 < |r| < .3$ corresponds to a small
correlation, $0.3 < |r| < .5$ corresponds to a medium/moderate correlation, and $|r| > .5$
corresponds to a large/strong correlation (where $|r|$ means the absolute value or $r$). Table 6
displays the results of the correlation analyses for each variable measured in the current study.

As shown in Table 6, self-efficacy was not associated with pre- or post-test levels of punitive strategies. However, there was a small positive correlation between self-efficacy and pretest levels of emotionally supportive strategies, a moderate positive correlation between self-efficacy and post-test levels of emotionally supportive strategies, and moderate positive correlation between self-efficacy and all of the other outcomes variables (i.e., post-test levels of emotionally supportive strategies and pre- and post-test levels of emotionally supportive strategies, pre- and post-test levels of responsibility, and pre- and post-test levels of impact).

There were moderate positive correlations between empathy and pre- and post-test levels of emotionally supportive strategies, pre- and post-test levels of responsibility, and pre- and post-test levels of Impact. However, empathy had a small negative correlation with pre- and post-test levels of punitive strategies.

Finally, there were small positive correlations between reappraisal and pre- and post- test levels of emotionally supportive strategies. There was a moderate positive correlation between reappraisal and pre-test levels of responsibility and a small positive correlation between reappraisal and post-test levels of responsibility. There were moderate positive correlations between reappraisal and pre- and post- test levels of impact. Reappraisal was not significantly associated with punitive levels of strategies.

In sum, each teacher characteristic (self-efficacy, empathy, and reappraisal) was positively associated with each outcome variable (i.e., pre-test and post-test levels of emotionally supportive strategies, punitive strategies, the degree to which teachers feel responsible to help
students, and the degree to which teacher feel that they can impact students other than punitive levels of strategies). The associations between the teacher characteristics and the outcome variables were generally moderate.
Table 6
Covariates, Outcome Variables, and Predictors: Correlations (N = 99)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
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<tbody>
<tr>
<td>1. PS</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>2. POS</td>
<td>.544**</td>
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<td></td>
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<td></td>
<td></td>
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<td>3. PP</td>
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<tr>
<td>4. POP</td>
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<td>-.288**</td>
<td>.709**</td>
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<td></td>
<td></td>
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<tr>
<td>5. PR</td>
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<td>.397**</td>
<td>-.245*</td>
<td>-.193*</td>
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<td>6. POR</td>
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<td>.042</td>
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<td>.456**</td>
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<td></td>
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<td>.419**</td>
<td>-.023</td>
<td>-.168</td>
<td>.360**</td>
<td>.237*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>8. POI</td>
<td>.238*</td>
<td>.433**</td>
<td>-.084</td>
<td>-.231</td>
<td>.309**</td>
<td>.468**</td>
<td>.557</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. S</td>
<td>.231*</td>
<td>.394**</td>
<td>.017</td>
<td>.057</td>
<td>.319**</td>
<td>.468**</td>
<td>.317**</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>10. E</td>
<td>.359**</td>
<td>.338**</td>
<td>-.154</td>
<td>-.229*</td>
<td>.483*</td>
<td>.384**</td>
<td>.378**</td>
<td>.384**</td>
<td>.256*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. R</td>
<td>.212*</td>
<td>.299*</td>
<td>-.071</td>
<td>-.079</td>
<td>.442**</td>
<td>.249*</td>
<td>.359**</td>
<td>.317**</td>
<td>.385**</td>
<td>.307**</td>
<td></td>
</tr>
</tbody>
</table>

Notes. PS = Pre-test Emotionally Supportive Strategies, POS = Post-test Emotionally Supportive Strategies, PP = Pre-test punitive strategies, POP = Post-test punitive strategies, PR = Pre-test levels of responsibility, POR = Post-test levels of responsibility, PI= Pre-test Impact, POI = Post-test Impact, S = Self-efficacy, E= Empathy, R = Reappraisal

*p < .05. **p < .01. ***p < .001
Hypothesis Testing

The following section is organized by research question. Results from analyses follow each question posed.

Research Questions 1, 2, and 3

Research questions 1, 2, and 3 deal with the impact of the professional development on ER on teachers’ behaviors, beliefs, and attitudes. For each question, a one-way ANCOVA was conducted to determine whether teachers who participated in PDPER group differed significantly from teachers who participated in the AT group on: (a) the level of emotionally supportive strategies that they would endorse after controlling for participants’ pre-test scores, (b) the level of punitive strategies that they would endorse after controlling for participants’ pre-test scores, (c) the degree to which they view themselves as responsibility to help students learn how to manage their emotions after controlling for pre-test scores and (d) and the degree to which they believe their responses will have a long-lasting impact on students’ behaviors after controlling for pre-test scores. The ANCOVA approach was selected as an appropriate analysis for these research questions because the study used random assignment to treatment group. This analysis used Cohen’s (1988) guidelines for categorizing effect sizes using Cohen’s $d$ (small effect = .2; medium effect = .5; and large effect = .8).

For every procedure, preliminary checks were conducted to ensure that there was no violation of the assumptions of normality, linearity, homogeneity of variances, homogeneity of regression slopes, and reliable measurement of the covariate. The assumption of linearity was met for each procedure as assessed by visual inspection of a scatterplot. The homogeneity of regression slopes assumption was met for each procedure as the interaction terms were not statistically significant (emotionally supportive strategies: $F(1,95) = .522, p = .472$; punitive
strategies: \( F(1,95) = .822, p = .367 \); levels of responsibility: \( F(1,95) = .073, p = .787 \); and levels of impact: \( F(1,95) = .320, p = .573 \).

For levels of emotionally supportive strategies, levels of punitive strategies, and levels of impact, standardized residuals for the interventions and for the overall model were normally distributed, as assessed by Shapiro-Wilk's test \((p > .05)\). However, for levels of responsibility the standard assumptions of normally distributed residuals did not hold. Therefore, several transformations were applied to the data, such as a “reflect and inverse” transformation and a “reflect and square root” transformation. Results between the transformed and untransformed analyses were qualitatively similar. Therefore, for ease of interpretation and consistency, only results from the original untransformed analysis will be reported.

There was homoscedasticity and homogeneity of variances, as assessed by visual inspection of a scatterplot and Levene's test of homogeneity of variance (levels of emotionally supportive strategies: \( F(1,97) = .071, p = .791 \); levels of punitive strategies: \( F(1,97) = 1.707, p = .194 \); levels of responsibility: \( F(1,97) = .045; p = .832 \); levels of impact: \( F(1,97) = 1.572, p = .213 \)). There were no outliers in the data, as assessed by no cases with standardized residuals greater than ±3 standard deviations. Based on the results we can use these variables and analysis to examine the research questions.

**RQ1:** Does a PD on emotional regulation impact how teachers respond to students with emotional regulation difficulties?

**H1a:** It was hypothesized that teachers in the PDPER group would endorse higher levels of emotionally supportive strategies in response to children who are exhibiting emotional regulation difficulties compared to teachers in the AT group, controlling for pre-test scores. This hypothesis was supported.
Participants in the PDPER group \( [n = 49, M = 40.92, SD = 4.252] \) endorsed higher levels of supportive strategies than participants in the AT group \( [n = 50, M = 36.90, SD = 4.455] \). See Table 7. After adjustment for pre-test scores, the one-way ANCOVA showed that there was a statistically significant difference in post-test levels of supportive strategies between the two different groups, \( F(1,96) = 27.194, p < .05, \eta^2 = .221 \). The adjusted mean difference between the PDPER and AT groups was 3.728, 95% CI [2.309, 5.148] in favor of the PDPER group. The standardized difference between these the two means (Cohen’s \( d \) effect size) was large \( [d = .92] \).
Table 7

Adjusted and Unadjusted Intervention Means and Variability for Post-Intervention Levels of Outcome Measures with Pre-test Levels as Covariate

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>Alternative Treatment</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Treatment</td>
<td>Unadjusted</td>
<td>Adjusted</td>
<td>SE</td>
</tr>
<tr>
<td>Emotionally Supportive</td>
<td>50</td>
<td>36.90</td>
<td>4.455</td>
<td>37.0444</td>
</tr>
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<td>Strategies</td>
<td>Treatment</td>
<td>40.92</td>
<td>4.252</td>
<td>40.772</td>
</tr>
<tr>
<td>Punitive Strategies</td>
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<td>32.16</td>
<td>5.829</td>
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</tr>
<tr>
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<td>Treatment</td>
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<td>6.934</td>
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<td></td>
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<td></td>
<td>Treatment</td>
<td>8.63</td>
<td>1.395</td>
<td>8.557</td>
</tr>
</tbody>
</table>

**H1b:** It was hypothesized that participants in the PDPER group would endorse lower levels of punitive strategies in response to children who are exhibiting emotional regulation difficulties, compared to teachers in the AT group, controlling for pre-test scores. This hypothesis was supported.

Participants in the PDPER group \([n = 49, M = 25.80, SD = 6.934]\) endorsed lower levels of punitive strategies than participants in the AT group \([n = 50, M = 32.16, SD = 5.829]\). After adjustment for pre-test scores, the one way ANCOVA showed that there was a statistically significant difference in post-test levels of punitive strategies between the two groups, \(F(1,96) = 21.786, p < .05, \eta^2 = .185\) between the AT group and the PDPER group. The adjusted mean difference between the PDPER and AT groups was 4.04, 95% CI [2.531, 6.277] in favor of the PDPER group. The standardized difference between these the two means (Cohen’s \(d\) effect size) was large \([d = .995]\).

**RQ2:** Does a PD on emotional regulation impact the degree to which teachers view themselves as responsible to help students learn how to manage emotions?
**H2:** It was hypothesized that participants in the PDPER group would view themselves as more responsible to help students with emotional regulation difficulties learn how to manage their emotions than participants in the AT group, controlling for pre-test scores. This hypothesis was supported.

Participants in the treatment \[ n = 49, M = 8.98, SD = 1.216 \] group indicated higher levels of responsibility than participants in the alternative treatment group \[ n = 50, M = 8.16, SD = 1.315 \]. After adjustment for pre-test scores, the one way ANCOVA showed that there was a statistically significantly difference in post-test levels of responsibility scores between the two groups, \( F(1,96) = 8.781, p = .004, \eta^2 = .084 \) (See Table 7). The data show evidence that there was a significant effect of the type of PD on the level of responsibility scores participants endorsed after controlling for pre-test scores. The adjusted mean difference between the PDPER and AT groups was \(.831, 95\% \text{ CI} [.339, 1.323] \) in favor of the PDPER group. The standardized difference between these the two means (Cohen’s \( d \) effect size) was moderate \([d = .647]\).

**RQ3:** Does a PD on emotional regulation impact the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior?

**H3:** It was hypothesized that participants in the PDPER group believed that their responses would have a long-lasting impact on students’ behaviors to a higher degree than teachers in the AT group. This hypothesis was supported.

Participants in the PDPER group \[ n = 49, M = 8.63, SD = 1.395 \] endorsed higher levels of beliefs about the long-lasting impact of their responses on students’ behavior than participants in the AT group \[ n = 50, M = 7.94, SD = 1.531 \]. After adjustment for pre-test scores, the one way ANCOVA showed that post-test levels of teachers’ beliefs about the long-lasting impact of their responses on students’ behavior were significantly different between the two groups \( F(1,96) = \).
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4.819, \( p = .031, \eta^2 = .048 \). The adjusted mean difference between the PDPER and AT groups was \( .544, 95\% \text{ CI } [.052, 1.035] \) in favor of the PDPER group. The standardized difference between these two means (Cohen’s \( d \) effect size) was moderate \( [d = .47] \).

**Summary of Research Questions 1, 2, and 3.**

As shown in Table 7 participants selected more emotionally supportive strategies and less punitive strategies after participating in a professional development on emotional regulation compared to participants in the AT group, after controlling for pre-test scores. There were large effect sizes for these analyses. However, analyses focusing on responsibility to help students learn how to manage their emotions and the long-lasting impact of responses on students’ behavior were less compelling. The effect sizes for these analyses were only moderate. The PDPER appeared to have a greater effect on changing participants’ levels of emotionally supportive and punitive strategies than it did on changing their views regarding their responsibility to help students learn how to manage emotions and their beliefs about the long-lasting impact of their responses on students’ behavior.

**Research Questions 4, 5, and 6**

The next set of research questions deals with whether personal teacher characteristics moderate the impact of the PDPER on three different outcome variables: (a) the level of emotionally supportive strategies that teachers would endorse after controlling for pre-test scores (RQ 4), (b) the degree to which teachers view their responsibility to help students learn how to manage their emotions after controlling for pre-test scores (RQ 5), and (c) the degree to which teachers believe that their responses will have a long-lasting impact on students with emotional regulation difficulties after controlling for pre-test scores (RQ 6). A moderation analysis was conducted for each research question to assess whether self-efficacy, reappraisal, and empathy
moderate the relationship between treatment group and each outcome variable described above.

**RQ4:** Do teacher characteristics moderate the impact of a PD on emotional regulation on the level of emotionally supportive strategies that teachers endorse in response to children who are exhibiting emotional regulation difficulties?

RQ4 was divided into three separate hypotheses, one for each teacher characteristic (i.e., self-efficacy, reappraisal, and empathy). To analyze these three hypotheses the PI built a multivariable model that examined the covariate (i.e., pre-test), the independent predictor (i.e., treatment), the three moderators (i.e., self-efficacy, empathy, and reappraisal) and the interaction terms (i.e., self-efficacy × treatment; empathy × treatment; and reappraisal × treatment). The dependent variable in this analysis was the level of emotionally supportive strategies that teachers endorse in response to children who are exhibiting emotional regulation difficulties. Table 8 displays the model summary of the multiple regression analysis for RQ4. Table 9 displays the summary of the regression analysis for the moderation effects of emotionally supportive strategies after controlling for pre-test scores.

In the first step of the hierarchical multiple regression, the pre-test score was entered. This model explained 29.6% of the variance in emotionally supportive strategies \( F(1, 95) = 39.867, p < .001 \). Next, the predictors (i.e., treatment, self-efficacy, empathy, and reappraisal) were entered in the second block. The addition of these predictors explained an additional 21.6% of the variance in emotionally supportive strategies, \( F(4, 91) = 10.081, p < .001 \). In this model, higher levels of self-efficacy predicted higher levels of emotionally supportive strategies (\( B = .250, t[91] = 3.010, p = .003 \)). Also, treatment predicted higher levels of emotionally supportive strategies. (\( B = 3.393, t[91] = 4.819, p < .001 \)). In the third block, all three interaction terms were included. \( R^2 \) change only increased from .512 to .522, amounting to a small \( R^2 \) change of
.010. There was not a statistically significant moderator effect of self-efficacy, empathy, or reappraisal, $F(3, 88) = .610, p = .610$.

Table 8

*Model Summary of Multiple Regression Analysis*

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>$R^2$</th>
<th>$R^2$ Change</th>
<th>Sign. F Change</th>
</tr>
</thead>
<tbody>
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<td>.296</td>
<td>.296</td>
<td>.000</td>
</tr>
<tr>
<td>2</td>
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<td>.512</td>
<td>.216</td>
<td>.000</td>
</tr>
<tr>
<td>3</td>
<td>.722</td>
<td>.522</td>
<td>.010</td>
<td>.610</td>
</tr>
</tbody>
</table>
### Table 9

**Summary of Regression Analysis for Moderation Effects of Self-efficacy, Empathy, and Reappraisal on Emotionally Supportive Strategies After Controlling for Pre-test Scores**

<table>
<thead>
<tr>
<th>Model</th>
<th>Variable</th>
<th>$b$</th>
<th>SE $b$</th>
<th>$t$</th>
<th>Sig</th>
<th>$\beta$</th>
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<tr>
<td></td>
<td>Pre-test</td>
<td>.497*</td>
<td>.079</td>
<td>6.314</td>
<td>.000</td>
<td>.544</td>
</tr>
<tr>
<td>2</td>
<td>Constant</td>
<td>11.829</td>
<td>3.460</td>
<td>3.418</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pre-test</td>
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<td>.073</td>
<td>5.698</td>
<td>.000</td>
<td>.454</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>3.393</td>
<td>.704</td>
<td>4.819</td>
<td>.000</td>
<td>.363</td>
</tr>
<tr>
<td></td>
<td>Empathy</td>
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<td>.100</td>
<td>.312</td>
<td>.756</td>
<td>.026</td>
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<tr>
<td></td>
<td>Reappraisal</td>
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<td>.061</td>
<td>.536</td>
<td>.593</td>
<td>.044</td>
</tr>
<tr>
<td></td>
<td>Self-efficacy</td>
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<td>3.010</td>
<td>.003</td>
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<tr>
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<td>Constant</td>
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<td>4.615</td>
<td>2.113</td>
<td>.037</td>
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<tr>
<td></td>
<td>Pre-test</td>
<td>.434</td>
<td>.076</td>
<td>5.730</td>
<td>.000</td>
<td>.475</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>6.069</td>
<td>5.861</td>
<td>1.035</td>
<td>.303</td>
<td>.649</td>
</tr>
<tr>
<td></td>
<td>Empathy</td>
<td>.124</td>
<td>.124</td>
<td>.999</td>
<td>.320</td>
<td>.103</td>
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<td></td>
<td>Reappraisal</td>
<td>-.035</td>
<td>.092</td>
<td>-.375</td>
<td>.708</td>
<td>-.046</td>
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<tr>
<td></td>
<td>Self-efficacy</td>
<td>.274</td>
<td>.111</td>
<td>2.465</td>
<td>.016</td>
<td>.268</td>
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<tr>
<td></td>
<td>Txm×Emp</td>
<td>-.184</td>
<td>.160</td>
<td>-1.151</td>
<td>.253</td>
<td>-.612</td>
</tr>
<tr>
<td></td>
<td>Txm×RA</td>
<td>.098</td>
<td>.122</td>
<td>.800</td>
<td>.426</td>
<td>.345</td>
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<tr>
<td></td>
<td>Txm×SE</td>
<td>-.007</td>
<td>.173</td>
<td>-.043</td>
<td>.966</td>
<td>-.025</td>
</tr>
</tbody>
</table>

**Note.** $p < .05$
Hypothesis Testing for RQ4

H4a: It was hypothesized that self-efficacy moderates the impact of the PD on emotional regulation on participants’ level of emotionally supportive responses.

Results did not support this hypothesis. Self-efficacy did not have a moderating effect on the relationship between treatment group and levels of emotionally supportive responses. However, self-efficacy was significantly related to levels of emotionally supportive strategies before the moderating variables and their interactions with treatment were entered into the regression analysis.

H4b: It was hypothesized that empathy moderates the impact of the PD on emotional regulation on participants’ level of emotionally supportive responses.

Results did not support this hypothesis. Empathy did not have a moderating effect on the relationship between treatment group and levels of emotionally supportive responses.

H4c: It was hypothesized that reappraisal moderates the impact of the PD on emotional regulation on participants’ level of emotionally supportive responses.

Results did not support this hypothesis. Reappraisal did not have a moderating effect on the relationship between treatment group and levels of emotionally supportive responses.

RQ5: Do teacher characteristics moderate the impact of the PDPER on the degree to which teachers view their responsibility in helping students learn how to manage emotions?

RQ5 was divided into three separate hypotheses with one for each teacher characteristic (i.e., self-efficacy, reappraisal, and empathy). To analyze these three hypotheses the PI built a multivariable model that examined the covariate (i.e., pre-test), the independent predictor (i.e., treatment), the three moderators (i.e., self-efficacy, empathy, and reappraisal) and the interaction terms (i.e., self-efficacy × treatment; empathy × treatment; and reappraisal × treatment). The
Preparing Teachers to Work with Students

dependent variable in this analysis was the degree to which teachers view their responsibility in helping students learn how to manage emotions. See Table 10 and Table 11 for a summary of the multiple regression analysis.

In the first step of the hierarchical multiple regression, the pre-test score was entered. This model explained 20.1% of the variance in the degree to which teachers view their responsibility in helping students learn how to manage emotions $F(1, 95) = 29.931, p < .000$ (See Table 10). Next, the predictors (i.e., treatment, self-efficacy, empathy, and reappraisal) were entered in the second block. The addition of these predictors explained an additional 10.4% of the variance in the degree to which teachers view their responsibility in helping students learn how to manage emotions, $F(4, 91) = 3.424, p = .012$. In this model, only treatment predicted higher levels of the degree to which teacher view their responsibility to help students learn how to manage emotions ($B = .607, t_{91} = 2.557, p = .012$) (See Table 10). In the third block, all three interaction terms were included. $R^2$ only increased from .306 to .328, amounting to a small $R^2$ change of .022. The addition of the interaction term explained only an additional 2.2% of the total variance. There was not a statistically significant moderator effect of self-efficacy, empathy, or reappraisal $F(3, 88) = .965, p = .413$. 
Table 10

*Model Summary of Multiple Regression Analysis*

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>$R^2$</th>
<th>$R^2$ CHANGE</th>
<th>Sign. F Change</th>
</tr>
</thead>
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<td>1</td>
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<td>.201</td>
<td>.201</td>
<td>.000</td>
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<tr>
<td>2</td>
<td>.553</td>
<td>.306</td>
<td>.104</td>
<td>.012</td>
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<tr>
<td>3</td>
<td>.573</td>
<td>.328</td>
<td>.022</td>
<td>.413</td>
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</tbody>
</table>
Table 11

Summary of Regression Analysis for Moderation Effects of Self-efficacy, Empathy, and Reappraisal on the Degree which Teachers View their Responsibility in Helping Students Learn How to Manage Emotions After Controlling for Pre-test Scores

<table>
<thead>
<tr>
<th>Model</th>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>t</th>
<th>Sig.</th>
<th>β</th>
</tr>
</thead>
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<tr>
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<td>Pre-test</td>
<td>.447</td>
<td>.091</td>
<td>4.892</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Constant</td>
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<td>1.074</td>
<td>2.695</td>
<td>.008</td>
<td></td>
</tr>
<tr>
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<td>Pre-test</td>
<td>.294</td>
<td>.110</td>
<td>2.681</td>
<td>.009</td>
<td>.295</td>
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<tr>
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<td>Treatment</td>
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<td>.237</td>
<td>2.557</td>
<td>.012</td>
<td>.229</td>
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<tr>
<td></td>
<td>Empathy</td>
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<td>.035</td>
<td>1.557</td>
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<td>.161</td>
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<td>Reappraisal</td>
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<td>.021</td>
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<td>.786</td>
<td>-.028</td>
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<td>Self-efficacy</td>
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<td>.084</td>
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<td>Pre-test</td>
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<td>.112</td>
<td>2.881</td>
<td>.005</td>
<td>.324</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td>1.264</td>
<td>1.970</td>
<td>.642</td>
<td>.523</td>
<td>.477</td>
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<tr>
<td></td>
<td>Empathy</td>
<td>.075</td>
<td>.042</td>
<td>1.778</td>
<td>.079</td>
<td>.221</td>
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<tr>
<td></td>
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<td>.008</td>
<td>.031</td>
<td>.267</td>
<td>.790</td>
<td>.040</td>
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<tr>
<td></td>
<td>Self-efficacy</td>
<td>.016</td>
<td>.038</td>
<td>.416</td>
<td>.679</td>
<td>.054</td>
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<tr>
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<td>Txm × Emp</td>
<td>-.062</td>
<td>.053</td>
<td>-1.181</td>
<td>.241</td>
<td>-.734</td>
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<tr>
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<td>Txm × RE</td>
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<td>.041</td>
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<td>.374</td>
<td>-.457</td>
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<tr>
<td></td>
<td>Txm × SE</td>
<td>.077</td>
<td>.058</td>
<td>1.320</td>
<td>.190</td>
<td>.909</td>
</tr>
</tbody>
</table>
Hypothesis Testing for RQ5

**H5a:** It was hypothesized that self-efficacy moderates the impact of the PDPER on the degree to which teachers view their responsibility in helping students learn how to manage emotions.

Results did not support this hypothesis. Self-efficacy did not have a moderating effect on the relationship between treatment group and the degree to which teachers view their responsibility in helping students learn how to manage emotions.

**H5b:** It was hypothesized that empathy moderates the impact of the PD on emotional regulation on the degree to which teachers view their responsibility in helping students learn how to manage emotions.

Results did not support this hypothesis. Empathy did not have a moderating effect on the relationship between treatment group and the degree to which teachers view their responsibility in helping students learn how to manage emotions.

**H5c:** It was hypothesized that reappraisal moderates the impact of the PD on emotional regulation on the degree to which teachers view their responsibility in helping students learn how to manage emotions.

Results did not support this hypothesis. Reappraisal did not have a moderating effect on the relationship between treatment group and the degree to which teachers view their responsibility in helping students learn how to manage emotions.

**RQ6:** Do teacher characteristics moderate the impact of the PDPER on the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior?
RQ6 was divided into three separate hypotheses with a separate hypothesis for each teacher characteristic (i.e., self-efficacy, reappraisal, and empathy). To analyze these three hypotheses the PI built a multivariable model that examined the covariate (i.e., pre-test), the independent predictor (i.e., treatment), the three moderators (i.e., self-efficacy, empathy, and reappraisal) and the interaction terms (i.e., self-efficacy x treatment; empathy x treatment; and reappraisal x treatment). The dependent variable in this analysis was the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior. See Table 12 and Table 13 for a summary of the multiple regression analysis.

In the first step of the hierarchical multiple regression, the pre-test score was entered. This model explained 31.4% of the variance in the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior $F(1, 95) = 43.534, p < .001$. Next, the predictors (i.e., treatment, self-efficacy, empathy, and reappraisal) were entered in the second block. The addition of these predictors explained only an additional 5.9% of variance of the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior, $F(4, 91) = 2.147, p = .081$. In the third block, all three interaction terms were included. $R^2$ only increased from .373 to .389, amounting to a small $R^2$ change of .015. The addition of the three interaction terms explained only an additional 1.5% of the total variance. There was not a statistically significant moderator effect of self-efficacy, empathy, and reappraisal when all three predictors were entered into the analysis $F(3, 88) = .738, p = .532$.

Although $R^2$ change did not improve significantly after the addition of all three interaction variables, in Model 3 empathy became a significant predictor, $b = .100$, $t[91] = 2.215$, $p = .029$. Higher levels of empathy predicted higher levels of impact. It should be noted that since the $F$ test for the model was not statistically significant, this $t$-test should be interpreted with
caution since it may be more reflective of chance than of a meaningful statistically significant result.

Table 12

*Model Summary of Multiple Regression Analysis*

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>( R^2 )</th>
<th>( R^2 ) Change</th>
<th>Sign. F Change</th>
</tr>
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<td>.314</td>
<td>.000</td>
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<tr>
<td>2</td>
<td>.611</td>
<td>.373</td>
<td>.059</td>
<td>.081</td>
</tr>
<tr>
<td>3</td>
<td>.624</td>
<td>.389</td>
<td>.015</td>
<td>.532</td>
</tr>
</tbody>
</table>
Table 13

Summary of Regression Analysis for Moderation Effects of Self-efficacy, Empathy, and Reappraisal on the Degree to Which Teachers Believe Their Responses Will Have a Long-lasting Impact on Students’ Behavior After Controlling for Pre-test Scores

<table>
<thead>
<tr>
<th>Model</th>
<th>Variable</th>
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<th>SE</th>
<th>t</th>
<th>Sig.</th>
<th>β</th>
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<td>Pre-test</td>
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<td>.077</td>
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<td>.000</td>
<td>.561</td>
</tr>
<tr>
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<td>Constant</td>
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<td>1.137</td>
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<td>.050</td>
<td></td>
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<tr>
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<td>Pre-test</td>
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<td>.000</td>
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<tr>
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<td>.155</td>
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<td>.022</td>
<td>.737</td>
<td>.463</td>
<td>.069</td>
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<td>.323</td>
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<td>.094</td>
<td>4.546</td>
<td>.000</td>
<td>.470</td>
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<tr>
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<td>Treatment</td>
<td>1.711</td>
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<td>.816</td>
<td>.417</td>
<td>.572</td>
</tr>
<tr>
<td></td>
<td>Empathy</td>
<td>.100</td>
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<td>2.215</td>
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<td>.035</td>
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<td>.003</td>
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<td>.028</td>
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<td>-.863</td>
</tr>
<tr>
<td></td>
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<td>.045</td>
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<td>.714</td>
<td>.184</td>
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<td></td>
<td>Txm × SE</td>
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<td>.062</td>
<td>.339</td>
<td>.736</td>
<td>.222</td>
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</table>
Hypothesis Testing for RQ6

**H6a:** It was hypothesized that self-efficacy moderates the impact of the PDPER on the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior. Self-efficacy did not have a moderating effect on the relationship between treatment group and the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior.

**H6b:** It was hypothesized that empathy moderates the impact of the PD on emotional regulation on the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior. Results did not support this hypothesis. Empathy did not have a moderating effect on the relationship between treatment group and the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior.

**H6c:** It was hypothesized that reappraisal moderates the impact of the PD on emotional regulation on the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior.

Results did not support this hypothesis. Reappraisal did not have a moderating effect on the relationship between treatment group and the degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior.

Summary of Research Questions 3, 4, and 5

Hierarchical multiple regression analyses yielded no significant moderator effects of self-efficacy, empathy, and reappraisal. The only teacher characteristic that had a statistically significant relationship to any of the outcome variables was self-efficacy. Specifically, higher levels of self-efficacy were associated with higher levels of emotionally supportive strategies before the moderating variables and their interactions with treatment were entered into the
regression analysis. In addition, higher levels of empathy were associated with a greater degree to which teachers believe that their responses will have a long-lasting impact on students’ behavior. However, as mentioned above this association should be interpreted with caution.
<table>
<thead>
<tr>
<th>Number</th>
<th>Research question</th>
<th>Evidence For/Against</th>
<th>Supported/Not Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ1</td>
<td>Does a PD on emotional regulation impact how teachers respond to students with emotional regulation difficulties?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1a</td>
<td>Teachers in the treatment group will endorse higher levels of emotionally supportive strategies in response to children who are exhibiting emotional regulation difficulties compared to teachers in the alternative treatment group when controlling for pre-test scores.</td>
<td>An ANCOVA revealed a significant difference between the two groups, when controlling for pre-test scores</td>
<td>Supported</td>
</tr>
<tr>
<td>H1b</td>
<td>Teachers in the treatment group will endorse lower levels of punitive strategies in response to children who are exhibiting emotional regulation difficulties, compared to teachers in the alternative treatment group when controlling for pre-test scores.</td>
<td>An ANCOVA revealed a significant difference between the two groups, when controlling for pre-test scores</td>
<td>Supported</td>
</tr>
<tr>
<td>RQ2</td>
<td>Does a PD on emotional regulation impact how teachers view their responsibility in helping students learn how to manage emotions?</td>
<td>An ANCOVA revealed a significant difference between the two groups when controlling for pre-test scores.</td>
<td>Supported</td>
</tr>
<tr>
<td>H2:</td>
<td>Teachers in the treatment group are more likely to report that it is their responsibility to help students learn how to manage their emotions than teachers in the alternative treatment group when controlling for pre-test scores.</td>
<td>An ANCOVA revealed a significant difference between the two groups, when controlling for pre-test scores</td>
<td>Supported</td>
</tr>
<tr>
<td>RQ3</td>
<td>Does a PD on emotional regulation impact teachers’ beliefs about the long-lasting impact of their responses on students’ behavior?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3</td>
<td>Teachers in the treatment group are more likely to report that their responses to students when they are exhibiting regulation difficulties will have a long-lasting impact on students’ behavior than teachers in the alternative treatment group when controlling for pre-test scores.</td>
<td>An ANCOVA revealed a significant difference between the two groups, when controlling for pre-test scores</td>
<td>Supported</td>
</tr>
<tr>
<td>RQ4</td>
<td>Do teacher characteristics moderate the influence of the impact of a PD on emotional regulation on how a teacher responds to students with emotional regulation difficulties?</td>
<td>Not Supported</td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------</td>
<td></td>
</tr>
<tr>
<td>H4A</td>
<td>Self-efficacy moderates the impact of the PD on emotional regulation on teachers’ emotionally supportive responses to students.</td>
<td>A moderation analysis revealed that self-efficacy does not moderate the impact</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4b</td>
<td>Empathy moderates the impact of the PD on emotional regulation on teachers’ emotionally supportive responses to students.</td>
<td>A moderation analysis revealed that empathy does not moderate the impact</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4c</td>
<td>Reappraisal moderates the impact of the PD on emotional regulation on teachers’ emotionally supportive responses to students will be more evident for teachers with high reappraisal.</td>
<td>A moderation analysis revealed that reappraisal does not moderate the impact</td>
<td>Not Supported</td>
</tr>
<tr>
<td>RQ5</td>
<td>Do teacher characteristics moderate the influence of the impact of a PD on emotional regulation on how teachers view their responsibility in helping students learn how to manage emotions?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H5a</td>
<td>Self-efficacy moderates the impact of the PD on how teachers view their responsibility in helping students.</td>
<td>A moderation analysis revealed that self-efficacy does not moderate the impact</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H5b</td>
<td>Empathy moderates the impact of the PD on how teachers view their responsibility in helping students.</td>
<td>A moderation analysis revealed that empathy does not moderate the impact</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H5c</td>
<td>Reappraisal moderates the impact of the PD on how teachers view their responsibility in helping students.</td>
<td>A moderation analysis revealed that reappraisal does not moderate the impact</td>
<td>Not Supported</td>
</tr>
<tr>
<td>RQ6</td>
<td>Do teacher characteristics moderate the impact of a PD on emotional regulation on teachers’ beliefs about the long-lasting impact of their responses on students’ behavior?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H6a</td>
<td>Self-efficacy moderates the impact of the PD on emotional regulation on teachers’ beliefs about the long-lasting impact of their responses to students with emotional</td>
<td>A moderation analysis revealed that self-efficacy does not moderate the impact</td>
<td>Not Supported</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Analysis</td>
<td>Findings</td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>H6b</td>
<td>Empathy moderates the impact of the PD on emotional regulation on teachers’ beliefs about the long-lasting impact of their responses to students with emotional regulation difficulties.</td>
<td>A moderation analysis revealed that empathy does not moderate the impact</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H6c</td>
<td>Reappraisal moderates the impact of the PD on emotional regulation on teachers’ beliefs about the long-lasting impact of their responses to students with emotional regulation difficulties.</td>
<td>A moderation analysis revealed that reappraisal does not moderate the impact</td>
<td>Not Supported</td>
</tr>
</tbody>
</table>
Chapter V: Discussion

This chapter focuses on the interpretations of the results and draws conclusions related to the hypotheses formed. Limitations of the study are described as well as ideas for future research and implications of results.

Summary of Findings

The goal of this study was to increase the likelihood that teachers would be prepared to address emotional regulation difficulties in their students. This study developed a cost-effective universal intervention, namely a professional development program on emotional regulation (PDPER) that aimed to improve pre-service and in-service teachers’ skill set for helping children develop more adaptive emotional regulation and provide pre-service and in-service teachers with actual strategies that they could use in the classroom.

The study investigated the impact of the PDPER on the way in which teachers respond to students with emotional regulation difficulties and on their beliefs about their role in helping students develop adaptive emotional regulation. Further, the study investigated whether specific personal teacher characteristics (i.e., self-efficacy, emotional-regulation, empathy) moderated the impact of the PDPER on teachers’ responses and beliefs.

The PDPER was conducted primarily in teacher education classes to provide important information for both pre-service and in-service teachers. Classes were randomly assigned to treatment and alternative treatment conditions. The study protocol was also conducted in one public school setting to provide a limited case study examination of its applicability to “real world” settings. Within the case study, open-ended questions were used to obtain more in depth information about teachers’ views on handling emotional regulation issues in their classrooms.

The PDPER had three major components. First, teachers learned to identify emotional
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regulation difficulties in students and gained an understanding of the relationship between emotional regulation difficulties and student behavioral problems. Second, the training focused on both the centrality and ability of classroom teachers to effect positive change in their students’ adaptive emotional regulation. Third, teachers learned specific evidence-based interventions that can be used in their classrooms to help students develop more adaptive emotional regulation.

Research Questions

The research questions in the study were divided into two sets. The first set of research questions concerned the impact of the PDPER on pre-service and in-service teachers’ beliefs and behaviors (i.e., levels of emotionally supportive strategies, levels of punitive strategies, the degree to which teachers viewed their responsibility in helping students learn how to manage emotions, and the degree to which teachers believed that their responses will have a long-lasting impact on students’ behavior). The second set of hypotheses concerned the influence of different teacher characteristics (i.e., self-efficacy, empathy, reappraisal) on the impact of the PDPER on teachers’ beliefs and behaviors. The PDPER appeared to have a more meaningful effect on changing participants’ levels of emotionally supportive and punitive strategies than it did on changing their views regarding their responsibility to help students learn how to manage emotions and their beliefs about the long-lasting impact of their responses on students’ behavior.

Emotionally Supportive and Punitive Strategies. The PDPER impacted the way teachers responded to students with emotional regulation difficulties. ANCOVA analyses revealed that teachers in the PDPER group had a) higher levels of emotionally supportive strategies and b) lower levels of punitive strategies.

These results are consistent with previous research. Webster-Stratton et al. (2008) taught teachers how to use cognitive-behavioral strategies to help foster the development of emotional
regulation in children and found that teachers’ management style changed as a result of their intervention. Teachers who received the training became less harsh/critical, less inconsistent/permissive, more warm/affectionate; and placed greater emphasis on social/emotional teaching. These teachers also used specific teaching strategies to address social emotional functioning, and fewer harsh statements when compared to controls. Potgieter-Groot et al. (2012) also developed an in-service training program designed to help teachers gain skills in working with children with emotional and behavioral issues. Participants reported increased gains in their repertoire of useful strategies to help students struggling with emotional and behavioral issues (Potgieter-Groot et al.).

**Responsibility and Impact.** ANCOVA analyses revealed only moderate effect sizes of the impact of the PDPER on the degree to which teachers feel responsible to help students and on the degree to which they feel that their responses to students were likely to have a lasting impact compared to teachers in the AT group. Previous studies have not examined the relationship between teacher training and the participants’ beliefs regarding the degree to which they feel responsible for helping students learn how to manage emotions, and the degree to which they believe that their responses will have a long-lasting impact on students’ behaviors. This study represents an initial attempt to explore this relationship.

**Teacher Characteristics.** Teachers’ personal characteristics often affect how teachers will respond to children with emotional regulation difficulties. This study investigated whether personal teacher characteristics (i.e., self-efficacy, empathy, and reappraisal) moderated the impact of the PDPER on (a) the level of emotionally supportive strategies that teachers would endorse, (b) the degree to which teachers view their responsibility to help students learn how to manage their emotions, and (c) the degree to which teachers believe that their responses will
have a long-lasting impact on students with emotional regulation difficulties after controlling for pre-test scores.

Multiple linear regression analyses showed that none of these three characteristics moderated the impact of the PDPER on any of the outcome variables. In other words, teachers who scored high in self-efficacy, empathy, or reappraisal were not more likely to be impacted by the PDPER. Although teachers’ characteristics did not impact the way in which they responded to the PDPER, the analyses found that some of the personal characteristics were linked to some of the outcome measures. The following section discusses the results of the analyses related to each of these three teacher personal characteristics explored in this study and how the findings relate to previous research.

**Self-efficacy.** Self-efficacy refers to a teachers’ judgment of his or her capabilities to achieve specific goals or outcomes in his or her classroom, or motivate and engage difficult learners) (Bandura, 1977; Tschannen-Moran & Hoy, 2000). Multiple regression analyses showed that teachers with high self-efficacy were more likely to endorse higher levels of emotionally supportive strategies.

This finding lends support to previous studies that also found that teachers with high self-efficacy are more likely to respond to emotionally and behaviorally challenged students with more supportive responses (Stefan, Rebega, & Cosma, 2015; Andreou & Rapti, 2010). Trainings for teachers should therefore focus (in a manner similar to the PDPER) on enhancing teachers’ self-efficacy, by offering concrete strategies for helping children with emotional regulation difficulties.

**Empathy.** Empathy refers to a person’s ability to imagine oneself in another’s place. Teachers who were high in empathy and self-efficacy were more likely to view themselves as
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responsible for helping students learn how to manage emotions. Swartz and McElwain (2012) had identified empathy as a predictor of the types of responses teachers have to children’s emotional expression. They found that teachers with higher reported perspective taking reported more supportive and fewer non-supportive responses to children’s negative displays of emotions. Although in this study empathy was not linked to the type of strategies teachers use in response to students with emotional challenges, it was linked to the degree to which teachers felt that their responses would have a long-lasting impact on students with emotional regulation difficulties. Future research should continue to explore the impact of empathy on teachers’ responses and the impact of teacher training programs on empathy towards students with emotional and behavioral challenges.

**Reappraisal.** A teacher’s individual emotional regulation strategies can impact the way he or she responds to a student’s emotional expression. Reappraisal (or the extent that one engages in cognitive reframing) is a type of emotional regulation strategy (Gross and John, 2003) which involves reinterpreting an emotionally provocative situation that changes its emotional impact (Gross. 2008). This study did not find that high reappraisal affected teachers’ beliefs and behaviors. In contrast, previous research linked reappraisal with teachers’ responses to students with emotional and behavioral difficulties. Swartz and McElwain (2012) found that teachers who reported more reappraisal when regulating their own emotions were more likely to engage in supportive responses to children’s negative emotions and were less likely to engage in non-supportive responses. Future research should continue exploring the effects of reappraisal on teachers’ beliefs and behaviors. Alternative measures should be used to examine teachers’ emotional regulation in the context of working with challenging students. Since a person’s facility with a particular emotional regulation strategy will vary depending on the particular
context or situation, future studies should evaluate teachers’ use of reappraisal when working with challenging students in a classroom setting rather than a teacher’s general facility with reappraisal.

**Case Study**

Overall, the teachers who participated in the case study reported that they appreciated the opportunity to learn about best practices in working with students with emotional and behavioral difficulties. Many participants reported that they valued sharing different strategies and personal experiences with other teachers. Some participants also indicated that the PDPER should continue throughout the school year because the children’s difficulties are ongoing and continuous support for the teachers is critical. Other participants felt that the PDPER would have been helpful earlier in the school year because their relationship with several students was already compromised and that it was too late to utilize some of the strategies at that point. Finally, several participants agreed that a teacher’s role was important in helping students but suggested that the parents have an equally important role and without the support of the parents the teachers would be unable to make a significant impact.

The findings of the case study are consistent with recent research. A recent study conducted in Romania explored Romanian teachers’ knowledge and strategies related to preschoolers with emotional and behavioral difficulties by conducting focus groups (Stefan et al., 2015). Stefan et al. identified four main themes to consider when developing teacher training programs: a) how teachers understand emotional and behavioral difficulties, b) how teachers view their role in preventing children’s behavioral and emotional difficulties, c) how teachers view the role of parents, and d) strategies for managing students emotional and behavioral challenges in the classroom. During these focus groups, teachers revealed that although they
agree that it is their role to help students and that their interactions with students do have an impact on students’ behaviors, teachers noted that they often feel overwhelmed by students with significant emotional and behavioral needs and do not feel equipped to help these students without the support of mental health providers in school. Similar to the case study in this current study, teachers suggested the need for more support.

Limitations

Although the findings in the study make important contributions to the field of education and specifically in training teachers to help students with emotional regulation difficulties, there are several limitations to the study. First, this study measured the impact of a professional development program exclusively by using teachers’ responses to vignettes. This method presents several challenges. While the vignettes were developed and validated with graduate students, they have not been extensively validated. They should be tested again on a larger sample and reviewed by experts in the field to measure validity.

Further, the emotional regulation difficulties of actual students in a classroom setting are more complex than the vignettes were able to depict. These vignettes presented a simplistic picture of how students respond to situations and were not able to capture the complexity of real life interactions and behaviors. Teachers’ responses to real life situations are likely to be different than teachers’ reactions to vignettes. In addition, teachers may experience emotional responses to real life situations that are different from their emotional responses when reading about these situations. Thus, responses to vignettes might be different than actual responses.

Further, the rating scales may result in social desirability bias. Social desirability bias is the tendency to respond to questions in a socially acceptable direction and is often associated with questions that deal with personally or socially sensitive content (Lewis-Beck, M., Bryman,
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A. & Liao, T.F., 2004). One limitation of this study is that participants’ beliefs and behaviors were measured through surveys, which may be susceptible to a response bias. In other words, teachers’ responses may have been affected by a tendency to respond in a socially desirable manner. To address this response bias neutral terms were used when constructing the responses to the vignettes. However, the deemed neutrality of these items is, by definition, a subjective determination and these items may still elicit a response bias. This response bias was also evident by the mean scores for each of the teacher personal characteristics on the TPCS, which were all at the upper range.

Additional limitations of the study relate to priming effects (or how the pre-test influences the post-test) and order-effects (or how the positioning of the surveys influences the outcome measures). Although the TRS had two different forms (i.e. the TRS A-B and TRS B-C) to control for order effects, the study remains limited because the questions posed by the pre-test TRS may influence responses to the questions posed by the post-test TRS. Further, the questions that comprise the TPCS were given to all of the participants in the same order. Specifically, questions in the TPCS related to reappraisal were followed by questions related to empathy and then followed by questions related to self-efficacy. It is possible that the questions in the TPCS related to one subject may influence responses to the questions in the TPCS related to the other subjects. To address this limitation, future replications of this study should vary the sequence of the items that comprise the TPCS among the participants.

Another limitation relates to treatment validity and reliability. Although the professional development program followed a treatment protocol, participants were encouraged to ask questions and contribute to group discussion. This interactive feature of the professional development program led to differences between each administration of the PDPER. For
example, during one of the administrations, a participant related a personal experience about her own child who has severe emotional regulation challenges. She described a history of frustrating experiences and expressed skepticism with respect to some of the strategies posed. Her comments and the discussion that followed may have made that particular administration of the PDPER different from the PDPER that was administered in the other graduate classes.

**Future Research**

Since teacher beliefs and attitudes towards students with emotional regulation difficulties impact the likelihood that teachers will respond in an emotionally supportive manner, future research on professional development for teachers should attempt to measure these underlying beliefs (specifically, the degree to which teachers believe that it is their responsibility to help children with emotional regulation difficulties, and the degree to which teachers believe that their responses will have a long-lasting impact) and devise means to strengthen these beliefs. Studies that use qualitative measures such as observation, focus groups, and open-ended questions may shed light on teachers’ attitudes and beliefs about children with emotional regulation difficulties. Future research should therefore employ qualitative methodology to better understand teachers’ beliefs about their role and to gain insight into how teachers relate to children with emotional regulation difficulties. Although the case study used open-ended questions, these questions were limited to the participants in the case study and were limited to written responses. Future research should extend these open-ended questions to all participants and should include some interview-type questions and responses.

Further, observations should be used as outcome measures in addition to surveys or responses to vignettes. Observations would provide actual responses of teachers in real classroom situations rather than only relying on what teachers say they would do in response to
children with emotional regulation challenges. It also would be useful to conduct a longitudinal study using a repeated measures design to determine if the PDPER had long-lasting effects.

Further, the training methods consider by this study should also be expanded to include an opportunity for the psychologist to observe the teachers after the training session, followed by a consultation session with the psychologist and the teachers at which the psychologist can provide feedback, answer questions and model how to implement the intervention in the natural context.

In addition, future research should explore the impact of teacher attribution styles on the type of strategies teachers are willing to use with students who present with emotional regulation difficulties. Weiner (1985) developed the theory of attribution that suggests that there are three categories (i.e., locus of control, stability, and controllability) of causal factors that individuals use to explain one’s success or failure. Several studies have applied this theoretical conceptualization of attributions to understanding how teachers may view students with behavioral problems. For example, a teacher who attributes behavioral problems to internal, unstable, and controllable factors may believe that he or she can play a role in implementing effective interventions (Mavropoulou & Padelida, 2002). Alternatively, when a teacher attributes a student’s difficulties to external, unstable, and uncontrollable causes (such as poor parenting), the teacher might have low expectations for positive teacher intervention (Mavropoulou & Padelida). Andreou and Rapti (2010) found that teachers who both a) reported low self-efficacy and b) attributed student behavioral problems to family causes, also reported using more negative interventions (e.g., threats and punishment) in response to student negative emotional displays. Future studies should explore whether a professional development
for teachers that focuses on altering these attributions will improve teacher responses to children with emotional difficulties.

**Implications and Conclusions**

Difficulty with emotional regulation is a symptom common to many child psychological disorders and classroom-related problems. However, many children with emotional regulation difficulties do not receive adequate support in their classrooms. Teachers are generally less sensitive, more controlling, and more likely to have strained relationships with these students (Morrison, 1997). Teachers often view children with emotional regulation difficulties more negatively, are often reluctant to interact with these students, and have little tolerance for their misbehavior (Stefan et al., 2015).

Therefore, professional development for teachers should focus on helping teachers improve their relationships with children with emotional and behavioral challenges and should address teachers’ perceptions about students with emotional regulation difficulties. Training that changes teacher perceptions about students with emotional regulation difficulties has been shown to lead to positive outcomes (Daunic et al., 2006; Ollendick & King, 1999; Sutherland & Oswald, 2005). Teachers with belief systems that reflect acceptance of children’s negative emotions have been shown to display more supportive responses when reacting to students’ negative emotions (Swartz & McElwain, 2012). Training should include discussions that help teachers develop an understanding of their students’ difficulties and perspectives when interpreting a child’s emotional behavior and belief system (Swartz & McElwain, 2012). Potgieter-Groot et al. (2012) found that teachers who participated in training reported feeling more empathy, caring, and desire to build positive relationships with these students.
Finally, professional development for teachers should help teachers develop awareness of their own emotional responses when faced with students with emotional and behavioral challenges. Stefan et al. (2015) suggest that teacher trainings should include educating teachers regarding emotional intelligence and understanding how their own personal stresses can affect their performance and understanding of children with emotional and behavioral difficulties.

The results of this current study indicate that a 90-minute professional development program designed to improve teachers’ responses to students with emotional regulation difficulties can effect changes in teachers’ responses and beliefs about emotional regulation difficulties. Teachers who participated in the PDPER reported more emotionally supportive and less punitive strategies compared to teachers in an AT group. Likewise, although less telling, teachers reported more responsibility and that their responses would have a greater impact than teachers in the AT group. In addition, the case study found that teachers expressed interest in continuing this type of training throughout the school year.

Although the PDPER did not have a very meaningful impact on the degree to which teachers feel responsible to help students and on the degree to which they feel their responses will have a lasting impact, the small change produced by the 90-minute program suggests that after more sessions, these attitudes may change more meaningfully. Continuous professional development for teachers may have the potential to strengthen teachers’ beliefs about their role and responsibility in helping students with emotional regulation difficulties.

Therefore, on-site school psychologists should initiate on-going professional development programs for teachers within the school environment to train them to interact with students with emotional and behavioral challenges in a more productive manner. Further, this type of indirect support should become a fundamental part of the school psychologists’ role. Teachers relate that
working with students with emotional and behavioral challenges is often difficult and that they often do not have the tools to work with these students. Although the PDPER was brief and was only offered on a one-time basis, the results of this study suggest that when schools implement a collaborative model (which includes continuous training and support with respect to children with emotional regulation difficulties) children who otherwise would be at-risk for a host of significant school-related difficulties may have a better chance of academic success.

This study makes two unique contributions to the literature regarding emotional regulation difficulties in a school environment. First, teachers’ success in dealing with children with emotional regulation difficulties may be impacted by teachers’ understanding of their students and the impact of their interactions upon their students. Second, interventions designed to help teachers understand children with emotional regulation difficulties may have a greater impact if delivered by a school psychologist who works in the subject school, because the resident school psychologist is best situated to consult with teachers on an ongoing basis and offer follow-up training. In this respect, this study may also have implications for broader audiences, beyond the school psychologist community. Specifically, some aspects of training or education – those that involve changing a perspective, approach or point of view – require follow-up and reinforcement on an ongoing basis.

In addition, this study suggests strategies that would be effective in “real world” conditions, by creating a professional development for teachers in a cost effective manner, using a psychologist resident in the school and providing training for teachers that will be useful and resonant for the balance of their careers. Social validity or acceptability of the strategies proposed by this study may be ultimately enhanced by teachers’ positive experience with the strategies and the professional development program.
Appendix A

TRS
Child A is sitting at a table with three other students. One of these other students mistakenly takes Child A's pencil. Child A shouts, "Give it back!" and then kicks the student in the leg. Child A engages in this type of behavior approximately three times a week.

For each item, mark the circle that best fits.

1. My response to this incident would probably involve:

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree Nor Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reprimanding Child A.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Assisting Child A in a calming exercise.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Referring Child A for a psycho-educational evaluation.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Using more praise in my interactions with Child A.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Telling Child A that I will call his/her parents.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Providing individual instruction to Child A regarding how to control emotions.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Keeping records of Child A's behavior.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Taking away recess privileges.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Giving a class lesson on how to control emotions.</strong></td>
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<td></td>
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<tr>
<td><strong>Insisting that Child A apologize.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Validating Child A after some time has elapsed.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Using a loud voice to redirect Child A.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. How I respond to Child A is:

- 1 (Unlikely to have a long-lasting impact on Child A’s behavior.)
- 2
- 3
- 4
- 5 (Likely to have a long-lasting impact on Child A’s behavior.)

3. Helping Child A learn how to manage his/her emotions is:

- 1 (Not part of my responsibility.)
- 2
- 3
- 4
- 5 (Completely part of my responsibility.)
Teacher Response Survey A-B

Child A notices that his/her favorite snack is missing from his/her backpack. When it is time to transition to the carpet for a reading lesson, Child A refuses to come to the carpet and starts screaming, "I didn't have snack. I'm not coming!" Child A engages in this type of behavior approximately three times a week.

For each item, mark the circle that best fits.

1. My response to this incident would probably involve:

<table>
<thead>
<tr>
<th>Option</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree Nor Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reprimanding Child A.</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Assisting Child A in a calming exercise</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
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<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Using more praise in my interactions with Child A.</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Telling Child A that I will call his/her parents.</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Providing individual instruction to Child A regarding how to control emotions</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
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<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Taking away recess privileges.</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Giving a class lesson on how to control emotions.</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
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<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Validating Child A after some time has elapsed.</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Using a loud voice to redirect Child A.</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Preparing Teachers to Work with Students

2. How I respond to Child A is:
   
   - 1 (Unlikely to have a long-lasting impact on Child A’s behavior.)
   - 2
   - 3
   - 4
   - 5 (Likely to have a long-lasting impact on Child A’s behavior.)

3. Helping Child A learn how to manage his/her emotions is:
   
   - 1 (Not part of my responsibility.)
   - 2
   - 3
   - 4
   - 5 (Completely part of my responsibility.)
Please read the following scenario.

It is Center Time in your classroom. Child A wants to use the computer but notices that Child B is already working at it. Child A screams, "It's not fair! I never get a turn!" Child A refuses to participate in any other activity for the remainder of the period. Child A engages in this type of behavior approximately three times a week.

For each item, mark the circle that best fits.

1. My response to this incident would probably involve:

<table>
<thead>
<tr>
<th>Option</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree Nor Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reprimanding Child A.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Assisting Child A in a calming exercise.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Referring Child A for a psycho-educational evaluation.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Using more praise in my interactions with Child A.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Telling Child A that I will call his/her parents.</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Providing individual instruction to Child A regarding how to control emotions.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Keeping records of Child A's behavior.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Taking away recess privileges.</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Giving a class lesson on how to control emotions.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Insisting that Child A apologize.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Validating Child A after some time has elapsed.</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Using a loud voice to redirect Child A.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
2. How I respond to Child A is:
   ○ 1 (Unlikely to have a long-lasting impact on Child A’s behavior.)
   ○ 2
   ○ 3
   ○ 4
   ○ 5 (Likely to have a long-lasting impact on Child A’s behavior.)

3. Helping Child A learn how to manage his/her emotions is:
   ○ 1 (Not part of my responsibility.)
   ○ 2
   ○ 3
   ○ 4
   ○ 5 (Completely part of my responsibility.)
Teacher Response Survey C-D
Please read the following scenario.

The students in your classroom are working in groups on a set of questions. Child B tells Child A that his answers are incorrect. Child A shouts, "No one asked you!" and then hits Child B in the arm forcibly. Child A engages in this behavior approximately three times a week. For each item, mark the circle that best fits.

1. My response to this incident would probably involve:

<table>
<thead>
<tr>
<th>Response Description</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reprimanding Child A.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Assisting Child A in a calming exercise.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Referring Child A for a psycho-educational evaluation.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Using more praise in my interactions with Child A.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Telling Child A that I will call his/her parents.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Providing individual instruction to Child A regarding how to control emotions.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Keeping records of Child A’s behavior.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Taking away recess privileges.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Giving a class lesson on how to control emotions.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Insisting that Child A apologize.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Validating Child A after some time has elapsed.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Using a loud voice to redirect Child A.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
2. How I respond to Child A is:

1 (Unlikely to have a long-lasting impact on Child A's behavior.)
2
3
4
5 (Likely to have a long-lasting impact on Child A's behavior.)

3. Helping Child A learn how to manage his/her emotions is:

1 (Not part of my responsibility.)
2
3
4
5 (Completely part of my responsibility.)
<table>
<thead>
<tr>
<th>Open-ended Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why do you believe Child A behaves like this?</td>
</tr>
<tr>
<td>How do you feel about helping Child A improve his/her emotional regulation?</td>
</tr>
<tr>
<td>What do you believe is the most effective way to help Child improve his/her emotional regulation?</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
## Appendix B
### Teacher Personal Characteristics Survey

**Q1:** The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale at the top of the page: A, B, C, D, or E. When you have decided on your answer, fill in the letter on the answer sheet next to the item number. READ EACH ITEM CAREFULLY BEFORE RESPONDING. Answer as honestly as you can. Thank you.

<table>
<thead>
<tr>
<th></th>
<th>(A) Does Not Describe Me Well</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E) Describes Me Extremely Well</th>
</tr>
</thead>
<tbody>
<tr>
<td>I often have tender, concerned feelings for people less fortunate than me.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I sometimes find it difficult to see things from the &quot;other guy's&quot; point of view</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Sometimes I don't feel very sorry for other people when they are having problems.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I try to look at everybody's side of a disagreement before I make a decision.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>When I see someone being taken advantage of, I feel kind of protective towards them.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I sometimes try to understand my friends better by imagining how things look from their perspective.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Other people's misfortunes do not usually disturb me a great deal.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Statement</td>
<td>Circle 1</td>
<td>Circle 2</td>
<td>Circle 3</td>
<td>Circle 4</td>
<td>Circle 5</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td>If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I see someone being treated unfairly, I sometimes don't feel very much pity for them.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am often quite touched by things that I see happen.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I believe that there are two sides to every question and try to look at them both.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would describe myself as a pretty soft-hearted person.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I'm upset at someone, I usually try to &quot;put myself in his shoes&quot; for a while.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before criticizing somebody, I try to imagine how I would feel if I were in their place.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q2: We would like to ask you some questions about your emotional life, in particular, how you control (that is, regulate and manage) your emotions. The questions below involve two distinct aspects of your emotional life. One is your emotional experience, or what you feel like inside. The other is your emotional expression, or how you show your emotions in the way you talk, gesture, or behave. Although some of the following questions may seem similar to one another, they differ in important ways. For each item, please answer using the following scale:

<table>
<thead>
<tr>
<th></th>
<th>(1) Strongly Disagree</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>(7) Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>When I want to feel more positive emotion (such as joy or amusement), I change what I’m thinking about.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I keep my emotions to myself.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>When I want to feel less negative emotion (such as sadness or anger), I change what I’m thinking about.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>When I am feeling positive emotions, I am careful not to express them.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>When I’m faced with a stressful situation, I make myself think about it in a way that helps me stay calm.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I control my emotions by not expressing them.</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>When I want to feel more positive emotion, I change the way I’m thinking about the situation.</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>I control my emotions by changing the way I think about the situation I’m in.</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>When I am feeling negative emotions, I make sure not to express them.</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>When I want to feel less negative emotion, I change the way I’m thinking about the situation.</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
</tbody>
</table>
Q3: The following questions are designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below.

<table>
<thead>
<tr>
<th>Statement</th>
<th>(1) Nothing</th>
<th>(2) Very Little</th>
<th>(3) Some Influence</th>
<th>(4) Quite a Bit</th>
<th>(5) A Great Deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much can you do to control disruptive behavior in the classroom?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much can you do to get children to follow classroom rules?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much can you do to calm a student who is disruptive or noisy?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How well can you establish a classroom management system with each group of students?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix C
Emotional Regulation Questionnaire

EMOTION REGULATION QUESTIONNAIRE (ERQ)

Reference:

Items:
We would like to ask you some questions about your emotional life, in particular, how you control (that is, regulate and manage) your emotions. The questions below involve two distinct aspects of your emotional life. One is your emotional experience, or what you feel like inside. The other is your emotional expression, or how you show your emotions in the way you talk, gesture, or behave. Although some of the following questions may seem similar to one another, they differ in important ways. For each item, please answer using the following scale:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly disagree</td>
<td></td>
<td>neutral</td>
<td></td>
<td></td>
<td></td>
<td>strongly agree</td>
</tr>
</tbody>
</table>

1. ____ When I want to feel more positive emotion (such as joy or amusement), I change what I’m thinking about.

2. ____ I keep my emotions to myself.

3. ____ When I want to feel less negative emotion (such as sadness or anger), I change what I’m thinking about.

4. ____ When I am feeling positive emotions, I am careful not to express them.
5. When I’m faced with a stressful situation, I make myself think about it in a way that helps me stay calm.

6. I control my emotions by not expressing them.

7. When I want to feel more positive emotion, I change the way I’m thinking about the situation.

8. I control my emotions by changing the way I think about the situation I’m in.

9. When I am feeling negative emotions, I make sure not to express them.

10. When I want to feel less negative emotion, I change the way I’m thinking about the situation.

Scoring:

Items 1, 3, 5, 7, 8, 10 make up the Cognitive Reappraisal facet.
Items 2, 4, 6, 9 make up the Expressive Suppression facet.

Scoring is kept continuous. 
Each facet's scoring is kept separate.
Appendix D
Teachers’ Sense of Efficacy Scale- Short Version
### Teachers’ Sense of Efficacy Scale (short form)

#### Teacher Beliefs

Directions: This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below. Your answers are confidential.

<table>
<thead>
<tr>
<th>Belief</th>
<th>How much can you do?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How much can you do to control disruptive behavior in the classroom?</td>
<td>(1) Nothing (2) Very Little (3) Slightly (4) Moderate (5) Quite a Bit (6) Quite a Deal (7) A Great Deal</td>
</tr>
<tr>
<td>2. How much can you do to motivate students who show low interest in school work?</td>
<td>(1) Nothing (2) Very Little (3) Slightly (4) Moderate (5) Quite a Bit (6) Quite a Deal (7) A Great Deal</td>
</tr>
<tr>
<td>3. How much can you do to get students to believe they can do well in school work?</td>
<td>(1) Nothing (2) Very Little (3) Slightly (4) Moderate (5) Quite a Bit (6) Quite a Deal (7) A Great Deal</td>
</tr>
<tr>
<td>4. How much can you do to help your students value learning?</td>
<td>(1) Nothing (2) Very Little (3) Slightly (4) Moderate (5) Quite a Bit (6) Quite a Deal (7) A Great Deal</td>
</tr>
<tr>
<td>5. To what extent can you craft good questions for your students?</td>
<td>(1) Nothing (2) Very Little (3) Slightly (4) Moderate (5) Quite a Bit (6) Quite a Deal (7) A Great Deal</td>
</tr>
<tr>
<td>6. How much can you do to get children to follow classroom rules?</td>
<td>(1) Nothing (2) Very Little (3) Slightly (4) Moderate (5) Quite a Bit (6) Quite a Deal (7) A Great Deal</td>
</tr>
<tr>
<td>7. How much can you do to calm a student who is disruptive or noisy?</td>
<td>(1) Nothing (2) Very Little (3) Slightly (4) Moderate (5) Quite a Bit (6) Quite a Deal (7) A Great Deal</td>
</tr>
<tr>
<td>8. How well can you establish a classroom management system with each group of students?</td>
<td>(1) Nothing (2) Very Little (3) Slightly (4) Moderate (5) Quite a Bit (6) Quite a Deal (7) A Great Deal</td>
</tr>
<tr>
<td>9. How much can you use a variety of assessment strategies?</td>
<td>(1) Nothing (2) Very Little (3) Slightly (4) Moderate (5) Quite a Bit (6) Quite a Deal (7) A Great Deal</td>
</tr>
<tr>
<td>10. To what extent can you provide an alternative explanation or example when students are confused?</td>
<td>(1) Nothing (2) Very Little (3) Slightly (4) Moderate (5) Quite a Bit (6) Quite a Deal (7) A Great Deal</td>
</tr>
<tr>
<td>11. How much can you assist families in helping their children do well in school?</td>
<td>(1) Nothing (2) Very Little (3) Slightly (4) Moderate (5) Quite a Bit (6) Quite a Deal (7) A Great Deal</td>
</tr>
<tr>
<td>12. How well can you implement alternative strategies in your classroom?</td>
<td>(1) Nothing (2) Very Little (3) Slightly (4) Moderate (5) Quite a Bit (6) Quite a Deal (7) A Great Deal</td>
</tr>
</tbody>
</table>
Appendix E
The Interpersonal Reactivity Index

INTERPERSONAL REACTIVITY INDEX

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale at the top of the page: A, B, C, D, or E. When you have decided on your answer, fill in the letter on the answer sheet next to the item number. READ EACH ITEM CAREFULLY BEFORE RESPONDING. Answer as honestly as you can. Thank you.

ANSWER SCALE:

A       B       C       D       E
DOES NOT   DESCRIBES ME
DESCRIBE ME   VERY
WELL       WELL

1. I daydream and fantasize, with some regularity, about things that might happen to me. (FS)

2. I often have tender, concerned feelings for people less fortunate than me. (EC)

3. I sometimes find it difficult to see things from the "other guy's" point of view. (PT) (-)

4. Sometimes I don't feel very sorry for other people when they are having problems. (EC) (-)
5. I really get involved with the feelings of the characters in a novel. (FS)

6. In emergency situations, I feel apprehensive and ill-at-ease. (PD)

7. I am usually objective when I watch a movie or play, and I don’t often get completely caught up in it. (FS) (-)

8. I try to look at everybody’s side of a disagreement before I make a decision. (PT)

9. When I see someone being taken advantage of, I feel kind of protective towards them. (EC)

10. I sometimes feel helpless when I am in the middle of a very emotional situation. (PD)

11. I sometimes try to understand my friends better by imagining how things look from their perspective. (PT)

12. Becoming extremely involved in a good book or movie is somewhat rare for me. (FS) (-)

13. When I see someone get hurt, I tend to remain calm. (PD) (-)

14. Other people’s misfortunes do not usually disturb me a great deal. (EC) (-)

15. If I’m sure I’m right about something, I don’t waste much time listening to other people’s arguments. (PT) (-)
16. After seeing a play or movie, I have felt as though I were one of the characters. (FS)

17. Being in a tense emotional situation scares me. (PD)

18. When I see someone being treated unfairly, I sometimes don’t feel very much pity for them.
   (EC) (-)

19. I am usually pretty effective in dealing with emergencies. (PD) (-)

20. I am often quite touched by things that I see happen. (EC)

21. I believe that there are two sides to every question and try to look at them both. (PT)

22. I would describe myself as a pretty soft-hearted person. (EC)

23. When I watch a good movie, I can very easily put myself in the place of a leading
   character. (FS)

24. I tend to lose control during emergencies. (PD)

25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while. (PT)

26. When I am reading an interesting story or novel, I imagine how I would feel if the events in
   the story were happening to me. (FS)

27. When I see someone who badly needs help in an emergency, I go to pieces. (PD)
Preparing Teachers to Work with Students

28. Before criticizing somebody, I try to imagine how I would feel if I were in their place. (PT)

NOTE: (-) denotes item to be scored in reverse fashion

PT = perspective-taking scale
FS = fantasy scale
EC = empathic concern scale
PD = personal distress scale

A = 0
B = 1
C = 2
D = 3
E = 4

Except for reversed-scored items, which are scored:

A = 4
B = 3
C = 2
D = 1
E = 0

Appendix F
Teacher Demographics

Teacher Demographics

Q1: What is your ethnicity?
Preparing Teachers to Work with Students

- Asian, Asian-American, Pacific Islander
- Hispanic, Hispanic-American, Latino
- Indian, Alaskan Native, Other
- Black, African-American, Non-Hispanic, Hispanic-American

Q2: What is your gender?
- Male
- Female

Q3: What is your age?
- 20-29
- 30-39
- 40-49
- 50-59
- 60-69

Q4: How many years have you worked as a teacher?
- 1-5 years
- 6-10 years
- 11-15 years
- 16-20 years
- 20-30 years

Q5: Have you ever received training on working with students with emotional or behavioral difficulties?
- Yes
- No

Q6: What grade do you currently teach?
- K
- 1st
- 2nd
- 3rd
- 4th
- 5th
- All grades

Q7: Do you have a Masters Degree in Teaching?
- Yes
- No
Appendix G

Consent Letter for Graduate Students
GRADUATE CENTER: CITY UNIVERSITY OF NEW YORK
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

CONSENT TO USE SURVEY RESULTS IN A RESEARCH PROJECT

Project Title: Successful Strategies for Teaching Students with Emotional Difficulties

Principal Investigator: Dana Gottesman
Graduate Student
CUNY Graduate Center
Educational Psychology Department, Room 3204,
365 Fifth Avenue, New York, NY 10016
Cell: 917-543-9297

Faculty Advisor: Helen L. Johnson
Professor
Queens College
Powderraker Hall, Room 057D,
65-30 Kissena Blvd.| Flushing, NY 11367
718-997-5312

Site where study is to be conducted: The study will be conducted during your regularly scheduled graduate classes.

Introduction/Purpose: You are invited to participate in a research study. The study is conducted under the direction of Dana Gottesman, Graduate Student at CUNY Graduate Center. The purpose of the study is to explore the impact of a professional development program on teachers’ responses to students with emotional difficulties. The findings will hopefully provide information that will produce strategies to help students develop more adaptive emotional regulation. The results also may also help inform teacher training practices.

Procedure: I will be delivering a professional development program during your regularly scheduled graduate classes. The professional development will consist of (1) a pre-lecture survey packet, which should take about 20 minutes to complete, (2) a lecture and discussion, which should take about 60 minutes, and (3) a post-lecture survey, which should take about 10 minutes to complete.

The first packet of surveys will collect self-reported information about self-efficacy, empathy, and emotional regulation and will also consist of (a) two vignettes followed by a series of questions, and (b) a demographic questionnaire. The second packet of surveys will include two additional vignettes followed by a series of questions. The entire study will take place during three of your regularly scheduled graduate classes.

It would be helpful if I could use your responses in my study. I would like your permission to do this, and have included two boxes below where you may give your permission for me to use your responses or decline. All surveys and participation will be anonymous. Your participation in this research project is completely voluntary.
**Possible Discomforts and Risks:** The risks from participating in this study are no more than encountered in everyday life or in other professional development activities in which you participate as part of your job or graduate studies.

**Benefits:** There are direct benefits from participating in this study. Participating in this study will increase your awareness of the impact that emotional regulation difficulties can have on classroom behaviors. Additional direct benefits will include learning specific strategies to help children improve their emotional regulation difficulties.

**Voluntary Participation:** Your participation in this study is voluntary, and you may decide not to participate without prejudice, penalty, or loss of benefits to which you are otherwise entitled. If you decide to leave the study, please contact the principal investigator Dana Gottesman to inform her of your decision.

**Financial Considerations:** Participation in this study will involve no compensation to the participants.

**Confidentiality:** The data obtained from you will be collected in the written questionnaires that you complete. The collected data will be accessible only to Dana Gottesman (PI), Helen Johnson (Faculty advisor), and IRB Members and staff. The researcher will protect your confidentiality by assigning each consent form and survey packet a study identification number in order to link pre- and post-test data. Although an initial list will be created to link your name to your study identification number, this list will be shredded and completely destroyed once the survey packets are complete. This list will be stored in a locked cabinet that will only be accessible to the PI. Additionally, all data will be stored in a locked cabinet. Data will be securely destroyed after three years.

**Contact Questions/Persons:** If you have questions about your rights as a research participant, or you have comments or concerns that you would like to discuss with someone other than the researchers, please call the CUNY Research Compliance Administrator at 646-664-8918. Alternately, you can write to:

CUNY Office of the Vice Chancellor for Research  
Attn: Research Compliance Administrator  
205 East 42nd Street  
New York, NY 10017

**Statement of Consent:** This project has been explained to me and I have had an opportunity to ask any questions that I may have and those questions have been answered to my satisfaction. I understand that my participation in this study is totally voluntary and that I may withdraw from this study at any time with no repercussions. I have read this form and I understand this project. I give consent for my participation in this study.

- □ Yes, you may use my responses.
- □ No, you may not use my responses.

<table>
<thead>
<tr>
<th>Printed Name of Investigator</th>
<th>Signature of Investigator</th>
<th>Date Signed</th>
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</thead>
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CUNY UI - Institutional Review Board  
Approval Date: October 14, 2014  
Expiration Date: August 26, 2015  
Coordinator Initials: gg
Appendix H
Consent Letter for Teachers
GRADUATE CENTER: CITY UNIVERSITY OF NEW YORK
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

CONSENT TO PARTICIPATE IN A RESEARCH PROJECT

Project Title: Successful Strategies for Teaching Students with Emotional Difficulties

Principal Investigator: Dana Gottesman
Graduate Student
CUNY Graduate Center
Educational Psychology Department, Room 3204,
365 Fifth Avenue, New York, NY 10016
Cell: 917-543-9297

Faculty Advisor: Helen L. Johnson
Professor
Queens College
Powdermaker Hall, Room 057D,
65-30 Kissena Blvd., Flushing, NY 11367
718-997-5312

Site where study is to be conducted: The study will be conducted during your regularly scheduled professional development time at your place of employment.

Introduction/Purpose: You are invited to participate in a research study. The study is conducted under the direction of Dana Gottesman, Graduate Student at CUNY Graduate Center. The purpose of the study is to explore the impact of a professional development program on teachers’ responses to students with emotional difficulties. The findings will hopefully provide information that will produce strategies to help students develop more adaptive emotional regulation. The results also may also help inform teacher training practices.

Procedure: I will be delivering a professional development program during your regularly scheduled professional development time at your place of employment. The professional development will consist of (1) a pre-lecture survey packet, which should take about 20 minutes to complete, (2) a lecture and discussion, which should take about 60 minutes, and (3) a post-lecture survey, which should take about 10 minutes to complete.

The professional development involves an overview of emotional regulation difficulties in children, teachers’ roles in helping students develop more adaptive emotional control, and specific evidence-based classroom intervention strategies. The first packet of surveys will collect self-reported information about self-efficacy, empathy, and emotional regulation and will also consist of (a) two vignettes followed by a series of questions, and (b) a demographic questionnaire. The second packet of surveys will include two additional vignettes followed by a series of questions. The entire study will take place during three of your regularly scheduled professional development time.

I would like your permission to participate in my study. I have included a box below where you may give consent to participate in this study. All surveys and participation will be anonymous. Your participation in this research project is completely voluntary.
Possible Discomforts and Risks: The risks from participating in this study are no more than encountered in everyday life or in other professional development activities in which you participate as part of your job or graduate studies.

Benefits: There are direct benefits from participating in this study. Participating in this study will increase your awareness of the impact that emotional regulation difficulties can have on classroom behaviors. Additional direct benefits will include learning specific strategies to help children improve their emotional regulation difficulties.

Voluntary Participation: Your participation in this study is voluntary, and you may decide not to participate without prejudice, penalty, or loss of benefits to which you are otherwise entitled. If you decide to leave the study, please contact the principal investigator Dana Gottesman to inform her of your decision.

Financial Considerations: Participation in this study will involve no compensation to the participants.

Confidentiality: The data obtained from you will be collected in the written questionnaires that you complete. The collected data will be accessible only to Dana Gottesman (PI), Helen Johnson (Faculty advisor), and IRB Members and staff. The researcher will protect your confidentiality by assigning each consent form and survey packet a study identification number in order to link pre- and post-test data. Although an initial list will be created to link your name to your study identification number, this list will be shredded and completely destroyed once the survey packets are complete. This list will be stored in a locked cabinet that will only be accessible to the PI. Additionally, all data will be stored in a locked cabinet. Data will be securely destroyed after three years.

Contact Questions/Persons: If you have questions about your rights as a research participant, or you have comments or concerns that you would like to discuss with someone other than the researchers, please call the CUNY Research Compliance Administrator at 646-664-8918. Alternately, you can write to:

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I consent to participating in this study.

Printed Name of Participant ___________________ Signature of Participant ___________________ Date Signed ___________________

Printed Name of Investigator ___________________ Signature of Investigator ___________________ Date Signed ___________________

CUNY U1- Institutional Review Board
Approval Date: October 14, 2014
Expiration Date: August 26, 2015
Coordinator Initials: sy
Appendix I
PowerPoint/Script PDPER

Successful Strategies for Teaching Children with Emotional Difficulties
A professional development program for pre-service and in-service teachers
by Dana Gottesman

You enter the classroom with your students after lunch. All of the students find their seats and you begin the afternoon lesson. Jonny then storms into the classroom, slamming the door behind him. Another child calls out, "Are you ok?" Jonny screams in a very loud voice, "Shut-up!" Jonny engages in this type of behavior approximately three times a week.

What do you do?
What would be your immediate strategy?
What long-term strategy would you employ?
How do you think this child’s behavior would affect you personally?
Why do you think Jonny has these extreme emotional outbursts?

Emotional regulation problems
• Difficulty regulating emotions in response to conflict
• React to conflict in hostile ways
• Anticipate fewer consequences for aggression
• Distort or under utilize social cues
• Misinterpret ambiguous situations as hostile

What is emotional regulation?
• "Emotional regulation" is defined as "the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals" (Thompson, 2004, pp. 27-28). Emotional regulation is also defined as "the process by which we influence what emotions we experience, when we experience them, and how we express them" (Gross, 1998).

Emotional regulation problems
Emotional regulation problems are manifested by an emotional response that tends to be more destructive that adaptive.

What are emotions?
Emotions are responses to a stimuli or situations that affect a person strongly
Emotional responses occur on three levels
• Neurophysiological
• Behavioral
• Cognitive
(Thompson, 2011; Webster-Stratton, 1999)
Preparing Teachers to Work with Students

Neurophysiological/Biochemical
- Body processes regulated by the autonomic nervous system
- Heart rate
- Blood flow
- Respiration
- Hormonal secretions
  (Thompson, 2011; Webster-Stratton, 1999)

Behavioral
- Facial expressions
- Crying
- Gazes
- Withdrawal
  (Webster-Stratton, 1999)

Cognitive
- Thoughts
- Language
  (Webster-Stratton, 1999)

Children differ in emotional responses
- Frequency
- Range of emotions
- Emotional expression
- Ability to control negative responses to frustrating situation

E.g., One student becomes verbally aggressive; another student withdraws
(Thompson, 2011; Webster-Stratton, 1999)

Emotional regulation is a developmental achievement
- Infancy
- Preschool years
- School years
- Adolescence
  (Thompson, 2004; Webster-Stratton, 1999)

Infancy
- Initially emotional regulation is provided by the environment
- Parent plays integral role in regulating infant’s emotional arousal
- Guided by physiological discomfort- e.g., parent tries different ways to calm crying baby
- Individual differences in self-regulation
  (Thompson, 2004; Thompson, 2011; Webster-Stratton, 1999)

Preschool Years
- Burden shifts from parent to child
- Emotional regulation system starts to develop
Preparing Teachers to Work with Students

• Language and communication skills develop
• Children learn to label emotions and thoughts
  (Webster-Stratton, 1999)

School Age
• Children assume more responsibility
• Parents and teachers continue to play role
• ER now guided by child’s sense of sense of self and the environment
  (Thompson, 2004; Webster-Stratton, 1999)

What influences the development of emotional regulation?
• Neurology/Temperament
• Language/developmental delays
• Family/Social Environment (chronic stress)
• School/teachers’ emphasis on emotional education (talk to students about feelings; responses to student’s expression of negative emotion)
  (Thomson, 2004; Webster-Stratton, 1999)

Types of emotional regulation difficulties
1. Problems in identifying and labeling emotions
2. Negativity
3. Hostile responses to neutral peer interactions.
4. Prone to emotional outbursts
  (Webster-Stratton, 1999)

You are reading a story to a group of students. You ask the students a question about the story. Mat and Jill both raise their hands at the same time. You call on Mat. Jill slams the desk with her fist and starts screaming loudly, “You never call on me!” Jill engages in this behavior approximately three times a week.

Teacher’s reaction:
• “Stop screaming, you are disrupting my class, that’s a phone call home!!”
• Loud voice
• Apologize now!

Possible Reactions
• Screaming intensifies
• Stamps feet
• Throws books everywhere
• Guidance office called
• Child refuses to go
• Child punches teacher
• Child is suspended

Escalate quickly - go from angry to state of rage: immediate responses and long term planning are critical
What do you think?
What could teacher have done differently?

Common Mistakes
• Emotional reaction (get very upset)
• Threaten to call parents
• Reactive
• Loud reprimands do not help calm the child and triggers strong emotional reaction
• Missed opportunity for good modeling
• Students learn from observing teachers
• Sending child to principal’s office
  (Kersey & Masterson, 2013; Webster-Stratton, 1999)

Problem with demanding an apology
• Insisting child: apologize, admit mistake, demand an explanation (causes power struggle)
• Lack insight and social/emotional skills to explain why they did something or to apologize on demand
• Only hear the first 20 seconds so it is best to be as succinct as possible
• Teacher models respect by remaining calm and polite
  (Kersey & Masterson, 2013; Webster-Stratton, 1999)

Impaired Teacher-Student Relationships
• Impaired teacher-student relationships (Morrison, 1997)
• Adverse effects of strained teacher-student interactions (Roorda et al., 2013)
• Children with ER difficulties do not receive support in the classroom (Macklem, 2011)
• Teacher report feeling less positively toward children with ER difficulties
• Student more likely to accept teacher’s feedback when student feels teacher cares about him
• Students with ER difficulties most vulnerable to negative relationships

Think about a time when you had difficulty connecting to a child.
Why do you think you felt that way?
What can a teacher do?
What do you think the teacher’s role is in helping students develop emotional regulation?
What does the research say?
Shift to teacher-led classroom based interventions for fostering emotional regulation in children
• Stratton Incredible Years program (Webster-Stratton, 1993).
• Coping Power Program
• The Zones of Regulation (Kuypers, 2011)
• The Incredible 5-Point Scale (Buron & Curtis, 2003)

Praise
• “Children who need love the most, ask for it in the most unloving ways; the same can be said of children most in need of positive attention, praise, and encouragement” (Kersey & Masterson, 2013; Webster-Stratton, 1999)
• Praising children with emotional and behavioral difficulties
  Children with ER difficulties need MASSIVE amounts of praise for appropriate behaviors and positive attention
  Rather have negative attention than no attention
  Teachers need to develop skills to praise defiant and difficult children- easy to forget
  Requires effort, planning, and awareness
  Can’t be left to chance because may be few episodes (Kersey & Masterson, 2013; Webster-Stratton, 1999)
• Effective Praise
  (Webster-Stratton, 1999)
  “Catch children being good”
  Technique that involves frequent reinforcement of positive behaviors
  Specify what the child did that was positive in order to increase the likelihood the behavior will be used again
  E.g. I like the way you used your words to tell us what upset you
• Sensitive Praise
  (Webster-Stratton,1999)
  Match the type and level of reinforcement to child
  Some children like very demonstrative displays of recognition while others shy away from it or can even get upset by it
  Some children are not used to receiving praise and may misinterpret it as negative
  Part of a positive teacher-student relationship
• Nonverbal praise
  Shift focus from negative behaviors
  Redirecting the attention provided to negative behaviors (avoid saying stop it or don’t do that)
  Better to restate expectations
  Complement students who are on task
  Complement students who are starting to do right thing
  Highlight upcoming preferred activity to motivate.
  (Webster-Stratton, 1999)

Feeling Thermometer
• Helps students develop self-evaluation, self-awareness, and self-control
  Ask the child to point to where on the chart he is feeling during different parts of the day (Kuypers, 2011; Buron & Curtis, 2003)
• Feeling thermometers help students separate physical and behavioral responses to emotions
Create a thermometer with ratings of a range of feelings
  Identify the physical sensational and bodily responses experienced at each level
  Children sometimes have difficulty separating the physical sensations of anger from the behavioral manifestations anger

5 point control scale to help develop self-management
  (Buron & Curtis, 2003)
• Rank level of control
Preparing Teachers to Work with Students

- Students often go from zero to 100 without recognizing that they are upset
- Helps students become more aware of their escalating feelings
- Example: A student who feels content at a level 1 can recognize that when he is upset he is at a level 2 and now needs to employ strategies to bring him back down to level 1 (take deeps breath)
- Example: A student learns that when he is at a level 5, his body is not in control and he may need a break or some other support to get calm
- Example of 5 point scale (Buron & Curtis, 2003; Kuypers, 2011)
- Joey is a 4th grade boy who has difficulty controlling his emotions. He has had problems getting along at school since kindergarten. He is easily irritated and provoked by other kids. Sometimes the smallest things make him angry. For example, if someone looks accidentally bumps into him he can get so angry that he will hit or kick the other child. Joey’s teacher used a 1-5 scale to teach him to recognize his own ability to control his reactions- using the scale, he started to check in with his teacher during the day to rate his level of control.
- Example of using 5 point scale
- STOP, OPT, AND GO (Kuypers, 2011)

Student considers options when in the yellow zone and the consequences of each option

Calming Corner
- Set up a designated area for students to relax/take a break when needed
- Helps students learn how to monitor feeling of anxiety and distress
- Replace problem behavior with more appropriate method of coping
- Variety of relaxation tools are kept
- A break card can be used as a visual cue to help students request a break

Calming Break Corner
- Help students learn how to manage their emotional distress
- Sample materials:
  - Bean bag chair/pillow
  - Bowl of pompoms
  - Calming cards
  - Head phones
  - Stress balls
  - Books

Break Corner
- find a spot in your classroom
- calming kit

“Turtle Technique”
- Help student learn how to control physiological arousal so that he/she can calm down
- Webster-Stratton (1999) Incredible Year - great resource
- A story about a child who uses adaptive coping strategies
Mailbox Messages
• Children communicate how they are feeling with a message in the mailbox
• Put the red handle up to let the teachers know

Do you have a student who can benefit from any of these interventions?
• Stay calm
• Model
• Praise
• Build positive relationships
• Emotional communication
• Break corner
• Feeling Thermometers

Shift to proving mental health lessons in the classroom
• Often children’s only access to emotional regulation learning
• Staying connected to the child
• Model emotional regulation
• Work collaboratively with parents

Thank you!
Appendix J
PowerPoint/Script PDPA

Psycho-educational Assessment
by Dana Gottesman School Psychologist
Doctoral Candidate CUNY Graduate Center

What is psycho-educational assessment?

Observe student displaying difficult, challenging, or unusual behaviors, or concerned about focusing, language, academics, or their overall development

Has anyone been through this process? What has your experience been like?

What is a psycho-educational evaluation?

It is designed to answer types of questions such as:
Does the student have a learning disability, developmental disability, attentional problems?

What are the student’s academic and cognitive abilities, strengths, and weaknesses?

Regulated by federal, state, and local laws

Process was not always so advanced
In 1978, Daniel Hoffman sued the NYC board of Education
This case will illustrate that the psycho-educational process used to have serious flaws and the need for legislation and regulations
The Case of Daniel Hoffman v. the Board of Education
Daniel Hoffman, 26-year old brought law suit against the NYC Board of Ed. in 1978
Who was Daniel Hoffman?
Born in 1951 in Queens
Father died when he was 13 months old Mother went to work full time
Language regressed
Age 4-10 speech evaluation at the National Hospital for Speech Disorders Referred for psychological evaluation
IQ 90; expressive language delay, receptive adequately developed
Kindergarten at PS 81 IQ 74
Placed in class for MR at age 5
Stayed in this class until age 18 Finally retested at age 18
Average IQ

How could this happen?
How could a child with average intelligence be put in a highly restrictive educational program for intellectually disabled children?
Lost out on an education with typical peers learning to socialize, read, and write In the 1950’s, there were no laws regulating the special education process
Daniel Hoffman v. the Board of Education

What did the psychologist do wrong?
One of the first cases to address the process of special education placement.
Important issues in assessment
Psycho-educational process needs to be followed according to laws and best practice IQs can change
Different tests provide different IQs (ex. nonverbal IQ)
Decisions must be based on more that one assessment approach (e.g., adaptive functioning)
Previous findings must be reviewed
IDEA
The Individuals with Disabilities Education Improvement Act (IDEA 2004), Public Law 108-446, is the federal law that protects those in special education (This is the reauthorized IDEA of 1997)

Multidisciplinary team
13 categories of disabilities under which children may be eligible for special education and related services Variety of assessment tools
Developmental and functional information (information from parent)
Multidisciplinary Team
Under IDEA, an evaluation of a child with a suspected disability must be made by a multidisciplinary team.

These professionals must use a variety of assessment tools and strategies to gather relevant functional and developmental information, including information provided by the parent, that will assist in determining whether a child has a disability as defined under federal law.
Disabilities:
Autism
Deaf-Blindness Deafness
Emotional Disturbance
Hearing Impairments (including deafness) Intellectual Disability
Multiple Disabilities Orthopedic Impairments Other Health Impairments Specific Learning Disabilities
Speech and Language Impairments Traumatic Brain Injury
Visual Impairments

Members of the Multidisciplinary Team:
Regular education teacher School psychologist Educational evaluator Special education teacher
Speech and language clinician Medical personnel (when appropriate) Social worker
School/guidance counselor Parents
School nurse
Occupational and physical therapists (when appropriate)

Who can refer a child for an a psycho-educational evaluation?
Teacher
School
Parent
Doctor
Court
Legal procedure
Letter submitted
School has 10 days to send referral request to parent Consent
60 calendar days to evaluate child

Comprehensive Evaluation
Under IDEA 2004, no single procedure is used as the sole criterion for determining an appropriate educational program for a child.
The child must be assessed in all areas related to the suspected disability Individual basis

Components of the evaluation
An appropriate educational evaluation
A behavioral assessment
Speech and language evaluations
When appropriate Physical and/or occupational evaluations, when indicated
Interviews with the student/parents and significant others in his or her life Medical evaluation

What type of questions should be considered?
If you had a child in your class that you thought needed an evaluation, what are some questions that you should first think about?

Psycho-Educational Evaluation
Referral
Behavioral Observations Social History
Classroom Observation/Teacher Report
Test Results (Cognitive, Academic, Social/Emotional)

Discussion Conclusions
What is the Referral Question?
Learning issues Attention/focusing issues Emotional problems
Low intellectual ability Strategies/Interventions in place

Behavioral Observations
Affect (e.g., expressive, flat)
Frustration tolerance (e.g., does the child persist or give up easily?) Eye contact (e.g., use it to regulate social interactions, consistency)
Language (e.g., sentence structure, volume, pragmatics, receptive, conversation) Interests
Focus/distractibility Motivation
Social overtures Transitions Rapport

Areas Assessed
Intelligence Memory Achievement Visual Skills Auditory Skills Motor Skills
Executive Functioning Oral language Adaptive behavior
Social-emotional functioning

Norm-Referenced and Standardized

Tests used in psycho-educational assessment are different than classroom tests. During the standardization process, the test is given to a large number of students from various backgrounds to determine what is average, low average, high average, etc. This allows us to compare a child’s scores to thousands of other students who were part of the normative sample. The scores generated give the student’s relative standing in a group. Allows us to make statements like: “Is the study average compared to his peers” or How does the student compare to others his age?

Standard Scores
Standard Scores compare a student's performance on a test to the performance of other students his/her age. Standard scores estimate whether a student's scores are above average, average, or below average compared to peers. They also enable comparison of a student's scores on different types of tests.

General thinking and reasoning skills
Wechsler Intelligence Scale for Children-IV: Assess general thinking and reasoning skills of children aged 6 years to 16 years.
Verbal Comprehension Index Perceptual Reasoning Index Working Memory Index Processing Speed Index
Full Scale
120+ Superior
110-119 High Average
90-109 Average
80-89 Low Average
70-79 Borderline
69 - Extremely Low

Verbal Comprehension
Ability to listen to a question
Draw upon learned information from both formal and information education Reason through an answer
Express thoughts aloud
A good predictor of school achievement

Verbal Comprehension
Vocabulary: What is a hat?
Similarities: In what way are an apple and a banana alike? Information: How many legs does a bird have?
Comprehension? Why do police wear uniforms?

Perceptual Reasoning
Measures non-verbal and fluid reasoning Ability to examine a problem
Draw upon a visual-motor and visual-spatial skills Organize thoughts
Create solutions and then test them Taps preferences for visual information
Comfort with novel and unexpected situations Preference to learn by doing

Perceptual Reasoning
Block Design: arrange blocks to match a model
Matrix Reasoning: select an item that properly completed a matrix
Picture Concepts: select objects that go together based on an underlying concept
Block Design
WISC-IV Matrix Reasoning
WISC-IV Matrix Reasoning
Working Memory
Letter number sequencing Digit Span
Processing Speed
Coding Symbol Search
WISC-IV Coding

Educational/Achievement Tests
Nationally normed (e.g., Wechsler Achievement Tests) Basic reading
Reading Comprehension Mathematics Calculation Mathematics Reasoning Written Expression
Oral Expression

Measures of Behavior Student interview Parent/Teacher interview
Observations across multiple settings (recess, small groups, large groups, different subjects)
Behavior Assessment System for Children (BASC-2)
Conners’ 3 (measures behaviors related to ADHD)

BASC-2
A norm referenced rating scale used to ID emotional and behavioral disorders
Inattention Impulsivity/Hyperactivity
Rule-breaking, Opposition, Conduct Problems Aggression
Anxiety, Depression, Withdrawal Somatic complaints
Atypicality, Social Problems, Thought Problems Leadership
Internalizing vs. Externalizing Behaviors

Adaptive Behavior
Adaptive functioning or behavior reflects an individual’s social and practical competence of daily skills to meet the demands of everyday living.
Adaptive behavior includes the age-appropriate behaviors necessary for people to live independently and to function safely and appropriately in daily life.
Vineland-II evaluates Communication, Daily Living Skills, Social Skills

What are adaptive behaviors?
Adaptive behaviors include real life skills such as grooming, dressing, safety, safe food handling, school rules, ability to work, money management, cleaning, making friends, social skills, and personal responsibility.

Executive Functioning
“Executive functions” is a term used to describe the many different cognitive processes that students use to control their behavior and to connect past experience with present action. Students rely on executive functions to perform activities such as planning, organizing, strategizing, paying attention to and remembering details, and managing time and space.

Evaluation of Autism or Autism Spectrum Disorders
Childhood Autism Rating Scale-II
Autism Diagnostic Observation Schedule (ADOS) to assess communication, social interaction, and play or imaginative use of materials

ADOS
Semi-structured
Standardized assessment of communication, social interaction, and play Language production
Reciprocal communication Stereotyped behaviors

Case Example
Andie
5 year old boy in kindergarten Minimal speech
Can count/knows shapes “Shuts down”
Mother report that he prefers to be alone

Case Example
What are the strengths of this evaluation? What are the weaknesses of this evaluation? What do all these tests mean?

Case Study
What would you recommend for Andie?

Based on the information, does he meet eligibility criteria for special education services?
What kind of supports would you recommend?
Which of the 13 classifications do you think is most appropriate?

References

References


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