# The Development of an Enhanced School Home Note Intervention: Applying Key Behavioral Parenting Training Components to Improve the Outcomes of School Based Behavioral Intervention

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**Abstract**

The aim of this study was to develop and evaluate an Enhanced School Home Note (ESHN) intervention as a brief, modified behavioral-parenting training intervention for students with externalizing problems who were non-responsive to a school-home note-as-usual. The ESHN intervention was designed to enhance a common school-based behavioral intervention, the School Home Note (SHN), by incorporating key treatment ingredients found in evidence-based behavioral parent training interventions to improve positive parenting practices to improve student behavior at school. Parents attended three one-on-one coaching sessions that focused on instruction, modeling, and practice of behavior management skills within the context of their child's SHN. Using a single-subject multiple baseline design, the ESHN intervention was shown to reduce levels of disruptive behavior and increase duration of student academic engagement in participants. Social validity results also revealed that both parents and teachers perceived the strategy to acceptable, feasible and effective. Data collected on parenting stress and efficacy was inconclusive. Implications for the use of school-based behavioral parent training interventions, school-home collaboration, and school psychologist and counselor preparation are explored.

*keywords:* Enhanced School-Home Note, Daily Behavior Report Card, behavioral parent training, school-home collaboration, externalizing problems, disruptive behavior, behavioral intervention, school mental health, direct behavior ratings, academic engagement

## Dedication

For Danny, my parents, and the families, colleagues, and graduate students I am privileged to work with everyday, for being my source of inspiration and support.

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## Chapter I: Introduction

Externalizing behavior problems (EP), also referred to as disruptive behavior problems, are the most common and challenging referrals to psychologists in school settings (Buscemi, Bennett, Thomas, & Deluca, 1995; Langdon & Vesper, 2000). EPs are undercontrolled outward behaviors that may include aggressive, inattentive, noncompliant and oppositional behaviors (Achenbach, 1991). Youth with untreated social and emotional disturbances do not fare well (Kazdin, 1987). These behaviors detract from learning (Hinshaw, 1992; Walker, Ramsey, & Gresham, 2004), contribute to negative school climate (McEvoy & Welker, 2000) and put youth at-risk for school failure (Vitaro et al, 2005; Reinke et al., 2008). Beyond the classroom, untreated EPs put youth at greater risk of developing a host of anti-social and psychological problems in adolescence and later in life, including substance abuse, as well as antisocial and criminal behavior (Blackorby & Wagner, 1996; Patterson et. al., 1992; Loeber & Egeland, 2009).

Researchers and practitioners have consistently argued that schools are, and should be, the frontline setting for the delivery of mental health services for youth (Burns et al., 1995; Hoagwood & Erwin, 1997). An analysis of three large-scale national surveys indicated that roughly 80% of 6-17 years olds who were identified as in need of mental health services did not receive those services in the preceding 12 months (Kataoka, Zhang, & Wells, 2002). For the small portion of youth who actually did receive mental health and related services, the vast majority received those services in schools. For this reason, and many more, schools have been referred to as the “de facto” mental health system (Hoagwood, 2005).

Several logical reasons support the notion of schools as our de facto mental system for youth today. First, schools have access to a captive audience, so they are able to deliver mental health services to those youth who need them (Kutash, Duchnowski, & Lynn, 2006). Second, most youth spend more of their waking hours in school than at home, indicating the potential positive impact a school setting can have on the development of a student (Walker, Ramsey, & Gresham, 2004). Third, school-related factors (e.g., negative climate, bullying, punitive discipline) have been shown to contribute to the development of mental health problems in youth (Cook et al. 2010; Crews et al., 2007). Fourth, many parents experience life stressors that prevent them gaining access to mental health services for their child that lie outside of the school (Wagner, Kutash, Duchnowski, & Epstein, 2005). Fifth, nearly all schools employ staff members who have background training and experience in the delivery of mental health services (Sprague et al., 2007), and it is well within the scope of practice of these educators to directly or indirectly deliver mental health services that emanate from the school.

Despite the intuitive appeal of school-based mental health, traditional approaches to addressing EPs in schools have typically been characterized as reactive and punitive (Mayer, 2001). For the most part, U.S. public schools have traditionally over-relied on punitive measures to manage disruptive behavior problems (Colvin & Sugai, 1988; Mayer, 2001), including disapproval statements, office referral, time-out, suspension, and in too many cases, expulsion (Heller & White, 1975; Shores et al., 1993; Van Acker, Grant, & Henry, 1996; Sugai & Horner, 2006). Research has consistently shown that the use of punitive measures contributes to a negative school climate in which there is an

increased likelihood for misbehavior, poorer academic achievement, and juvenile delinquency (APA Zero Tolerance Task Force, 2008; Bear, 1998; Nafpaktitis, Mayer, & Butterworth, 1985; Skiba, Ritter, Simmons, Peterson, & Miller, 2006).

Given the lackluster outcomes associated with reactive, punitive approaches to dealing with EPs, school-based mental health advocates argue for the adoption and implementation of preventative and remedial evidence-based programs, interventions, or supports that have been shown to effectively reduce Eps and improve outcomes for targeted youth (Weist, Mellin, Chambers, Lever, Haber, & Blaber, 2012). Evidence-based refers to programs, interventions or supports that have been shown repeatedly via rigorous research (e.g., randomized control trial, regression discontinuity design, quasi-experimental designs with adequate comparison group, or experimental single-case designs) to improve outcomes in one or more targeted domains of performance (e.g., EPs, social skills, academic performance, emotion regulation, school attendance, etc.).

There is a well established evidence base to support the use of behavioral parent training (BPT) programs to effectively and efficiently treat EPs in youth (Webster-Stratton, 1994; Estrada & Pinsof, 1995; Serketich & Dumas, 1996; Kazdin & Weisz, 1998; Maughn, Christian, Jenson, Olympia & Clark, 2005; Kaminski, 2008). There are many evidence-based manualized BPT programs, including the Triple P Positive Parenting Program (Prinz, Sanders, Shapiro, Whitaker & Lutzker, 2009), Helping the Noncompliant Child (Forehand & McMahon, 2003), Parent Management Training-Oregon (Forgatch, Bullock, & Patterson, 20044), Parent Management Training (Kazdin, 2005), and Incredible Years (Webster-Stratton & Reid, 2010), to name a few. Although numerous evidence-based BPT exist, these programs continue to be far underutilized in

school-based mental health programming. In a recent review of evidence-based school prevention and intervention programs for youth with emotional disturbance (ED), nine out of fifteen studies implemented treatments in both the school and home settings, while only one of the studies focused on directly implementing behavioral parent training (Reddy, Thomas, Newman & Chun, 2008). According to this same study, the most frequently used evidence-based intervention for youth with ED in school settings continue to be student-focused behavioral interventions.

One factor that has been shown to influence whether evidence-based program or interventions are adopted is feasibility. Feasibility refers to the capability of carrying out the intervention as designed and intended, and is dependent on a multitude of factors, including but not limited to resources, time, setting, and training (Kratchowill & Shernoff, 2004). Even the most effective treatments may not be adopted or implemented with fidelity in schools if they are not viewed as feasible and acceptable (Hagermoser Sanetti & Kratochwill, 2009). Given the lack of success in implementing many of these manualized programs in the school setting, there is a clear need to develop a model or procedure to transfer practices found to be effective in research contexts to actual practice in real settings. There are many factors that affect whether a particular program intervention will be adopted and used, including the amount of training it takes to develop competency to deliver it; the time and effort it takes to implement it; the costs associated with purchasing the materials; and the fit between it and the way schools operate (Proctor, Landsverk, Aarons, Chambers, Glissoe, Mittman, 2009; Witt & Elliott, 1984).

Given the importance of feasibility, researchers have begun to consider ways of making BPT more efficient and feasible for implementation while maintaining defensibility and effectiveness. Indeed, many of the evidence-based BPT programs possess common components. Moreover, there is an emerging body of research in parent-training interventions has sought to identify which 'key ingredients,' or mechanisms of change, lead to these positive short and long-term outcomes. Researchers are also devoting their attention to identifying moderators that clarify for whom and under what conditions these interventions are most effective (Brestan & Eyberg, 1998; Kazdin, 2007). Identification of key mediators and moderators in parent training interventions creates potential for the application of parent-training strategies that are more efficient and feasible to implement, which can possibly increase the future adoption and implementation of BPT from a school-based mental health perspective.

In addition to designing more efficient and feasible parent training, the pairing of parent training with common school-based interventions implemented naturally by educators can be a successful approach to increase the use of parent trainings. For example, the School Home Note (SHN) represents a common behavioral intervention used in the school setting to address EPs that can serve as a vehicle to deliver key components of evidence-based parent training programs. The SHN aims to reduce disruptive behavior problems in the classroom by 1) increasing communication between home and school and 2) linking school behaviors with positive and negative consequences at home (Kelley, 1990). Most schools have utilized some form of a SHN, also sometimes referred to as a daily behavior report card, demonstrating it as both an acceptable and feasible intervention used by school mental health practitioners. Given the

universality of this type of intervention, the SHN presents an opportunity to enhance treatment or care as usual by including common components of evidence-based parent trainings.

The purpose of this study was to examine the effects of applying core treatment components found in evidence-based behavioral parent training (BPT) programs to a commonly used treatment in the school setting. Specifically, this study evaluated the feasibility, acceptability and effectiveness of an Enhanced School-Home Note (ESHN) Intervention for elementary school students with identified EPs. In particular, the SHN was used as a vehicle to deliver key ingredients drawn from the evidence-based BPT training literature. Single-case experimental methods were used to evaluate the impact of the EHSN relative to SHN intervention as usual. Direct behavior ratings (DBRs) of students' disruptive behavior and academic engaged time were used to track change over time and evaluate the impact of the ESHN. Also, social validity and consumer satisfaction data were collected from teachers and parents, because it was anticipated that the EHSN would serve as an efficient, feasible, and acceptable means of delivering BPT to improve student behavior and academic engagement at school.

This dissertation begins with a review of the literature on the nature of EPs, effects of EPs on academic and long-term social/emotional development of youth, and an overview of commonly used interventions in traditional and school-based mental health settings. Next, specific research questions and hypotheses are proposed, followed the methods and results sections. Finally, results are described and implications discussed.

# Chapter II: Literature Review

## Externalizing Behavior Patterns: Prevalence, Risk Factors, and Negative Outcomes in Youth

Emotional and behavioral problems in childhood are often categorized as either Externalizing Problems (EP) or Internalizing Problems (IP), though it is not unusual for youth with mental health problems to experience comorbid problems that fall in both categories. Externalizing behavior patterns are the most visible and noticeable emotional and behavior problems and, therefore, the most common reason for referrals to clinics and within schools (Yeh & Weisz, 2001). Students with externalizing behavior patterns represent a large majority of mental health problems in youth, exhibiting under-controlled, outward behaviors, including aggressive, inattentive, impulsive, noncompliant and oppositional behaviors, that are disruptive, offensive, harmful, and/or dangerous to others (Achenbach, 1991).

**Prevalence**. An estimated 18-22% of children and adolescents experience mental health problems (Adelman & Taylor, 2006) and epidemiological studies have shown that the prevalence rates of EP (identified as conduct disorders) range from 2% to 6% among youth (Russo & Beidel, 1994), with boys showing higher rates of conduct disorder than girls (Nock, Kazdin, Hiripi, & Kessler, 2006). Maughn and colleagues (2004) found the prevalence of oppositional defiance disorder in 5 to 10-year-olds to be 4.8 percent for boys and 2.1 percent for girls. Moreover, prevalence rates for attention deficit hyperactivity disorder have been shown to range as high as 1% to as high as 20%, but more accurate estimates appear to fall within 3% to 7% of children and adolescents (Polancyzk et al., 2007).

**Risk Factors**. Among the risk factors for EPs that have been identified in past research, parenting and contextual factors are consistently shown to be among the most salient predictors of chronic EPs (Lochman & Wells, 2002). These risk factors, or key aspects of the child's environment, are associated with the development of EPs and predict poor outcomes (Garmezy & Rutter, 1983).

***Parenting Characteristics.*** The literature has established a clear relationship between the quality of parent-child attachments, interactions, and disciplinary practices and a child's social, emotional, behavioral and cognitive development (Bowlby, 1980; Patterson et al., 1992; Forehand & McMahon, 2003). Research has shown that children who live with parents suffering from mental health problems, including maternal depression (Leadbeater, Bishop, & Raver, 1996) and substance abuse (Nunes et al., 1998; Stanger, Dumenci, Kamon & Burstein, 2004), are at greater risk for developing EPs at an early age. Maladaptive parenting practices, including lack of warmth and affection (McFadyen-Ketchum, Bates, Dodge, & Pettit, 1996), harsh or insensitive parenting (Booth, Rose-Krasnor, McKinnon, & Rubin, 1994), parental rejection (Loeber & Stouthamer- Loeber, 1986), coercive interaction patterns (Leadbeater, Bishop, & Raver, 1996), negative, inconsistent disciplinary practices (Forehand & McMahon, 2003), and poor parental monitoring (Snyder & Patterson, 1995) are all powerful predictors of EPs.

The parent-child conflict that stems from maladaptive parenting practices has been show to predict the development of a number of severe behavioral problems including Oppositional Defiant Disorder (ODD), Conduct Disorder (CD), and Attention-Deficit Hyperactivity Disorder (ADHD) (Burt, Krueger, Iacono & McGue, 2003) and also contribute to the escalation and reinforcement of these problems (Maughn, 2005).

Alternately, positive, skillful, and consistent parenting practices are protective factors that influence positive child outcomes (Snyder & Patterson, 1995).

***Contextual Factors***. The community in which a child is raised has a significant impact on the level of risk for developing EPs. While mental health problems affect all children and families, rates of psychological disorders, particularly EPs, are higher among children in poverty when compared to their middle and high SES counterparts (Johnson, Cohen, Dohrenwend, Link, & Brook, 1999). Living in poverty puts youth, disproportionately youth of color, under stress and at greater risk of poor academic preparedness and achievement, physical health problems, and the development of social and emotional disturbance (Costello, Compton, Keeler, & Angold, 2003; World Health Organization, 2003; Conger, Conger, Elder, & Lorenz, 1992). In a longitudinal study exploring the link between socioeconomic status and psychopathology in youth, Wadsworth & Achenbach (2005) demonstrated a link between SES and somatic complaints, anxiety & depression, thought problems, attention problems, delinquent behavior, and aggressive behavior.

A child's developmental trajectory is not only impacted by the socioeconomic status of their family, but also the climate and level of social-emotional support in the child's school community. Given the central presence that schools have in the everyday lives of children, schools have the power to either prevent or exacerbate EPs in childhood (Mayer & Leone, 1999). Studies have consistently shown that schools with negative school disciplinary practices, characterized by the predominant use of punishment, containment, and exclusion, have higher rates of EPs (Sugai & Horner, 2002; Utley, Kozleski, Smith, & Draper, 2002). A 2005 study found that schools in which students

perceived greater fairness and clarity of rules had lower rates of delinquent behavior and less student victimization (Gottfredson et al., 2005)

Alternately, school communities characterized as positive, caring and orderly environments are preventing the occurrence of antisocial behaviors (Nelson, 1996; Lewis & Sugai, 1999; Luiselli, Putnam, Handler, & Feinberg, 2005). Recent studies in School-Wide Positive Behavior Support (SW-PBS), which centers on the above principles, have documented reductions in antisocial behavior (Sprague et al., 2002), vandalism (Mayer, 1995), aggression (Grossman et al., 1997; Lewis, Sugai, & Colvin, 1998), later delinquency (Kellam, Mayer, Rebok, & Hawkins, 1998), and alcohol, tobacco, and other drug use (Kellam & Anthony, 1998). It has also been shown that schools where social-emotional health and programming is prioritized, access and utilization of mental health services improve for all youth (Juszczak, Melinkovich, & Kaplan, 2003; Leaf et al. 1996), especially youth most at risk (Stephan et al., 2007). Clearly school climate and discipline are key factors in predicting the development or escalation of EPs in childhood and adolescence. While negative school climate puts children at-risk for EPs, positive and supportive school communities that attend to the social and emotional needs of all students should be considered a clear protective factor.

**Negative Outcomes Associated with Externalizing Behavior Patterns**

Childhood mental health problems, including but not limited to disruptive behavior problems, can be debilitating to youth and are barriers to learning and academic success (Wagner, 2005). Youth with social emotional disabilities consistently have poorer academic outcomes when compared to all other disability categories (Wagner,

2005; Marder et al., 1991) and are at greater risk for developing more serious emotional and anti-social behavior problems (Blackorby & Wagner, 1996; Patterson et. al., 1992).

**Child Outcomes**. In the classroom, externalizing behaviors detract from learning, interfere with instructional delivery, and negatively impact the social and academic climate of the classroom (Hinshaw, 1992; Walker, Ramsey, & Gresham, 2004; Conduct Problems Prevention Research Group, 1999). The prognosis for children who exhibit EPs early on in the classroom is poor; untreated behavior problems in early childhood often leads to the development of elevated school problems, including drug abuse and violence, and even school dropout (Landrum, Tankersley, & Kaufman, 2003). Long term, youth who do not receive adequate treatment for conduct disorder develop more serious delinquent behaviors in adolescence and adulthood, including alcohol and drug use, as well as anti-social, violent, and criminal behaviors (Molina & Pelham, 2003; Moss & Lynch, 2001; Braswell et al., 1997; Blackorby & Wagner, 1996; Patterson et. al., 1992). The negative impacts of untreated EPs are far-reaching, impacting development and functioning in school, home and community settings.

**Societal Outcomes**. EPs in childhood not only lead to negative outcomes in the individual child's life, they are also costly to society. Untreated EPs lead to more severe antisocial behavior problems that become a greater financial burden on our schools, as well as justice and health care systems (Preventing Mental Health, 2009; Centers for Disease Control and Prevention, 2006). A 2004 study by economist Ted Miller calculated the long term costs to society associated with treating chronic anti-social behavior problems in youth and adolescence, including substance abuse, violence, high-risk sexual behavior, high school drop out and suicidal behaviors. Beyond the cost of

medical treatment and use of government and community resources to treat these problems, he also included the loss of work and decline in quality of life in these calculations. The estimated total societal costs of problem behaviors in 1998 were $435.3 billion (Miller, 2004).

**Challenges with Accessing Treatment**

Despite decades of research illuminating the negative outcomes of externalizing behavior patterns, there continue to barriers that impede parents accessing and youth receiving treatment to address their externalizing behavior patterns. While one fifth of youth in our nation suffer from mental illness, only a small percentage of these youth actually receive treatment for their disorder (Huang, Macbeth, Dodge, & Jacobstein, 2004; Kataoka et al., 2002). A 1992 survey found that close to 40% of youth were identified as being at-risk for psychological problems, while only 11% of these youth were actually receiving services in traditional mental health settings (Zahner et al., 1992). This growing number of underserved youth can be largely attributed to challenges in accessing mental health services in traditional settings (Weist et al., 2009).

Psychotherapeutic interventions for youth with emotional and behavioral disorders have historically been restricted to community mental health or hospital settings. A gap has persisted between the mental health needs of youth and availability of and access to services in traditional mental health (i.e. community mental health, hospital) settings, and that gap only appears to be growing (Duchnowski & Friedman, 1990; Weist et al., 2009). A 1992 survey found that close to 40% of youth were identified as being at-risk for psychological problems, while only 11% of these youth were actually receiving services in traditional mental health settings (Zahner et al., 1992). Gaining

access to high-quality interventions in public health settings is most problematic for families with limited resources, transportation, and lack of knowledge regarding how services work. Even if families do access these services, they are often deterred by weeks or even months on waiting lists and can be overburdened by lengthy intake processes and insurance paperwork (Weist; 1999). Given the challenges of accessing services preemptively, too many disadvantaged youth, disproportionately youth of color, do not receive services until their psychological or behavior problems escalate into criminal behavior and they become involved in the juvenile justice system (Shufelt & Cocozza, 2006).

On the other hand, youth who are identified in traditional mental health settings are often subjected to psychiatric diagnoses that emphasize internal pathology and deemphasize the role of ecological factors in dysfunction (Adelman & Taylor, 2006). Clinicians in traditional settings rarely have opportunities to access or intervene with youth in natural contexts (i.e. home and school) where dysfunctional behaviors develop, limiting their ability to fully consider and alter how the child's environment maintains dysfunctional behavior. This lack of ecological validity in traditional mental health settings is a notable disadvantage in treating EPs in childhood, especially when it comes to the clinician's ability coach the child in using and generalizing new skills and strategies outside the therapeutic setting. Given the challenges with accessing mental health services located in hospital or clinics, there is growing movement towards school-based mental health.

**School-Based Mental Health**

Mandated school attendance from an early age has put schools on the 'front lines' for identifying youth with social and emotional problems (Reddy & Newman, 2009). Schools have been referred to as the "de-facto mental health system" because they are already the major providers for the small percentage of youth who actually do receive mental health services (Burns et al., 1995; Costello et al., 1996; Leaf et al., 1996; Zahner, et al., 1992). Given the limitations of mental health service delivery in traditional settings, it makes sense that national efforts to improve access to mental health services for youth and families would focus attention and efforts on expanding existing service structures in schools. In fact, fifteen years ago, Leaf et al. (1996) reviewed the use of mental health and substance abuse services by youth and concluded that if we are to meet the growing mental health needs of youth, schools must play a critical role in the future provision of mental health services.

There are a number of advantages to positioning mental health services for youth in schools. The provision of mental health services in the school setting may reduce traditional 'barriers to care,' namely barriers related to access, stigma, and continuity of care (Nabors, Weist & Reynolds, 2000). As previously stated, impoverished youth, who are at the greatest risk for developing social emotional problems and negative outcomes, have lower rates of insurance coverage and therefore lack access to mental health services (Glied et al. 1997). Further, statistics show that youth in poverty who do access services in traditional settings tend to drop out (Kazdin et al. 1997). Alternately, research has consistently shown that access to mental health services improves for youth who attend schools with programs aimed at improving access and utilization for youth

(Juszczak et al. 2003; Leaf et al. 1996; Santelli et al. 1996) and that these services are reaching youth most at risk, including youth from ethnic minority groups and those with 'invisible' and neglected internalizing disorders (Stephan et al., 2007). Positioning services in the schools allows at-risk, uninsured youth and families to access much needed services at low or no cost at a convenient, community-based location.

For many families, the stigma associated with receiving mental health services prevents youth and parents from seeking support, and research shows that this stigma more negatively impacts youth and families from minority ethnic groups (Power, 2003). Families who are less likely to seek out psychological services for this reason may be more amenable to services framed as 'educationally-relevant' and delivered and accessible in a 'natural,' familiar setting (Weist, 1997). Reframing mental health services in this way, as part of educational success, makes a statement that social-emotional health is intertwined with academic success and has the potential to reduce that stigma and encourage families who need it the most to take advantage of these services.

Schools represent one of the primary settings in which childhood services are delivered. School personnel monitor and support the academic and developmental needs of youth from preschool through high school. In this way, schools are better situated than clinics or hospitals to provide an ecologically-grounded approach to mental health service delivery (Atkins et al., 2001). Monitoring and intervention services can follow youth as they develop and progress in their educational program, leading to better gains, generalization, and maintenance (Evans, 1999). School-based providers are also positioned better to be more responsive and ensure the continuity of care across the different environments—namely school and home—in which youth function. Further, as

proposed by Adelman and Taylor (2006), this ecological approach resists the tendency in the field of child mental health to attribute problems to a within-child pathology, focusing instead on how the environments can be altered to better support the wellbeing and success of youth. This approach removes the pressure to diagnosis or pathologize the child, and instead emphasizes the potential for key social figures and contexts to positively teach and reinforce the development of prosocial and proacademic behaviors.

While the focus of many public schools has been to educate and provide academic instruction, the literature provides ample evidence that the successful education of youth involves attention to both academic and social emotional development (Merrell, 2002), and that schools are already the primary providers of mental health services for those youth in need (Hoagwood, 2005). Recent educational legislation recognizes this link between educational success and behavioral health; the reauthorization of the Individuals with Disabilities Education Act (IDEA 2004) allocated funds for evidence-based early intervention services to promote both academic and behavioral health (Maag & Katsiyannis, 2012). Further, the expansion of mental health treatments in schools has been a primary recommendation in reports from the New Freedom Commission, U.S. Surgeon General, and Children's Mental Health conference (Stephan et al, 2007). Public and legislative recognition of the is only the first step; there is still much work to be done to improve the quality of prevention and intervention services schools are providing to youth and families in need.

**Traditional School-Based Approaches to Address Externalizing Behaviors**

Although schools are ideally positioned to promote behavioral health in youth, typical approaches to addressing EPs in schools have unfortunately been characterized as

negative and reactive (Mayer, 2001). For the most part, U.S. public schools have over-relied on negative, punitive measures to manage disruptive behavior problems (Colvin & Sugai, 1988; Mayer, 2001), including disapproval statements, office referral, time-out, suspension, and in too many cases, expulsion (Heller & White, 1975; Shores et al., 1993; Van Acker, Grant, & Henry, 1996). While the overreliance on punitive discipline affects many youth, it is disproportionality directed at males, youth of color, and student from low-income homes (McFadden, Marsh, Price, & Hwang, 1992; Shaw & Braden, 1990; Skiba, 2000). Too many school disciple initiatives aimed at decreasing rates of EPs in schools, including popular 'zero tolerance' policies, have not been shown to effective (Sprague, Cook, Browning Wright, & Sadler, 2008).

Research has consistently demonstrated that negative and punitive approaches to discipline actually marginalize at-risk youth and contribute to increased misbehavior, lack of academic achievement, poorer school climate, an elevated dropout rate, and increased juvenile delinquency and incarceration (APA, 2006; APA Zero Tolerance Task Force, 2008; Bear, 1998; Skiba, Ritter, Simmons, Peterson, Miller, 2006). Despite substantial investment of resources in programming to 'combat' EPs, an estimated $50 billion in 2002 (Chambers, Parrish, & Harr, 2002), efforts to successfully educate youth with emotional and behavioral problems have been largely inadequate (Walker, Nishioka, Zeller, Severson, & Feil, 2000; Walker, Zeller, Close, Webber, & Gresham, 1999).

Youth who display persistent EPs (i.e. conduct problems) often qualify for special education services under the label Emotional Disturbance (ED) and/or are likely to be placed in restrictive classroom settings with other volatile youth. Restrictive placements limit access to typically developing peers and positive social exchanges. Stigmatization

of youth with an ED label is common, leading many teachers and administrators to decrease learning demands and expectations, which ultimately leads to fewer learning opportunities, academic failure and school drop-out for many youth (Arnold et al., 1999; U.S. Department of Education, 1994). Moreover, the literature on peer contagion indicates that restrictive programs for youth with EPs can serve as an iatrogenic intervention in which peers train one another in more deviant behaviors (Dishion & Patterson, 1992). To make matters worse, if ED identification represents the means by which schools implement services for youth with EP, then these youth must wait years before they receive services, because the average age of ED identification is 14. This is clearly an example of poor service delivery that impedes the provision of preventive interventions for youth with EP (Gresham, 2005)

Given the lackluster services associated with traditional school-based service delivery for youth with EP, the identification and dissemination of effective, cost-efficient methods to serve this population has become a national priority in the fields of education and mental health. Faced with the costs of serving youth with EP and the demands, federal and state agencies have emphasized the integration of EBPs in schools to increase effectiveness and accountability in preventing and treating EP in schools (National Coordinating Technical Assistance Center for Drug Prevention and School Safety Program Coordinators, 2003). Thankfully, research has identified a range of EBP to prevent, remediate, and treat EP.

**Evidence-based Practices in School Mental Health**

Over the last 20 years, there has been tremendous growth in empirical knowledge leading to major breakthroughs in identifying effective treatments for EPs, and an overall

increase in school-based programming to promote, prevent and treat the social, emotional and behavioral needs of youth in the school setting (Weist, 2003). This growing emphasis on the use of EBPs in educational settings has the potential to change the landscape of supports for youth with EPs.

Attention to and popularity of EBPs in the fields of psychology and education has grown exponentially over the last 20 years (Hoagwood et al., 2001; Kratochwill & Stoiber, 2002; Power, 2003). Taking cues from the field of medicine, the child mental health field now seeks to provide the highest quality care to improve child and family outcomes by informing clinical practice with current research (Sox & Woolf, 1993; Woolf & Atkins, 2001). The Institute of Medicine (2001) defines EBP as "the integration of best research evidence with clinical expertise and patient values," a definition adopted and supported by the American Psychological Association (p. 147). In the education realm, a major tenant of the 2001 No Child Left Behind Act was to require standards for effective interventions through the use of Evidence Based Education (Report of the Coalition for Evidence-Based Policy, 2002). The National Association of School Psychologists (NASP) acknowledges the transfer of empirically based practices into schools as one of the most important issues confronting school psychologists today (Kratochwill & Shernoff, 2004).

There are a number of clear advantages to utilizing EBPs in the treatment of EPs in schools, namely increased assurance that the time, resources, and energy invested in treatment efforts leads to measurable reductions in problematic behaviors. Ideally, EBPs streamline programs or treatments by providing practitioners with, in the words of Garland and colleagues (2008) a "clear operationalization of treatment," which is

required in research and helpful in practice (p. 506). This operationalization of treatment often takes the form of a treatment manual or curriculum that outlines a step-by-step protocol that when followed helps to ensure treatment fidelity and effectiveness. A number of studies have shown that strict adherence to treatment protocols typically increases the fidelity of treatment as well as effectiveness (Henggeler et al., 2002), and consumer satisfaction data is high among practitioners and families who use individual treatment programs (Raines, 2008). From a cost standpoint, research suggests that EBPs have promise to produce more cost-efficient outcomes (Cohen, 1998). A 2006 report from Washington State Institute for Public Policy analyzed evidence-based treatments designed to reduce serious criminal activity by adolescents and found that benefits and savings far outweighed costs.

Nearly every professional school mental health organization's (i.e. NASP, SSWAA, etc.) code of ethics includes a clause obligating school mental health practitioners to stay abreast on current treatment literature and choose practices that have empirical support (Raines, 2008). Further, federal legislation in Individuals with Disabilities Education Act (IDEA) requires school-based practitioners to use interventions supported by scientific evidence (Raines, 2008). Mental health professionals are obligated ethically to maintain their knowledge and skills in applying treatment based on scientific research. Clearly, the case for the implementation of EBPs in school mental health is strong and growing.

**Evidence-Based Parent Training Interventions for Externalizing Behavior Patterns**

There are numerous EBP that target youth with EP, but parent training programs are considered among the most efficacious (Prout, 2007; Van de Wiel, Matthys, Cohen-

Kettenis, & van Engelhand, 2002) as well as cost and time efficient (Wright, Schaefer, and Solomons, 1979; Graziano & Diament, 1992) treatment approaches. EPs have long been both a persistent source of stress for parents and the primary reason youth are referred for psychological services in school (Kazdin, Bass, Ayers, & Rodgers, 1990; Hinshaw & Lee, 2003). Further, poor parenting practices are strongly associated with the development and persistence of EPs. For these reasons, over the years, the clinical treatment of childhood behavioral problems has shifted from traditional child-focused therapies to multi-modal approaches that incorporate skill development and coaching with parents (Lundahl et al., 2006).

Parent training programs largely target the maladaptive parenting habits that contribute to the escalation and reinforcement of externalizing, anti-social behavior problems (Maughn et al., 2005). Maladaptive parenting in the form of coercive interaction patterns between the child and the parent, poor parental monitoring, and harsh, inconsistent discipline have been identified as common determinants in the development of EP (Patterson, 1982; Snyder & Patterson, 1995; Forehand & McMahon, 2003). Indeed, these maladaptive parenting practices have been shown to predict the development of severe behavioral problems including Oppositional Defiant Disorder (ODD), Conduct Disorder (CD), and Attention-Deficit Hyperactivity Disorder (ADHD) (Burt, Krueger, Iacono & McGue, 2003).

**Behavioral parent training**. Behavioral Parent Training (BPT) programs focus primarily on coaching parents to develop behavior management strategies, including positive reinforcement of prosocial behaviors and consistent responding in the delivery of developmentally appropriate disciplinary consequences (Kaminski et al., 2008), but are

also informed by principles derived from social learning and attachment theories (Maughn et al., 2005). BPT differs from parent-education programs in that parents actively acquire skills through modeling, role-play and homework; this emphasis on active skill acquisition sets BPT programs apart from other non-behavioral parent-training treatments that primarily target parental attitudes and communication patterns with youth (Lundahl, 2006). The empirical evidence for parent training programs focused on the acquisition of behavior management skills is stronger than other parent training programs (Hudson, 1982; Hughes & Wilson, 1988; Olson & Roberts, 1987; Miller & Prinz, 1990; Serketich and Dumas, 1996; Lundahl, 2006).

Popular and efficacious BPT programs include Parent-Management Training, Helping the Noncompliant Child, Incredible Years, Parent-Child Interaction Therapy, and the Positive Parenting Program (Triple-P), to name a few. Though developed by different researchers, these treatment programs target similar types of EPs, are rooted in a similar theoretical models of change, and share common treatment and delivery elements (Kaminski et al., 2008). The majority are also developed and tested as manual-based programs that outline session-by-session treatment procedures. To maintain treatment fidelity, practitioners are required to receive extensive training and maintain close adherence to the treatment protocol. There is typically little room for deviation or modification from the treatment protocol. These BPT programs, which may be delivered in group or individual treatment settings, are predominantly utilized in child welfare, early education/Head Start, university hospital, and community mental health clinics (Barth et al., 2005).

While an estimated 800,000 families receive behavioral parent training each year (Barth et al., 2005), still only 1 in 10 parents participate in parent education programs (Sanders et al, 1999). Given the sheer number of youth who exhibit EP across development, improved access to parent training supports is needed and should be a priority on the school-based mental health agenda. While BPT programs are typically designed and administered in clinical and community mental health settings (Lundahl, 2006), there is a need to expand parent education programs to the school setting, where there is a captive audience of at-risk youth and practitioners can reach out to and incorporate parents in the services delivery process (Burns et al., 1995).

**Parenting Interventions in the School Setting**

As previously stated, the utilization of EBTs to improve academic and behavioral outcomes in school settings are growing in popularity, and interest in incorporating parenting programs has been no exception (Weist et al., 2003). Given the adverse educational impacts associated with conduct and other EPs, administrators and school-based mental health practitioners are wise to consider incorporating evidence-based parent-training strategies to prevent and address the escalation of such problems in schools. However, despite the clear benefits and legislative support for behavioral parent training interventions to reduce EPs, the majority of school mental health practitioners, including school psychologists, counselors, and social workers, are still not utilizing these research-informed techniques (Weisz and Gray, 2008; Cohen, Mannarino, & Rogal, 2001; Hallfors & Godette, 2002). Researchers and practitioners are discovering that these evidence-based treatments do not easily and effectively transfer to practical settings (Kazdin, 2008). This is especially true in the school setting, where historically, contexts

are not conducive to the transfer of evidence-based treatment programs, threatening treatment fidelity and ultimately effectiveness (Weisz, Donenberg, Han & Weiss, 1995; Embry & Biglan, 2008; Kazdin, 2008).

**Limitations of EBT Implementation in Community Settings**

**Feasibility.** Issues related to the feasibility of transferring manual-based treatment programs to the school setting mirror those challenges experienced in other settings, including community mental health and hospital settings. These issues help provide an explanation for the underutilization of BPT and other evidence-based treatment programs in school and other community treatment settings (Chorpita, Daleiden, & Weisz, 2005). Up to this point, schools have had little success applying comprehensive, evidence-based treatment programs with fidelity and achieving the same effects as demonstrated in tightly controlled research studies (Storch & Crisp, 2004). This is especially true of transporting multi-modal programs, as behavioral parent-training programs might be categorized, which require coordination of supports and services across multiple settings. Cost and resources, intensive training and support requirements, duration of treatment, and procedural rigor of applying EBTs inhibit school administrators and mental health professionals from implementing BPT programs in their schools (Eckert & Hintze, 2000; Kratochwill & Stobier, 2000; Ringeissen et al., 2003).

**Cost**. Many of the empirically supported BPT programs necessitate considerable investment in materials, training, as well as ongoing support and monitoring of intervention fidelity. Developing competence in delivering these treatment programs with fidelity often require implementers to attend costly, intensive trainings and, in some cases, meet certification requirements before utilizing the programs (Kazdin, 2005;

Embry & Biglan, 2008). For example, a review of Kazdin's (2005) *Parent Management Training*, which has an extensive evidence base, revealed that practitioners need a minimum of six months of training before they can successfully implement PMT (Kazdin, 2005). The FAST track program, a similar multi-modal approach with a parent training program, utilizes both universal and selective components to target at-risk 'early starters' across developmental stages (from grade 1 through 10) and costs an estimated $5,828/year (Foster, Jones, & Conduct Problems Prevention Research Group, 2006).

While extensive trainings and manuals may help to ensure fidelity and effectiveness, the cost of implementing these comprehensive programs are major setbacks for schools and school-based practitioners that are lacking funds and resources (Embry & Biglan, 2008; Ringeisen et al. 2003; Storch & Crisp, 2004). Poor funding for mental health services has long been a barrier to treatment implementation, especially in schools, and as Embry & Biglan (2008) suggest, "There is no reason to expect a surge in such funds at a local, state, or federal level anytime soon," suggesting a need for innovation to develop interventions that are effective on problems, but also cost effective (p. 76).

**Poor Treatment Fidelity**. Recent studies reveal that even when expensive treatment programs and manuals are purchased and made available to practitioners, a significant number of teachers and other school mental health implementers of EBTs are not using or following the manuals closely (Ringwalt et al., 2003), which puts fidelity and effectiveness at risk (Hallfors and Godette, 2002). Indeed, the field of *implementation science* has been developed to study issues with the translation, adoption, and implementation of known EBTs (Michie, Fixsen, Grimshaw & Eccles, 2009).

Beyond cost, there are valid concerns regarding school-based practitioners' ability to implement comprehensive treatment programs with fidelity in school settings. Many treatment programs are reliant on mastery and rigid adherence to comprehensive manuals (Kratochwill & Stoiber, 2002). In schools, some educators view manual-based treatments as impositions, taking time away from the child's academic needs, and not aligned with the values or theoretical approach of practitioners or implementers (Kratochwill & Stoiber, 2002). Many manualized programs are viewed as structured to the point of being inflexible, making it difficult to individualize treatment, especially when working with ethnically diverse youth and families (Weisz, Jensen-Doss & Hawley, 2006). As a result, the very people charged with the duty of implementing these intensive treatments or curriculum are often times unenthusiastic, unavailable, or unprepared to learn and apply them with fidelity. Acknowledgement of these attitudinal and ability factors is critical, as Garland et al. (2005) suggest, "Even the most efficacious intervention risks failure to have an impact on public health if therapists are unable or unwilling to implement it with enthusiasm and fidelity" (p. 507).

According to Ringeisen, Henderson & Hoagwood (2003), treatment infidelity in school settings is partly due to the fact that "the literature on EBPs in children's mental health pays insufficient attention to features of the school context that might influence intervention delivery" (154). Unlike traditional mental health settings, the primary aim of schools is to educate, which means the mindset and practices of educators are organized around this goal. There are practical barriers, including time, space, and trained staff, that are not present in research and other controlled settings (Kratochwill & Sheroff, 2004). The overall shortage of mental health personnel in schools greatly impacts the

extent to which EBTs can be applied with fidelity, as revealed by Ringeisen (2003), "the ratio of school psychologists or social workers averages 1 to 2,500 youth; for school counselors the ratio is 1 to 1,000," (p. 159). Shortage of mental health practitioners makes implementation of comprehensive treatment programs, especially behavioral parent training treatments, less feasible and less preferred by administrators.

The limitations in applying EBTs to the school settings notwithstanding, the idea of EBPs and behavioral parent-training should not be abandoned. On the contrary, schools are arguably the most important place to administer the most effective interventions given the high numbers of youth with EPs and the even higher risk of leaving these problems untreated. Rather, these limitations indicate a need to reconsider the way both researchers and practitioners define and use evidence when devising and delivering treatment. There continues to be a significant gap between the programs and interventions being produced by clinical treatment efficacy research and the need for feasible EBPs that can be applied in schools, the primary providers of mental health services for youth (Hoagwood, Burns, Kiser, Ringeisen, and Schoenwald, 2001).

To begin to close this gap, Kazdin (2008) offers a useful distinction between *evidence-based treatments* (EBTs) and *evidence-based practices* (EBPs) (Kazdin, 2008). As Alan Kazdin (2008) suggests, EBTs are "interventions or techniques… that have produced therapeutic change in controlled trials" while EBPs really refer "to clinical practice that is informed by evidence about interventions, clinical expertise, and patient needs, values, and preferences and their integration in decision making about individual care" (p. 147). While the research base for disruptive behavior treatments appears to be strong and growing, research has overemphasized the development and assessment of *treatments*

over *practices*, and as a result, has made little impact on everyday practice. In a recent review of evidence-based *treatments* for youth with disruptive behavior problems, Eyberg et al. (2008) identified 16 evidence-based treatments for EPs but found that no one program emerged as the best when compared to others.

Embry and Biglan (2008) believe that the "sole reliance on program dissemination to affect population outcomes will have a limited impact, even with restrictive policies" (p. 76). Instead, a number of researchers are currently exploring the possibility that research resources might best be devoted to identifying components found in effective programs and assessing their application to care as usual. In other words, the greatest hope for seeing evidence-based *practices* improve treatment in school and other community settings will likely be dependent on the field's ability to identify, define, and disseminate the common components or active ingredients that drive the outcomes of effective treatments (Chorpita et al. 2005; Garland et al., 2008; Embry & Biglan, 2008).

**The Identification and Application of 'Common Elements' for the Effective Treatment of Externalizing Disorders in School Settings**

There is already a wealth of research outlining both mediators and moderators common in effective treatments for youth with disruptive behavior disorders, with a recent study conduced by Kaminski, Valle, Filene & Boyle (2008) outlining those specific to behavioral parent training programs. The 'Common Elements Approach,' as described by Garland, Hawley, Brookman-Frazee, & Hurlburt (2008), considers the possibility that the identification and application of common elements of EBTs can improve both dissemination and practice. Using a systematic review of interventions for youth with disruptive behavior problems and their parents, many of which appeared in

Eyberg et al.'s (2008) review, Garland et al. identified 21 core, common elements of evidence-based treatment programs for disruptive behavior problems. The Dephi technique was utilized by Garland's team, in which a team of six experts underwent a three step process to identify these 21 core elements: 1) identify treatments with strong evidence of efficacy, 2) review treatment materials (protocols, manuals, articles, etc.) to compare core elements of the treatment programs and 3) survey experts to gain consensus on the validity of their list of common elements (Garland et al., 2008). Identified elements included both therapeutic content and treatment techniques, as well as aspects of the working alliance, and other parameters such as treatment duration.

Similar to Eyberg et al.'s (2008) findings, Garland et al. (2008) found that effective treatment programs for youth with disruptive behavior problems typically fell into two categories: parent-mediated programs or direct child training programs, with some incorporating both delivery approaches. In a review to determine common elements, Garland et al. (2008) differentiated between components found in each respective approach, and indicated when components were present in both. Identified therapeutic content components were: principles of positive reinforcement; principles of effective limit setting/discipline; parent-child relationship building; problem-solving skills; anger management; affect education; anticipating/training for setbacks. Identified treatment technique components included: delivering positive reinforcement; delivering punishment/rule setting; psychoeducation/didactics; assigning and reviewing homework; role-playing/behavioral rehearsal; modeling; providing materials; and reviewing goals and progress. Common aspects of the working alliance included consensual goal setting and building rapport or an affective bond. Common treatment parameters included

participation by both parent and child in 1-hour sessions, at least once weekly, for no less than 12 total sessions.

These findings were consistent with those of a 2005 study conducted by Chorpita, Daleiden, & Weisz. Chorpita et al. (2005) used a distillation and matching model (DMM) to develop profiles of the common components found in the EBTs for disruptive behavior problems as well. The seven most commonly represented practice elements for youth with disruptive behavior disorders identified in this study by Chorpita and colleagues (2005) include: limit setting; time out; ignoring; parent praise; problem-solving; psychoeducation of parents; and tangible rewards. Researchers Embry and Biglan (2008) have taken a similar approach to interpreting research in EBPs, also attempting to identify core treatment strategies that they call *evidence-based kernels*. Embry and Biglan (2008) define evidence-based kernels as "a behavior-influence procedure shown through experimental analysis to affect a specific behavior and that is indivisible in the sense that removing any of its components would render it inert" (p. 75). While they focused on kernels targeting a variety of psychological and behavioral disorders, those identified to treat EPs add to the consensus above, including: timeout; use of verbal praise and tangible reinforcements; positive play between parent and child. Similar to Garland et al. (2008) and Chorpita et al. (2005), Embry and Biglan (2008) advocate that evidence-based treatment programs can be distilled down into 'active ingredients' that have the potential to "contribute to developing interventions that are more efficient and effective" (p. 75). The treatment component overlap found in these multiple studies that employed different approaches to identifying components is

significant because, in Garland et al.'s (2007) words, it "lends significant consensual validity to the identification of common elements" (511).

**'Active Ingredients' in Evidence-Based Behavioral Parent Training Treatments.** As previously stated, BPT programs are considered to be among the most effective methods for treating EP in youth, but they are not being adopted and implemented on a large scale basis in the schools. As a result, a logical next step is to begin the process of translating these programs into modified parenting interventions that possess common treatment components that are central to the efficacy in reducing behavior problems in youth. Within the field of parent training, Kaminski, Valle, Filene and Boyle (2008) deconstructed parent-training programs for to identify which treatment components, or 'active ingredients,' act as mediators in treatment outcomes. Kaminski and colleague's (2008) approach took this analysis a step further, however, in analyzing which treatment components were associated with programs that yielded the largest effect sizes and had similar findings. Identification of key mediators in parent training interventions creates potential for the application of parent-training strategies that are more feasible, flexible, and efficient to implement for a wider range of youth and their families.

***Mediators***. In their 2008 meta-analysis, Kaminski, Valle, Filene & Boyle (2008) set out to better understand mechanisms of change found in evidence-based BPT programs for parents of youth ages 0 to 7 years old; these will be referred to as 'key ingredients' throughout this paper. Kaminski and colleagues (2008) identified which common components act as mediators, in that they are consistently associated with strong outcomes in two areas: 1) parent acquisition of skills and parenting behaviors and 2) child

externalizing behavior outcomes. Both content and delivery components were analyzed. To summarize their findings, three key ingredients were associated with improvements in parents' acquisition of skill and improved parenting behaviors, four were associated with improvement in externalizing child behaviors, and two were associated with larger effect sizes in both. First, BPT programs that taught parents emotional communication skills (content component) saw greater effects in parent acquisition of skills and behaviors. Next, programs that coached parents how to a) correctly utilize time out and b) consistently respond to their child (both content components) saw greater effects in reducing externalizing child behaviors. Finally, two key ingredients were associated with larger effects in both outcomes: a) teaching parents to increase positive interactions with their youth (content component) and b) requiring parents to practice with their own child during session times under the guidance of the therapist (delivery component).

Endorsement of these last two ingredients, increased positive interactions and guided practice with own child, are supported in the literature elsewhere. Early research in parenting styles suggested that a 'love-oriented style,' as described by Sears et al. (1957), which consists of the use of warmth, praise, and emotional affection (and withdrawal of these) to respond to their child's behaviors, were associated with the internalization of parental values and the development of prosocial behaviors (self-control and self-regulation) in youth. This seems to match Kaminski's (2008) findings that programs focused on increasing positive interactions between child and parent should improve relationships and child compliance with parental requests. Likewise, the association between BPT programs with stronger effects and the guided practice

component is not surprising, as these findings are consistent with traditional educational literature that suggests learning in context is more effective (Hattie et al., 1996).

***Expendable Components***. The Kaminski et al. (2008) study also highlighted potentially expendable ingredients, or components associated with programs that had weaker effects on parenting and child outcomes. Teaching parents how to promote their child's academic and cognitive skills, problem solve about child behaviors and offering additional ancillary services as part of the parenting program were associated with programs that had weaker effects on these outcomes (Kaminski et al., 2008). In fact, teaching parents how to promote social skills was associated with programs that appeared to have a reverse impact on youth's EP. Thus, there appear to be components associated with parent training programs that produce minimal to no effect on youth behavior.

These findings draw attention to a significant hurdle in developing and promoting evidence-based interventions: the challenge of letting go of certain strategies or techniques that may have a long history in child treatment but upon further investigation, are not consistently associated with improvements in functioning. In a 2006 report, Lundahl et al. (2006) described these "inconsistencies between the findings of these meta-analyses and expected parent training outcomes derived from theory and clinical wisdom" (p. 2). Research in evidence-based practice is not just about determining what works, but it also aims to identify and eliminate superfluous components that do not contribute to effects with the hope of designing more efficient, cost effective programs that can reach more families in need.

While the integration of EBTs in school and community settings has been slow and met with many challenges, there is great potential in the application of a 'key

ingredient' approach to improve the transfer of EBPs to settings where they can best be delivered to meet the needs of youth. More specifically, these findings enable school-based practitioners to develop modified, shorter-term therapeutic interventions that can be more feasibly applied in the school setting.

**Improving School Based Treatment with Key Ingredients**

The identification of specific treatment techniques and procedures, or 'key ingredients,' in evidence-based treatment programs has the potential to change the way researchers and clinicians attempt to transfer EBPs into everyday clinical settings. More so than traditional evidence-based treatment manuals or protocols, this 'Common Elements Approach,' as it's been termed by Garland and colleagues (2008), allows practitioners to combine clinical judgment with knowledge of evidence-based treatment components to tailor treatments that fit the client and the setting. Consideration of 'other' factors in selecting treatment, including context, patient, and cultural variables as well as clinician preferences, has been a direct recommendation by the 2005 Presidential Task Force on Evidence-Based Practice. These key ingredients hold the potential for development of flexible treatment 'profiles' that are grounded in evidence and can be utilized in a variety of context.

In the school setting, a 'key ingredients' approach may provide school practitioners with the guidance and flexibility needed to more effectively and efficiently apply EBPs in school-based practice. Specifically, this innovative approach has the potential to aid school practitioners in a) evaluating and enhancing 'care as usual' for students with EPs and b) adapting EBTs to better fit the school context. This approach may also provide school practitioners with a structured way to assess and improve the

quality of interventions they provide by first defining the features and procedures and then comparing those procedures identified key ingredients for the particular disorder (i.e. EP) being treated. This has the potential to advance the field of school mental health practice by a) informing research of what types of services are being delivered in school settings, b) helping practitioners to know what makes programs effective and why, and c) enhancing 'care as usual' by improving or incorporating the key, active components. This approach acknowledges, like Kratochwill & Shernoff (2004), the central role that school-based practitioners play in the research process, taking active steps to inform practice with current research as well as informing future research with practice in real contexts.

**The Potential for Key Ingredients of BPT to Enhance the School Home Note Intervention**

While any number of school-based behavioral interventions would benefit from this type of analysis and improvement, Daily Behavior Report Cards (DBRC) are considered to be one of the more widely utilized interventions nationwide to treat EPs in a wide range of youth (Vannest, Davis, Davis, Mason & Burke, 2010). DBRCs, which are utilized in a variety of formats and may be called by a variety of names, aim to achieve reductions in EPs by increasing communication and collaboration between home and school (Bailey, Wolf, & Phillips, 1970; Sluyter & Hawkins, 1972). Research suggests that DBRCs, including "Home-School Notes" (Long & Edwards, 1994) and "Home-Based Reinforcement" (Atkeson & Forehand, 1979) are the most utilized by educators to address EPs because they are viewed as nondisruptive, flexible, efficient,

and effective (Vannest et al., 2010; Vannest & Parker, 2010). In other words, they are viewed as feasible.

The School Home Note (SHN) is one such format of a DBRC, and was selected as a base for the ESHN intervention and the focus of this study because of its emphasis on parent collaboration. When implemented well, the SHN represents a type of daily behavior report card that requires teachers to complete a short, daily evaluation of students' behavior that students then bring home for their parents to review and provide consequences (positive or negative) based on the evaluation (Kelley, 1990). However, in actual everyday practice, SHNs, like many other interventions, are not designed and, therefore, implemented with this degree of rigor. SHNs are thought to be effective because parents can offer reinforcements or disciplinary consequences at home impact behavior at school (Kelley, 1990). Ideally, SHNs promote a collaborative approach to treatment, improving communication and shared responsibility between parents, teachers, and students and increase prosocial and academic behaviors among students with EPs via greater consistency across school and home contexts and enhanced contingency management (Kelley, 1990).

Indeed, the SHN represents one of the most widely used interventions employed in schools. Research identified varying levels of effectiveness in addressing student problem behaviors (Vannest et al., 2010). The efficacy of the SHN and most DBRCs rest on one major assumption: parents can effectively translate the SHN into parenting practices that reduce EPs in school and increase prosocial and academic performance. Given the critical role that effective parenting practices play in the SHN, it makes logical sense to incorporate brief behavioral parent trainings about how to interpret the

information included in the SHN and translate it into effective parenting practices that are likely to decrease EPs and increase prosocial behavior and academic performance. Viewed in this way, the SHN provides an excellent opportunity to utilize existing, accepted practices as a means to integrate key ingredients of BPT into school-based service delivery.

There are several reasons supporting the use of the SHN in this way. First, the term SHN represents common language used by educators in authentic educational settings; therefore, it does not require educators and parents to develop additional vocabulary, which can potentially serve as a barrier to the adoption and implementation of evidence-based practices. There have been several research articles that have discussed about the importance of creating a common language to increase the use of evidence-based practices (Greenberg et al., 2003; Odom et al., 2004; Kratochwill & Stoiber, 2002). Second, teachers naturally create some form of a SHN to communicate with parents about their child's performance in the school (Guli, 2005). As a result, incorporating key ingredients of BPT with the SHN represents an enhancement of a practice that occurs naturally between many teachers and parents, rather than asking teachers and parents to be involved in an intervention that differs significantly from practice-as-usual. Hence, BPT paired with the SHN is less likely to be viewed as intimidating and cumbersome. Finally, given the etiological research linking the development and expression of EPs to coercive interactions in the home and maladaptive parenting practices, including key ingredients of BPT as part of the SHN intervention will likely enhance its efficacy to produce desirable changes in the child's behavior and school performance.

An analysis of the treatment components present in the SHN intervention reveals that a number of key ingredients as outlined by Chorpita et al. (2005), Garland et al. (2005), and Embry et al. (2004) above, are already present, including the delivery of punishment/rule setting and tangible rewards. When assessed against a 'treatment profile' for youth with EPs, as described by Chorpita et al. (2005), the practitioner may find that certain components need improvement, while others may be added to enhance the effectiveness of this intervention. For example, the SHN 'assumes' that parents have the skills to effectively and consistently deliver praise and consequences when in fact research suggests that parents of youth with EPs tend to focus on negative behaviors and are inconsistent in disciplinary practices. Therefore, enhancing and adding key ingredients found in BPT programs for youth with EPs would hypothetically lead to improved treatment response and outcomes for youth who display chronic EPs in multiple settings and therefore require more intensive support (Kaminski et al., 2008; Garland et al., 2008).

## Chapter III: Research Hypotheses

### Statement of the Problem

The literature is clear in describing the efficacy of behavioral parenting interventions in reducing disruptive behavior problems, a common behavioral health concern and barrier to learning in school settings. Research has also revealed the active treatment ingredients associated with these most effective programs, ingredients that some believe have the potential to improve practice and dissemination of EBPs in community and school treatment settings. We have some indication of the types of

interventions, termed "care as usual" currently being utilized to address EPs in school settings, Direct Behavior Report Cards. What is not known is if and how applying key ingredients to this common school-based practice may improve 1) reduction of EPs in youth with persistent problems not adequately addressed by "care as usual" and 2) the acceptability and feasibility of applying EBPs in settings where effective mental health intervention is most needed.

**Purpose of the Study**

The overarching purpose of this study was to examine the effects of a short-term behavioral parent training intervention on EPs. Specifically, this study sought to apply core treatment components, or active ingredients, found in EBTs to a commonly used intervention, DBRCs, in the school setting. This study evaluated the effectiveness, acceptability, and feasibility of what has been termed the Enhanced School-Home Note (ESHN) Intervention for elementary school-aged students with identified EPs. In the ESHN, the SHN, a type of DBRC, will be used as a vehicle to deliver these active treatment ingredients drawn from the evidence-based BPT training literature. The study addresses three primary research questions:

**Research question #1.** To what extent will the ESHN produce changes in students' EPs when compared to levels during baseline phase in which the SHN-as-usual is implemented?

**Hypothesis #1.** It is hypothesized that participants will show reductions in levels of EPs in the classroom during the ESHN intervention phase than when SHN-as-usual is implemented during baseline phase.

**Research question #2.** To what extent will the ESHN produce changes in students' duration of academic engagement when compared to duration during baseline phase in which the SHN-as-usual is implemented?

**Hypothesis #2.** It is hypothesized that participants will show increased duration of academic engagement in the classroom during the ESHN intervention phase than when SHN-as-usual is implemented during baseline phase.

**Research question #3.** To what extent will parents and teachers report satisfaction with the ESHN intervention? Specifically, to what extent will they find the ESHN intervention to be an effective, feasible, and acceptable intervention for their youth with EPs?

**Hypothesis #3.** It is hypothesized that parents and teachers will report high levels of satisfaction with the ESHN intervention; they will report the ESHN to be an effective, feasible, and acceptable intervention for their youth with EPs.

**Research question #4.** To what extent will parents report a change in levels of stress and efficacy following the ESHN intervention as compared to levels during baseline?

**Hypothesis #4.** It is hypothesized that parents will report a reduction in parenting stress and an increase in parenting efficacy following the ESHN intervention as compared to levels during baseline.

## Chapter IV: Method

In this section, the participants, setting, experimental design, measures, and procedures of the study will be described.

### Participants and Setting

Participants for this study were four elementary students between the ages of 5 and 8 years old and their parent(s) from an urban public school district located in the Northwestern part of the United States. Participants came from a small (350 students) K-8 public school where 80% of students are African American and 80% of students receive free/reduced lunch.

**Eligibility**. To determine eligibility for participation, an initial screening was completed in which classroom teachers nominated and ranked students in their classroom that exhibited problematic EPs (i.e. noncompliant, hyperactive, off-task behaviors). Once students were identified, a SHN-as-usual intervention was then implemented and progress-monitoring data collected via daily behavior ratings (DBRs) completed by the teacher. Students who showed poor responsiveness to the school-home note-as-usual intervention, as determined by stable or increasing levels of disruptive behaviors on DBRs, were eligible to participate in this study.

Due to high rates of comorbid disorders, including but not limited to Autism Spectrum Disorder and Internalizing Problems, individuals with these disorders were not excluded from this study. Inclusion of a heterogeneous group that reflects real-world characteristics of the population of youth with EPs is consistent with the current trend to examine real-world feasibility and effectiveness of interventions (MTA; Chronis, Jones & Raggi, 2006).

**Demographics**. All participants in this study were elementary-school children with identified EPs who participated in general education classrooms. The participants were three males and one female, ranging in age from 5 to 8 years, and their parents. These children were selected to participate in this study based on teacher referrals that indicated persistent EPs, namely disruptive classroom behaviors. Specific concerns related to EPs varied for each participant so the target behaviors and goals were selected based on the behavioral needs and concerns of the child; all target behaviors fell within the category of EPs. Participants represent the racial, ethnic, and socioeconomic diversity of students in urban school settings. English was the sole language spoken by the participants.

***David.*** David (all names are pseudonyms), an 8-year old African American boy in the second grade, was referred for behavioral support due to reports of off-task, inattentive, impulsive, and behaviors. According to teachers, David had previously been referred to the Student Intervention Team (S.I.T.) for academic and behavioral problems, but parent was resistant to special education evaluation. David was one of many "high-needs" students in his class. David was an only-child whose parents were separated, though his mother was remarried and David was reported to have a positive relationship with his stepfather. David's mother, a full-time employee in the medical field, participated in parent-coaching sessions.

***James.*** James, a 6-year old African American boy in the first grade, was referred for behavioral support due to reports of off-task, inattentive and anti-social behaviors. James was reported to excel in math, but had difficulties learning to read, completing classwork, following class routines, and socializing appropriately. According to his

teacher, James had exhibited these behavior challenges since kindergarten but had not previously responded to intervention attempts; James was being considered for special education evaluation. James was an only-child who was being raised by his father and grandmother. James' father, unemployed at the time of intervention, participated in parent-coaching sessions.

***Lucy***. Lucy, a 6-year old African American female in kindergarten, was referred for behavioral support due to reports of inattentive, impulsive, emotionally reactive, and poor social behaviors. According to her teacher, Lucy qualified for special education services under the qualification category of "other health impaired" due to her diagnoses of ADHD and Communication Disorder NOS, a qualification she brought to this school from her previous school in the southern United States. Lucy was reported to be smart and capable, but was also reported to be easily distracted and provoked by others, interrupted often, and had difficulty staying on task to complete work. Lucy was an only-child being raised by her single-mother, though her mother reports grandparents contributed to childcare. Lucy's mother, unemployed and on disability benefits at the time of intervention, participated in parent-coaching sessions.

***Michael***. Michael, a 5 year-old African American boy in kindergarten, was referred for behavioral support due to reports of off-task, inattentive, disruptive, impulsive, and noncompliant behaviors. According to his teacher, Michael had recently been referred for special education evaluation and would be evaluated that school year. Teacher described Michael to be charming and well-liked by staff but had difficulty following directions and classroom routines, focusing to complete tasks, getting along with other children, and learning. Micahel was being raised by his aunt who he referred

to as "mom," due to parental incarceration; Michael's female, high-school aged cousin served as his primary after-school caregiver. Michael's aunt, who works full-time evenings in the medical field, participated in parent-coaching sessions.

***Teacher participants.*** With regard to teacher demographics, teachers were one Caucasian female (second grade), one Caucasian male (first grade), and one African American female (kindergarten). Years of experience ranged from 0-5 years.

**Experimental Design**

A non-concurrent multiple-baseline, single-case experimental design was utilized for this pilot study. Single-case experimental research is a controlled experimental approach to the study of single case or small groups of subjects commonly used in treatment outcome research for special education and behavioral interventions in the school setting. Single-case designs can demonstrate adequate experimental control using one person as both the control and experimental participant to demonstrate the effect of a treatment over time (Kazdin, 2003). Through the collection of multiple data points across time, the multiple baseline design allows for an examination of within-subject variability, or the pattern of change in a given individual over time. Additionally, the multiple-baseline design across subjects allows examination of between subject variability as well and can demonstrate direct replication across participants. In this study, a nonconcurrent multiple-baseline across subjects design was utilized to demonstrate a functional relationship between the intervention and dependent variable across both time and participants. Finally, replication of this design in a number of participants identified sources of variability and led to greater generalizability (Barlow & Hersen, 1984; Kratochwill & Williams, 1988).

**Measures**

Measures in the ESHN Project consisted of direct behavior rating scales, standardized behavior rating scales, a social validity rating scale, and questionnaires.

**Direct Behavior Rating Scales (DBR)**. DBRs served as the progress monitoring tool to track participants' response to intervention (see Appendix A). DBRs are hybrid assessment tools combining features of systematic direct observations and behavior rating scales. DBRs have been recommended as a practical alternative to systematic direct observations as progress monitoring tools. DBRs (sometimes referred to as home notes, daily report cards, and home-school notes) are observation tools that meet the following criteria: (a) specification of target behavior(s), (b) rating behavior(s) at least once per day, (c) sharing rating information across individuals (e.g., teachers, parents, students), and (d) monitoring the effects of interventions (Chafouleas, McDougal, Riley-Tilman, Panahon, & Hilt, 2005; Chafouleas, McDougal, Riley□Tillman, Panahon, & Hilt, 2005.). DBRs have been shown to reliable and valid measures of student behavior (Riley-Tilman, Kalberer, & Chafouleas, 2005).

**Child Behavior Checklist**. The Child Behavior Checklist (CBCL), a broadband standardized rating scale, was used to measure baseline and post intervention levels of classroom EPs to corroborate DBR data. Teachers used the 120-item Teacher Rating Form (TRF) to rate children on various behavioral and emotional problems and is intended to measure problem behaviors that a child may exhibit at school. Using a three-point rating scale, teachers indicated the extent to which each item described a child's behavior within the past 6 months (0=not true, 1=sometimes or somewhat true, 2=very true or often true). Three subscales that measure types of acting-out (externalizing)

behaviors were selected for this study including 1) Rule-Breaking Behaviors, 2) Attention Problems, and 3) Social Problems; these subscales were selected because they best represented EP referral concerns for participants in this study. The CBCL continues to be one of the most widely used standardized measures in child psychology for evaluating maladaptive behavioral and emotional problems. Multiple studies have found the CBCL to be a valid and reliable tool for identifying and measuring emotional and behavioral problems in youth (Achenbach & Rescorla, 2001).

**Social Validity Rating Scales**. A modified version of The Treatment Acceptability Rating Form—Revised (TARF-R; Reimers, Wacker, Cooper, & de Raad, 1992) was used as a measure of treatment acceptability and related factors. The modified versions of the TARF-R consisted of six-questions for parents and seven questions for teachers, and were designed to assess understanding, reasonableness, effectiveness, drawbacks, cost, and willingness, all factors related to the overall acceptability of an intervention. Items are presented in a seven point Likert-scale format with anchor point descriptors for each item. Items have been coded so higher ratings indicate more acceptable treatment. Sample items include: How clear is your understanding of this intervention program? How acceptable did you find this intervention to be regarding students in your class? How willing are you to participate in or carry out this program?

**Adapted Parenting Questionnaire**. Parents also completed a questionnaire to gain information on parental stress and self-efficacy at pre- and post- treatment. This adapted questionnaire contained modified questions from two validated measures: The Parental Stress Scale (Berry & Jones, 1995) and The Parenting Sense of Competence

Scale (Gibaud-Wallson & Wandersman, 1978). Both of these questionnaires have been found to be reliable and valid instruments.

**Procedures**

This study was completed in three phases. Phase one of the study involved collection of data that determined 1) eligibility and 2) baseline levels of EPs for eligible students. Parents of eligible students were contacted by the school mental health worker (i.e. school counselor, school psychologist) and provided complete information about the intervention and study to obtain informed consent from the parent and assent from the child. In addition to behavior rating scales, during baseline phase parents also completed a modified parental stress and self-efficacy questionnaire.

Phase two involved ongoing collection of baseline data and random selection within dyads to determine which subject would commence intervention first. Baseline and progress monitoring data were collected using DBRs, completed daily by the teacher. Intervention for subject one was initiated once behavior on DBRs was shown to be consistent, or at least two data points indicated no change or an increase in disruptive behaviors.

Phase three of the study was the intervention and progress-monitoring phase. This phase involved implementation of the ESHN intervention, including three parent-coaching sessions with the school psychologist, one session in which the parent practices strategies with their own child with feedback from the coach. To monitor progress and response to treatment, DBRs were completed daily by the teacher and collected twice per week to monitor responsiveness to intervention.

## Treatment Integrity

Information on treatment integrity, in the form of self-report homework for parents and treatment protocol checklists for treatment provider, was collected to estimate the extent to which the SHN-as-usual and ESHN interventions were implemented as planned. Parents were asked to complete weekly homework calendars in which they recorded their child's progress toward goals as well as their own response to child behavior. Teachers were asked to self-report fidelity in completing and sending home daily SHNs on DBR sheets. Provider followed and completed a treatment checklist embedded within the protocol during treatment sessions. Provider also recorded session attendance for each parent. 92% of parent coaching sessions were completed in person, while one (final) session was completed via phone due to parent illness. 75% of parents arrived on time for all scheduled coaching sessions, while one parent missed two scheduled coaching sessions; this session was eventually rescheduled via phone. Treatment checklists revealed that 100% of required treatment items were completed for all parent participants for all sessions. Data from self-report homework for parents indicated that 50% of parents returned both homework sheets, 25% parent returned one homework sheet, and 25% did not return any homework sheets; James' parent did not return any completed homework.

## Independent and Dependent Variables

**Enhanced School Home Note**. The independent variable in the proposed study was the ESHN intervention. As previously stated, this study aimed to enhance an SHN-as-usual intervention by including selected key ingredients of behavioral parent training derived from Kaminski et al.'s (2008) study. Two content components (1. consistency in

responding and 2. appropriate delivery of praise and time out (or other consequences)) and one program delivery component (practicing parenting skills with their own child) were determined to be contextually appropriate for integration with the SHN.

The first key ingredient, teaching parents to interact positively with their child, involves coaching parents to interact with their child in non-disciplinary situations, such as engaging in an activity that the child selects and directs (Kaminski et al, 2008). The goal of this component is to teach the parent to show enthusiasm and provide positive reinforcement when their child displays appropriate, prosocial behaviors. The second key ingredient, consistency in discipline and behavior management, involves teaching parents to respond consistently to their child and to be consistent in setting rules and enforcing consequences across settings. Within the framework of the SHN, this component is intended to increase parents' effectiveness in responding to the daily note and consistently delivering or withholding praise and rewards depending on the child's ratings that day. Finally, the SHN was enhanced with a key 'program delivery' component in which parents practiced applying skills and strategies with their child during sessions and received direct feedback from the therapist. This component was helpful to ensure that skills are being used correctly. This also gave therapists the opportunity to model the delivery of positive reinforcement to parents.

The ESHN was initiated and implemented by an on-site school psychologist in collaboration with the parent and teacher. The school psychologist met with each parent for (3) forty-five minute sessions for instruction, modeling, and practice of two 'key ingredients' found in effective BPT programs: 1) consistency in responding and 2) appropriate delivery of praise and time out (or other consequences).

**Externalizing Behavior Patterns.** The main dependent variable for the proposed study was the level of EPs collected via the DBR measure. Teacher ratings on the CBCL were collected on a pre-post basis to corroborate the findings from the DBR measure. Secondary effects of the ESHN was examined by collecting data on the level of academic engagement, using a DBR measure. The participants' behavior performance in the ESHN condition was compared against behavior during the SHN-as-usual baseline condition.

## Chapter V: Results

### Statistical Analyses

The data were interpreted using a combination of visual analysis, descriptive statistics, and effect size estimates. Visual inspection of single-case data was used as the primary method of interpreting the effects of the independent variable on the dependent variable within the multiple baseline design graphs (Kahng et al., 2010). Visual analysis consists of analyzing the level, trend, and variability in behavior across phases and participants. The data were depicted in a graph with the horizontal axis reflecting the data collection time points and the vertical axis represents the score on the dependent variable. Descriptive statistics, in the form of means, percentile ranks, and change scores, were calculated for two dependent variables: EPs (disruptive behaviors) and academic engagement; means and percentile ranks were calculated standardized behavior rating scale. To validate visual findings and determine effect size for EPs and academic engagement, the indexes of Nonoverlap of All Pairs (NAP) and PEM were utilized as indices of the magnitude of the effect produced by the ESHN on the dependent variables.

The NAP, which summarizes data overlap between each Phase A and phase B datapoints, is calculated by subtracting the number of overlap pairs from the total number of comparisons, and dividing this by the total number of comparisons (Parker & Vannest, 2009).

$$NAPscore = \frac{(N_A \times N_B) - (overlap)}{(N_A \times N_B)}$$

To calculate the PEM score, first the median level during baseline is calculated and then the percent of intervention data points that were below the median level are computed.

Results are presented sequentially in the following domains: 1) Externalizing behavior patterns; 2) Academic engagement; and 3) Social validity. Results from the Parenting Stress and Efficacy Questionnaire are presented and interpreted qualitatively.

**Externalizing Behavior Patterns**

To measure levels of EPs, frequency of disruptive classroom behaviors were collected via teacher-completed DBRs. DBR data were plotted on a graph and visually analyzed for changes in level (mean), trend (slope), and variability in performance from baseline to treatment phases. A decreasing trend in DBRs for disruptive behaviors indicated a favorable response. Standard scores derived from teacher ratings on the Child Behavior Checklist (CBCL) were collected to corroborate the findings for the DBR data demonstrating a change in the level of EPs from baseline to treatment phases. Direct behavior ratings.

***Visual analysis.*** Visual analyses of scores on DBRs showed visually observable and predictable improvements from the baseline to treatment phase for all four of the

participants. Moreover, visually detectable changes from baseline to treatment were noted with regard to both the level and slope of each of the participant's disruptive behavior.

Figure 1 depicts the non-concurrent multiple baseline design for the first dyad of participants, David and James. Beginning first with David, although his disruptive behavior was variable at baseline, the trendline for his data indicated a relatively stable trend in disruptive behavior. It was not until the introduction of the intervention that David demonstrated a reduction in both the level and slope of his disruptive behavior. With regard to level, David's average scores on the DBR decreased by two points from baseline (m= 6.40) to treatment (m = 4.48). The most visually notable effect was the stability of David's behavior at the conclusion of the study/data collection, as indicated by a consistent rating of 3 on the last 7 data points collected. These positive effects of the ESHN were replicated by the data obtained for James. James demonstrated relatively consistent levels of disruptive behavior at baseline and immediately evidenced a positive response following the introduction of the intervention. Visually comparing the trendlines across phases indicated that James had an increasing trend in performance during baseline and a decreasing one during the treatment phase, which provided support for the functional relationship between the independent and dependent variables. There was also an observable difference in the level of James' behavior between the baseline and treatment phases, with a reduction from 5.92 during baseline to 3.17 once the ESHN was implemented. These results demonstrated experimental control as James' extend baseline data did not observably change until the EHSN was implemented. Together, the

results from David and James supported the efficacy of the EHSN through replication of effects and demonstration of the functional relation between the IV and DV.

Figure 2 depicts the nonconcurrent multiple baseline design for the second dyad of participants, Lucy and Michael, two kindergarten students. Beginning with the first participant in this dyad, the trendline for Lucy's data indicated an increasing trend in disruptive behavior. Only when the intervention was introduced did Lucy show a clear reduction in both level and slope for disruptive behaviors. With regard to level, Lucy's mean level of disruptive behaviors showed a two-point reduction from baseline (m= 7.13) to intervention (m= 5.06). These positive effects of the ESHN were replicated by the data obtained for Michael. Michael demonstrated consistently high levels of disruptive behavior at baseline. It was only once the intervention was introduced did Michael's data demonstrate a noticeable decrease in both the level and trend of performance. The trendline for Michael's data indicated a decline in slope, while Michael's mean level of disruptive behaviors showed a one-point reduction from baseline (m= 8.70) to intervention (m= 7.59). Results from both participants evidence a visually observable change following the introduction of the intervention, providing further support for the efficacy of the EHSN through replication of effects and demonstration of the functional relation between the IV and DV.

***Descriptive statistics.*** Results for descriptive statistics are depicted in Table 1. As one can see, the average change for each of the participant's disruptive behavior from baseline to intervention were included to represent within and between differences. Average change for disruptive behaviors across participants from baseline (M = 7.08) to intervention (M = 5.02) on the DBR likert scale was 2.06, which corresponded to a 31%

reduction in the average frequency ratings of disruptive classroom behaviors. James demonstrated the greatest amount of change on the DBRs from baseline to intervention, while Michael showed the least.

***Effect size.*** The single-case effect sizes for changes in disruptive behaviors are portrayed in Table 2. As shown in Table 2, the NAP results for David, James, Lucy and Michael were 0.85, 0.93, 0.94 and 0.81 respectively. According to the NAP interpretation guidelines (Weak Effects: 0-.65; Medium effects: .66-.92; Large/Strong effects: .93-1.0), proposed by Parker & Vannest (2009), the estimates for David and Michael fall within the Medium Effects range and those for James and Lucy fall within the Large/Strong range.

As for the PEM estimates, the results for David, James, Lucy and Michael were 0.84, 0.89, 0.88, and 0.77, respectively, indicating that a majority of the participants' intervention data points were below their respective medians. Together, the results from the NAP and PEM estimates corroborate the findings from the visual analysis and descriptive statistics, further demonstrating a functional relationship between and the efficacy of the ESHN for reducing disruptive behavior patterns.

**Child behavior checklist (CBCL).** Results for descriptive statistics, depicted in Table 3, show the average change in EPs on the three selected scales as rated by teachers on the CBCL within and across participants from baseline to intervention. The three selected scales included: Rule-breaking Behavior, Social Problems, and Attention Problems. As one can see, the average change for each of the participant's problem behaviors from baseline to intervention for each scale were included to represent within and between differences. Average change for Rule Breaking Behavior across participants

from baseline (m = 62.66) to intervention (m = 61.66) based on teacher ratings on the CBCL was 1.00, which corresponded to an average 1.67% reduction in rule breaking behaviors across participants. David demonstrated the greatest decrease in scores for rule breaking behaviors from baseline to intervention, while ratings for James and Lucy yielded no changes in score. T-scores for the Rule-breaking Behavior subscale were not available for Michael due to young age.

Average change for Attention Problems across participants from baseline (m = 72.00) to intervention (m = 64.75) based on teacher ratings on the CBCL was 7.25, which corresponded to an average 10% reduction in attention problems across participants. Ratings for Michael showed the greatest change in scores for attention problems from baseline to intervention; baseline ratings yielded a clinically significant score while post intervention ratings yielded a score in the typical range. Ratings for James yielded similar results, changing scores from clinically significant at baseline to the borderline clinical range at post intervention. While scores for Lucy indicated a negligible decrease in reported attention problems, ratings for David demonstrated a minimal increase in observed attention problems from baseline to intervention.

With regard to Social Problems, average change on the Social Problems subscale across participants from baseline (m = 63.33.00) to intervention (m = 61.00) based on teacher ratings on the CBCL was 2.33, which corresponded to an average 3.67% reduction in observed social problems across participants. Ratings for James showed the greatest change in scores from baseline to intervention; baseline ratings yielded a clinically significant score while post intervention ratings yielded a score in the typical range. Ratings for David yielded a minimal reduction in social problems and ratings for

Lucy yielded no change in score. T-scores for the Social Problems subscale were not available for Michael due to young age.

**Academic Engagement**

To measure levels of academic engagement, frequency of engaged academic behaviors were also collected twice weekly via teacher-completed DBRs. DBR data was again plotted on a graph and visually analyzed for changes in level (mean), trend (slope), and variability in performance from baseline to treatment phases. An increasing trend in DBRs for disruptive behaviors indicates a positive response.

**Direct behavior ratings.** To assess the impact of the ESHN on academic performance, data was collected daily on the duration or percent of time the student was academically engaged via teacher-completed DBRs. DBR data were plotted in a multiple baseline design graph and visually analyzed for changes in level (mean), trend (slope), and variability in performance from baseline to treatment phases.

***Descriptive statistics.*** Results for descriptive statistics are depicted in Table 6. The average change for each of the participant's academic engagement, from baseline to intervention, was included to represent within and between differences. Average change for academic engagement across participants from baseline (M = 4.24) to intervention (M = 5.95) on the DBR likert scale was 1.71, which corresponded to a 17% increase in academic engaged time. This increase translates into roughly a 10-minute increase in academic engagement for every instructional hour. James and Michael demonstrated the greatest amount of change on the DBRs from baseline to intervention, while David showed the least.

***Visual Analysis.*** Visual analyses of DBR scores revealed observable improvements from baseline to treatment phase for all four of the participants. Visually detectable changes from baseline to treatment were noted with regard to the level of academic engagement for all four participants, while changes in slope were observed for three out of four participants. Interpretation of each dyad's response to the ESHN is discussed next.

Figure 3 depicts the non-concurrent multiple baseline design for David and James. Beginning first with David's data, results revealed that the level of academic engagement was relatively variable at baseline though his data showed a stable decreasing trendline. It was not until the introduction of the intervention that that the directionality of David's data shifted upward, demonstrating an improvement in both the level and slope of his academic engagement. When focusing specifically on the change in level, David's average DBR scores increased by one point from baseline (m= 5.40) to treatment (m = 6.26), which corresponded to roughly a 9% increase in academic engaged time, or six additional minutes for every instructional hour. These positive effects of the ESHN on academic engagement were replicated and strengthened by the data obtained for James. James also demonstrated relatively consistent levels of academic engagement during the extended baseline period even when David received the intervention. It was not until the intervention was introduced that James displayed an observable increase in both the level and trend of academic engaged time. James evidenced a three-point difference in his level of academic engagement between the baseline (3.69) and treatment (6.44) phase, which was the largest improvement in duration of academic engagement of all the participants. This increase corresponded to roughly a 28% increase in academic engaged

time, which corresponds to roughly 20 minutes per instructional hour. These results demonstrated experimental control, as James and David's respective baseline data did not observably change until the EHSN was implemented. Taken together, the results from David and James supported the efficacy of the EHSN through replication of effects and demonstration of the functional relation between the IV and DV.

Figure 4 depicts the nonconcurrent multiple baseline design for the second dyad of participants, Lucy and Michael. Beginning with Lucy, visual inspection of data during baseline revealed variable levels of academic engagement, though the trendline for Lucy's baseline data indicated a moderately increasing slope. However, once the intervention was introduced, Lucy showed a visually detectable improvement in level and relative steeper slope for academic engagement. Lucy's mean level of academic engagement showed a two-point increase from baseline (m= 6.25) to intervention (m= 8.24), which translates into a 20% increase in estimated academic engaged time, or 12 additional minutes of academic engagement for every one instructional hour. Turning next to Michael, visual inspection of his performance revealed that his DBR data remained relatively stable during the extended baseline phase and did not demonstrate noticeable yet modest changes in the level and slope of academic engagement until the intervention was introduced. Michael's mean level of academic engagement showed a 1.24 increase from baseline (m= 1.60) to intervention (m= 2.84), which translates to roughly a 12% increase in academic engaged time. These changes were modest as Michael continued to spend the majority of instructional time disengaged even when receiving the intervention. This design and the resulting data demonstrated experimental control as both Lucy and Michael's baseline data did not observably change until the

EHSN intervention was implemented. Moreover, although the data for Michael demonstrated modest changes, the data provided further support of the efficacy of the EHSN through replication of effects and demonstration of the functional relation between the IV and DV.

***Effect size.*** The single-case effect size estimates depicting the magnitude of the effect of the ESHN on academic engagement are portrayed in Table 5. As shown in Table 7 the NAP results for David, James, Lucy and Michael were 0.75, 0.91, 0.92 and 0.80 respectively. According to the NAP interpretation guidelines (Weak Effects: 0-.65; Medium effects: .66-.92; Large/Strong effects: .93-1.0), proposed by Parker & Vannest (2009), the estimates for all four participants landed within the Medium Effects range. As for the PEM estimates, the results for David, James, Lucy and Michael were 0.72, 0.94, 0.94, and 0.68, respectively, indicating that the majority of the participants' intervention data points were below their respective medians. Together, the results from the NAP and PEM estimates corroborated the findings from the visual analysis and descriptive statistics.

**Social Validity**

Participating teachers and parents were asked to complete a social validity questionnaire, a modified version of the Treatment Acceptability Rating Form- Revised (TARF-R), to assess parent and teacher perceptions of the feasibility, acceptability, and effectiveness of the ESHN intervention (Martens, Witt, Elliott, & Darveaux, 1985). Modified TARF-R for parents consisted of six items while the teacher version consisted of seven items. The ratings on each item ranged from a low of 1 (not at all) to a high of 7 (very/many); higher scores indicate more favorable perceptions of the intervention.

As displayed in Table 8, the average rating across all 6 items on the parent scale was 6.29 on a scale from 1 to 7, indicating that the parents reported positive responses to items measuring the reasonableness, acceptability, and likely effectiveness of the ESHN. One of the 6 items received an average rating of 7, indicating that all parents found the intervention to be "very acceptable" for their child. On an item assessing parental willingness to carry out the intervention, parent ratings yielded an average rating of 6.25 on a scale of 1-7 (minimum= 6 and maximum= 7). On a related item that asked parents to consider the reasonableness of time commitments for the ESHN intervention, parent ratings yielded an average rating of 6 on a scale of 1-7 (minimum= 5 and maximum= 7). Two out of four parents indicated that there were no disadvantages to participating in the intervention, while two others parents rated this item a "5," indicating few disadvantages. On an item measuring the likelihood that this intervention would lead to lasting improvements in behavior for the child, parent ratings yielded an average rating of 6 on a scale of 1 to 7 (minimum= 5, maximum= 7), indicating that parents believe this intervention to be highly likely to effect permanent change to their child's behavior.

As displayed in Table 9, the average rating across all 7 items on the teacher scale was 6.28 on a scale from 1 to 7, indicating that teachers reported positive responses to items measuring the reasonableness, acceptability, and likely effectiveness of the ESHN. One of the 6 items received an average rating of 7, indicating that all teachers found the intervention to be highly cost-efficient. On items assessing acceptability and reasonableness of the intervention for students in their class, teacher ratings yielded average scores of 6.5 on both items, indicating that teachers perceive the intervention as highly reasonable and acceptable given the needs of their students. When asked to rate

their understanding of the ESHN intervention, teacher ratings yielded an average score of 5.5 (minimum= 5 and maximum= 7). An average rating of "6" on an item assessing disadvantages in participating in the ESHN intervention indicated that teachers see few disadvantages to participating in or implementing the ESHN intervention for students in their class. Finally, when asked to rate the likelihood of the ESHN intervention to make permanent change on their student's behavior, teacher ratings yielded an average score of 5.5 out of 7 (minimum= 5 and maximum= 7), indicating that teachers perceive the ESHN intervention as likely to lead to lasting improvements in behavior for their students.

**Parenting Stress and Efficacy Questionnaire**

To measure levels of parenting stress and efficacy at pre- and post- treatment, parents completed an adapted questionnaire that contained modified questions from two validated measures: The Parental Stress Scale (Berry & Jones, 1995) and The Parenting Sense of Competence Scale (Gibaud-Wallson & Wandersman, 1978). Results indicate few changes in parent ratings of stress and efficacy from baseline to intervention phase on most items for most parents, with the exception of one parent whose ratings indicated positive changes across four items. Two other parents showed changes in ratings on limited items; one parent showed no changes in ratings. Changes that did occur are described qualitatively.

Parental ratings for David indicated the greatest change in ratings of stress and efficacy from baseline to intervention phase, suggesting an increase in satisfaction and efficacy in parenting role as well as a decrease in parenting stress. This parent's ratings went from 'agree' to 'strongly agree' on an item stating, "I am happy in my role as a parent," from 'neutral' to 'disagree' on an item stating "Caring for my children

sometimes takes more time and energy than I have to give," from 'agree' to 'strongly agree' on an item stating, "I honestly believe I have all the skills necessary to be a good mother/father to my child," and finally from 'agree' to 'disagree' on an item stating, "I go to bed the same way I wake up in the morning, feeling I have not accomplished a whole lot."

Two parent questionnaires showed both positive and negative changes in ratings on limited items from baseline to treatment phase. Parental ratings for Lucy showed positive changes in cognitions demonstrated by change in rating from 'neutral' to 'agree' on an item stating, "The problems of taking care of a child are easy to solve once you know how your actions affect your child, an understanding I have acquired" and also a decrease in negative cognitions from 'agree' to 'neutral' on an item stating, "I go to bed the same way I wake up in the morning, feeling I have not accomplished a whole lot." Lucy's parent showed negative changes in rating from 'strongly agree' to 'agree' on an item stating, "Being a good mother/father is a reward in itself." Parental ratings for Michael suggested a possible reduction in parenting frustration and stress as evidenced by rating changes from 'strongly agree' to 'agree' on an item stating, "Even though being a parent could be rewarding, I am frustrated now while my child is at his/her present age." Unfortunately, parental ratings on an item stating, "I go to bed the same way I wake up in the morning, feeling I have not accomplished a whole lot" changed from 'neutral' to 'agree.'

## Chapter VI: Discussion

There is a need for school-based interventions that improve school-home communication and train parents to deliver positive parenting practices at home contingent upon their child's behavior at school (LaRocque, Kleiman, & Darling, 2011). The ESHN was developed in response to the limitations of traditional SHNs that primarily consist of sending home a note and assuming parents have the skills to translate the note into effective parenting practices. However, for those parents who lack the effective parenting practices, the SHN is unlikely to be effective. As a result, the ESHN included a parent training component to teach parents evidence-based practices that they could implement in the home contingent upon the information in the SHN.

In light of these SHN-as-usual limitations, the present study investigated the efficacy of the ESHN intervention to reduce EPs and improve academic behaviors for elementary students who were non-responsive to SHN-as-usual using a multiple baseline across participants single case experimental design. The hypotheses going into this study were that the ESHN would result in favorable behavior change on both of the primary outcome measures used in this study: 1) levels of EPs in the classroom as reported by teachers on DBRs and 2) standardized scores on CBCL completed by teachers. Improvements were also expected on the secondary outcome measures, including 1) academic engagement based on teacher reports on DBRs and 2) parental stress and efficacy self-reports. The ESHN intervention was also predicted to receive high parent and teacher ratings for social validity.

Overall, results from the teacher completed DBRs indicated that the ESHN intervention was able to produce reductions in EPs and increases in academic engaged

time for the participating students included in this study. These findings, while modest are noteworthy considering that all participants had previously been non-responsive to a SHN-as-usual intervention, which previous research has shown to be an evidence-based practice (Vannest et al., 2010). The findings from the standardized behavior rating scale (CBCL) were mixed and provided weak cross-validation of the results from the DBRs across all participants. Moreover, questionnaire results did not demonstrate a conclusive link between the ESHN intervention and improvements in parental stress or efficacy, though individual changes are discussed below. Social validity ratings showed that parents and teacher perceived the ESHN intervention to be an acceptable, feasible and effective intervention for elementary students.

**Expected Outcomes**

**Externalizing behavior patterns.** Establishing a functional relationship between the ESHN intervention and reduced frequency of disruptive behaviors (EPs) was the primary aim of this study. Results demonstrated evidence supporting the implementation of this brief, modified parent training intervention to improve the behavioral outcomes for elementary students with persistent EPs who were previously found to be non-responsive to an SHN-as-usual intervention. Specifically, the data from the DBRs demonstrated a significant reduction, ranging from moderate to strong effect sizes, in disruptive behavior problems for all four participants receiving the ESHN intervention. Results on the CBCL did not reflect changes in levels of EPs to the same degree as DBR findings. While teacher CBCL ratings did yield overall improvements across participants for rule-breaking behaviors, attention problems, and social problems subscales, percent changes were minimal (1.67%, 10%, and 3.67% respectively) compared to average

percent reduction in EPs according to DBRs (31%). Unlike DBRs, which occur at the time and setting the target behavior occurs, most standardized behavioral rating scales rely upon retrospective judgments and inferences removed from the time and place of the occurrence of the behavior; for this reason, these tools have been argued to be less sensitive to change than more direct measures of behavior (Merrell, Streeter, Boelter, Caldarella, & Genry, 2001). Further, the CBCL, which assesses common behavioral and emotional problems, does not necessarily assess and reflect changes to identified target behaviors for each individual child, as the DBRs do. These are clear limitations of standardized behavioral rating scales as progress monitoring tools, and may explain the discrepancy in post treatment results. The drawbacks of inconsistency between the DBR and CBCL are further discussed below as a limitation of this study, with suggestions for future research.

Positive findings for reductions in EPs in response to the ESHN intervention are consistent with the extant literature demonstrating and recommending BPT interventions as the most effective treatment for persistent EPs in childhood (Hudson, 1982; Hughes & Wilson, 1988; Olson & Roberts, 1987; Miller & Prinz, 1990; Serketich and Dumas, 1996; Lundahl, 2006). There is a dearth of BPT interventions delivered as part of a school's mental health system, not due to a lack of need or recognition of value, but due in greater part to the poor transferability of established BPT treatment programs to community settings (Tang et al., 2009). The findings from this study suggest that BPT interventions can be feasibly and effectively delivered in a school setting when paired with a common intervention. Results of this study are also consistent with the findings and recommendations from a recent meta-analysis on DBRC interventions identifying the

importance of home-school collaboration, including parent training, collaboration in reinforcement, and quality of student feedback, as a moderating variable in achieving positive outcomes with DBRC-like interventions (Vannest et al., 2010). In short, this study demonstrates that the marriage of these two intervention approaches can lead to positive behavioral outcomes for youth with persistent EPs in school settings.

**Academic Engagement.** In addition to the primary effect of the ESHN on EPs, it was also hypothesized that reductions in EPs would produce secondary effects on students' academic engaged time. Results provided support for the ESHN intervention revealing that it also resulted in secondary effects by increasing the duration of students' academic engagement, according to daily DBR ratings. This finding is consistent with prior research findings linking reductions in behavioral problems to improvements in academic engagement and performance (Cook et al., 2013). The implication of this finding is that a behavioral intervention can potentially serve as the best academic intervention for some students with co-occurring academic and behavioral problems. This is important considering that students with EPs are often overly exposed to punitive discipline practices, which has been shown to produce contraindicated effects (Teasley & Miller, 2011).

**Social Validity.** While the primary aim of ESHN intervention was to improve behavioral and academic outcomes for at-risk youth in schools, an equally important question was whether or not the intervention would be perceived as acceptable, feasible and effective by those charged with helping implement it. As previously established in this paper, the greatest barriers to utilization of EBPs, including BPT, in school and other community treatment settings are related to issues of poor feasibility, including the high

resource, time and training demands of many EBTs (Eckert & Hintze, 2000; Kratochwill & Stobier, 2000; Ringeissen et al., 2003). This study aimed to develop an intervention that was not only effective, but also fit the treatment setting and would therefore be utilized. Findings indicated both teachers and parents reported the ESHN intervention to be an acceptable, feasible, and effective intervention. These results suggested that teachers and parents are amenable to implementing this intervention.

**Parenting Stress and Efficacy.** There are a number of possible reasons that parenting questionnaire results yielded few and inconsistent changes in parent ratings of stress and efficacy from baseline to intervention phase. While one might assume that improvements in child behavior would naturally translate to reductions in parenting stress, which is common across parenting experiences of children with and without behavioral problems, it appears that in order to produce lasting reductions in parental stress parents may need to learn specific skills to manage their stress and promote their well being (Kazdin, 2003). When it comes to parental efficacy, one would also predict that parents would feel a greater sense of efficacy, or beliefs that they have the skills to improve their child's behavior, once they experience success reflected in positive behavioral outcomes. While experience is considered to be the primary source of improved efficacy, the translation of successful experiences into improved efficacy is moderated by cognitive appraisal, or to what the person's attributes success (Bandura, 1977). While the training and support provided by the intervention was likely sufficient to motivate parents to use effective parenting practices, it appeared not to be sufficient to impact perceptions and other cognitions in a way to improved efficacy. Without direct attention given in treatment to the alteration of faulty perceptions or attributions, parents

of children with behavioral problems may lack efficacy and motivation required to commit to the practices that achieve sustained changes child behavior. Finally, there are known limitations to asking sensitive questions via self-reports due to social desirability concerns. This would be especially true for families who have a case history with Child Protective Services, who may perceive these questions as threatening.

**Limitations**

As with all studies, this study included limitations that readers should be aware of when interpreting the findings. This study was designed and implemented in the context of natural educational conditions to allow for an examination of real-world feasibility and effectiveness of interventions. Although this represents a strength of the study, the applied nature of this study resulted in some limitations with regard to internal and external validity of the findings. First, the use of single case experimental designs requires a small sample of participants, which limits the extent to which the results can be generalized to other students, parents, and schools. Future research should replicate these findings using group-based methods and different samples of students. Second, as a reflection of real-world feasibility of practice in school settings, this study relied upon teacher ratings to monitor progress with the ESHN intervention. While direct observations of student behavior are considered the "gold standard" of measurement, most school mental health workers do not have adequate time to complete consistent standardized direct observations. While DBRs have been shown to correlate highly with the results from direct observations (Chafouleas, Riley-Tilman, & McDougal, 2005), inclusion of direct observations would have helped cross-validate findings and added strength to this study. Direct observations might also serve as a tool to contest possible

error introduced by teachers' restrospective ratings. Finally, due to limited resources of this pilot project, all interventions were implemented by the primary investigator, which affected the type of social validity data that were collected. It is unclear at this point how providers would perceive the acceptability, feasibility of the intervention. There is a need for additional research to determine whether the effects of the ESHN hold true across different practitioners who lead the parent training sessions.

**Directions for Future Research**

While this study offers contributions to the practice of school mental health, namely school-home collaboration in prevention and treatment, it was a pilot study and there is still much to be done to better understand and develop the ideas proposed in this paper. Given that the ESHN represents a novel approach to transferring evidence-based practices into school mental health settings, further study of this important and timely intervention in school settings is warranted. Future studies should aim to replicate findings using group-based methods that incorporate multiple informants and direct observations of student behavior. To better assess the social validity of the intervention and identify training needs, future studies should also employ different types of school mental health providers, from school psychologists and counselors to social workers.

To enhance treatment, it is recommended that a complimentary teacher-training component be developed and added that allows for instruction, modeling, and practice of the same skills parents are learning, as well as incorporating modules to improve teacher cognitions and stress. While it was initially believed that a lack of parenting skills needed to effectively reinforce SHN target behaviors at home was the sole barrier to achieving efficacy with SHNs, this study revealed a number of teacher factors, including

variation in behavior management approach, high stress, and attribution beliefs or biases about childhood problems, that may also be acting as moderators in SHN effectiveness and should be further explored in future studies. On a related note, to better address parenting stress, a complementary feature or module could be added to the ESHN intervention to train parents in specific skills to manage stress in the context of parenting such as mindfulness practices, problem solving, and relaxation strategies, similar to the PPS (Parent Problem Solving) intervention Kazdin and Whitley (2003) incorporated into PMT interventions that was found to enhance therapeutic change for children and parents and reduce barriers that parents experienced during treatment.

**Implications for Practice**

Beyond research, there are several important implications for practice that stem from this study's findings. The first implication is the promise of integrating parent training into the framework of school-based service delivery. Too often school systems do not reach out to parents and work with them to acquire the skills necessary to support their child's success at school. The ESHN intervention presents an effective, feasible and efficient tool for school-based providers to collaborate with parents in this way. To achieve this end, there is a clear need for additional training for school-based providers. While the ESHN protocol provides adequate step-by-step direction to deliver treatment, it has been designed on the premise that best practice in the delivery of modified EBPs requires practitioners to combine clinical judgment with knowledge of evidence-based treatment components to tailor treatments that fit the client and the setting.

Further, the ESHN represents a potentially useful Tier 3 intervention within a multi-tiered systems approach to prevention and service delivery. At the Tier 2 level, the

SHN behavioral intervention is already commonly used as a first line of treatment to target disruptive behaviors in at-risk students. The ESHN has proved to be effective for students who exhibited elevated EPs but were non-responsive to SHN delivery as usual. The ESHN intervention, a more involved and sophisticated behavioral intervention, fits within this Tier 3 level of intensive and individualized support. Within this same model, student responsiveness to ESHN treatment also provides practitioners with valuable information to make informed treatment and diagnostic decisions for students. While the ESHN might be an adequate intervention to treat some at-risk students, for others it may act as a screening tool to identify the child as a good candidate for a more intensive intervention, such as special education qualification, medication, or more intensive and comprehensive mental health treatment.

In this way, responsiveness to the ESHN intervention may help improve school success, prevent the escalation of EPs and negative developmental trajectories, and avoid a path of delinquency for at-risk youth. Any intervention that yields positive results at this preventative level of treatment may help to defend against unnecessary labeling, special education referral, and placement in restrictive settings for at-risk youth. Given the relatively positive response to the ESHN intervention demonstrated by four African American children and their parents, these findings are particularly important and timely given the growing awareness of the disproportionate use of punitive discipline strategies and special education qualification among African American youth (McFadden, Marsh, Price, & Hwang, 1992; Shaw & Braden, 1990; Skiba, 2000).

## Conclusion

This study was unique in its attempt to develop and evaluate a brief and modified parent-training intervention by adding key BPT ingredients to enhance a common school-based behavioral intervention, SHN. Results of this study provide moderate support for the efficacy of ESHN intervention to reduce EPs and improve academic engagement for early elementary-aged students referred for persistent disruptive behavior problems. These results are important in furthering the cause to improve school-home collaboration in treatment for at-risk youth. Further, this pilot study establishes the ESHN as an effective, feasible, and cost-efficient method for relaying evidence-based BPT treatment to settings where this service is needed but historically underutilized. Now more than ever the identification and dissemination of effective, cost-efficient methods for prevention and treatment of students with behavioral challenges is recognized as a national priority in the fields of education and mental health. Results from this study suggest there is strong potential for clinicians to take a "common elements" approach, as recommended by Garland et al. (2008), to transfer evidence-based treatments to community settings to improve practice. In this way, this study fills a void in current research and practice and may set a precedent to develop other modified interventions using the common elements approach with the hope of improving dissemination and utilization of EBPs to school settings where they are needed most. Despite its limitations, the present study advances knowledge and practice in the effective treatment of EPs in the school setting, which has too long relied on negative, punitive approaches, or those not validated in research.

Table 1

Descriptive Statistics for Daily Behavior Ratings of Disruptive Behaviors

| Subject | DBR mean pre | DBR mean Post | DBR change score | Percent Reduction |
|---|---|---|---|---|
| David | 6.55 | 4.48 | 2.07 | 32% |
| James | 5.92 | 3.28 | 2.65 | 45% |
| Lucy | 7.14 | 4.71 | 2.43 | 34% |
| Michael | 8.70 | 7.59 | 1.11 | 13% |
| Average | 7.07 | 5.02 | 2.07 | 31% |

Table 2

Non-Overlap of All Pairs (NAP) and Percentage Exceeding Median (PEM) for Daily Behavior Ratings of Disruptive Behaviors

| Subject | Non-Overlap of All Pairs | Percentage Exceeding Median |
|---|---|---|
| David | 0.85 | 0.84 |
| James | 0.93 | 0.89 |
| Lucy | 0.94 | 0.88 |
| Michael | 0.83 | 0.77 |
| Average | 0.89 | 0.85 |

Table 3

T-Scores for CBCL Ratings of Externalizing Problems on Rule Breaking Behavior subscale

| Subject | Rule Breaking Behavior Pre | Rule Breaking Behavior Post | Change score | Percent Change |
|---|---|---|---|---|
| David | 66* | 63 | -3 | -5% |
| James | 59 | 59 | 0 | 0 |
| Lucy | 63 | 63 | 0 | 0 |
| Michael | -- | -- | | |
| Mean | 62.66 | 61.66 | -1.00 | -1.67% |

* denotes borderline clinical score
** denotes clinically significant score

Table 4

T-Scores for CBCL Ratings of Externalizing Problem on Attention Problems subscale

| Subject | Attention Problems Pre | Attention Problems Post | Change score | Percent Change |
|---|---|---|---|---|
| David | 69* | 73** | +4 | 6% |
| James | 76** | 65* | -11 | -14% |
| Lucy | 61 | 60 | -1 | -2% |
| Michael | 82** | 61 | -21 | -26% |
| Mean | 72.00 | 64.75 | -7.25 | -10% |

* denotes borderline clinical score
** denotes clinically significant score

Table 5

T-Scores for CBCL Ratings of Externalizing Problems on Social Problems subscale

| Subject | Social Problems Pre | Social Problems Post | Change score | Percent Change |
|---|---|---|---|---|
| David | 62 | 61 | -1 | -2% |
| James | 70** | 64 | -6 | -9% |
| Lucy | 58 | 58 | 0 | 0% |
| Michael | -- | -- | -- | -- |
| Mean | 63.33 | 61.00 | 2.33 | -3.67% |

* denotes borderline clinical score
** denotes clinically significant score

Table 6

Descriptive Statistics for Daily Behavior Ratings of Academic Engagement

| Subject | DBR mean Pre | DBR mean Post | DBR change score | Percent Change |
|---|---|---|---|---|
| David | 5.40 | 6.26 | 0.86 | +9% |
| James | 3.69 | 6.44 | 2.75 | +28% |
| Lucy | 6.25 | 8.24 | 1.99 | +20% |
| Michael | 1.60 | 2.84 | 1.24 | +12% |
| Average | 4.24 | 5.95 | 1.71 | +17% |

Table 7

Non-Overlap of All Pairs (NAP) and Percentage Exceeding Median (PEM) for Daily Behavior Ratings of Academic Engagement

| Subject | Non-Overlap of All Pairs | Percentage Exceeding Median |
|---|---|---|
| David | 0.75 | 0.72 |
| James | 0.91 | 0.94 |
| Lucy | 0.92 | 0.94 |
| Michael | 0.80 | 0.68 |
| Average | 0.85 | 0.82 |

Table 8

Modified Treatment Acceptability Rating Form – Revised (TARF-R) Parent Ratings

| | David | James | Lucy | Michael | Range | Mean |
|---|---|---|---|---|---|---|
| 1. How clear is your understanding of the Enhanced School Home Note (ESHN) treatment program? | 7 | 6 | 6 | 7 | 6-7 | 6.5 |
| 2. How acceptable did you find this intervention to be regarding your child? | 7 | 7 | 7 | 7 | 7-7 | 7 |
| 3. How willing are you to participate in or carry out this program? | 7 | 5 | 6 | 7 | 6-7 | 6.25 |
| 4. Given the time commitments, how reasonable do you find participation in the ESHN program to be? | 7 | 5 | 5 | 7 | 5-7 | 6 |
| 5. To what extent are there disadvantages in participating in this program? | 7 | 5 | 5 | 7 | 5-7 | 6 |
| 6. How likely is this intervention to make permanent improvements in your child's behavior? | 6 | 6 | 5 | 7 | 5-6 | 6 |
| Mean within and across participants | 6.83 | 5.67 | 5.67 | 7 | | 6.29 |

Table 9

Modified Treatment Acceptability Rating Form- Revised (TARF-R) Teacher Ratings

| | David | James | Lucy | Michael | Range | Mean |
|---|---|---|---|---|---|---|
| 1. How clear is your understanding of the Enhanced School Home Note (ESHN) treatment program? | 4 | 6 | 6 | 6 | 4-6 | 5.5 |
| 2. How acceptable did you find this intervention to be regarding students in your class? | 7 | 6 | 7 | 6 | 6-7 | 6.5 |
| 3. How willing are you to participate in or carry out this program? | 7 | 5 | 7 | 6 | 5-7 | 6.25 |
| 4. Given the range of needs of students, how reasonable do you find the ESHN program to be? | 7 | 6 | 7 | 6 | 6-7 | 6.5 |
| 5. How costly will it be to carry out this program? | 7 | 7 | 7 | 7 | 7 | 7 |
| 6. To what extent are there disadvantages in participating in this program? | 6 | 5 | 7 | 6 | 5-7 | 6 |
| 7. How likely is this intervention to make permanent improvements in your student's behavior? | 5 | 5 | 7 | 5 | 5-7 | 6.18 |
| Mean within and across participants | 6.14 | 5.71 | 6.86 | 6 | | 6.28 |

Figure 1
Multiple Baseline DBRs for Level of Disruptive Behaviors (Externalizing Problems)—Dyad 1

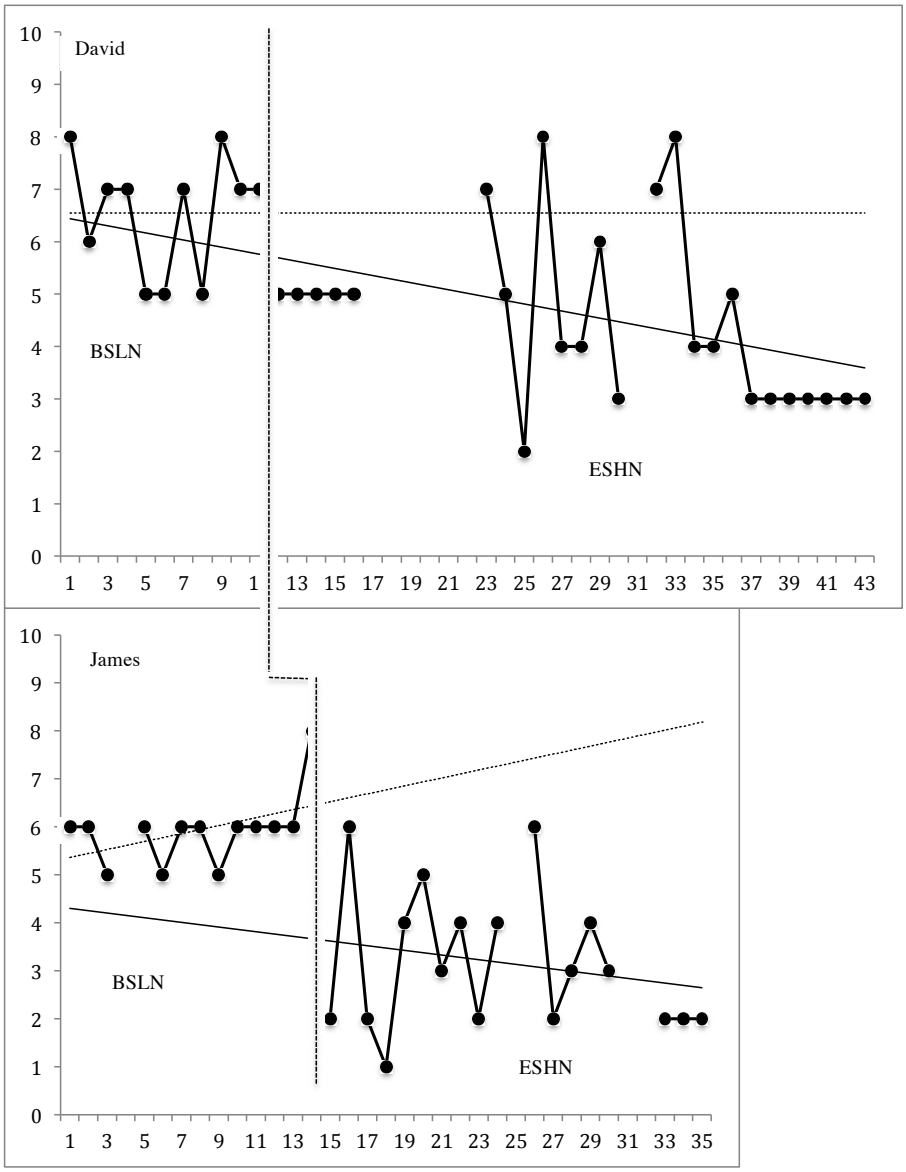


Figure 2
Multiple Baseline DBRs for Level of Disruptive Behaviors (Externalizing Problems)—Dyad 2

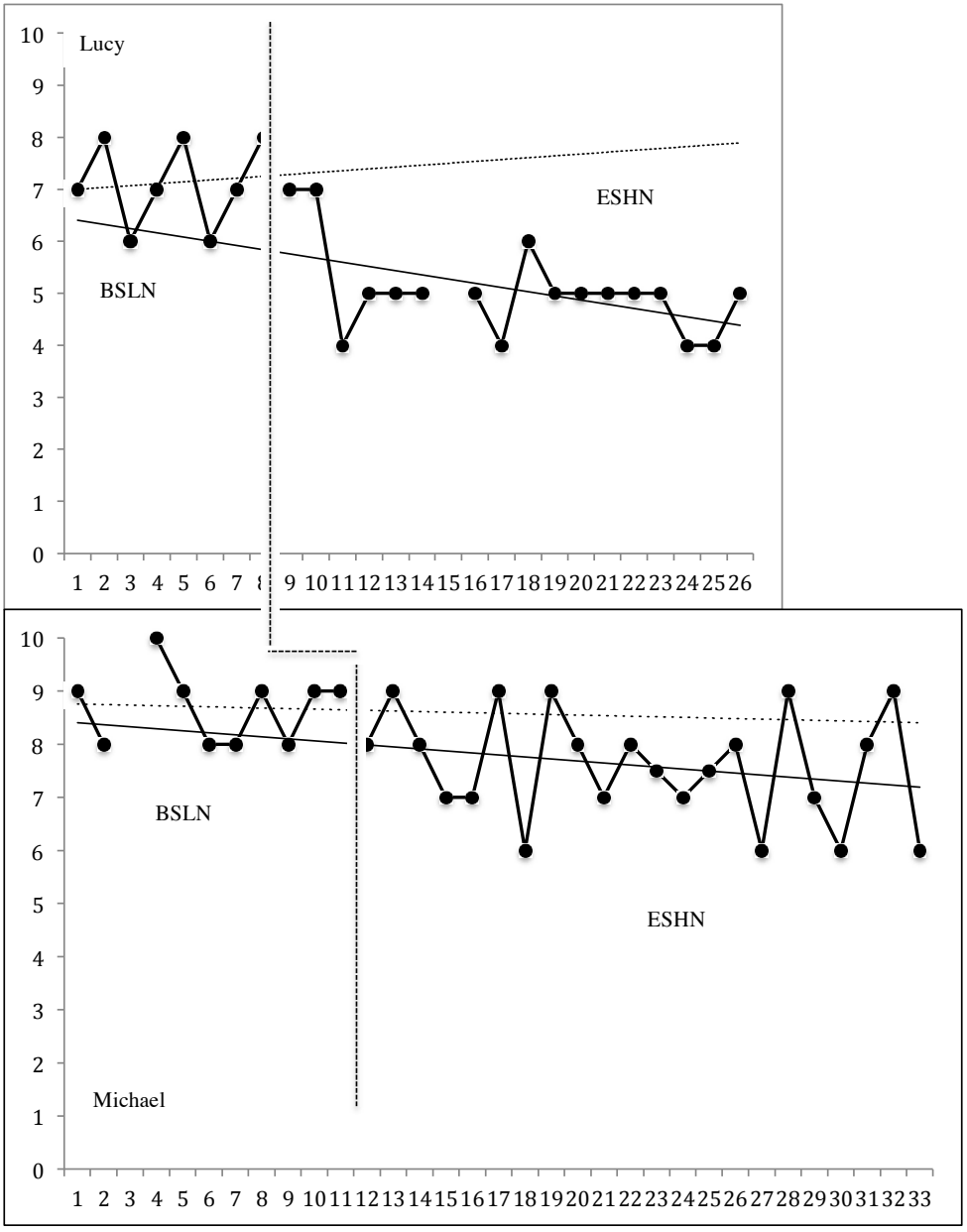


Figure 3
Multiple Baseline DBRs for Duration of Academic Engagement—Dyad 1

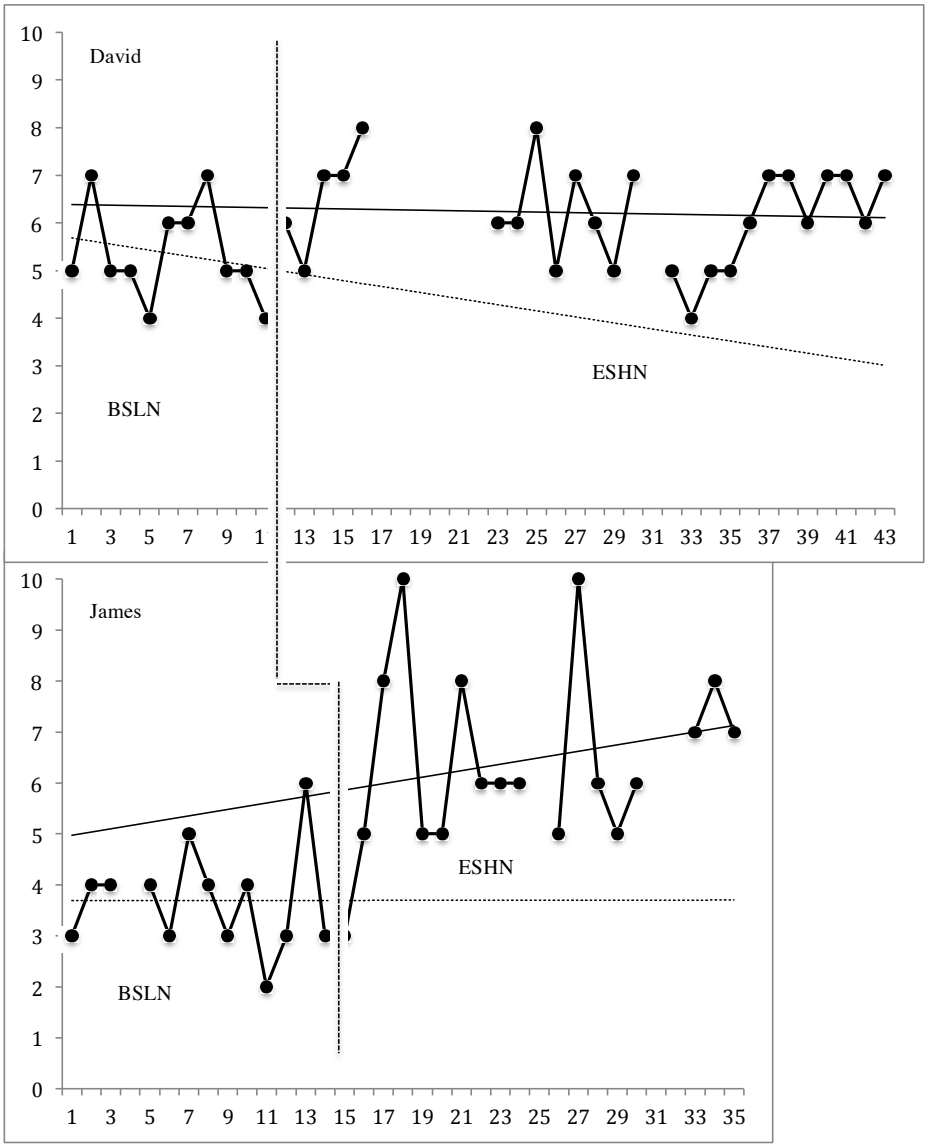
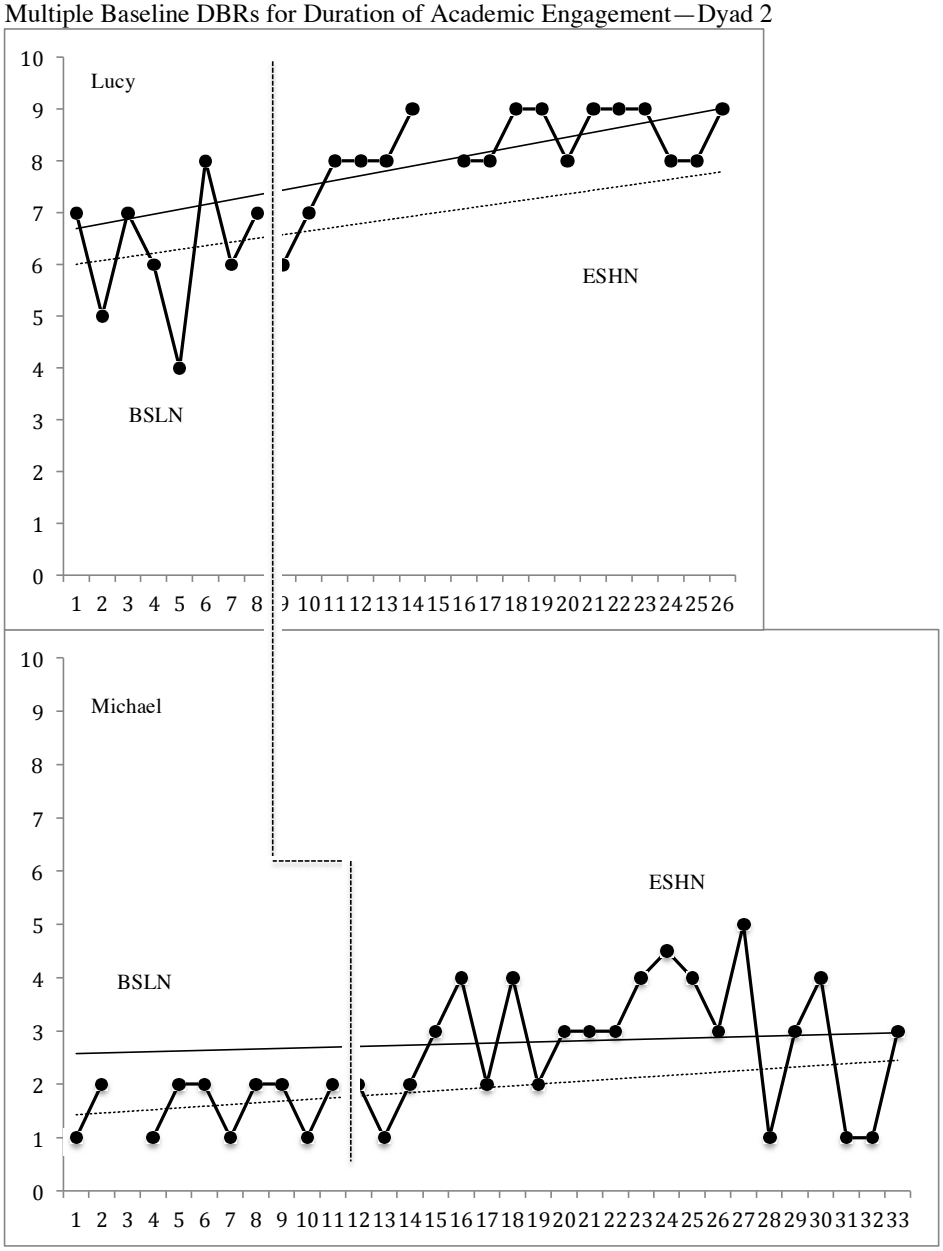


Figure 4
Multiple Baseline DBRs for Duration of Academic Engagement—Dyad 2

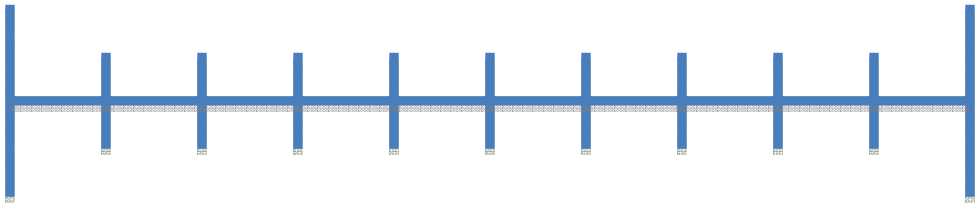


## Appendix A

SAMPLE DIRECT BEHAVIOR RATING (DBR)

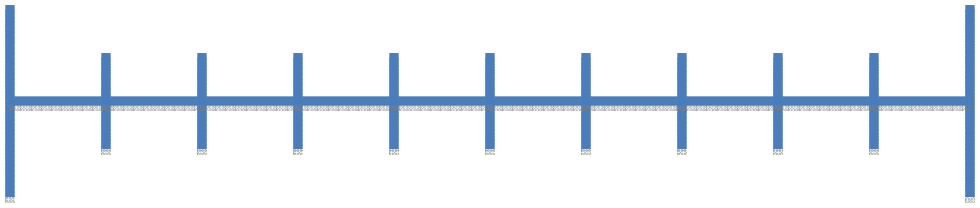
Student name: _____ Date and day of week:_____

Academic Engagement:
Actively or passively participating in the classroom activity by paying attention to the lecture, answering questions, reading quietly, cooperating with peers, working independently on assigned task.



0 1 2 3 4 5 6 7 8 9 10
(frequency)
0% 50% 100%
(duration)
Mild Moderate Severe
(intensity)

Disruptive Behavior:
A student action that interrupts or interferes with the teacher's ability to deliver instruction or classmates' ability to learn. Blurting out answers, getting out of seat without permission, making noises with object, talking to peers about non-academic content are examples of disruptive behaviors.



0 1 2 3 4 5 6 7 8 9 10
(frequency)
0% 50% 100%
(duration)
Mild Moderate Severe
(intensity)

## Appendix B

### SCHOOL-HOME NOTE

A Guideline for Parents and Teachers

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School-home notes are easy-to-use interventions that improve students' behavior and the daily communication between parents and teachers. Each day the classroom teacher rates the behavior of a student, who then brings the note home to his/her parent. It is then the parent's responsibility to deliver consequences at home depending on whether the child met his/her daily behavioral goal at school. For example, if the child receives a negative school-home note indicating inappropriate behavior at school, the parents would deliver disappointing consequences to their child by restricting access to desired privileges (TV, play with friends, computer, video game, use of cell phone, late bedtime, etc.). On the other hand, if the child receives a positive school-home-note indicating appropriate behavior at school, then the parents would praise their child and deliver rewards or permit access to preferred activities (extra video game/computer time, play with friends outside, invite a friend over to spend the night, trip to get ice cream, later bedtime, etc.).

When parents deliver consequences at home based on their child's behavior at school, the child is able to learn that enjoyment at home depends on good behavior at school. Alternatively, the child also learns that behaving badly at school will result in home life being boring and aversive because desired privileges are taken away. This system relieves the teacher of some of the burden associated with trying to choose effective rewards for many different students. Also, it may not be feasible for a teacher to deliver some types of rewards in a school setting. Delivering rewards at home allows us to use items or activities that we know a child will work to earn.

A school-home note allows parents to be knowledgeable of their child's behavior at school every day, which fosters greater parental involvement in the academic life of the child. Also, a school-home note is a simple and efficient intervention, which requires little time for both the teacher and the parent involved. It has been found to be effective in reducing many undesirable behaviors in the classroom, including: aggression, being out-of-seat, talking out of turn, not completing assignments, being disruptive, and not participating correctly with teachers or peers.

The following steps outline how to develop and utilize a school-home note:

**Select target behaviors.** These can be considered areas in which the child needs improvement in the school setting. All teachers and school staff who have daily contact with the student should contribute to determining these target behaviors. Examples include: remained seated unless given permission, raised hand to speak, kept hands and feet to self, followed directions the first time, said nice things to others, completed class work in a timely manner, and turned in completed homework. Keep in mind target behaviors should be easily observable by the teacher and should be worded positively. For instance, rather than "Did not blurt out" or "Did not hurt others," you can use "Raised

hand to speak" and "Kept hands to self."

**Set a goal.** Estimate how often the target behaviors are occurring based on teacher input. Start off by setting an easily attainable goal so that the child will experience reinforcement early-on in the intervention. Goals can gradually be increased, as described below. Also, goals can be set for the entire day, for the morning and the afternoon, or for each subject/class period, depending on your child's schedule. The following is an example of a well written goal for a child who was engaging in 4 out-of-seat behaviors per day: *Johnny will have equal to or fewer than 2 incidents of out-of-seat behavior each day. This means that Johnny will remain in his seat with his bottom connected to his chair.*

**Explain the school-home note to your child.** Have a meeting with the teacher, the child, and the parent(s) to discuss the school-home note and explain each person's responsibility in the procedure. Let the child know it will help him/her show better behaviors throughout the school day. Explain that good behavior at school will earn rewards at home. Make sure the child knows he/she is responsible for bringing the note home after the teacher fills it out each afternoon. The child also must bring the note, signed by a parent, back to school the following day. This correspondence keeps both the teacher and the parent informed as to whether each party is keeping up with their responsibility.

**Establish the home-based reward system.** In order to ensure effective and desired rewards are used, your child should provide ideas for prizes to earn for good behavior. The items/activities that are included must be openly discussed and finally, approved by the parent(s). Examples of daily rewards include: snacks, later bedtime, playing a board game/electronic game after homework, and extra television time. Weekly rewards are also an option. Some include: renting a movie, going to a friend's house, having friend over, getting an allowance, going shopping, and going out to eat.

**Monitor and modify goal.** Once your child meets the goal twice, the goal can be adjusted, requiring more appropriate behavior in order to obtain a reward. This will slowly shape your child's behavior by gradually increasing the amount of appropriate behavior needed to earn a reward.

## Appendix C

### ESHN INTERVENTION

**SESSION ONE**

At school, my child's classroom behavior goals are:

1. _____
2. _____
3. _____

When my child meets their behavior goal of _____, at home I:

1. _____
2. _____
3. _____

*What is going well with this daily behavior report card intervention?*

*What do you think needs improvement?*

***To increase your child's success with the daily behavior report, we will focus on:***

- **Focus on POSITIVE** approaches to increasing good behaviors:
  - Focus on the positive behaviors we want to see more of!
  - Using labeled praise & rewards to teach & reinforce good behaviors.
  - Increase positive interactions & communication in non-discipline situations.

- **Be CLEAR AND CONSISTENT** in our expectations and responses:
  - Be clear in our behavior expectations (goals) for the child at school & home
  - Be consistent in how we respond to child's behavior (with praise, rewards and consequences)

**Step One:** *Let's make sure behavior goals to are **clear, positive,** and **achievable**.*

Did you know that children learn more from their successes than their mistakes? It's easy to get stuck on pointing out a child's bad behaviors, but it turns out that when we give more attention to negative behaviors, this can backfire and these behaviors actually increase! Instead, the most effective way to increase good behaviors is to ***focus on***, ***teach*** and ***praise*** those behaviors we want to see more of. Rather than telling kids what *NOT* to do, our job is to instruct & praise children on what TO DO. When we give our attention to good behaviors, we are teaching, reinforcing and increasing these behaviors. It is in successes where the learning and change begins to take place!

*Getting started:*

1. Look again at behavior goals: if behavior goals focus on what *not* to do, let's re-word them to focus on the opposite, positive behavior you DO want to see.
    a. Rather than "do not interrupt," say "raises hand to talk" or "waits turn to share"
    b. Rather than "do not distract others" say "lets other learn"
2. Let's make sure that goals are clear, rather being than too general or vague. Keeping things positive means setting children up for success by clearly telling them exactly what we want to see more of.
3. Speaking of setting your child up to experience success, are your child's behavior goals *realistic* and *achievable*? Children can only be successful if our expectations are realistic. We don't want to set a child up to fail. The behaviors should be clear *and* developmentally appropriate. Remember, child who experience the "fruits of her labor" will be motivated to put the extra effort into earning the praise & rewards!
4. Remember to reserve praise for *successes*. If your child does not meet her behavior goal, praise should be withheld. This **does not** mean to be negative and dwell on the missed goal—rather, stay **neutral** and **encourage** the child to try again tomorrow.

Let's practice!

*Revising behavior goals:*

1. _____ + _____
2. _____ + _____

*Notes:*

**Step Two:** *Let's make sure we're consistent in how we respond to good and bad behavior.*

Praise, rewards, and consequences are only powerful in changing behavior if they happen **consistently**! If children cannot rely on a good response to good behavior, they will not put the extra effort into being good. In the same way, only when consequences consistently follow bad behavior will the child learn from their mistakes or bad choices. Consistency makes the child's world predictable, less stressful, and teaches them that they have control over outcomes. Being consistent in expectations and consequences (good or bad) is essential to improving behavior.

*Getting started:*

1. Make your daily check in at the same time/place. Make it a **routine**.
2. Respond to good behavior reports in the same way. ***Label*** what your child did well to meet her behavior goal that day. Labeled praises highlight what your child did well! Remember to show enthusiasm!
    a. "I see you received three smiley faces because you stayed focused on your work and kept your hands to yourself."
    b. "Wow, this report tells me you were listening and following directions today! You are really working hard to meet your goal!"
3. ***Immediately*** deliver or withdraw the "reward," depending on the child's report.
    a. Remind child how they earned the reward: "when you meet your behavior goal of 12 points, you earn 30 minutes of video game time."
    b. If goal on behavior report is not met, show genuine empathy (but not praise), and deliver consequence, "It's sad that you weren't able to meet your goal today. Tomorrow will be another chance to earn _____."
    c. Remind your child that *they earned* the reward—you did not *give* it to them.
4. Only select behavior goals you can consistently reinforce.

Let's practice!

*My child & I will check in each day at (where/when):* _____

*Responses to positive (goal met) behavior report card:*

1. _____
2. _____
3. _____

*Responses to negative (goal **not** met) behavior report card:*

1. _____
2. _____
3. _____

**Parent Homework!**

**This week, monitor your responses to your child's daily behavior report. Circle if the report was positive or negative (goal met or not) and what your response was.*

| *Monday* | *Tuesday* | *Wednesday* | *Thursday* | *Friday* |
|---|---|---|---|---|
| Report: +/ -<br><br>Praise Response: | Report: +/ -<br><br>Response: | Report: +/ -<br><br>Response: | Report: +/ -<br><br>Response: | Report: +/ -<br><br>Response: |
| Report: +/ -<br><br>Praise Response: | Report: +/ -<br><br>Response: | Report: +/ -<br><br>Response: | Report: +/ -<br><br>Response: | Report: +/ -<br><br>Response: |

**<u>Beyond the behavior report card: what can I do AT HOME?</u>**

1. Show enthusiasm and provide positive attention when your child displays appropriate behavior and choices—use *labeled*, *specific* praises.
2. Make it a point to have positive interactions with your child in non-discipline situations—even just 5 minutes makes a big difference!
3. Encourage and sign your child up for recreational & extracurricular activities that encourage positive social interaction with others

***What does "increasing positive interactions with my child" look & sound like?***

- As simple as smiles, laughs, hugs, high fives, pats on the back
- Playing legos, ball, or a board game of the child's choice
- Active listening (nodding, smiling, laughing) while your child tells about their day
- Labeled praises: "Thank you for <u>putting your dishes in the sink</u>! You are very <u>helpful</u>!"
- "Wow, you are <u>working so hard on building that tower</u>! Your hard work is paying off!"

*Positive Interactions I can have with my child this week: (include what, where, when)*

1. _____
2. _____
3. _____

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