

TREATMENT ACCEPTABILITY AS PERCEIVED BY  
CHILDREN FOR BEHAVIOR INTERVENTIONS:  
A TWO PART INVESTIGATION

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## CHAPTER I

### INTRODUCTION

#### Introduction to the Problem

There are a handful of children in classrooms across the nation who display disruptive behaviors which are problematic enough to take large amounts of effort to manage, however that are not severe enough to warrant removal from the general education classroom. Subsequently, teachers are asked to respond to these children and their behaviors on a daily basis and still maintain an appropriate learning environment for all of the other children in the classroom. These behaviors, although considered mild, may include talking out, being out of seat, and not remaining on task. Children displaying high rates of these behaviors “have challenged teachers since school began and will likely continue to be a central concern for teachers in the future” (Kulinna, Cothran & Regualos, 2003, p. 25).

In an effort to assist teachers in controlling the disruptive behaviors of these children in the classroom, school psychologists often use functional behavior assessment (FBA) to develop an intervention that is unique to each child and his/her classroom. The functional behavior assessment is typically conducted through a behavioral consultation approach which results in the development and implementation of a behavior intervention.

Throughout recent decades, researchers have focused on the importance of such treatments, their social validity, and more specifically treatment acceptability. Treatment acceptability has been previously defined as the degree to which an individual perceives a treatment procedure to be fair, reasonable, appropriate, and unintrusive (Kazdin, 1980). In the 1980's, a large amount of literature was published which discussed the importance of treatment selection and social validity. Ultimately, researchers such as Kazdin, Elliott, and Witt felt that society would be more likely to accept and carryout those treatments which they viewed as more acceptable. Subsequently, these researchers implied that treatments may be more effective if they are found to be more acceptable by those individuals implementing and receiving the treatment. Some of these researchers even realized that determining the acceptability of treatments was important in the pursuit of further defining treatment procedures and consultative methods in general. Elliott (1988) may have best captured these sentiments when he stated:

... we believe much of the basic social validity research, especially that concerning the study of acceptability of treatment procedures, contributes to the advancement of behavioral consultative methods, the development of a science of treatment selection, and to treatment evaluation methodology. (p. 122)

Treatment acceptability studies to date have relied heavily on teacher perception of interventions. That is, the person responsible for implementing the intervention has been asked to respond to its acceptability. Many variables have been found to influence acceptability ratings as perceived by teachers and studies conducted in this area have been fairly consistent in their findings. For example, researchers have examined type of intervention presented (positive or aversive), level of behavior severity (mild or severe),



complexity of intervention (complex or simple), jargon used in intervention presentation (complex or simple), mode of intervention presentation (written or visual), teacher knowledge of intervention (a lot or none), and experience with intervention (high or low) (e.g. Clark & Elliott, 1987; Cowan & Sheridan, 2003; Elliott, 1988; Elliott, Witt, Galvin & Peterson, 1984; Kazdin, 1980a; Layne, 2002; Martens, Peterson, Witt, & Cirone, 1986; Miltenberger, 1990; Reimers, Wacker & Koepl, 1987; Reimers, Wacker, Cooper & DeRaad, 1992; Singh & Katz, 1985; Tarnowski et al., 1989; Witt, Elliott, & Martens, 1984; Witt, Moe, Gutkin & Andrews, 1984; Witt & Robbins, 1985; Zaino, 1995).

Unfortunately, how each of these variables potentially influences the acceptability ratings of children has yet to be examined thoroughly, nor have they been studied in a naturalistic setting. According to Finn and Sladeczek (2001), treatment acceptability as perceived by the child is an area that remains largely unexplored. Because the children are the individuals receiving the intervention, it seems common sense to consider their perception, or learned history. In fact, a multidimensional evaluation of treatment acceptability requires information acquired by multiple sources and requires judgments obtained from different informants. Informants included in this process should include the child, parent and teacher at various points in time; however, as previously mentioned, children's perceptions have been readily ignored thus far in the literature and in practice (Finn & Sladeczek, 2001).

Research suggests a possible relationship between treatment effectiveness and treatment acceptability. For example, research has shown that poor treatment acceptability can lead to treatment factors such as noncompliance, nonexistent improvement, and early treatment termination (Tarnowski & Simonian, 1992).

Determining whether the client variable is an important factor to consider in treatment selection could assist practitioners in developing the most effective treatment for the classroom. To date there have been no studies conducted in a naturalistic setting using experimental methods to determine if a relationship exists between pre-treatment acceptability and post-treatment effectiveness. Although some researchers have attempted to examine this relationship, they have used analogue methods in their research. Additionally, studies utilizing the client as the rater of treatment acceptability are lacking, as most studies have sought ratings from the person responsible for implementing the procedures.

Ultimately, this study is an attempt to understand more about treatment acceptability in young children and draw closer the lines within the treatment acceptability and treatment effectiveness literature. Not only will it provide practitioners with missing data on the perception of children, depending on the results of this study, it will give practitioners further information on what is needed to build an effective intervention for the classroom. According to Gutkin (1993), consultants should implement a consultation model, use multimethod outcome measures, utilize single subject designs to evaluate treatment effectiveness, and assess treatment acceptability, integrity, and consumer satisfaction. Clearly the proposed study will attempt to address the importance of some of these variables.

#### Purpose of the Current Study

The purpose of this study is twofold. The main purpose of the study will be to investigate children's treatment acceptability of behavior interventions implemented in the general education classroom for problem behaviors. More specifically, the purpose of

part one will be to collect information regarding variables which may contribute to children's treatment acceptability ratings of behavior interventions. Part two of the study will be to determine if there is a causal relationship between pre-treatment acceptability ratings of behavior interventions proposed to be implemented in the classroom and the post-treatment effectiveness data of those proposed interventions when actually implemented in the classroom. Determining whether or not acceptability influences treatment effectiveness may assist practitioners in the selection of the most appropriate intervention for the child.

### Proposed Model

Treatment acceptability has been examined and discussed in the literature for many years. Unfortunately, treatment acceptability has been mainly limited to studies with teachers and the perception of children has been largely ignored. Treatment acceptability, a concept with roots in learning theory, is important for research and practice alike.

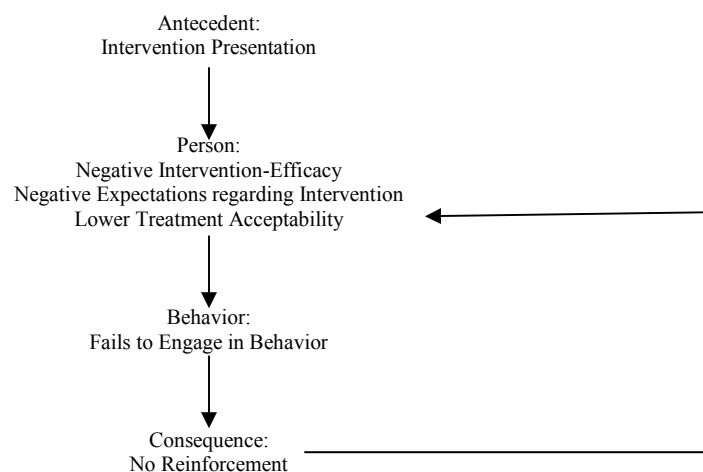
Many concepts in learning theory can be represented by both behaviorism and its counterpart, social learning theory. This study will propose a model for treatment acceptability which combines the foundation of behaviorism with the theoretical extension of social learning theory. Behaviorists suggest that behaviors may be explained as responses to antecedents and/or consequences in one's own environment. Exposure to specific antecedents and/or consequences creates a learning history which then shapes future behaviors within the individual. Similarly, social learning theorists believe that the environment plays a vital role in the prediction of behaviors. However, social learning theorists believe that previous experience influences an individual's future

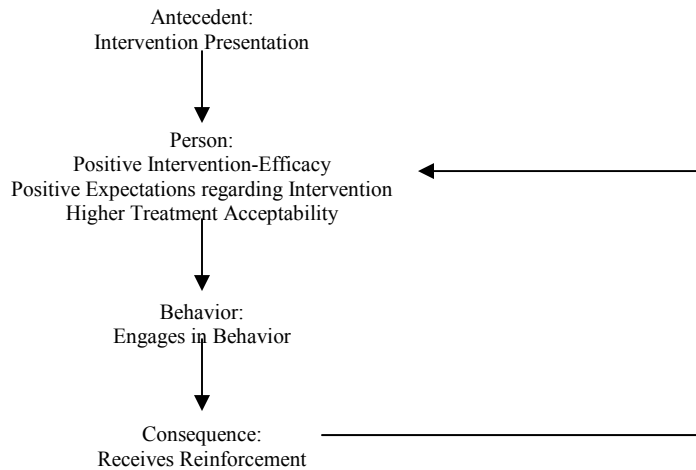
expectations and self-efficacy. The individual's expectations and self-efficacy then influence the individual's behavior in conjunction with environmental cues. This differs from behaviorism which contends that a new behavior is reflective of behaviors which were previously reinforced by using antecedents and/or consequences solely within the environment (Goldhaber, 2000).

Combining both behaviorism and social learning theory may provide researchers and practitioners with a more comprehensive framework from which to work. The new model may describe the individual, his/her previous experience with an intervention and the related intervention-efficacy (as opposed to self-efficacy) and expectations, and cues within the environment (both antecedents and consequences). For example, an intervention is implemented to maintain in seat behavior in the classroom. The child is told that he will earn a sticker for every five minutes he remains in his seat. After he earns five stickers, he will earn five minutes of free computer time. The intervention is then implemented; however, the teacher never follows through on access to the free computer time. The child's expectations are then influenced and thus the child begins to fail to engage in the desired behavior. At this point the teacher attempts to resolve the situation by re-explaining the intervention to the child and promising to remember the reward of free computer time. However, by this point the child has already formed negative expectations toward the intervention, has a lowered intervention-efficacy, and potentially lower treatment acceptability. When the teacher attempts to implement the intervention again, the child still fails to engage in the desired behavior. According to the proposed model, the intervention is presented (antecedent), the negative expectations and lowered intervention-efficacy of the child are triggered (person), the child fails to engage

in the appropriate behavior (behavior), and thus the child does not earn the desired contingency (consequence). This cycle continues to repeat itself, thus the effectiveness of the treatment is decreased based on the child's previous experience with the intervention. If this was a situation in which a new intervention was being implemented in a classroom with a target child, this previous experience could impact the success of the intervention in the new environment. Thus, if the child had been consulted regarding the treatment and its' acceptability, adjustments may have been made prior to implementation to ensure success for the child.

Ultimately, children may come to the classroom environment with learned responses to certain stimuli (presentation of the intervention) that may prevent interventions from being as effective as possible. Thus, it is possible that learned responses that include avoidance of or escape from treatment methods and are associated with low acceptability may cause the child to be resistant to an intervention. The proposed model is depicted below.





### Research Questions

1. Is there a difference in treatment acceptability ratings of interventions based on children's previous experience with interventions?
2. Is there a difference in treatment acceptability ratings of interventions based on grade level of children?
3. Is there a difference in treatment acceptability ratings based on type of intervention presented?
4. Is there a relationship between the level of behavior severity exhibited by children in the classroom and ratings on treatment acceptability measures for interventions?
5. How much variance in treatment acceptability can be accounted for by grade level and behavior severity level?
6. Does a causal relationship exist between treatment acceptability and treatment effectiveness in children receiving a behavioral intervention in the general education classroom?

7. Does an alteration in treatment acceptability produce long-term effects on the effectiveness of a treatment?
8. Does previous experience with a behavior intervention that was implemented in the classroom influence children's future ratings of treatment acceptability for that same intervention?

### Definition of Terms

The following independent and dependent variables have been defined specifically for use in this study. Consumers of this literature should make themselves aware of the terms and definitions used herein in order to more thoroughly understand the procedures to be implemented throughout the study.

*Behavior Severity:* The level of inappropriate behavior that the child exhibits in the general education classroom. Behavior severity level will be based on teacher ratings as measured by the *Conner's Teacher Rating Scale-Revised: Short Form*. (Independent Variable)

*Contingency:* The specific reinforcer associated with the implemented intervention to reward the target child for successfully maintaining appropriate behavior during the intervention session. (Independent Variable)

*Grade Level:* The specified grade in which the child receiving the intervention is currently enrolled. (Independent Variable)

*Intervention:* A behavior management strategy used to reduce inappropriate behaviors in the classroom. (Independent Variable)

*Previous Experience:* The target child has been exposed to an intervention and is then exposed to another intervention at a later time. (Independent Variable)

*Treatment Acceptability:* The perceived social appropriateness of an intervention as perceived by a target child. Treatment acceptability will be measured using the *Children's Intervention Rating Profile*. (Independent Variable and Dependent Variable)

*Treatment Effectiveness:* The extent to which an intervention successfully reduces an inappropriate behavior and increases an appropriate behavior. (Dependent Variable)

#### Brief Rationale

Since recent laws have been established, it is not uncommon for teachers in general education classrooms to be in charge of teaching a large number of children with various academic and behavioral abilities. At times this task may not seem overwhelming; however, there are times in which teachers are responsible for controlling the problematic behaviors of a few children and at the same time are responsible for ensuring that all children in the class receive an appropriate education. In order to help control these problem behaviors, teachers may implement class-wide or individual behavior management procedures of their own, or they may seek assistance from a school psychologist. Either way, teachers are implementing behavioral procedures in order to help maintain appropriate behavior in the classroom and ensure the successful learning of all students within the classroom. Unfortunately, when selecting behavior management procedures children who will be receiving the intervention are often times not involved in the intervention development. Because the child is the consumer of the intervention, this may potentially pose a threat to the overall success of the intervention.

Treatment acceptability is a measure of the perceived social appropriateness of a treatment. Throughout the years researchers have conducted studies which have focused on determining the variables associated with an acceptable treatment. Unfortunately,



most researchers have relied on teacher perception and analogous methods of data collection. There are only a few studies that have used naturalistic (or experimental) methods and only a handful that have solicited the assent of the child. Of studies that did incorporate children, most have asked fifth graders and beyond to rate treatments, and most have asked children to rate their perception of a treatment based on it being implemented with another child. This is unfortunate. Because children potentially bring learned responses to specific stimuli (e.g. intervention procedures) to the environment, it seems critical that the perception of the child be considered when beginning to develop an intervention. Children who were once exposed to intervention procedures that were implemented incorrectly may have adverse reactions to methods intended to be used in a new intervention. Regrettably, researchers have tended to ignore the perception of the child in their studies. This poses a problem because the perception of the child may be a critical variable to consider in intervention development. Although practitioners should select intervention procedures based on empirical validation, the child needs to be considered as well to ensure the intervention is as effective as possible.

Determining whether the child's perception of treatment acceptability can influence treatment effectiveness is critical. Previous studies and their findings provide a good foundation for further research in this area. However, research in this area needs to be conducted in the natural setting and needs to meet the standards of experimental control. The relationship of pre-treatment acceptability and post-treatment effectiveness needs to be examined. It may be that practitioners are overlooking a potential barrier to treatment effectiveness by not asking the child for his/her perception. Considering the perception of the child before intervention development may save practitioners time in

having to modify procedures and thus save time on intervention development.

Additionally, considering the perception of the child may enhance an already effective procedure into being more effective.

Chapter II, which follows, includes an extensive overview of the literature available on problem behaviors in the classroom, behavior interventions utilizing functional behavior assessment, treatment acceptability as perceived by teachers, and treatment acceptability as perceived by children. The relationship between treatment acceptability and treatment effectiveness is also explored. Included in this discussion are instruments that have been used to assess these variables, as well as those instruments that will be used in this study.

## CHAPTER II

### REVIEW OF LITERATURE

Since the amendments to the Individuals with Disabilities Education Act (IDEA) in 1997, federal law has required that positive behavioral supports be implemented in the classroom for all children. Laws have established guidelines that support the use of positive behavioral supports; and school psychologists and teachers alike are required to implement interventions in the general education classroom. One commonly cited benefit is that these interventions keep children who might otherwise be placed in the special education classroom in the general education classroom. Subsequently, this means that teachers must respond to the needs of all children in the general education classroom.

There are a handful of children, who are considered to take large amounts of teacher effort in order to manage their behavior in the classroom, however do not display behaviors severe enough to warrant removal from the classroom. These children exhibit only mild behaviors such as talking out, being out of seat, and not remaining on task, and “have challenged teachers since school began and will likely continue to be a central concern for teachers in the future” (Kulinna, Cothran & Regualos, 2003, p. 25). Although mild in nature, the level of their behavior can be quite disruptive and the consequences multifaceted. Thus, these children may not only impede their own

academic achievement in the classroom, but they may impede the ability of their peers to learn in the classroom as well. Additionally, it was reported by Borg & Riding (1991) that this disruptive behavior can ultimately contribute to teacher dissatisfaction and burnout. In an effort to assist teachers in controlling the disruptive behaviors of these children in the classroom, school psychologists often use functional behavior assessment (FBA) to develop an intervention that is unique to each child and his/her classroom. The functional behavior assessment is typically conducted through a behavioral consultation approach which results in the development and implementation of a behavior intervention. During the process, it is imperative that school psychologists ensure that all factors which could potentially interfere with the effectiveness of the intervention be examined.

During the 1980's a large amount of literature discussed the importance of the potential relationship between selection of treatment and social validity. More specifically, researchers felt that society would be more likely to accept and carryout those treatments which they viewed as more acceptable. Subsequently, researchers implied that treatments may be more effective if they are found to be more acceptable by those individuals implementing and receiving the treatment. For example, Elliott (1988) believed that Wolf's conceptualization of social validity could be used to explain society's frequent reluctance to use behavioral methods. In fact, as per Elliott (1988), Wolf said that society would need to validate behavior treatments on three levels. First, the goals of the intervention should be socially significant. In other words, the intervention is likely to have positive effects. Second, the procedures used within the interventions should be deemed socially appropriate. Consumer's perceptions need to be

taken into account as to the acceptability of the procedures to be implemented. Third, the effects of the intervention should be socially important. That is, the behavior being changed would have to be important to society. Elliott (1988) may have best captured these sentiments when he stated:

... we believe much of the basic social validity research, especially that concerning the study of acceptability of treatment procedures, contributes to the advancement of behavioral consultative methods, the development of a science of treatment selection, and to treatment evaluation methodology (p. 122).

Since these initial writings, research has been conducted to examine the possible relationship between treatment effectiveness and treatment acceptability. Within the school-based behavior consultation literature, most of these studies have focused on treatment acceptability of the teachers. These studies were conducted to determine if acceptability of a treatment as perceived by the person responsible for implementing the intervention had an effect on the treatment's effectiveness. Other studies have examined acceptability of treatment as perceived by children. These studies were conducted to determine if acceptability of treatments varied by the person actually receiving the intervention. However most of these studies failed to implement actual treatments in the general education classroom and have been analogue in nature. Additionally, these studies have been limited to older children. Based upon a review of this literature it is clear that the potential importance of treatment acceptability has not been thoroughly investigated as no studies have attempted to experimentally explore the impact of treatment acceptability on treatment effectiveness.

Further investigation of children's treatment acceptability is important because of the negative effect it may have on treatment effectiveness. For example, research has shown that poor treatment acceptability can lead to treatment factors such as noncompliance, nonexistent improvement, and early treatment termination (Tarnowski & Simonian, 1992). From a pragmatic view, Wolf (1978) described the importance of determining treatment acceptability:

... if the participants don't like the treatments then they may avoid it, or run away, or complain loudly. And thus, society will be less likely to use our technology, no matter how potentially effective and efficient it might be (p. 206).

From a theoretical view, treatment acceptability comes from the historical context in the learning theories, more specifically behavior theory and social cognitive theory. Within behavior theory, behaviors are explained very specifically in response to events occurring in the environment. A common way to explore this relationship is to look at behaviors from an antecedent, behavior and consequence framework. For example, a child is presented an assignment (antecedent), he leaves his seat (behavior), time runs out and he is unable to complete his work and he receives a poor grade on his assignment (consequence). A behaviorist might hypothesize that the child is out of his seat in order to avoid engaging in work. Therefore, an intervention is developed based on this hypothesis and the child is provided an appropriate opportunity to escape work for remaining in his seat and completing the assignment during the appropriate times.

Behaviorally, this would mean that an intervention based on the hypothesized function of the child's behavior (attention, avoidance, escape, etc.) would be developed

and an effective treatment would follow. However, if an intervention is developed in which the child fails to engage in the desired behavior then he may not earn the contingent reinforcement and fail. Repeated failure and lack of opportunity to be successful with the intervention may result in a negative learning history for the child. Therefore, the child may then attribute failure to interventions in general and future interventions with the target child may prove ineffective. The child's acceptability of the treatment may decrease due to the negative learning history and this lowered treatment acceptability may then impact future treatment effectiveness.

Assuming that the child develops a negative learning history with a specific intervention, he may develop a schema which then prevents him from displaying the desired behavior and encourages him to continue to display the inappropriate behavior because it is more rewarding. This component incorporates a 'person' component into the behavior framework. Now, not only is the presentation of a specific stimuli influencing how the child will respond, but the child's perception is influencing how he will respond as well. The 'person' component may be best depicted in the social learning theory literature and may be seen as a broader base to the theoretical underpinnings of treatment acceptability. Social learning theory gives more importance to "internal cognitive processes as mediators of the relationship between social experiences and behavioral responses (Goldhaber, 2000, p. 88)." Within this theory, the environment, the individual, and his/her behavior are all considered to be reciprocal in nature and important in determining behaviors.

Using the previous example, a child is handed an assignment (antecedent), previous experience with similar assignments have been a failure and the child views this

as a possible outcome for this assignment, thus as Bandura would describe it, a lower self efficacy (person), the child leaves his seat (behavior), the child does not have to do the work and avoids failure (consequence). In this example, from a social learning perspective, the presentation of the assignment is not what caused the child to leave his seat, instead it was an interaction between the assignment, the child's cognition or perception about the probable outcome of the assignment, the child's behavior and the consequences. A similar situation could occur with intervention. For example, the child is told that he/she will receive tickets for remaining in his seat during appropriate times during the day (antecedent), the child has been told this before and has never earned tickets and the teacher has even forgotten to give him tickets on some occasions (learning history), the child decides not to engage in the inappropriate behavior (behavior) because he believes he will not be successful (person), and therefore the child does not earn the tickets for the reward (consequence). This cycle continues to repeat itself, thus the effectiveness of the treatment is decreased based on the child's previous history with the intervention. If the child had been consulted regarding the treatment and its' acceptability, adjustments may have been made prior to implementation in order to ensure success for the child.

Reciprocal determinism assumes that the environment, person, and behavior all influence and are influenced by one another. This concept deviates from behaviorism which indicates behavior and behavior change are caused solely by external factors. In reciprocal determinism, the environment causes behavior change, but environmental data provide the information that can be interpreted to predict future behaviors. Individuals obtain information from past experiences, either directly or vicariously, and generate new



expectations based on these experiences. This in turn affects how the individual proceeds with the new behavior and how much they believe a specific consequence will occur based on previous experience (Goldhaber, 2000).

Equally as important to social learning theory is learning through observational means. Peers can play a significant role in children's learning history because they serve not only as models of behavior but as norms against which children may compare their own behaviors (Goldhaber, 2000). Children who have observed another child in the classroom experience failure with an intervention may use this information when evaluating how successful they are going to be in their own intervention. Using the previous example, if Joey never received enough tickets to get a prize, then James may not feel that he has the ability to receive enough tickets either. This may produce an initial lowered treatment acceptability in James, which would in turn prevent the intervention from being as effective as possible in the classroom.

Combining these two theories can provide researchers and practitioners with a more comprehensive framework from which to work. The new model depicts the ability of a person to create a learning history based on experiences (both direct and indirect). This learning history in turn creates a perception that may later impact the target behavior. When an intervention is presented, the person's history and expectations may influence behavior in reaction to the intervention, and the behavior then leads to the final consequence. [refer to page 8 for visual example of model]

In sum, children may come to the classroom environment with learned responses to certain stimuli (presentation of the intervention) that may prevent interventions from being effective. Learned responses that include avoidance of or escape from treatment

methods and/or selection of appropriate reinforcers could affect overall treatment effectiveness; thus causing the child to be resistant to an intervention. Also, children's overall willingness to accept a plan plays a significant role in intervention effectiveness and being able to obtain a child's point of view may help minimize resistance (Wilkinson, 2003). By determining if a causal relationship exists between treatment acceptability as perceived by children and treatment effectiveness, practitioners may be able to more accurately determine the appropriate intervention to implement in the classroom. According to Finn and Sladeczek (2001) research further exploring treatment acceptability and the relationship between treatment acceptability and treatment effectiveness is necessary.

Finn and Sladeczek (2001), suggest treatment acceptability as perceived by the child is an area that remains largely unexplored. Because the children are the individuals receiving the intervention, it seems common sense to include their perception. Studying the implications of treatment acceptability, along with other potential factors, is vital to ensuring success in the classroom for all children with whom school psychologists work. A multidimensional evaluation of treatment acceptability requires information acquired by multiple sources and requires judgments obtained from different informants. Informants included in this process should include the child, parent and teacher at various points in time; however, children's perceptions have been readily ignored thus far in the literature and in practice (Finn & Sladeczek, 2001).

Not only is it important to examine the relationship between treatment acceptability and treatment effectiveness, it is important to determine factors that may alter treatment acceptability. The treatment acceptability literature is full of variables

which previous researchers have found to influence acceptability ratings as perceived by teachers. For example, type of intervention presented (positive or aversive), complexity of intervention (complex or simple), jargon used in intervention presentation (complex or simple), mode of intervention presentation (written or visual), teacher knowledge of intervention (a lot or none), and experience with intervention (a lot or none) (e.g. Clark & Elliott, 1987; Cowan & Sheridan, 2003; Elliott, 1988; Elliott, Witt, Galvin & Peterson, 1984; Kazdin, 1980a; Layne, 2002; Martens, Peterson, Witt, & Cirone, 1986; Miltenberger, 1990; Reimers, Wacker & Koepl, 1987; Reimers, Wacker, Cooper & DeRaad, 1992; Singh & Katz, 1985; Tarnowski et al., 1989; Tingstrom, 1989; Witt, Elliott, & Martens, 1984; Witt, Moe, Gutkin & Andrews, 1984; Witt & Robbins, 1985; Zaino, 1995). Unfortunately, these variables have mostly been studied in analogue and have been mostly applied to teachers. How each of these variables potentially influences the acceptability ratings of children has yet to be examined thoroughly and in a naturalistic setting.

Ultimately, this study is an attempt to understand more about treatment acceptability in young children and draw closer the lines in the treatment acceptability and treatment effectiveness literature. Not only will it provide practitioners with missing information on the perception of the child, depending on the results of this study, it will give practitioners additional information on what is needed to build an effective intervention for the classroom. According to Gutkin (1993), consultants should implement a consultation model, use multimethod outcome measures, utilize single subject designs to evaluate treatment effectiveness, and assess treatment acceptability,

integrity, and consumer satisfaction. Clearly the proposed study will attempt to address the importance of some of these variables.

In addition, determining how treatment acceptability might impact an individual intervention in the classroom is essential. As recommended, practitioners should engage in best practices when developing any intervention. Best practice includes using functional based assessments and referring to the literature for empirically supported interventions. However, best practices may ultimately include obtaining the perception of the child to help strengthen the intervention and pinpoint unique interventions that are positive, acceptable, and effective. Enhancing each of these qualities in an intervention will assist in making sure all children in the classroom are as successful as possible.

#### Problem Behaviors in the Classroom

In order to ensure that all children within the classroom are successful and that they receive the same opportunity to achieve to their utmost potential, it is critical that teachers, in conjunction with school psychologists, are able to manage disruptive behavior in the classroom. Disruptive environments can potentially interfere with the learning of all children in the classroom. More specifically, a child who displays behavior excesses in the classroom can distract not only his/her peers from obtaining the education being provided in the classroom, but the actual academic achievement of the disruptive student may be adversely impacted (Kaplan, Gheen & Midgley, 2002). When students engage in disruptive behavior, their ability to engage in the appropriate academic task is limited.

Several studies have suggested that teachers believe they spend too much time on attempting to control disruptive behaviors in the classroom (Jones & Charlton, 1995).

Disruptive behavior has been acknowledged as a growing problem and a serious concern in the classroom (Kaplan et al., 2002). According to O'Brien (1982), disruptive behavior in the classroom consists mostly of Off Task behavior, Talking, and Out-of-Seat behavior. Lawrence and Steed (1986) identified 'Not Listening', 'Poor Concentration', and 'Short Concentration Span' as three most disruptive behaviors reported by teachers in the classroom. Additionally, Wheldall and Merrett (1988) asked 198 primary school teachers to rate their most disruptive behaviors. Of this sample, fifty-one percent of the teachers claimed that disruptive students spent excessive amounts of time 'Talking Out of Turn' and 'Hindering Other Students'. In another study by Jones and Charlton (1995), teachers identified the most disruptive and most frequently occurring behaviors in the classroom to be Talking, followed by Off Task behavior. Finally, in a teacher survey conducted by Bausman, Bent, Collister and Post (1999), researchers asked teachers to indicate problem behaviors in the classroom which were in need of identification and intervention with social skills training. Teachers' responses indicated that lack of preparation, off-task behavior, inappropriate language, physical contact, lack of respect, and excessive noise were the most problematic behaviors.

Ultimately, disruptive behavior in the classroom may have best been described by Fields (1986) in which he described disruptive behavior in the following manner:

... the great majority of disruptive behavior in primary classrooms is of a mild nature relating to poor attention, persistent infringement of class rules and procedures, and inconsistent on-task behavior. Extraordinary intervention strategies are not normally required for these behaviors (p. 56).

Although these behaviors may be mild, Wheldall and Merrett (1988, p.24) described them as “time wasting, irritating, stressful and ultimately, exhausting for teachers”. These behaviors have also been reported as contributing to teacher dissatisfaction and burnout (Borg & Riding, 1991). They may also act as an excuse for poorer performance in the classroom by the disruptive child (Baumeister, 1997; Covington, 1992). Disruptive behaviors have and continue to cause significant difficulties in the classroom, therefore these are behaviors that should be targeted for intervention in the classroom.

The literature suggests that Talking Out, Off-Task and Out-of Seat behaviors are consistently the most disruptive and problematic behaviors reported by primary and secondary teachers in the classroom. Because these behaviors have been previously identified as most disruptive, and have been identified as irritating and stressful as perceived by teachers, these behaviors will be the focus of this study.

### Behavioral Interventions

In order to determine appropriate interventions for behavior difficulties in the classroom, school psychologists often engage in behavioral consultation with teachers, parents and children alike. This consultation process involves improving functioning not only in children, but in the individual responsible for implementing treatments within the environment. This type of consultation is based on behavior theory and social learning theory. It does not focus on ‘unconscious themes as most important in determining success’ (Erchul & Conoley, 1991, p.208), rather it focuses on increasing or decreasing observable target behaviors. Because this model of consultation relies on behavior and social learning theory, it is important that researchers understand not only the process of

consultation, but variables within each of the theories may influence success of the overall consultation process in the classroom. Additionally, more thoroughly understanding how this process utilizes functional behavior assessment to create interventions for individual children in the classroom may assist practitioners in creating the most effective behavior change interventions. This literature review will now provide a brief description of the consultation process and the use of functional behavior assessment in assisting practitioners in developing interventions for children displaying problem behaviors in the classroom. Consumers of this literature should keep in mind the importance of treatment acceptability and its potential place within the consultation model and intervention development process.

Based on the behavioral consultation model, Bergan (1977) developed a model for working with teachers in the classroom in determining and defining target behaviors for change. His model utilized four stages including, problem identification, problem analysis, plan implementation, and problem evaluation. During the problem identification stage, target behaviors are identified for intervention. This is done through conducting a problem identification interview (PII). Throughout the interview, the consultant must target the behavior in operational terms. The environment must be thoroughly investigated, including antecedents, behaviors and consequences. In addition, frequency, intensity, and/or duration of the targeted behavior must be identified. And the consultant must work with the teacher to determine appropriate data collection techniques to use in the classroom. Baseline observations must then be obtained before meeting with the teacher in the next interview stage. Baseline procedures may include direct

observations by the consultant or may include paper-pencil techniques carried out by the teacher on a daily basis.

Problem analysis (PAI) occurs when the consultant meets with the teacher to discuss the obtained baseline behavior. Discussion then revolves around determining the appropriate level of functioning expected in the classroom. An intervention is then developed based on the baseline information and on the antecedents and consequences of the target behavior. At this point, the teacher is trained on the intervention and the consultant makes arrangements to monitor implementation for the first few trials.

During the plan implementation stage, the consultant monitors the teacher's ability to collect data and carry out the intervention. If the intervention is too difficult, or the teacher does not have the required skills to run it, or the teacher does not run it as specified, modifications may be made to ensure the intervention has the potential to be as successful as possible.

The final stage conducted in behavioral consultation is the problem evaluation interview (PEI). This is to evaluate the effectiveness of the intervention. Initially identified goals must be evaluated to determine if the effects of the intervention were successful. In addition, a determination of whether the intervention should be continued, modified, or withdrawn is made (Bergan, 1977).

Behavioral consultation is well suited for use in schools. It is an easily understood method for identifying and carrying out behavior change. Unfortunately, this method has problems as well. Practitioners using this model at times neglect to consider consultee preference with a particular intervention, thus resistance to implementing the developed intervention presents itself. Again, this shows why it is critical to determine



acceptability of these procedures before initiating them in the classroom. (Erchul & Conoley, 1991).

Behavioral consultation often makes use of functional behavior assessment (FBA). FBA was derived from operant learning theory (Gresham, Watson, & Skinner, 2001). This is a specific method used to assess variables which are paired with the occurrence of inappropriate behavior (e.g. talking out, out of seat, off task). Through this process, the function of the child's behavior is determined and an effective intervention can be developed (Sterling-Turner, Robinson & Wilczynski, 2001).

Ervin, Radford, Bertsch, Piper, Ehrhardt and Poling (2001) suggest four phases for conducting an FBA. First, in a descriptive phase, information is gathered using indirect procedures and direct observation. The second phase is the interpretive phase, in which hypotheses are developed about the function of the child's behavior. The third phase is the verification phase, when functional tests are conducted to determine if appropriate hypotheses were generated. The final phase is based on implementation of an intervention and then focuses on the monitoring of the intervention. Unfortunately, as will be seen, none of these phases attempts to consider treatment acceptability as perceived by either the teacher or the child. Although the teacher is consulted throughout the FBA process, he/she may not be consulted as to whether the procedures being selected are all acceptable. Additionally, the child's opinion may not be considered in the process at all. Determining whether or not to evaluate the child's treatment acceptability may be a vital part which has been left out of the FBA process thus far.

During the descriptive phase information is collected through various methods. Methods may include record review, interview, various rating scales, and direct

observation. A review of records is critical in determining if previous attempts have been made at modifying the same or alternative behaviors. Successful attempts may be options for the new intervention, and failed attempts may help the practitioner to rule out ineffective options before beginning the intervention process. Additionally, important information regarding the child's medical history may be found. Interviews are also used in collecting information. During the interview a definition of the behavior can be determined, times of the day that the behavior occurs can be established, and possible antecedents to the behavior can be discussed. In addition, obtaining a good description of the classroom in which the behavior occurs can help in creating a suitable intervention for the classroom. Ratings scales may also be used to further assess the extent of the behavior; however some researchers have found that information obtained from these are not reliable and provide little information (Ervin et al., 2001). Direct observation is another method of collecting descriptive data (Ervin et al.; 2001; Sterling-Turner et al, 2001). This may be done using "narrative recording, event recording, or observations based on time-sampling procedures" (Sterling-Turner, et al., 2001, p.214).

During the interpretive phase hypotheses are developed as to the function of the target child's behavior. Hypotheses are developed using information gathered during the descriptive phase. This information is analyzed to determine if patterns exist within and across the information. Finding patterns within the data assists the practitioner with determining what triggers or maintains the student's inappropriate behavior (Ervin et al., 2001). A maintaining variable defines the reason for the child's behavior and can be called the behavior's function. Gresham et al (2001) described the five most common functions of a behavior to include, attention, access to tangibles, escape of tasks, escape

of individuals, and internal stimulation. These functions are then tested during the verification phase in order to determine an appropriate intervention.

The verification phase is used to verify whether or not the correct conclusions were drawn in the interpretive phase of the FBA process. During this phase, systematic manipulations are made to the environment in order to test the function of the behavior. Brief functional analysis procedures may be the easiest procedure to use in the school setting (Ervin et al., 2001). These procedures are very brief, 5-10 minutes, and are based solely on the previously derived hypotheses. For example, if a child is suspected to be talking out in order to gain teacher attention, a test may be set up to see if talking out behavior decreases when teacher attention is given only for not talking out. Subsequently, if the same child is believed to be talking out to gain peer attention, a test may be set up to see if talking out behavior decreases when peer attention is provided for appropriate behavior. After both of these hypotheses are tested, outcome data are compared to see which function (peer or teacher attention) was more effective in decreasing the disruptive behavior. The function determined to be more effective is then described as the primary function of the child's behavior and is used in developing the intervention (Ervin et al., 2001).

The final stage of the process is intervention implementation. During this phase, the practitioner works with the teacher to determine an intervention that is appropriate for the respective classroom and that is based on the function of the child's behavior. It is critical during intervention implementation that the teacher is provided a rationale for why the intervention is being chosen. It is also important that the teacher be trained in implementation of the intervention and that steps be taken to ensure the teacher has the

adequate skills to carry out the intervention. This is based on literature which suggests that failure to implement an intervention is primarily due to the teacher not having the appropriate skills to implement the intervention and/or the just not teacher wanting to carry out the intervention (Ervin et al., 2001). The practitioner must decide on which type of treatment method is to be used. They may choose to weaken a response with punishment or extinction procedures or they may choose to strengthen a response with differential reinforcement procedures. “Treatments based on the latter serve as the basis for positive behavioral supports (Gresham et al., 2001, p. 159).”

#### *Validity of Functional Behavior Assessment*

Shriver, Anderson and Proctor (2001) describe the validity of functional behavior assessment. They state that “a functional analysis is currently the best proof of the accuracy of hypotheses regarding functional relations (p. 189).” Functional analysis relies heavily on single subject design methodology. Therefore, to evaluate the validity of FBA, practitioners and researchers must be aware of the single subject design methodology, in particular internal and external validity. Additionally, evaluating the outcomes of FBA based on treatment validity and social validity is important in behavior analysis.

Shriver, Anderson and Proctor (2001) state that treatment validity is important in determining whether or not data obtained during data collection phases lead to an effective intervention. To examine and view support for the treatment validity of FBA procedures, one must only refer to “any issue of the Journal of Applied Behavior Analysis (p. 190).” Ervin et al. (2001) provide evidence in their critique of the empirical literature on school-based functional assessment that FBA is useful in designing effective

interventions for high-frequency problem behaviors in students. Social validity is also important in determining the validity of FBA procedures. Interventions developed using FBA procedures need to be socially meaningful. That is, interventions need to use socially appropriate procedures and directly address the disruptive behavior being targeted (Shriver et al., 2001).

Overall, FBA studies have shown that FBA methods can lead to effective treatments with children who display a variety of problems in the classroom. In a meta-analysis of FBA procedures, 146 out of the examined 148 interventions demonstrated success in behavior change based on FBA. In addition, researchers examined the number of studies which utilized students as raters of treatment acceptability. Findings were sparse in this area and most research utilizing treatment acceptability ratings of FBA procedures asked the teacher to rate his/her perception, although these findings were limited (Ervin et al., 2001). Although little information is available regarding the effectiveness of FBA interventions versus non-FBA interventions, the information available in regards to the effectiveness of FBA interventions alone is convincing. “No other procedure has demonstrated similar utility (Ervin et al., 2001, p. 206).”

*Differential Reinforcement of Incompatible Behavior (DRI) and Differential Reinforcement of Alternative Behavior (DRA)*

Many reinforcement-based interventions developed through the use of FBA are considered to be applied behavior analysis techniques. These techniques are referred to as positive reduction procedures because they maintain a positive environment and are not likely to raise ethical and legal issues like other reductive techniques (e.g. extinction and punishment) (Cooper, Heron & Heward, 1987). Differential reinforcement of

incompatible behavior and differential reinforcement of alternative behavior are two methods used to develop behavior interventions in the classroom. Basing these methods on information collected throughout functional assessment can assist practitioners in developing an intervention that is unique to each child. Both of these methods involve strengthening an appropriate behavior during a time when the child normally exhibits the inappropriate behavior (Abramowitz & O’Leary, 1991). The rationale is that the child is unable to display both an inappropriate and appropriate behavior simultaneously. Studies show DRI and DRA techniques to be effective in decreasing inappropriate behaviors (e.g. Deitz, Repp and Deitz, 1976).

When implementing DRI and DRA, practitioners must follow several guidelines. First of all, practitioners must ensure that the responses they are expecting the student to emit are actually behaviors that the student possesses and that they are behaviors that the environment will support after removal of the intervention. When designed in this way, there is an enhanced probability of maintenance of the appropriate behaviors. Secondly, consequences should be based upon the function of the student’s behavior. Third, when implementing DRI and DRA, practitioners must establish an appropriate reinforcement schedule that can eventually be faded (Cooper, Heron & Heward, 1987).

Overall, the consultation and FBA processes have ignored the perception of the child when designing interventions. Strategies used throughout both of these processes have focused on the relationship between the school psychologist and the teacher, and interventions have been collaborated upon and developed relying mainly on teacher input. However, the child may play a critical role in the intervention process. This is a role that has not been thoroughly examined by researchers and/or practitioners. It is

essential that researchers further examine variables that may influence the consultation and FBA process, specifically variables that may influence treatment acceptability in children. Additionally, determining if a relationship between treatment acceptability and treatment effectiveness exists will provide practitioners with more information on variables that may impact treatment effectiveness and further arm practitioners with tools that may prevent barriers to treatment success.

### Treatment Acceptability

Treatment acceptability has been previously defined as the degree to which an individual perceives a treatment procedure to be fair, reasonable, appropriate, and unintrusive (Kazdin, 1980a). Researchers such as Kazdin (1977) and Wolf (1978) discussed the importance of treatment acceptability. They argued that it was not enough for interventions to just be effective, but that they must also be accepted by individuals with whom they are implemented. “Do the ends justify the means?” (Wolf, 1978, p. 207) was a question posed by Wolf in his efforts to emphasize the importance of this concept. Central to this argument is a belief that treatment acceptability may influence overall treatment effectiveness. In an effort to answer this question, many researchers have conducted studies examining treatment acceptability and have developed instruments to measure the perceived acceptability by various populations.

Kazdin (1980a) developed a definition of treatment acceptability and was the first to develop and validate a measure which evaluated treatment acceptability. He proposed that treatment acceptability referred to “judgments about the treatment procedures by nonprofessionals, lay persons, clients, and other potential consumers of treatments” (p. 259). He further stated that a treatment was acceptable when it was “appropriate, fair, and

reasonable for the problem or client.” Treatment acceptability is important because it is presumed to be related to client behavior and satisfaction with treatment. Specifically, acceptable treatments are expected to be associated with greater client compliance and motivation, lower attrition rates, more positive behavioral outcomes, and greater satisfaction with treatment (Cross Calvert, & Johnston, 1990). Thus, it is not only important to assess the intervention’s effectiveness, but also its acceptability.

Although treatment acceptability has been defined as essential to examine in the client, most studies within the literature have failed to examine the client’s perspective and have focused on the consultee. Beginning with Kazdin’s research in the early 1980’s (Kazdin, 1980a, 1980b, 1981), the administration of rating scales to consultees has served as the primary approach to studying treatment acceptability. Typically, vignettes that describe behavior characteristics of a client and a proposed intervention are paired with rating scales. Researchers have varied vignettes in areas such as age, gender, and ethnicity of the child. Attempts at varying behavior severity have also been conducted. After participants have been exposed to a vignette, they are asked to rate the vignettes on the acceptability of the proposed intervention plans. Depending on the research design being used in the study, the participant may rate multiple treatments implemented for the same problem behavior. Variation in treatments allows researchers to evaluate factors which may ultimately influence treatment acceptability. Factors which have been investigated include problem severity, treatment effectiveness, side effects, and time (Reimers, Wacker & Koepl, 1987). Discrepancies between intervention acceptability ratings are then interpreted as indicators of consultee preferences for particular theoretical models and intervention styles.



Although vignettes have been used extensively for many years, the literature is limited because most studies present vignettes in text form. To expand on this, Kazdin (1980a) presented vignettes via audio tapes. Video studies by Kazdin were then followed up with studies that included presentation of cases through a visual media (Martens, Witt, Elliott, and Darveaux, 1985). Martens et al. (1985) compared acceptability ratings for written vignettes and videotaped vignettes. Results suggested that the methodology employed for presenting case information did not have a significant effect on the acceptability levels. Hyatt and Tingstrom (1993) used visual aids in the presentation of proposed school consultation interventions. One group of teachers watched a video presentation of a school psychologist's presentation of a proposed intervention to a teacher. Another group of teachers read the text description of the same intervention. Results indicated acceptability ratings were dependent upon presentation methodology. Specifically, written description of the intervention was rated as more acceptable than video presentation for one intervention (timeout), when levels of technical terminology were high. Otherwise, no significant results were found.

Other researchers have examined treatment acceptability using treatments implemented in a natural setting. These studies had participants actually implement direct treatments. Then they were asked to rate the treatments at multiple points throughout the treatment process (Miltenberger, 1990; Shapiro & Goldberg, 1986). Many of these studies have used parents to implement the treatments and subsequently to rate the intervention being implemented. Unfortunately, these studies have not typically assessed teacher treatment acceptability. Because most behavior interventions are implemented in the general education classroom, it would seem imperative to assess

teacher perception of treatment acceptability. Additionally, few studies have asked children to rate the acceptability of the intervention when applied in a naturalistic setting. Most studies using children have requested the child to rate multiple vignettes.

Miltenberger (1990) discusses the advantages and disadvantages in using analogue versus naturalistic methods in data collection. Researchers choosing to implement analogue studies have more control over variables. Additionally, they are less time-intensive and require less effort in data collection. On the other hand, generalizability to the natural setting is restricted with analogue studies because the participant is not actually experiencing the treatment as it would be implemented in the environment. Researchers have suggested further studies be done utilizing interventions applied in the actual setting with which they are intended to be applied (Reimers & Wacker, 1988; Reimers et al., 1992). This would provide researchers with a better conceptualization of how acceptability influences or is influenced by treatment effectiveness.

#### *Teacher's Treatment Acceptability*

Due to a seemingly apparent relationship to improvements in student behavior and teacher satisfaction, treatment acceptability is thought to be important in school-based intervention selection and development. Research has suggested that acceptable treatments correlate with greater client compliance and motivation, lower attrition rates, more positive behavioral outcomes, and greater satisfaction with treatment (Cross, Calvert, & Johnston, 1990).

One area in which treatment acceptability is important is the treatment of child behavior problems in the classroom. Teachers are often confronted with behavior

problems ranging in severity from daydreaming to destruction of property and aggression. Some behavior problems are difficult for teachers to manage without the aid of behavior consultants such as school psychologists. In many cases teachers are provided with treatment recommendations and asked to implement an intervention and rate its effectiveness. Whether or not these procedures are effective depends a great deal on the teacher's commitment to the intervention and their willingness to carry out the procedures properly. Presumably, teachers who are not fully committed to a procedure may not take the time or effort to implement it properly or consistently. As a result, behavior problems may continue or even worsen and children may be referred for special education eligibility testing before all possibilities have been exhausted in the general education setting. Teachers who believe a procedure is appropriate and likely to be effective are more apt to carry it out properly until desired results are achieved.

Kazdin (1980a) asked pre-service teachers to rate the acceptability of four proposed treatments. The behavior presented with the treatment varied in severity. Results indicated that pre-service teachers found treatments to be more acceptable when the behavior problem was more severe. Kazdin (1980b) again used undergraduate students to rate the acceptability of four behavior interventions. Results indicated that differential reinforcement and some forms of time-out were acceptable by raters. In addition, raters found isolation to be more acceptable when used as a backup method for other time-out procedures. Kazdin (1981) also wanted to examine whether treatment efficacy and/or adverse side effects influenced acceptability ratings. He found that stronger side effects reduced treatment acceptability ratings; however, outcome information did not influence acceptability ratings in either direction. All three of

Kazdin's studies used the *Treatment Evaluation Inventory* (TEI) to measure treatment acceptability ratings of participants.

Witt and Martens (1983) used six vignettes to present varying behavior interventions and obtain treatment acceptability ratings. Again, pre-service and student teachers were asked to rate one of six treatment vignettes using the *Intervention Rating Profile* (IRP). Results indicated that positive, and non-time consuming interventions were more acceptable by raters. Interventions were also perceived to be more acceptable when applied to mild behavior problems. Witt, Martens and Elliott (1984) solicited 180 teachers to participate in their study examining the influence of time, intervention type and behavior problems on treatment acceptability. Teachers were presented a vignette describing a child with a behavior problem and an intervention and asked to rate the intervention using the IRP. Results indicated that time needed to implement an intervention altered treatment acceptability ratings, with less time-intensive interventions being rated as more acceptable. Witt, Elliott and Martens (1984) conducted another study which looked at five factors potentially related to treatment acceptability. They had 180 pre-service teachers and student teachers read multiple case vignettes and then rate acceptability using the IRP based on general acceptability, undue risk, time, negative side effects, and teacher skill. Results of this study suggest that treatment acceptability is dependent upon all five of the proposed factors and is not simply influenced by one factor.

McKee (1984) examined regular education teacher's acceptability ratings of treatments using the TEI. Teacher's knowledge of behavior procedures, type of problem and type of intervention were manipulated. Results indicated that teachers with more

knowledge found interventions more acceptable than those teachers with less knowledge of behavior procedures. Teachers within this study also rated reinforcement procedures as more acceptable than the other procedures presented.

Elliott, Witt, Galvin and Peterson (1984) conducted a two part investigation. In the first part of their study, they presented 141 teachers, a combination of both special and regular education, one of three vignettes describing a problem child's behavior which varied on severity. They also presented an intervention which varied in positive behavior techniques. Participants were asked to rate the intervention using the IRP. Researchers found that the least complex positive intervention was more acceptable for the least severe problem behavior and that the most complex positive intervention was more acceptable for the more severe problem behavior. In the second part of their study they again varied problem severity and treatment complexity; however, this time they used reductive behavior techniques as the presented intervention. Teachers rated the least complex reductive intervention as the most acceptable intervention for the less severe problem behavior.

Concluding studies conducted in 1984, by Witt, Moe, Gutkin and Andrews manipulated the type of jargon used in presentation of the treatment. Additionally, they examined behavior severity and teacher experience. Utilizing regular and special education teachers, participants were asked to rate interventions using the IRP. Results indicated that pragmatic descriptions were more acceptable than both behavioral and humanistic. Also, researchers found that more experienced teachers rated interventions as less acceptable and that interventions were found to be more acceptable when a more severe behavior was described in the vignette.

Witt and Robbins (1985) asked general education, preschool and Headstart teachers to determine the acceptability of treatments. Participants were asked to read a vignette and then rate the treatment using the IRP. Researchers varied type of intervention, behavior severity, teacher experience and interventionist. Similar to past studies, results suggested that positive interventions were more acceptable and that teachers with more experience rated interventions as less acceptable overall than did teachers with less experience.

In 1985, Sing and Katz compared the acceptability ratings of three behavior techniques and one humanistic technique for modifying behaviors in the classroom. Ninety-six undergraduates rated the techniques both before and after receiving information on the techniques. Pre-test results indicated that raters found differential reinforcement, followed by humanistic parenting, and positive practice to be the most acceptable treatments. Post-test results however were not consistent with pre-test findings. Post-test results, after instruction on the four techniques, found that all three behavior techniques were rated higher than before and they were each rated similarly. In addition, the humanistic parenting technique was rated less favorably than the three behavior techniques.

Martens, Peterson, Witt and Cirone (1986) investigated the perceptions of 2, 279 special education and regular education teachers. Relative effectiveness, complexity and frequency of use were variables that were manipulated in this study. Results suggested that treatments which redirected students in using the appropriate behavior or included a reward manipulation were rated as the most effective, least complex and most frequently used, in other words, the most acceptable.

VonBrock and Elliott (1987) utilized 216 experienced teachers in their study. Teachers were asked to rate the acceptability of one of three treatments for a behavior varying in severity. Outcome data were presented with each treatment as well. Results of this study suggested that outcome information influenced ratings when the severity of the presented behavior was considered.

Clark and Elliott (1987) conducted a study in which participants were either presented a strong treatment or a weak treatment and were then asked to rate the treatment accordingly. Additionally, researchers examined participant's knowledge as a potential variable influencing treatment acceptability. Results indicated that teachers tended to rate stronger treatments as more acceptable and weaker treatments as less acceptable. Knowledge was found to correlate slightly, with ratings of treatment acceptability being higher for teachers who had more knowledge of the procedures being implemented.

Tingstrom, McPhail and Bolton (1988) examined treatment outcome and the age of the target child on treatment acceptability ratings. Undergraduate students rated four interventions applied to either an eight-year old or a thirteen-year old. The proposed interventions were described to be effective or not effective or no information on effectiveness was given. Results indicated that the more aversive interventions were rated as less acceptable and that interventions with reported effectiveness were rated as more acceptable than those reported to be not effective. Age was not found to be influential for acceptability ratings.

Power (1995) had 147 elementary and junior high school teachers read vignettes depicting the use of behavioral interventions (BIs) of daily report (DR) and a response

cost (RC) procedure and the use of psychostimulant medication in the treatment of Attention Deficit/Hyperactivity Disorder (ADHD). Teachers rated the acceptability of each. Results showed that elementary and middle school teachers rated DR as more acceptable than RC and stimulant medication. In addition, teachers rated medication as more acceptable when used in combination with BIs than when used in isolation. Knowledge of ADHD and years of teaching experience were found unrelated to ratings of acceptability in this study.

Glass and Weigar (2000) found that teachers tend to prefer a combination of medication and behavior management to treat children in the classroom who have Attention Deficit Hyperactivity Disorder (ADHD). Surprisingly, even teachers who believed ADHD behaviors to be environmentally caused or just normal behavior recommended the same treatment.

Higgins (2000) found that middle and high school teachers gave significantly higher ratings for School-home Notes than for Self-monitoring. School-home Notes were rated higher than Contingency Contracting but this difference was not significant. Teachers recognized the difference in severity of problem behaviors described in the student vignettes. The interaction between severity and order of students was significant. Type of teacher, i.e., general education versus special education, had a significant affect on acceptability ratings. Special education teachers reported using Contingency Contracting more than other teachers and they evaluated it higher.

Marcoe (2001) investigated the effect of school level on treatment acceptability. Marcoe had 50 high school, 50 middle school, and 56 elementary school teachers rate five academic and five behavior interventions. Results indicated that teachers at all



school levels rated behavior modification techniques as less acceptable and that teachers at the high school level were less willing to implement such procedures overall.

Elementary school teachers in this study rated administrative conferencing as less acceptable than other modes of intervention. As for academic interventions, all teachers were consistent in their ratings of one-on-one instruction. Teachers rated this procedure as the least acceptable mode of intervention for academic problems.

Pisecco (2001) investigated treatment acceptability as perceived by teachers of elementary school children. Teachers were asked to rate the acceptability of four interventions: a daily report card (DRC), a response cost technique, a classroom lottery, and medication management. They rated their levels of agreement to the items using the *Behavioral Intervention Rating Scale* (BIRS). Overall, teachers preferred the DRC to all other forms of treatment, the only intervention that required parent involvement.

Another set of researchers, Stinnett, Crawford, Gillespie, Cruce and Langford (2001) examined treatment acceptability as affected by the rater's rural or urban background. One hundred and forty-four pre-service teachers were asked to read and rate one of four vignettes. Researchers examined whether obtaining a high school degree in a rural or urban environment affected pre-service teachers' treatment acceptability ratings. Results indicated that participants from urban areas rated treatments as less acceptable than those from rural areas.

In the most recent studies on treatment acceptability as perceived by teachers, Gage (2002) and Layne (2002) further added to the literature base. Gage (2002) suggested that providing a rationale for a specific treatment did not affect teachers' acceptability of the treatment. Layne (2002) indicated the need to provide information to

teachers in order to increase acceptability ratings. In Layne's study, 134 teachers were asked to rate interventions varying on behavior knowledge, recommended parental involvement and behavior severity. Teachers who were provided the function of the child's behavior and who were recommended parental involvement had higher acceptability ratings. Additionally, the study found that teachers rated interventions for more severe problem behaviors higher than interventions for less severe problem behaviors.

As described above, literature does exist on treatment acceptability as perceived by teachers. In general, findings from this line of research have demonstrated that interventions are rated as most acceptable when positive techniques are used, when the teacher has increased knowledge of the intervention, when intervention procedures are neither time intensive or complex, and when a treatment rationale was provided.

Critically however, only three studies were found that examined the relationship between treatment acceptability and treatment effectiveness. To recap, results of these three studies indicated that perceived treatment effectiveness influenced treatment acceptability ratings. It was found that when strong effectiveness data was presented, treatments were viewed as more acceptable. Previous experience with a treatment also appeared to alter treatment acceptability. Overall, results from all studies indicated that treatment acceptability and treatment effectiveness were highly correlated. Importantly, most of this literature has been analogue as opposed to naturalistic and fails to take into consideration those treatment acceptability ratings of children. There are some studies that have incorporated the child perspective in comparing rater preferences, however very few have focused solely on the child. Although the literature is fairly sparse in the

treatment acceptability of children, there are some notable exceptions which provide researchers with a base from which to further delve into this area.

### *Children's Treatment Acceptability*

Similar methods as used in teacher treatment acceptability studies have been used to conduct studies examining the perception of children. Mainly, analogue studies have been carried out which consider post-treatment acceptability ratings of treatments. According to Elliott (1986), treatment acceptability as perceived by children was originally obtained through anecdotal studies (e.g. Fox & Jones, 1978; Ollendick, Matson, Esveldt-Dawson & Shapiro, 1980; Kirigin, Braukmann, Atwater & Wolf, 1982). Subsequently, this research spurred further interest in the field and numerous analogue studies utilizing children as the main participants were conducted.

Kazdin et al. (1981) collected the first acceptability information using a treatment acceptability measure, the *Treatment Evaluation Inventory* (TEI). Children, in addition to their parents and institutional staff, were asked to rate the acceptability of four treatments. Results found that children rated the presented interventions less acceptable than both their parents and the staff and preferred reinforcement of replacement behaviors over all other presented methods.

Kazdin et al.'s study was followed in 1986 by a four-part investigation by Elliott, Witt, Galvin and Moe (1986). In the first study they had 23 sixth-grade students rate 20 descriptions of behaviors based on severity. They indicated whether a behavior was "Not a Problem" to "A Very Big Problem." Participants were then asked to rate likeability of the interventions. Interventions were either praise versus reprimand, group versus individual, or traditional. Likeability ratings differed significantly between treatments.

Results indicated that public praise, private reprimand, and public reprimand were all more acceptable than private praise. Interventions in which the whole class gained extra recess were more acceptable than interventions in which the entire class lost recess. This survey study was followed by three more studies. In each of these studies 79 sixth-grade boys and girls were provided vignettes consisting of a description of a problem behavior and a description of an intervention. Participants were then asked to rate the interventions applied to the problem behavior using the *Children's Intervention Rating Profile* (CIRP). Results indicated that students preferred private reprimand and that problem severity did not influence student ratings. Additionally, results suggested that children prefer to “reward the group and punish the individual (p. 272).”

Elliott, Witt, Galvin and Moe (1986) conducted a study involving sixth grade children. Children were presented twelve interventions for a student described in a vignette as displaying either talking out or destructive behavior in the classroom and asked to rate the intervention using the CIRP. Results indicated that interventions were rated as more acceptable when there was a teacher-child interaction, a group reinforcer, or a negative consequence applied to the target child. Interventions rated less acceptable by children included those which implemented negative contingencies for the group when one child misbehaved and those which required verbal reprimand by the teacher toward the target child.

Turco and Elliott (1986) further examined variables which could influence treatment acceptability ratings by children. They examined type of intervention in their study as applied to either a child who was destroying other student's property or a child who was disturbing other children. Proposed interventions included public reprimand,

public praise, private reprimand, private praise, self-monitored reprimand, self-monitored praise, home-based reprimand and home-based praise. Results indicated that public reprimands were significantly less acceptable and both home-based methods were significantly more acceptable for students.

Wurum (1999) used the CIRP to investigate treatment acceptability of five different programs used in the education of students with learning disabilities. Three hundred and ninety-three students in the fifth-, seventh- and ninth-grades were asked to rate the acceptability of one of five models for education. Results indicated that all models of educational delivery were acceptable by all aged raters and all abilities, learning disabled and non-learning disabled. Of note, the self-contained model was rated lower than the other three models. Researchers also found that acceptability of models varied with age. Additionally, a lack of understanding of the disability did not affect overall children's ratings of the various models and students currently receiving special education services under a specific model did not necessarily rate that model as their most acceptable choice. This study was a jump from the previous analogue method of data collection to a version of the naturalistic method; however, the study is limited in its ability to generalize to individual interventions in that students were asked to rate models of education service delivery and not individual interventions applied to them solely in the classroom.

The few studies that do exist which examine treatment acceptability as perceived by children, ask children to rate independent contingency interventions only. Taking a variation of this approach, Elliott, Turco, Evans and Gresham (1984) wanted to examine whether acceptability ratings would vary dependent upon how the treatments were

applied in the classroom. In particular, they wanted to examine if children would rate different group contingencies as more or less acceptable to independent group contingencies. Elliott et al. (1987) assessed the treatment acceptability of fifth grade students using the CIRP. Participants were asked to rate one of three behavior severities and one of three group contingency methods. Results in this study indicated that females rated group contingencies as less acceptable than their male counterparts as behavior severity increased; black children rated group contingencies as more acceptable than their white counterparts. Overall, children rated all group contingencies similarly, although gender and race separated how acceptable they were perceived within each group.

Shapiro and Goldberg (1986) present one of the few naturalistic studies that exist in the child treatment acceptability literature. This study asked sixth grade students to rate the acceptability of three group academic interventions after the implementation of each intervention. Researchers of this study found that independent group contingency procedures were rated as more acceptable than the other two procedures. In their study, Shapiro and Goldberg were able to examine treatment acceptability in a naturalistic setting; however the main goal of their study was to examine the link between effectiveness and post-acceptability measures and not the link between pre-treatment acceptability and treatment effectiveness.

Overall, research on children's perceptions of treatment acceptability has demonstrated that most children prefer positive interventions for mild behaviors, reinforcement of replacement behaviors, private reprimands and/or public praise, home-based procedures, and interventions that involved a teacher-child interaction. In addition, they prefer interventions that apply punishment to the disruptive child and/or reward the

entire class. However, these studies have just begun to look at treatment acceptability as perceived by children and have largely ignored the potential impact of the child's perception of treatment acceptability on treatment effectiveness. With a lack of studies in this area, it is important that further research be conducted which aims at targeting this population, especially since they have been largely forgotten to date. Future researchers should consider the perception of the child because it may be critical in overall treatment success. Elliott (1986) suggests that obtaining treatment acceptability from children is 'theoretically and ethically desirable'. As school psychologists move toward a resistance to intervention model, it will be increasingly imperative that they be able to ensure that developed and implemented interventions are the most effective. Implementation of a multi-modal, multi-method approach to intervention development, including functional based assessment of the problem behavior, empirically based procedures to treat the problem behavior and perceptions of not only the teacher, but the child as well, will ensure best practice in the classroom.

#### *Relationship between Treatment Acceptability and Treatment Effectiveness*

Several models have been proposed in the literature which suggests a relationship between treatment acceptability and treatment effectiveness. In addition, several researchers have examined the relationship between treatment acceptability and treatment effectiveness through empirical studies. Overall, researchers have found that the more an intervention is utilized with success, the more acceptable a rater will find the intervention (Clark & Elliott, 1987; Kazdin, 1981; Reimers & Wacker, 1988; Reimers et al., 1992; Tingsrom, McPhail & Bolton, 1989; VonBrock & Elliott, 1987). Ultimately,

researchers have examined whether treatment acceptability is influenced by overall treatment effectiveness.

In 1985, Witt and Elliott developed a model that looked at the relationships between treatment acceptability, treatment use, treatment integrity, and treatment effectiveness. These researchers found these four elements to be linear and reciprocal. Reimers, Wacker and Koepl (1987) followed up Witt and Elliott, with a model of their own. In this model, the researchers incorporated a knowledge element with the belief that knowledge of a treatment is necessary before acceptability can be measured. These researchers predicted that a treatment would be less effective, if it was perceived as less acceptable because low acceptability would lead to poor compliance. In determining what causes treatment acceptability to be lower or higher, one may refer to the proposed model presented in this review of the literature. It is possible that children's treatment acceptability is influenced by a specific learning history which is created through both direct and non-direct experiences. Negative experiences (e.g. failure to earn the reward) may create a lower treatment acceptability which in turn may adversely impact overall treatment effectiveness. Of course the reverse may be true as well, positive experiences (e.g. success in earning a reward) may create higher treatment acceptability which in turn may strengthen overall treatment effectiveness.

Kazdin (1981) first looked at the relationship between treatment acceptability and treatment effectiveness. Although Kazdin examined the influence of treatment efficacy and adverse side effects on treatment acceptability, he only found that treatments in which strong adverse side effects were presented negatively influenced treatment acceptability ratings. Overall, his results suggested that there was no relationship



between treatment effectiveness and treatment acceptability. Some researchers have questioned Kazdin's methods however, and believe that an inappropriate sample was used in his study, thus potentially influencing his results (e.g. Witt, Elliott, & Martens, 1984). Additional studies of the treatment acceptability and treatment effectiveness relationship support the existence of this relationship.

VonBrock and Elliott (1987) followed Kazdin and examined treatment acceptability and its' relationship with treatment effectiveness via an analogue study. They presented teachers with outcome information prior to having the teachers rate the acceptability of the treatment. Results indicated that treatment effectiveness information influenced overall treatment acceptability ratings when a mild behavior problem was presented in the vignette. They also found that interventions rated as less acceptable were also rated as less effective by teachers. Clark and Elliott (1987) further investigated this relationship by examining the presentation of treatment strength data to teachers prior to obtaining acceptability ratings. Participants were either presented a strong treatment or a weak treatment and were then asked to rate the treatment accordingly. Teachers in this study rated stronger treatments as more acceptable and weaker treatments as less acceptable. Reimers and Wacker (1988) had parents rate a treatment used with their child prior to and after implementation of the treatment with their child. Results indicated that prior to the treatment, acceptability was altered by willingness of the parent to implement the treatment and the potential of disruption when implementing the treatment. However, researchers in this study also found that after the treatment had been implemented, acceptability ratings were altered only by treatment effectiveness. Thus, previous experience with a treatment appears to alter treatment acceptability ratings.

Elliott (1988) suggested further study of this relationship through use of analogue studies using treatment-effectiveness presentation of data prior to obtaining treatment acceptability ratings. Reimers et al. (1992) used parents in their study to examine a treatment prior to and multiple times throughout the course of the treatment. Results indicated that treatment acceptability and treatment effectiveness were highly correlated. They found that raters who were more compliant, rated the intervention as more acceptable; and that raters who rated interventions as more acceptable after an extended period of time were likely to be more compliant, thus resulting in a more effective treatment. Again treatment effectiveness influenced treatment acceptability ratings through multiple ratings throughout the treatment, thus previous experience appeared to alter treatment acceptability ratings. Tingstrom et al. (1988) and Zaino (1995) both found that when effectiveness information was presented prior to obtaining acceptability ratings, acceptability ratings were influenced.

Another study investigating the relationship between therapeutic change (treatment effectiveness) and treatment acceptability was conducted by Kazdin (2000). Kazdin's study included 144 children who were referred to the Yale Child Conduct Clinic for oppositional, aggressive and antisocial behaviors. Acceptability measures were taken after implementation of the outpatient treatment. Results indicated that there was a small relationship between treatment acceptability and therapeutic change.

In addition, Tingstrom et al. (1988) examined treatment effectiveness on treatment acceptability ratings. Undergraduate students rated four interventions: differential reinforcement, time out, corporal punishment, and the presence of the parent in the classroom. The proposed interventions were described to be effective or not

effective or no information on effectiveness was given. Results indicated that interventions with reported effectiveness were rated as more acceptable than those reported to be not effective. However, results also indicated that acceptability was only slightly higher when effectiveness was reported as opposed to no information being provided on effectiveness. This pre-treatment rating of acceptability based on effectiveness data is just a piece of the proposed relationship between treatment acceptability and treatment effectiveness.

Although the relationship between treatment acceptability and treatment effectiveness has been previously studied, studies have relied mainly on analogous methods of data collection and post-treatment measures of treatment acceptability. Researchers suggest that this relationship be further examined in naturalistic settings due to the sparse literature using this method of data collection. Few studies exist in the treatment acceptability literatures which utilize naturalistic settings. Shapiro and Goldberg (1986) examined the relationship between treatment acceptability and treatment effectiveness using the actual recipients of the treatment, children. This study asked sixth grade students to rate the acceptability of three group academic interventions after the implementation of each intervention. Results indicated no differences in effectiveness between the three groups. Researchers of this study also found that independent group contingency procedures were rated as more acceptable than the other two procedures. Although Shapiro and Goldberg's findings were consistent with other group studies which utilized post-treatment acceptability ratings (e.g. Elliott, Turco & Gresham, 1987), this study was limited in that it only asked participants to rate treatments following implementation of the treatment.

It is apparent that further studies conducted in naturalistic settings are critical to adequately examine the importance of this relationship. Unlike past research that has examined the impact of treatment effectiveness on treatment acceptability, this study proposes to examine the impact of treatment acceptability on treatment effectiveness. It is important that practitioners further understand this relationship in order to attempt to prevent resistance to intervention. Using children as participants will only enhance these studies, as children are the primary recipients of interventions in the classroom and their perception may influence the overall effectiveness of a treatment.

#### *Variables Influencing Treatment Acceptability*

In an effort to expand the treatment acceptability literature beyond the influence of a few potential factors, many researchers have looked at a plethora of variables such as problem severity, type of treatment, time needed to implement, rater characteristics, and so on (e.g. Elliott, 1988; Reimers et al., 1987). As previously presented, the mode of presentation of interventions was examined in the early stages of the treatment acceptability literature by Kazdin (1980a) and Martens et al. (1985). Although they presented no real significant findings, their interventions were based on vignettes and not applied to the actual classroom. Researchers have also found that more aversive treatments were deemed more acceptable for severe behaviors and positive treatments were rated as more acceptable for mild behaviors (Cowan & Sheridan, 2003; Reimers et al., 1992; Tarnowski et al., 1989; Witt et al., 1984). Even though researchers have found that adult raters rate more aversive treatments as more acceptable for severe behaviors, they still rate punishment treatments as less acceptable than positive reinforcement treatments (Elliott, Witt et al., 1984; Kazdin, 1980a; Martens et al., 1986; Miltenberger,

1990; Reimers et al., 1992; Witt et al., 1984; Witt & Robbins, 1985). As for implementation influencing treatment acceptability ratings, researchers have found that interventions that require less time to implement and are less complex in their methods are rated as more acceptable by all raters (e.g. Cowan & Sheridan, 2003; Elliott, Witt et al., 1984; Miltenberger, 1990; Reimers et al., 1992; Witt et al., 1984). However, teachers are more receptive to time intensive/complex interventions when applied to a more severe problem behavior (Elliott, 1988). Additionally, the correlation between treatment integrity and treatment acceptability has been examined. Sterling-Turner and Watson's (2002) results indicated that the correlation was not significant between pre-/post-treatment acceptability and treatment integrity. That is, acceptability ratings did not influence treatment integrity and treatment integrity did not influence treatment acceptability. Although previous research suggested that acceptability of an intervention could potentially influence the teacher's willingness to implement the intervention, Sterling-Turner and Watson's findings were not significant.

Some researchers have examined characteristics of the individual adult raters as having potential influences on treatment acceptability ratings. Kazdin (1984) presented a difference between parents and psychiatric inpatient children's ratings of treatment acceptability. In this same study he found that children would rather use medication as an intervention, whereas parents would rather use time-out as an intervention. In his study, Kazdin discussed the characteristic of age as being a variable in influencing treatment acceptability. Miltenberger, Lennox and Erfanian (1989) looked at place of employment as a characteristic of a rater and found that community-based staff rated aversive treatments less acceptable than institutional staff working with individuals with

mental retardation. Type of theoretical orientation was examined by Tarnowski et al. (1989) and results indicated that raters perceived treatments based on their personal model of thinking/training as more acceptable. In addition, researchers in a study by Heffer and Kelly (1987), had results which indicated that race and income influenced treatment ratings. The type of rationale presented to the rater was also found to influence acceptability ratings as found by Cross Calvert and McMahon (1987) and Gage (2002). The amount of experience that a teacher had in the classroom was also found to affect treatment acceptability (Witt et al., 1984; Witt & Robbins, 1985). Finally, increased knowledge with an intervention was found to alter treatment acceptability ratings in several other studies (Clark & Elliott, 1987; Layne, 2002; Singh & Katz, 1985; Tarnowski et al., 1989; Tingstrom, 1988; Zaino, 1995).

Variables that specifically influence children's acceptability have also been examined. In studies conducted with children, behavior severity was not significant in the ratings of treatment acceptability by younger children and was significant in the ratings of treatment acceptability by older children. Findings also indicate that younger children prefer positive interventions, whereas older children prefer more aversive interventions. In addition, sex and race seem to alter acceptability ratings (Elliott et al, 1986).

With the vast amount of variables described in the teacher treatment acceptability literature already, it seems that literature that describes variables that may impact children's treatment acceptability ratings is lacking. It is surprising that there is little literature in this area due treatment acceptability originally being concerned with the perception of the client. Subsequently, due to the lack of literature in this area,

researchers have yet to investigate the impact of all variables investigated in the teacher treatment literature. Additionally, studies have not used a naturalistic research method in their attempts to explore the relationship between treatment acceptability and other variables. This study will focus on examining previously identified teacher and child variables as applied to children in a naturalistic setting. These variables include: behavior severity, previous experience, grade level and type of intervention.

### Purpose of the Study and Hypotheses

The purpose of this study is to investigate children's treatment acceptability of behavior interventions implemented in the general education classroom. Researchers will further examine factors that may influence treatment acceptability in children from grades one through four. Additionally, the relationship between treatment acceptability and treatment effectiveness will be further explored. Determining whether or not acceptability influences treatment effectiveness may assist practitioners in the selection of the most appropriate intervention for the child. Answers to the following substantive questions are integral to such a purpose.

1. Is there a difference in treatment acceptability ratings of interventions based on children's previous experience with interventions?

Hypothesis: Previous experience with an intervention will influence treatment acceptability ratings of children.

Assessment: Treatment acceptability will be measured using the CIRP. Previous experience will be measured via teacher report obtained through the BIRS and via involvement with a pre-referral intervention team. A one-way between subjects ANOVA design will be used to analyze the data.

2. Is there a difference in treatment acceptability ratings of interventions based on grade level of children?

Hypothesis: The grade level of children rating an intervention will influence treatment acceptability ratings of children.

Assessment: Treatment acceptability will be measured using the CIRP.

Developmental level will be measured using a demographic form. A one-way between subjects ANOVA design will be used to analyze the data.

3. Is there a difference in treatment acceptability ratings based on type of intervention presented?

Hypothesis: Type of intervention will influence treatment acceptability ratings of children.

Assessment: Treatment acceptability will be measured using the CIRP. Type of intervention will be counterbalanced across grades and genders and will be presented via permanent products and verbal explanation. A repeated measures ANOVA design will be used to analyze the data.

4. Is there a relationship between the level of behavior severity exhibited by children in the classroom and ratings on treatment acceptability measures for interventions?

Hypothesis: A relationship between behavior severity ratings as reported by teachers and treatment acceptability ratings of children will exist for classroom interventions proposed to be implemented in the classroom.

Assessment: Treatment acceptability will be measured using the CIRP. Teacher reported behavior ratings will be measured via the *Conner's Teacher Rating Scale*. A



Pearson-Product Moment correlation coefficients design will be used to analyze the data.

5. How much variance in treatment acceptability can be accounted for by grade level and behavior severity level?

Hypothesis: A statistically significant amount of the total variance in treatment acceptability will be accounted for by grade level and behavior severity level.

Assessment: Treatment acceptability will be measured using the CIRP. Grade level will be obtained through a demographic form. Behavior severity will be measured using the Conner's Teacher Rating Scale. A Multiple Regression will be used to analyze the data.

6. Does a causal relationship exist between treatment acceptability and treatment effectiveness in children receiving a behavioral intervention in the general education classroom?

Hypothesis: A causal relationship exists between treatment acceptability and treatment effectiveness in children receiving a behavioral intervention in the general education classroom.

Assessment: Treatment acceptability will be measured using the CIRP. Treatment effectiveness will be measured using direct observation. Data will be compared across groups.

7. Does an alteration in treatment acceptability produce long-term effects on the effectiveness of a treatment?

Hypothesis: The impact of treatment acceptability on treatment effectiveness will produce long-term effects on the effectiveness of a treatment if a child does not achieve success with the intervention.

Assessment: Treatment acceptability will be measured using the CIRP. Treatment effectiveness will be measured using direct observation. Data will be compared across graphs.

8. Does previous experience with a behavior intervention that was implemented in the classroom influence children's future ratings of treatment acceptability for that same intervention?

Hypothesis: Previous experience with a behavioral intervention in the classroom will influence children's future ratings of treatment acceptability for that same intervention.

Assessment: Treatment acceptability will be measured using the CIRP. CIRP scores will be compared across treatment phases to determine if a change in scores occurs. Previous experience will involve exposing the child to multiple phases of the same treatment.

## CHAPTER III

### METHODOLOGY

Chapter III provides a narrative of the methodology. Included are a description of the experimental design, a description of participants, a description of the setting, a description of the independent variables, a description of the measures for the dependent variables, and data collection procedures. The current study was broken down into two separate parts.

#### Design

##### *Part One*

Part one used a correlational design to examine treatment acceptability of children in grades one through four. Independent variables included grade level, type of intervention, teacher reported behavior severity, and previous experience with interventions. Treatment acceptability was the dependent variable measured in this part of the study.

##### *Part Two*

In part two a variation of a single-case reversal design was utilized. More specifically, an ABCACB design was used to establish treatment effectiveness of the proposed interventions for the classroom, and to compare the influence of treatment acceptability on treatment effectiveness. Each phase ultimately

served as a baseline for the preceding phase. Variables were then changed to attempt to reproduce levels of behavior in a previous phase and all treatments were implemented at least two times in order to verify obtained results (Cooper, Heron & Heward, 1987). An ABCACB design also allowed researchers to end with a treatment phase and reduced the potential of sequence effects by reversing treatment order following a return to baseline.

Ultimately, the existence of multiple treatment phases allowed for the examination of a causal relationship between the independent (treatment acceptability) and dependent (treatment effectiveness) variables. If a change in the dependent variable occurred at the onset of the manipulation of the independent variable, a relationship between the independent and dependent variable was determined to be established. Specifically, internal control was demonstrated in the reversal design if the behavior changed at each reversal of conditions. External control was demonstrated if consistency in the results across subjects existed.

Part two utilized the reversal design to manipulate (move between the levels of) the independent variable and then verify changes in the dependent variable. Participants, target children, rated a behavior intervention (the treatment) using the *Children's Intervention Rating Profile (CIRP)*. The rated behavior intervention was used during the first treatment phase (B) in the classroom. The intervention was then implemented by the classroom teacher on a daily basis. After implementation of the original intervention, a new treatment phase (C) was implemented. This occurred after the behavior line in phase B stabilized and after at least three data points were obtained. The new treatment phase (C) attempted to alter the acceptability of the implemented intervention. A modified version of the original behavior intervention was presented to the child. It described the

same intervention used in phase B with a modification that was aimed at altering the acceptability rating of the intervention as perceived by the child, in this case, removal and/or alteration of the associated contingency. At this time, a new acceptability rating was obtained. It is important to note that actual behavior intervention procedures used in phase B did not change in phase C. Treatment phase C was implemented at least three times, or until a stable data line had been obtained.

The treatment was then removed from the classroom, resulting in a return to baseline (A). This was done to determine if the developed treatment was producing the behavior change in the classroom. A return to baseline also provided evidence of internal control, as it allowed the researcher to then reverse treatment acceptability presentation following baseline and rule out potential treatment acceptability order effects. The researcher conducted two behavioral observations during the baseline phase, and then immediately returned to a treatment phase. Following a return to baseline, the child was again presented the intervention from phase C and a second treatment acceptability rating was taken. Phase C was run until a stable behavior line was achieved or until at least 3 data points had been obtained. After implementation of the second phase C, the child was told they were returning to the original behavior intervention used in phase B. At that point, another acceptability rating was taken.

In total, the target child was exposed to the two treatment scenarios a total of four times, (B) two times and (C) two times. All treatment acceptability and treatment effectiveness data were graphed and phases were separated by vertical lines on the x-axis.

## Participants

### *Part One*

Data were collected from elementary school, general education classrooms, in a rural school district in Oklahoma and were selected based on convenience to the researcher. Children in grades one through four were recruited for participation. One hundred students were proposed to be included in part one of the study. All students, a total of 332, in grades one through four within the chosen rural school district were given the opportunity to participate in part one. Of those solicited, two-hundred and six students were provided consent by their guardians in order to participate in the study. This indicated a 62% return rate. Out of the 206 students who were given consent to participate, 183 participated in the study. Twenty of the initial 206 students did not participate because they were absent on the data collection days and researchers were unable to collect data from the students at a later date. Three of the initial 206 students did not participate because they chose to withdraw from the study during the CIRP training phase. Of the 183 students who did participate, only 170 were included in data analysis. The 13 students not included in the data analysis were not included because they did not pass the manipulation check at the beginning of the study, which indicated a potential lack of understanding of the interventions being presented to them. Table 1 presents relevant demographic data for the sample.

Table 1 *Characteristics of the sample for part one (N = 170)*

<u>Categorical Variables</u>		
<u>Characteristic</u>	<u>Frequency</u>	<u>Percent</u>
<u>Child's Gender</u>		
Female	98	57.6
Male	72	42.4
<u>Child's Race/Ethnicity</u>		
Caucasian	135	79.4
African American	4	2.4
Mixed	10	5.9
Other	4	2.4
<u>Parental Income Level</u>		
Below \$18,000	21	12.4
\$18-\$40,000	44	25.9
\$40-\$75,000	53	31.2
\$75,000 and up	29	17.1
<u>Special Education Placement</u>		
Yes	15	8.8
No	138	81.2
<u>IDEA Category,</u>		
Learning Disabled	1	0.6
Speech-Language	8	4.7
Other Health Impaired	2	1.2

Table 1 (*continued*)

<u>Categorical Variables</u>		
Characteristic	Frequency	Percent
Category unknown	4	2.6
No Category	138	80.6
<u>Receives Title I Services</u>		
Yes	28	16.5
No	120	70.6
	<u>Mean</u>	<u>Standard Deviation</u>
Age	8.34	1.25

*Part Two*

Participants in part two of the study came from elementary school, general education classrooms, in an urban school district in Maryland. Eight children were proposed to be included in part two of the study. Following teacher nomination of students, nine children were identified by the researcher to be appropriate candidates for participation based on baseline behavioral observations and on the willingness and ability of the guardian to provide informed consent. Of these nine children, eight were provided parental consent for participation. This indicated an 89% return rate. Although eight children were provided parental consent, one child was withdrawn from participation in the study based on teacher and child request to do so. The child who withdrew from the study showed a high emotional response when the intervention was not implemented exactly the way he anticipated. Because this behavior was interfering with his academic



performance more than when the intervention was not in place, it was agreed that his removal from the study was in his best interest.

Students were selected from a school which consisted of the following demographic profile: 51% male, 49% female, 1% American Indian, 1% Asian, 69% African American, 8% Caucasian, 22% Hispanic, 58% free lunch, and 4% reduced lunch. Therefore, the sample obtained from this school is not unreasonable.

Participants were originally selected by their respective classroom teachers because they were perceived to display a high level of disruptive behaviors in the classroom (e.g. talking out, being off task, being out seat). Researchers then observed the target children to determine if they met observational criteria for the study. Target children were required to be engaged in disruptive behaviors for an average of 60% of the intervals observed during baseline observations, and had to emit at least one of the target behaviors during the observation, to qualify for participation in the study. Two of the eight children only exhibited disruptive behaviors an average 58-59% of the intervals observed during the baseline condition; however, even though these children did not meet the 60% behavioral cutoff, in comparison to their classroom peers they were engaged in disruptive behaviors at a much higher rate. Due to this, and due to information obtained from a teacher interview, it was agreed they would be good candidates for the study even though children failed to meet the researcher's criteria for inclusion during baseline. A description of each of the participating target children is provided below. Of note, the children chosen for part two varied in their experience with interventions; most had experience with class-wide techniques. Table 2 represents relevant demographic data for the sample used in part two of the current study.

Table 2 *Characteristics of sample for part two (N = 7)*

<b>Demographic Data</b>	<b>Target Child</b>			
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Age</b>	6yrs. 7mths.	6yrs. 6mths.	6 yrs. 7mths.	6yrs. 11mths.
<b>Grade</b>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>
<b>Gender</b>	Male	Male	Male	Male
<b>Ethnicity</b>	African American	African American	African American	African American
<b>Family Income Level</b>	\$40,000- \$75,0000	\$18,000- \$40,000	Below \$18,000	\$18,000- \$40,000
<b>Classroom Placement</b>	Title I, General Education Classroom	Title I, General Education Classroom	Title I, General Education Classroom	Title I, General Education Classroom
<b>Diagnosis</b>	None	None	None	None
<b>School Suspensions</b>	None	None	Yes, 2 days	None

Table 2 (continued)

<b>Demographic Data</b>	<b>Target Child</b>		
	<b>5</b>	<b>6</b>	<b>7</b>
<b>Age</b>	8yrs. 3mths.	7yrs. 8mths.	8yrs. 7mths.
<b>Grade</b>	2 <sup>nd</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
<b>Gender</b>	Male	Male	Male
<b>Ethnicity</b>	Hispanic	African American	African American
<b>Family Income Level</b>	Below \$18,000	\$18,000- \$40,000	Below \$18,000
<b>Classroom Placement</b>	General Education Classroom	General Education Classroom / OHI	General Education Classroom / OHI
<b>Diagnosis</b>	None	ADHD	ADHD
<b>School Suspensions</b>	None	None	None

### Instrumentation

#### *Part One*

*Children's Intervention Rating Profile (CIRP).* The dependent variable, treatment acceptability was measured using the *Children's Intervention Rating Profile (CIRP)* [Appendix D]. The CIRP is the only existing treatment acceptability measure for use with children. The CIRP consists of seven items, which are rated on a five-point Likert scale ranging from "I agree" to "I do not agree." Readability of the scale is determined to be at the fifth grade level. Items represent the fairness, expected effectiveness, and potential adverse effects associated with a treatment. Internal consistency of the scale

ranges between .75 and .89 across a variety of studies. The scale has also been found to discriminate between interventions as seen in several studies utilizing fifth and sixth grade children as participants (Finn & Sladeczek, 2001). Results from Elliott, Witt and Galvin's original study in 1983 indicate that the CIRP is comprised of one primary factor which accounts for 79% of the variance. The remaining variance is included in question 2 of the scale which was found to load on its own factor, teacher harshness (Witt & Elliott, 1985). Scores for each item on the scale were summed to achieve a total treatment acceptability score. Items two, three and four required reverse scoring. Possible scores ranged from 7 to 35, with a seven indicating the highest level of acceptability.

*Demographic Form.* A demographic form [Appendix C] was used to collect information on all participants in part one of the study. This form asked for information such as sex, age, gender, grade, ethnicity, income level, educational placement and behavior. This form was completed by the child's parent and measured the grade level independent variable.

*Vignettes.* Four vignettes [Appendix E], with associated visual permanent products [Appendix F-1], were developed to evaluate the effect of intervention type on the ratings of treatment acceptability. The vignettes included a description of the problem behavior in the classroom. Additionally, the vignettes included the proposed intervention for the problem behavior. The type of intervention presented was either negative reinforcement, positive reinforcement, type I punishment or type II punishment. The interventions in the vignettes were presented to children as if they were to be the individuals receiving the respective intervention in the classroom. Data collected by the researcher through manipulation checks and preference ordering, indicated that children

were able to differentiate between all treatments presented to them via vignette presentation.

*Conner's Teacher Rating Scale-Revised: Short Form (CTRS-R:S).* The *Conner's Teacher Rating Scale-Revised: Short Form (CTRS-R:S)* [Appendix G] was used to measure the independent variable of behavior severity. Teachers of participating children completed one CTRS-R:S per child in the study that was in their respective classroom, however each teacher did not complete more than six scales total to minimize potential rating bias.

The CTRS-R:S is a rating scale utilizing a Likert-type system for classifying behaviors associated with the DSM-IV criteria for Attention-Deficit Hyperactivity Disorder. The scoring ranges from "Not At All True" to "Very Much True". The CTRS-R:S yields T-Scores for Hyperactivity, Inattention/Cognitive Problems, Oppositionality, and an overall ADHD Index score. Scores on the CTRS-R:S are computed and plotted on a chart for each of the diagnostic criterion. The scores are then converted to T-Scores with a mean of 50 and a standard deviation of 10.

The coefficient alpha determined for the CTRS-R:S ranges from .88 to .95. Test retest reliability coefficients for the Oppositional subscale, Cognitive Problems/Inattention subscale, Hyperactivity subscale, and ADHD Index are .84, .92, .72, .80 respectively. The CTRS-R:S is a shortened version of the CTRS-R:L. To develop items for the CTRS-R:S test developers selected only those items that loaded the highest in Oppositionality, Hyperactivity, and Inattention/Cognitive Problems after running an exploratory factor analysis. These three factors were then run again in order to test

reliability of the chosen 17 items in defining the three chosen factors. The three factors were confirmed to be appropriate after analysis had been completed (Conners, 1997).

*Behavior Intervention Rating Scale (BIRS).* The *Behavior Intervention Rating Scale (BIRS)* [Appendix H] was used to measure the previous experience variable. The BIRS was developed as a modified version of the IRP-15. The BIRS extended the IRP-15 in order to include items reflecting treatment effectiveness. Elliott and Treuting (1991) developed the BIRS as a measure of both treatment acceptability and treatment effectiveness. Nine additional items were added to the IRP-15 to reflect treatment effectiveness. These items represented rate, level and maintenance of behavior change, peer comparisons, and generalization to other behaviors and settings. The items representing treatment effectiveness were labeled the Effectiveness Rating Profile (ERP). The BIRS is a six point Likert scale ranging from “strongly disagree” to “strongly agree”. Initially the BIRS was used in studies with teachers that examined severity of problem behavior, type of intervention, intervention outcome, and teacher’s knowledge of intervention use (Finn & Sladeczek, 2001).

The psychometric properties of this assessment have been consistently good compared to the IRP-15. Overall, analysis of the BIRS demonstrates differentiation between treatment acceptability and perceived treatment effectiveness. In addition, time of effectiveness is also an obtained factor on the BIRS resulting from two questions. A coefficient alpha of .97 was found for the BIRS, with the Acceptability scale yielding a .97, the Effectiveness scale yielding a .92, and the Time scale yielding a .87. The resulting three factors of the BIRS account for 73.6% of the total variance. This was determined through factor analyses utilizing an oblique rotation. Factor 1, Treatment

Acceptability accounted for 63% of the variance. Factor 2, Treatment Effectiveness accounted for an additional 6% of the variance. Factor 3, Time of Effectiveness accounted for an additional 4.3% of the variance. (Elliott & Treuting, 1991).

For purposes of this study, only the Effectiveness Rating Profile of the BIRS was used. Items were completed by the participating child's previous year's teacher. The teacher indicated on the measure if an intervention was implemented with the child the previous year. If so, the teacher was to indicate whether the implemented intervention was a group or individual intervention and then briefly describe the procedures used. The teacher was asked to fill out one evaluation scale per intervention that the child was exposed to in the classroom.

#### *Part Two*

*Children's Intervention Rating Profile (CIRP).* See description provided in the part one section of instrumentation. Of note, all target children were administered the CIRP prior to intervention implementation to ensure that successful manipulation of the independent variable had occurred. Treatment acceptability scores were plotted. A vertical line on the x-axis indicated a phase change.

*Demographic Form.* See description provided in the part one section of instrumentation. This form provided the researcher with information regarding the child's background and added to the descriptive case history of each child.

*Background Form.* A background form [Appendix I] served as an additional source for collecting background information on the target children. The background form was used to collect additional data on the target children. This form was completed by the researcher and included information from the child, the child's teacher, and the

child's cumulative and behavior records. The background form gathered information on inappropriate behaviors and academic status.

*Reward Acceptability Worksheet.* A reward acceptability sheet [Appendix J] was used to collect information on the rewards that the target child would like to receive and would not like to receive. This sheet was completed by the target child with assistance from the researcher. The reward acceptability sheet is a list of potential rewards that was used as part of the intervention development.

*Target Child Observation Form.* Direct observations were used to measure treatment effectiveness throughout the study. To select target children, collect baseline data on target children, and determine treatment effectiveness throughout all phases of the intervention, an interval recording procedure was used. Researchers used a target child observation form [Appendix K] to record behaviors during a ten to fifteen minute observation. Interval length was ten seconds. Partial interval recording was used for Out of Seat, Talking Out, Object Play, Passive Off Task, Teacher Attention, and Peer Attention behaviors. This meant that if the target child engaged in any of these behaviors for just a portion of the observed interval, the behavior was marked as observed. For example, if the child was observed to be out of his seat for at least two seconds during the ten second interval, he was marked to be out of seat for the entire interval because he emitted the behavior during that time. Whole interval recording was used for Engaged behavior. This meant that the target child had to be Engaged the entire observed interval in order for the behavior to be marked as observed. For example, the child could not be engaged in any disruptive behavior during the entire ten second period in order to be considered on task.



*Procedural Integrity and Interrater Reliability.* . Procedural checks were conducted continuously throughout the course of treatment during phase two of the study. Because altering or omitting steps could affect the outcome of the study, performance feedback was provided to teachers regularly if they were not completing the intervention with full integrity each time it was implemented. All participating teachers were open to feedback and responded well to researcher input. Procedural checks included a combination of completed permanent products and observation of the carried out intervention in the classroom. Procedural integrity of the interventions ranged from 77% to 100% throughout the course of the study. Lower procedural integrity was found in the initial stages of intervention implementation; however, with performance feedback from the researcher, procedural integrity improved quickly. Permanent products were completed on a daily basis and indicated a high level of procedural integrity associated with use of the card.

Interrater reliability measures were taken in order to ensure that researchers were not inaccurate in their observations. At least 20% of the total observations conducted underwent interrater reliability checks. According to Hersen & Barlow (1976), an agreement rate of 80% or higher is adequate. To obtain interrater reliability, a scored interval method was used to determine agreed upon (1) occurrence of behavior, (2) nonoccurrence of behavior, and (3) occurrence plus nonoccurrence of behavior. This formula is:  $(\text{Agreement} / (\text{Agreement} + \text{Disagreement})) * 100$ . During the baseline phase, an interrater reliability check was conducted during at least one observation. For the current study, interrater reliability ranged from 88% to 100% for baseline observations (one per child) and from 87% to 100% for treatment observations (three per child).

*Permanent Products.* Permanent products [Appendix F-2] served as an aid for the teacher in implementing the intervention. Permanent products were direct components of the implemented intervention and tracked rates of appropriate behavior in the classroom. Because interventions were function-based and unique to each individual child, use of the permanent products across interventions varied. Permanent products were collected on a daily basis by researchers as a second way to monitor the intervention and ensure procedural integrity. Two researchers were responsible for scoring the permanent products to ensure accuracy.

### Procedures

A rural school district in Oklahoma and an urban school district in Maryland were contacted by the researcher for participation in the study. The districts were chosen based upon convenience to the researcher. The districts received a consent form that requested their district's participation and explained procedures to be used in the study [Appendix A-1]. Once permission from the district was obtained, elementary schools from the participating district were asked to participate. The respective principal for each elementary school was contacted to obtain permission to collect data at their school by the researcher. Principals received a consent form explaining procedures to be used in the study [Appendix A-1]. Administrators were asked to allow the researchers to contact teachers within the building to inquire about their potential participation in the study.

### *Researchers*

A doctoral student from an APA-accredited and NASP-approved School Psychology program served as the primary investigator for this study. The primary researcher had training in psychological, instructional and behavioral consultation;

advanced research methods; applied behavior analysis; and had completed a 600 hour school-based practicum. The primary researcher worked with secondary researchers in completing part one of the study. The primary researcher was the sole person responsible for collecting part two data, with a secondary researcher serving only to conduct interrater reliability checks of observations and secondary checks of permanent products.

Doctoral and specialist students in an APA-accredited and NASP-approved School Psychology program served as researcher assistants for each subject in part one. Researcher assistants all had at least one course in consultation, one course in advanced research methods, and at least 120 hours of experience in the general education classroom before being able to serve in the study. A clinical psychologist from an APA-accredited Clinical Psychology program served as a research assistant for part two of the study and underwent training in interval time sampling procedures for recording behaviors during this part of the study. The assistant for part two also became familiar with the instruments to be used in the study and was trained on how to score necessary protocols.

### *Part One*

*Step One- Sampling Procedures.* After permission was obtained from the school administrators, researchers entered first through fourth grade classrooms to solicit participation from students [see script, Appendix B]. The procedures to be used in the study were described and students were encouraged to return their consent form and an included demographic sheet [Appendix C]. Students were given four days to return materials. Researchers returned on the third day to remind students of the study, distribute extra forms, and collect returned forms. The letters of consent that were sent home with all children in grades one through four requested permission for participation

in part one of the study [Appendix A-2]. All children who returned consent forms, regardless of desire to participate, were offered an incentive. Consent letters described the procedures to be used during the study and researcher contact information was provided.

After obtaining consent and demographic information from children, the study began. Participating children were pulled from the general education classroom to administer measures. Before administering the measures, children were trained on how to use the CIRP. All students were given three examples and researchers demonstrated the correct procedures for rating the items. This was done to ensure that participants understood how to complete the measure.

*Step Two- Administering Study Packet to Children.* Researchers removed one child out from the class at a time. At this time, researchers described to the child what would be asked of him/her and the child was then asked to sign an assent form for participation [Appendix A-2]. This was the only form which included the child's name. Following completion of the assent form, the child was presented four behavior interventions [see scripts, Appendix B]. Interventions were based on positive reinforcement, negative reinforcement, type I punishment, and type II punishment. Intervention presentations were completely counterbalanced across participants. Each child rated four interventions. Each intervention was described to the child as it would be applied to him/her in the actual classroom. Procedures were explicit and included a visual example of the protocols to be used and a manipulation check. A manipulation check was conducted to ensure intervention comprehension [Appendix M]. If a child needed additional information, the researcher indicated this on the appropriate protocol

and provided the necessary information to the child. Children were then asked to rate the intervention they were just shown using the CIRP. Of note, prior to completing the CIRP the children received a brief explanation on how to use the CIRP [see script, Appendix B and see practice sheet, Appendix M]. Also, all items on the CIRP were read to the child to ensure understanding of each item. Following the presentation of all interventions, children were presented all four interventions simultaneously and asked to select the intervention they liked the best. The selected intervention was removed from the line-up, and children were asked again which intervention they liked the best. This continued until one intervention was left, and provided researchers with a hierarchy of preference from each child. This concluded an individual administration which took no longer than 10 to 15 minutes per child. This procedure was completed for each participating child in grades one through four. Teachers were consulted prior to beginning data collection in order to determine the best times to pull children out of the classroom throughout the day.

*Step Three- Administering Study Packet to Teacher.* Teachers of children in grades one through four were asked to participate in the study. Participation from the teachers was minimal. Prior to administration, teachers were asked to consent to participation. Teachers were then asked to rate the behaviors of no more than six participating children within their classroom using a behavior rating scale, the *Conner's Ratings Scale for Children-Revised: Short Form*. Researchers provided teachers with the necessary protocols at the time that the children within their respective classroom were engaged in the study. Teachers had one week to complete the forms and were provided an incentive for their time. To ensure confidentiality, the teachers were provided rating forms with a child's identification number at the top of the form. A removable note at the

top of each form included the child's name and was removed by the teacher after the form was complete. No protocol had the name of any child on it, except for the assent form.

*Step Four- Administering Study Packet to Previous Teacher.* To obtain data for the previous experience variable, researchers obtained information from the participating child's teacher from the previous school year. Prior to administration, teachers were asked to consent to participation. Teachers were then asked to rate the perceived effectiveness of any intervention used with the child during the previous school year using the ERP from the BIRS. If multiple interventions were implemented, multiple ratings were obtained. A space was provided on the form so that the teacher could specify whether the intervention was an individual intervention or class-wide intervention. Researchers provided teachers with the necessary protocols at the time that the participating children were engaged in the study. Teachers were given one week to complete the forms and were provided an incentive for their time. Again, to ensure confidentiality, the teachers were provided rating forms with a child's identification number at the top of the form. A removable note at the top of each form included the child's name and was removed by the teacher after the form was complete. No protocol had the name of any child on it, except for the assent form.

#### *Part Two*

*Step One- Sampling Procedures.* After permission was obtained from the school administrators, the researcher contacted regular education teachers from grades one through three for participation in the study. Teachers were contacted via a research letter [Appendix A-2] which outlined their role in the study. The letter also indicated that the

teacher would be responsible for the initial selection of the target child in the classroom. Teachers were also provided a description of the intervention procedures to be used in the classroom to ensure that they fully understood their participation in the study. Interested teachers provided consent [Appendix A-3] and returned the consent form to their school principal or the researcher. Because the teachers were to be the individuals responsible for carrying out the intervention, only teachers who were willing to perform such duties were selected. In addition, not all teachers who consented for participation were chosen for the study. Those teachers who chose to participate nominated a student in their class for participation in the study based upon his/her experiences with the child. Teachers were asked to select a child whom they felt exhibited one of the target behaviors at a higher rate than his/her peers. Their selection was then followed up and confirmed through direct observations by the researcher. Interval time sampling observation procedures were used to document observed behaviors. If the target child was observed to display out of seat, talking out, and/or off task behavior for an average of at least sixty-percent of the observed intervals, that child and classroom were selected for participation in the study.

At that point, the classroom teacher was asked to send home a research letter [Appendix A-2], an informed consent for participation [Appendix A-2], and a demographic sheet [Appendix C] with the target child. The research letter explained the procedures to be used during the study. Parents were provided three days to return the consent form and demographic sheet. Contact information for the primary researcher was included in the consent so that parents could contact the researcher if any questions arose.

Of note, the researcher initially entered the classroom without conducting observations. This was to ensure that the researcher's presence had the least possible effect on the behaviors of the child and class being observed. Once the teacher felt that the researcher's presence was no longer affecting the behaviors of children in the classroom, observations of the target child were conducted.

*Step Two- Functional Behavior Assessment.* Following parental consent, additional observations were conducted of the target child for the baseline phase. A total of at least three systematic observations of the child were completed to determine the target child's current rate of behavior in the classroom. Interval time sampling procedures were utilized via the target child observation form, and were ten to fifteen minutes in length. Additional observations were conducted, if necessary, in order to achieve a stable trend line in the data.

Target behaviors were operationally defined as follows: Out of Seat (OS) - The target child inappropriately loses contact between his/her back pant pockets and respective seat for more than two seconds without teacher permission. Talking Out (TO) - The target child inappropriately makes any vocalization without permission of the teacher. This may include talking, humming, singing, unrecognizable noises, etc. Passive Off Task (POT) - The target child is not out of seat, talking out, or engaged in object play; however is not appropriately attending to the required task.

Additional behaviors were also included on the observation form to assist in development of the function-based intervention: Engaged, Object Play, Teacher Attention and Peer Attention. Engaged (Engaged) was defined as: The target child is appropriately attending to and completing the required task and/or is appropriately moving around the



room. Object Play (OP) was defined as: The target child is inappropriately manipulating an object inconsistent with task completion. Teacher Attention (TA) was defined as: The teacher is within one foot of the target child for more than two seconds or is directly talking to or gesturing to the target child. Peer Attention (PA) was defined as: A peer is within one foot of the target child, excluding adjacent peers, for more than two seconds or a peer is talking directly to or gesturing to the target child.

In addition to baseline observations, the functional behavior assessment included collection of behavior and academic data. A teacher interview was conducted to collect current classroom academic and behavioral data [Appendix L]. Based on this information, hypotheses were developed in an attempt to determine the function of the child's behavior. Systematic observations that tested the hypothesized function(s) of the target child's behavior followed. These observations assisted in the development of the function-based intervention and again utilized the target child observation form.

*Step Three- Intervention Development.* Once the function of the child's behavior had been determined, the researcher developed an intervention utilizing differential reinforcement of incompatible behavior. The researcher then consulted with the classroom teacher to ensure that the intervention was appropriate for the respective classroom environment. Permanent products that were to be used in monitoring student behavior during the intervention were shown to the teacher as well. Table 3 presents relevant descriptive data used in individual intervention development.

Prior to finalizing the intervention, the researcher pulled the target child out of the regular education classroom to obtain assent for participation in the study [Appendix A-3]. The child was not be told the purpose of the study as that may have had an affect on

the study results; however the child was told about the intervention procedures to be used in the classroom and researchers obtained assent for participation in the intervention [see script, Appendix B]. Additionally, to determine potential contingencies that may be associated with the intervention, the child was asked to complete a reward acceptability sheet. This sheet asked the child to indicate items that he/she would like to receive and/or would not like to receive during the intervention process. These potential contingencies were options available to the teacher and the researcher. The intervention was then finalized and implemented following teacher and child training.

Table 3 *Intervention characteristics for part two participants*

	Target Child			
	1	2	3	4
<b>Average Rate of Behavior</b>				
<b>Talking Out</b>	10.67%	23.30%	18.30%	18.67%
<b>Out of Seat</b>	43.67%	44.67%	44.67%	23.00%
<b>Passive Off Task</b>	3.67%	1.30%	5.33%	2.67%
<b>Object Play</b>	3.00%	6.67%	6.33%	12.3%
<b>Total Disruptive Behavior</b>	62.67%	68.00%	59.67%	58.00%
<b>Identified Target Behavior(s)</b>	TO, POT	TO, OS	TO, OS	TO, OS
<b>Antecedents</b>	teacher-directed activity, independent assignments	Journal time, circle time, independent assignments	Circle time, journal time, independent assignments, teacher-led reading	Independent assignments, teacher-led activities

<b>Consequences</b>	Verbal redirection, peer/teacher modeling of appropriate behavior, seclusion from peers, red/yellow/green system	Verbal redirection, peer/teacher modeling of appropriate behavior, red/yellow/green system	Verbal redirection, red/yellow/green system	Verbal redirection, red/yellow/green system
<b>Duration, Frequency, Intensity</b>	varies, nonstop, varies	varies, nonstop (OS) and 10/activity (TO), varies	varies, nonstop, varies	varies, nonstop, varies
<b>Function of Behavior</b>	Teacher Attention	Teacher Attention	Teacher Attention	Teacher Attention
<b>Teacher Goal of Intervention</b>	Reduce behavior to 30- 35%, higher work completion	Reduce behavior to 30%, no screaming in class	Reduce behavior to 20- 25%, lower peer aggressions	Increase hand raising, model approp. behavior

Table 3 (continued)

	<b>Target Child</b>		
	<b>5</b>	<b>6</b>	<b>7</b>
<b>Average Rate of Behavior</b>			
<b>Talking Out</b>	5.33%	20.00%	49.33%
<b>Out of Seat</b>	0.00%	22.33%	22.00%
<b>Passive Off Task</b>	35.00%	37.00%	8.00%
<b>Object Play</b>	14.67%	51.00%	23.00%
<b>Total Disruptive Behavior</b>	58.67%	89.00%	76.67%
<b>Identified Target Behavior(s)</b>	TO, OP	TO, POT	TO, OS
<b>Antecedents</b>	Unable to Identify	Unable to Identify	Morning time, end of day activities (e.g. packing up), transitioning in hallways, independent assignments, presence of multiple activities in classroom
<b>Consequences</b>	Verbal redirection, a strike system (warnings) for inappropriate behavior, red/yellow/green system	Verbal redirection, removal to another classroom, red/yellow/green system	Respond to call-out, verbal redirection, nonverbal redirection, removal to another classroom, red/yellow/green system
<b>Duration, Frequency, Intensity</b>	Unknown, 4-5/activity (TO) and 1-2/activity (OP), unknown	varies, unknown, varies	Varies, 10+/activity (TO) and 4-5/activity (OS), varies
<b>Function of Behavior</b>	Teacher Attention	Teacher Attention	Teacher Attention
<b>Teacher Goal of Intervention</b>	Reduce behavior to 30-35%, end on green at end of each day	Reduce behavior to 40%, improve peer relations, increase respect of authority figures	Reduce behavior to avg. of 25%, increase work completion, follow directions the first time, ask for help when needed

*Step Four- Teacher Training.* Teacher training occurred prior to implementation of the intervention. The teacher was provided the necessary materials and was trained in how to implement the intervention. Each teacher was asked to carry out the intervention in a mock session with the researcher. The purpose of the mock session was to familiarize the teacher with the permanent products to be used in conjunction with the intervention. Permanent products assisted the teacher in monitoring the appropriate behavior of the target child. After successful completion of the mock session, the teacher was instructed to begin the intervention. He/she was instructed to run the intervention until notified by the researcher that the study was complete. Permanent products were picked up daily from the classroom to monitor treatment integrity. Products were scored based on the number of observable steps that the teacher completed.

In addition to the training sessions, the researcher informed the teacher that the target children may at times be pulled from the classroom to discuss intervention progress. Appropriate times to pull out children were discussed and agreed upon with the respective teacher.

*Step Five- Child Training.* On the same day following teacher instruction, the target child was pulled from the classroom to review the procedures for the intervention with the researcher. Prior to explaining the intervention, the child was trained on how to complete the CIRP using standardized training procedures [see script, Appendix B and see practice sheet, Appendix M]. Following training of the CIRP, the researcher explained the intervention to the child and demonstrated the procedure to be used in the classroom. Children viewed examples of all necessary permanent products and the researcher answered any questions the child had regarding the intervention procedure. To

check for understanding, the following questions were asked of the child following initial presentation of the intervention: 1) What is this intervention for? and 2) What happens if you {insert appropriate behavior}? [Appendix M]. The child was then asked to complete the CIRP. Items on the CIRP were read aloud to the child to make sure the child understood what was being asked. In addition, the permanent products associated with the respective intervention were shown to the child while they rated the intervention.

*Step Six- Implementing the Intervention.* The intervention was implemented in the classroom on a daily basis. The teacher implemented the intervention according to the intervention protocol. The intervention was run until the researcher notified the teacher otherwise. All intervention effectiveness data throughout the study were gathered using direct observation. Observers used the target child observation form to collect data. Interrater reliability checks were conducted for at least 20% of the total observations. Agreement had to be at 80% before observations were considered valid.

*Step Seven- Manipulating Treatment Acceptability.* The intervention originally explained to the child was the actual intervention implemented by the general education teacher during the entire length of the study. No changes were made to the actual intervention implementation. However, periodically the child was pulled from the classroom by the researcher and informed that a component of the intervention was going to change. To keep the teacher from becoming biased to the change, the teacher was not informed of the proposed change and continued to carry out the intervention as originally planned.

Pulling the child out of the classroom to inform them that a component of the intervention had changed indicated a phase change. A phase change indicated

manipulation of the independent variable. When a target child was pulled from the classroom a script was followed which included the manipulation of the independent variable [Appendix B]. Children were told 1) that a component of the intervention has changed, (C), or 2) that they will be going back to the original intervention, (B). After the change had been thoroughly explained to the child, two questions were asked to check for understanding: 1) What is different about this intervention from the last? 2) Is that good or bad? If the child answered all questions with information pertaining to the intervention just described to them, then he/she was asked to rate the acceptability of the intervention using the CIRP. However, if children were not sure of what change had been made, the researcher explained the intervention once more and followed up with the same questions. This process continued until the child was able to accurately describe the new intervention. The CIRP was read aloud during each administration, and associated protocols for the respective intervention were made available for the child to view as well.

Phase change did not occur until treatment effectiveness data points or by obtaining stabilized or at least three consecutive data points were collected. Of note, if treatment effectiveness significantly dropped off during a phase for three observation points, an immediate move to the next phase was conducted. This was to ensure that children were able to return to a more effective intervention as soon as possible.

It is important to note that all children received a new explanation at each phase change. During this time they were pulled outside of the general education classroom. The researcher explained the modified intervention to the child. Explanations took no

more than five minutes and included administration of the CIRP to ensure that treatment acceptability had been successfully manipulated.

## Data Analysis

### *Part One*

After completion of the first part of the study, data were analyzed using one-way between subjects ANOVA procedures to determine if differences in treatment acceptability existed dependent upon grade level and/or previous intervention experience. Follow up post-hoc analyses were conducted in an effort to identify specific group differences following obtained F-values were statistically significant. Pearson product-moment correlation coefficients were examined to determine if a relationship existed between behavior severity as reported by the teacher and treatment acceptability. A repeated measures ANOVA was used to determine if differences in treatment acceptability existed dependent upon type of intervention. Additionally, a multiple regression was carried out in order to determine the amount of variance accounted for by the predictor variables.

### **One-Way ANOVA's were used to assess the following hypotheses:**

Hypothesis 1: Previous experience with an intervention will influence treatment acceptability ratings of children.

Hypothesis 2: The grade level of children rating an intervention will influence treatment acceptability ratings of children.

### **A Repeated Measures ANOVA was used to assess the following hypothesis:**

Hypothesis 3: Type of intervention will influence treatment acceptability ratings of children.



**Pearson Product-Moment Correlation Coefficients were used to assess the following hypothesis:**

Hypothesis 4: A relationship will exist between behavior ratings as reported by teachers and treatment acceptability ratings of children.

**A Multiple Regression was used to assess the following hypothesis:**

Hypothesis 5: A statistically significant amount of the total variance in treatment acceptability will be accounted for by grade level and behavior severity.

#### *Part Two*

After completion of the second part of the study, all data were graphed. Graphs were then analyzed via visual inspection of the data lines. To evaluate the strength of the manipulation, a visual analysis of the graphs was conducted and behavior rates and CIRP scores were compared. To do this, the researcher examined the levels of the graphed data across phases. Data collected on target behaviors were analyzed to determine the effectiveness of the intervention. Treatment acceptability was analyzed to determine the acceptability of the intervention and the impact that changes in the intervention had on acceptability. In addition, treatment effectiveness was analyzed to determine if exposure to, and success or failure with, a treatment impacted future treatment acceptability scores. The treatment acceptability and treatment effectiveness graphs were combined to determine if changes in treatment acceptability led to simultaneous changes in treatment effectiveness. In particular, treatment effectiveness data across phases B to C and phases C to B were examined in relation to treatment acceptability manipulations at the beginning of each of these phases.

**Visual Inspection of graphs was used to evaluate the following hypotheses:**

Hypothesis 6: A causal relationship exists between treatment acceptability and treatment effectiveness in children receiving a behavioral intervention in the general education classroom.

Hypothesis 7: The impact of treatment acceptability on treatment effectiveness will produce long-term effects on the effectiveness of a treatment if a child does not achieve success with the intervention.

Hypothesis 8: Previous experience with a behavioral intervention in the classroom will influence children's future ratings of treatment acceptability for that same intervention.

## CHAPTER IV

### RESULTS

#### *Reliability of Children's Intervention Rating Profile (CIRP)*

Reliability of the CIRP in the current study was conducted. Results revealed a Cronbach alpha coefficient of .56 ( $N=677$ ). According to Pallant (2005), the Cronbach alpha coefficient should typically lie above .7; however an alpha as low as .5 is common with scales consisting of less than 10 items. In this case, the CIRP contains seven items, so an alpha of .56 indicates a reliable measure. However, Pallant (2005) also recommends examining inter-item correlations to determine how well items within the scale hang together. Briggs and Check (1986) recommend an optimal range of inter-item correlations to be between .2 and .4. Examination of the inter-item correlations for the scale reveals all items to be valid for inclusion on the scale. Item one has an inter-item correlation of .39. Item two has an inter-item correlation of .38. Item three has an inter-item correlation of .19. Item four has an inter-item correlation of .25. Item five has an inter-item correlation of .31. Item six has an inter-item correlation of .39. Item seven has an inter-item correlation of .26. Thus, this scale can be considered reliable with the population for this study. Of note, the current study found a Cronbach alpha coefficient for the CIRP that was lower than in previously reported studies. Although there was a difference in values, this may be due to the scale being used with a population in which it

has limited exposure. It is also important to note that although the Cronbach alpha coefficient was lower, it was still found to be within the acceptable range.

#### *Research Question 1*

*Is there a difference in treatment acceptability ratings of interventions implemented in the classroom based on children's previous experience with interventions?*

It was hypothesized that previous experience with an intervention influences treatment acceptability ratings of children. A one-way between subjects ANOVA design using SPSS 12.0 statistical software was to be used to compare treatment acceptability scores across the independent variable, previous experience; however only 13 of the 170 students met the criteria for the previous experience variable, thus the researcher did not run analysis for this variable (see Table 4).

Children in the study were determined to have had exposure to a systematic academic or behavioral intervention if they participated in the school's pre-referral intervention process. Interventions developed within this process were based on direct observation and direct work samples. Interventions were unique to the child's needs, created utilizing the function of the child's behavior, such as attention, escape, tangible access, and were only implemented with the target child in the classroom.

The dependent variable measure, the *Behavior Intervention Rating Scale* (BIRS), was administered to participating teachers; however a minimal number of teachers ( $N = 6$ ) chose to participate in the study. Unfortunately, this meant that only two of the 13 children eligible for ratings via the BIRS, received ratings from their teacher. Although six teachers participated, only two of these teachers had previously implemented interventions in their classroom with one of the participating children. Again, analyses were not run utilizing this data due to the significant difference in  $N$  between groups.

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Table 4 *Previous experience data* ( $N = 170$ )

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<u>Label</u>	<u>Frequency</u>	<u>Percent</u>
<u>Previous Experience (via record review)</u>		
Academic	9	5.3
Behavioral	2	1.2
Academic and Behavioral	2	1.2
None	157	92.4

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#### *Research Question 2*

*Is there a difference in treatment acceptability ratings of interventions based on grade level of children?*

It was hypothesized that the grade level of children rating an intervention influences treatment acceptability ratings of children. A one-way between-group ANOVA design was used using SPSS 12.0 statistical software to explore the impact of grade on treatment acceptability scores, as measured by the CIRP [See Tables 6-9].

Preliminary analyses were conducted to ensure no violation of the assumptions of homogeneity of variance, normality and independence of observations. Harmonic means of the groups are used based on unequal N size across groups. The assumption of normality was not determined to be met based on the Kolmogorov-Smirnov statistic, the Shapiro-Wilk statistic and examination of respective histograms; however, according to Gravetter and Wallnau (2000) and Stevens (1996), most statistics are ‘robust’ enough to tolerate violations of this assumption, particularly with sample sizes larger than 30.

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Table 5 *Descriptive data for research question 2*

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Grade	Frequency	Percent
First	37	21.8
Second	47	27.6
Third	45	26.4
Fourth	41	24.1

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For the analysis participants were divided based upon respective grade levels. A separate ANOVA analysis was run for each of the intervention conditions. Due to the use of repeated ANOVA’s, a more stringent alpha value was selected to claim statistical significance and minimize the error rate. The Bonferroni adjustment was applied, creating an alpha level of  $p < .0125$  (Tabachnick & Fidell, 2001). There was no statistically significant difference at the  $p < .0125$  level in treatment acceptability scores across the four grade levels for any of the intervention conditions [CIRP A:  $F(3, 166) = .175, p = .913$ ], [CIRP B:  $F(3, 165) = .107, p = .956$ ], [CIRP C:  $F(3, 166) = .629, p =$

.913], and [CIRP D:  $F(3, 166) = .554$ ,  $p = .646$ ]. Post-hoc comparisons were not conducted.

Table 6 *ANOVA between--subjects coefficients for CIRP A (N = 170)*

Source	Type III SS	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>	<i>Eta</i> <sup>2</sup>
Between Groups	10.602	3	3.534	.175	.913	.0032
Within Groups	3354.904	166	20.210			
Total	3365.506	169				

Table 7 *ANOVA between--subjects coefficients for CIRP B (N = 170)*

Source	Type III SS	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>	<i>Eta</i> <sup>2</sup>
Between Groups	6.592	3	2.197	.107	.956	.0019
Within Groups	3376.875	165	20.466			
Total	3383.467	168				

Table 8 *ANOVA between--subjects coefficients for CIRP C (N = 170)*

Source	Type III SS	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>	<i>Eta</i> <sup>2</sup>
Between Groups	42.330	3	14.110	.629	.913	.0112
Within Groups	3724.117	166	22.434			
Total	3766.447	169				

Table 9 *ANOVA between--subjects coefficients for CIRP D (N = 170)*

Source	Type III SS	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>	<i>Eta</i> <sup>2</sup>
Between Groups	24.117	3	8.039	.554	.646	.0099
Within Groups	2408.971	166	14.512			
Total	2433.088	169				

### *Research Question 3*

*Is there a difference in treatment acceptability ratings based on type of intervention presented?*

It was hypothesized that type of intervention influences treatment acceptability ratings of children. A one-way repeated-measures ANOVA design was used using SPSS 12.0 statistical software to compare treatment acceptability scores across the independent variable, type of intervention (Positive Reinforcement, Negative Reinforcement, Type 2 Punishment, and Type 1 Punishment). Table 10 provides means and standard errors of scores found across intervention conditions.

Table 10 *Intervention means, standard errors, and number of cases (N = 170)*

Variable	Estimated Marginal Means	Std. Errors	<i>n</i>
Positive Reinforcement	11.781	.344	169
Type 2 Punishment	12.432	.345	169
Type 1 Punishment	12.722	.364	169
Negative Reinforcement	11.734	.293	169

Note. A lower score indicates a higher acceptability of the treatment.



Preliminary analyses were conducted to ensure no violation of the assumptions of sphericity, multivariate normality, and independence of observations. The assumption of sphericity was assessed using Mauchly's Test of Sphericity. Results revealed a significant value of .018,  $p < .05$ , which indicated that the assumption had been violated. This significant result indicated that an examination of the multivariate statistics within the one-way repeated measures ANOVA should be utilized, as opposed to examination of the univariate statistics. Although there are methods to compensate for violation of the sphericity assumption, statistically, Pallant (2005) suggests that inspection of the associated multivariate statistics be conducted instead. The assumption of normality was not determined to be met based on the Kolmogorov-Smirnov statistic, the Shapiro-Wilk statistic, and examination of the histograms; however, according to Gravetter and Wallnau (2000) and Stevens (1996), most statistics are 'robust' enough to tolerate violations of this assumption, particularly with sample sizes larger than 30. An examination of Mahalanobis Distance's revealed that the assumption of multivariate normality was not met either [MD= 31.365, Cook's Distance= .121], as several scores were found to be above the chi-square critical value of 18.47. However, deviation from multivariate normality is suggested to only have a minimal impact on Type I error (Stevens, 2002).

Analysis of the one-way repeated measures ANOVA output revealed a Wilk's Lambda of 3.79, indicating a statistically significant effect for Intervention,  $p = .012$ . This suggests that there was a change in treatment acceptability across type of intervention. An examination of the associated multivariate tests revealed a significant difference in treatment acceptability across interventions,  $F(3, 168) = 3.789$ ,  $p < .05$ ,

with an associated multivariate partial eta squared ( $\eta_p^2$ ) of .064. Using Cohen's (1988) guidelines, this indicates a moderate effect. The observed power of the study was found to be .81, which is considered reasonable for behavioral research (Keppel, 1991).

The Bonferroni post hoc approach was utilized to examine where differences occurred between treatments (see Table 11). This approach was selected based on the violation of the sphericity assumption (Stevens, 2002). The Bonferroni approach is reported to “keep the actual  $\alpha < \text{nominal } \alpha$  in all cases, even when there is a severe violation of the sphericity assumption” (Stevens, 2002, p.509). The Bonferroni pairwise comparisons revealed treatment acceptability to be significantly different between the Positive Reinforcement intervention and the Type 1 Punishment intervention. In addition, treatment acceptability was found to be significantly different between the Negative Reinforcement intervention and the Type 1 Punishment intervention. As predicted, type of intervention influences treatment acceptability.

Table 11 <i>Bonferroni pairwise comparisons</i>				
Inter (I)	Inter (J)	Mean Diff	Std. Error	Sig. <sup>a</sup>
PR (1)	2	-.651	.323	.271
	3	-.941*	.327	.027
	4	4.734E-02	.302	1.000
T2P (2)	1	.651	.323	.271
	3	-.290	.278	1.000
	4	.698	.300	.126

Table 11 (continued)

Inter (I)	Inter (J)	Mean Diff	Std. Error	Sig. <sup>a</sup>
T1P (3)	1	.941*	.327	.027
	2	.290	.278	1.000
	4	.988*	.336	.022
NR (4)	1	-4.734E-02	.302	1.000
	2	-.698	.300	.126
	3	-.988*	.336	.022

Note. Based on estimated marginal means

\* The mean difference is significant at the .05 level

<sup>a</sup>. Adjustment for multiple comparisons: Bonferroni

#### *Research Question 4*

*Is there a relationship between the level of behavior severity exhibited by children in the classroom and ratings on treatment acceptability measures for interventions implemented in the classroom?*

It was hypothesized that a relationship would exist between the behavior severity level of children and ratings on treatment acceptability measures for interventions proposed to be implemented in the classroom. The relationship between behavior severity level, as measured by the *Conner's Teacher Rating Scale-Revised: Short Form*, and treatment acceptability, as measured by the *Children's Intervention Rating Profile*, was explored with Pearson Product-Moment Correlation Coefficient using SPSS 12.0 statistical software. Table 12 provides means and standard deviations for behavior severity scores via the *Conner's Teacher Rating Scale-Revised: Short Form*.

Table 12 *Descriptive data for behavior severity (n = 21)*

Behavior Severity (CTRS-R:S)	Mean	Standard Deviation	Range
ADHD Score	53.43	8.20	41-70
Oppositionality	49.19	9.23	45-87
Inattention	56.48	12.85	42-82
Hyperactivity	52.62	8.29	45-71

Preliminary analyses were conducted to ensure no violation of the assumptions of homoscedasticity, linearity, normality and independence of observations. The assumption of normality was not determined to be met based on the Kolmogorov-Smirnov statistic, the Shapiro-Wilk statistic, and examination of the histograms; however, according to Gravetter and Wallnau (2000) and Stevens (1996), most statistics are ‘robust’ enough to tolerate violations of this assumption.

Results for the Pearson Product-Moment Correlation Coefficients analysis are presented in Table 13. Although not significant, small to medium correlations were found between behavior severity level and treatment acceptability.

Table 13 *r* between behavior severity level and treatment acceptability (*n* = 21)

	Opposition	Inattention	Hyperactivity	ADHD
Positive Reinforcement	.274 <sup>S</sup>	-.166 <sup>S</sup>	.096	-.006
Type 2 Punishment	-.278 <sup>S</sup>	-.358 <sup>M</sup>	-.353 <sup>M</sup>	-.344 <sup>M</sup>
Type 1 Punishment	.065	-.068	-.065	-.062
Negative Reinforcement	.306 <sup>M</sup>	-.344 <sup>M</sup>	-.098	-.119 <sup>S</sup>

\* Correlation is significant at the 0.05 level (2-tailed).

<sup>S</sup> Indicates small correlation as per Cohen (1988)

<sup>M</sup> Indicates medium correlation as per Cohen (1988)

#### *Research Question 5*

*How much variance in treatment acceptability can be accounted for by grade level and behavior severity level?*

It was hypothesized that a statistically significant amount of the total variance in treatment acceptability is accounted for by grade level and behavior severity level, as measured on the *Conner's Teacher Rating Scale: Short Form* and by the overall ADHD score. Estimated marginal means are reported because of the unequal N design (see Table 18). Although results may not be conclusive, a multiple regression design using SPSS 12.0 statistical software was used to determine the amount of variance accounted for in treatment acceptability (dependent variable) scores dependent upon the independent variables of grade level and behavior severity level. With *n* = 21, this subsample size may be too small for a multiple regression analysis. As per Stevens (1996), approximately 15 subjects are needed per predictor variable to run a reliable analysis. This would indicate the need for at least 30 subjects. However, according to Tabachnick and Fidell (2001), sample size should be  $N \geq 50 + 8m$  (*m* = number of IVs). Based on

this, caution should be used when interpreting the data as this study did not have a large enough sample size to yield a reliable equation according to some researchers. The ability for the equation to find significant results, the power, may also be affected due to the low  $n$  size.

Preliminary analyses were conducted to ensure no violation of the assumptions of multicollinearity, outliers, homoscedasticity, linearity, normality and independence of residuals. A separate analysis was run for each of the rated interventions.

A total of 170 students participated in the study. Of these students, 21 had complete data sets including grade, behavior severity scores and treatment acceptability scores. Thus,  $n=21$  for this analysis. The *Children's Intervention Rating Profile*, consisting of seven-items, was used to assess the criterion variable, treatment acceptability. A demographic form was used to assess the predictor variable, grade, and the *Conner's Teacher Rating Scale-Revised: Short Form* was used to assess the predictor variable, behavior severity level.

Scores on the *Children's Intervention Rating Profile* ([CIRPA]  $M=11.81$ ,  $SD=3.41$ ; [CIRPB]  $M=12.33$ ,  $SD=3.54$ ; [CIRPC]  $M=13.10$ ,  $SD=5.11$ ; [CIRPD]  $M=11.62$ ,  $SD=3.46$ ) were slightly positively skewed. The Kolmogorov-Smirnov test of normality was statistically significant ( $p<.001$ ), indicating some degree of violation of normality. Despite some indication of non-normality in these data, further parametric analysis was conducted as the violations were not extreme and most statistics being reported are somewhat robust to violations of normality. Scatterplots were examined and were determined to have met the linearity and homoscedasticity assumptions. No outliers were present based on visual inspection of scatterplots and studentized residual scores.

Mahalanobis distances and Cook's distances (.170, .171, .115, .209, respectively) were also examined for any indication of scores with high leverage or influence. Based on preliminary analysis no cases were eliminated due to extreme scores.

The variance inflation factor (VIF) for each of the independent variables was examined to determine if multicollinearity existed between variables. Multicollinearity can be defined as high correlations between independent variables within a study. The VIF's were all within an acceptable range. In addition, tolerance scores were also examined to determine if multicollinearity existed between variables. Tolerance scores across treatments were all determined to be within an acceptable range. Thus, results indicate no violation of the assumption of multicollinearity.

Prior to calculating Pearson correlations between variables, the linearity of the relationships was assessed through plotting. No indication of non-linearity existed. To address whether grade level (1-4) and behavior severity level are related to treatment acceptability, zero-order correlations among these variables were computed. These correlations are summarized in Table 14.

Table 14 *Zero-order  $r$  among behavior severity level, grade, and acceptability* ( $n=21$ )

	G1	G2	G3	G4	ADHD
Positive Reinforcement	-.002	-.020	.093	.253	-.006
Type 2 Punishment	.043	-.273	-.313	.341	-.344
Type 1 Punishment	-.056	-.034	-.062	.290	-.062
Negative Reinforcement	.236	.303	.667	.089	.806

\* Correlation is significant at the 0.05 level (2-tailed).

To examine the overall amount of variability in treatment acceptability explained by grade level and behavior severity level, and to examine the unique amount of variability explained by both grade and behavior severity on treatment acceptability, a multiple regression was conducted following the examination of the respective correlations. Dummy coding was utilized in order to account for the categorical variable of grade. Results indicated no significant amount of variability in treatment acceptability scores to be accounted for by the set of grade level and behavior severity level (CIRP A:  $R^2 = .181$ ,  $F(2, 31) = .658$ , *ns*; CIRP B:  $R^2 = .368$ ,  $F(2, 31) = .185$ , *ns*; CIRP C:  $R^2 = .163$ ,  $F(2, 31) = .713$ , *ns*; CIRP D:  $R^2 = .214$ ,  $F(2, 31) = .557$ , *ns*). The adjusted  $R^2$ 's = -.093, .157, -.116, and -.048, respectively. Of note, negative values for the adjusted  $R^2$  value indicate that there are variables in the equation that do not help to predict the criterion variable. Thus, variability in treatment acceptability as accounted for by grade level and behavior severity level ranged from -11.6% to 15.7% across interventions. Next, semi-squared partial correlations were computed to address the unique amount of variability in treatment acceptability accounted for, separately, by grade level and behavior severity level across interventions. This information is summarized in Table 16. As can be seen in the table, neither grade level nor behavior severity level accounts for a significant amount of variability in treatment acceptability across any of the interventions.



Table 15 *Multiple regression predicting treatment acceptability from grade level and behavior severity level (n = 21)*

Predictor Variables	B	$sr^2$	p
CIRP A			
DummyG1	.474	.289	.235
DummyG2	.520	.300	.219
DummyG3	.105	.104	.664
DummyG4	.722	.414	.097
Behavior Severity	.074	.069	.773
CIRP B			
DummyG1	.315	.192	.365
DummyG2	.094	.054	.795
DummyG3	-.376	-.369	.092
DummyG4	.403	.231	.279
Behavior Severity	-.364	-.091	.120
CIRP C			
DummyG1	.393	.240	.327
DummyG2	.459	.265	.280
DummyG3	-.062	-.061	.799
DummyG4	.675	.387	.123
Behavior Severity	-.062	-.002	.994

Table 15 (continued)

Predictor Variables	B	$sr^2$	p
CIRP D			
DummyG1	.464	.283	.236
DummyG2	.424	.244	.303
DummyG3	-.102	-.100	.667
DummyG4	.726	.416	.089
Behavior Severity	-.061	-.057	.806

\* Correlation is significant at the 0.05 level (2-tailed).

#### *Research Question 6*

*Does a causal relationship exist between treatment acceptability and treatment effectiveness in children receiving behavioral intervention in the general education classroom?*

It was hypothesized that a causal relationship exists between treatment acceptability and treatment effectiveness in children receiving a behavioral intervention in the general education classroom. Visual inspection of the graphed behavioral data indicated no causal relationship between treatment acceptability and treatment effectiveness for five of the seven subjects (See Figures 2-6). However, a causal relationship between treatment acceptability and treatment effectiveness is suggested by examining data from two of the seven subjects (See Figures 7-8).

### *Baseline (A)*

*Target Child 1.* Three baseline observations were conducted prior to treatment implementation. Baseline observations were conducted utilizing interval time sampling procedures during time periods in which the child was expected to be in his seat and either working independently or following along with a teacher-directed lesson. Targeted disruptive behaviors included talking out, being out of seat, and being off task. The target child was observed displaying disruptive behavior for 66%, 64% and 58% of the intervals observed, respectively. This indicated an absolute value (mean level) of 63%. Baseline observations indicated a slightly decreasing trend, but were considered stable because all data points fell within a 15% range of this mean level (Cooper, Heron & Heward, 1987).

*Target Child 2.* Three baseline observations were conducted prior to treatment implementation. Baseline observations were conducted utilizing interval time sampling procedures during time periods in which the child was expected to be in his seat and either working independently or following along with a teacher-directed lesson. Targeted disruptive behaviors included talking out, being out of seat, and being off task. The target child was observed displaying disruptive behavior for 71%, 66% and 67% of the intervals observed, respectively. This indicated an absolute value (mean level) of 68%. Baseline observations indicated a slightly decreasing trend, but were considered stable because all data points fell within a 15% range of this mean level (Cooper, Heron & Heward, 1987).

*Target Child 3.* Three baseline observations were conducted prior to treatment implementation. Baseline observations were conducted utilizing interval time sampling

procedures during time periods in which the child was expected to be in his seat and either working independently or following along with a teacher-directed lesson. Targeted disruptive behaviors included talking out, being out of seat, and being off task. The target child was observed displaying disruptive behavior for 60%, 62% and 57% of the intervals observed, respectively. This indicated an absolute value (mean level) of 60%. Baseline observations indicated a zero trend and were considered stable because all data points fell within a 15% range of this mean level (Cooper, Heron & Heward, 1987).

*Target Child 4.* Three baseline observations were conducted prior to treatment implementation. Baseline observations were conducted utilizing interval time sampling procedures during time periods in which the child was expected to be in his seat and either working independently or following along with a teacher-directed lesson. Targeted disruptive behaviors included talking out, being out of seat, and being off task. The target child was observed displaying disruptive behavior for 67%, 51% and 56% of the intervals observed, respectively. This indicated an absolute value (mean level) of 58%. Baseline observations indicated a slightly decreasing trend, but were considered stable because the majority of the data points fell within a 15% range of this mean level (Cooper, Heron & Heward, 1987).

*Target Child 5.* Three baseline observations were conducted prior to treatment implementation. Baseline observations were conducted utilizing interval time sampling procedures during time periods in which the child was expected to be in his seat and either working independently or following along with a teacher-directed lesson. Targeted disruptive behaviors included talking out, being out of seat, and being off task. The target child was observed displaying disruptive behavior for 60%, 54% and 62% of the

intervals observed, respectively. This indicated an absolute value (mean level) of 59%. Baseline observations indicated a zero trend and were considered stable because all data points fell within a 15% range of this mean level (Cooper, Heron & Heward, 1987).

*Target Child 6.* Three baseline observations were conducted prior to treatment implementation. Baseline observations were conducted utilizing interval time sampling procedures during time periods in which the child was expected to be in his seat and either working independently or following along with a teacher-directed lesson. Targeted disruptive behaviors included talking out, being out of seat, and being off task. The target child was observed displaying disruptive behavior for 89%, 100% and 78% of the intervals observed, respectively. This indicated an absolute value (mean level) of 89%. Baseline observations indicated a slightly decreasing trend. In addition, only one of the three data points fell within the 15% range of the mean level; however, because the child had to be frequently removed from the classroom due to his elevated behaviors and inability of his peers to learn, the researcher chose to proceed to phase B based information obtained from observations, teacher interview and qualifying observations.

*Target Child 7.* Three baseline observations were conducted prior to treatment implementation. Baseline observations were conducted utilizing interval time sampling procedures during time periods in which the child was expected to be in his seat and either working independently or following along with a teacher-led lesson. Targeted disruptive behaviors included talking out, being out of seat, and being off task. The target child was observed displaying disruptive behavior for 83%, 80% and 67% of the intervals observed, respectively. This indicated an absolute value (mean level) of 77%. Baseline observations indicated a slightly decreasing trend. In addition, only two of the

three data points fell within the 15% range of the mean level; however, because of the intensity of the behaviors, the child's frequent removal from the room due to elevated behaviors, and inability of his peers to learn, the researcher chose to proceed to phase B based on information obtained from observations, teacher interview and qualifying observations.

#### *Initial Phase B*

*Target Child 1.* Three observations utilizing interval time sampling procedures were conducted in phase B. Observations during phase B occurred during the same time periods as observations in phase A. Prior to implementation of phase B, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase B intervention was an 8. During this phase, the target child was observed to be engaged in disruptive behavior for 12%, 18%, and 7% of the intervals observed, respectively. This indicated an absolute value of 12%, which was 51% lower than the previous phase. Observations in this phase were considered stable and revealed a slightly decreasing trend. Compared to the previous phase A, there was no change in trend.

*Target Child 2.* Five observations utilizing interval time sampling procedures were conducted in phase B. Observations during phase B occurred during the same time periods as observations in phase A. Prior to implementation of phase B, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase B intervention was a 7. During this phase, the target child was observed to be engaged in disruptive behavior for 7%, 18%, 22%, 8% and 10% of the intervals observed, respectively. This indicated an absolute value of 13%, which was 55% lower than the

previous phase. Observations in this phase were considered stable and revealed a slightly decreasing trend. Compared to the previous phase A, there was no change in trend.

*Target Child 3.* Three observations utilizing interval time sampling procedures were conducted in phase B. Observations during phase B occurred during the same time periods as observations in phase A. Prior to implementation of phase B, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase B intervention was a 12. During this phase, the target child was observed to be engaged in disruptive behavior for 2%, 8% and 2% of the intervals observed, respectively. This indicated an absolute value of 4%, which was 56% lower than the previous phase. Observations in this phase were considered stable and revealed a zero trend. Compared to the previous phase A, a decrease was shown in level, and a change in trend occurred, from slightly decreasing to zero.

*Target Child 4.* Three observations utilizing interval time sampling procedures were conducted in phase B. Observations during phase B occurred during the same time periods as observations in phase A. Prior to implementation of phase B, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase B intervention was a 9. During this phase, the target child was observed to be engaged in disruptive behavior for 10%, 3% and 5% of the intervals observed, respectively. This indicated an absolute value of 6%, which was 52% lower than the previous phase. Observations in this phase were considered stable and revealed a slightly decreasing trend. Compared to the previous phase A, there was no change in trend.

*Target Child 5.* Five observations utilizing interval time sampling procedures were conducted in phase B. Observations during phase B occurred during the same time

periods as observations in phase A. Prior to implementation of phase B, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase B intervention was an 11. During this phase, the target child was observed to be engaged in disruptive behavior for 9%, 20%, 20%, 3% and 12% of the intervals observed, respectively. This indicated an absolute value of 13%, which was 46% lower than the previous phase. Observations in this phase were considered stable and revealed a zero trend. Compared to the previous phase A, there was no change in trend.

*Target Child 6.* Five observations utilizing interval time sampling procedures were conducted in phase B. Observations during phase B occurred during the same time periods as observations in phase A. Prior to implementation of phase B, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase B intervention was a 22. During this phase, the target child was observed to be engaged in disruptive behavior for 17%, 18%, 8%, 3% and 24% of the intervals observed, respectively. This indicated an absolute value of 14%, which was 75% lower than the previous phase. Observations in this phase were considered stable and revealed a zero trend. Compared to the previous phase A, a change in trend occurred, from slightly decreasing to zero.

*Target Child 7.* Four observations utilizing interval time sampling procedures were conducted in phase B. Observations during phase B occurred during the same time periods as observations in phase A. Prior to implementation of phase B, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase B intervention was an 11. During this phase, the target child was observed to be engaged in disruptive behavior for 10%, 21%, 8% and 9% of the intervals observed, respectively.



This indicated an absolute value of 12%, which was 65% lower than the previous phase. Because the majority of the data points within this phase fell within the 15% range, the data were considered to be stable. Compared to the previous phase A, there was no change in trend.

#### *Initial Phase C*

*Target Child 1.* Three observations utilizing interval time sampling procedures were conducted in phase C. Observations during phase C occurred during the same time periods as in previous phases. Prior to implementation of phase C, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase C intervention was a 17, which indicated lower treatment acceptability than in phase B. During this phase, the target child was observed to be engaged in disruptive behavior for 8%, 3% and 10% of the intervals observed, respectively. This indicated an absolute value of 7%, compared to previous values of 63% (A) and 12% (B). Observations in this phase were considered stable and revealed a slightly increasing trend. Compared to the previous phase B, a decrease was shown in level and a change in trend occurred, from slightly decreasing to slightly increasing.

Data from this phase revealed that when treatment acceptability was lower, rate of disruptive behaviors slightly decreased. This would indicate that treatment acceptability did not influence treatment effectiveness during this phase.

*Target Child 2.* Three observations utilizing interval time sampling procedures were conducted in phase C. Observations during phase C occurred during the same time periods as in previous phases. Prior to implementation of phase C, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase C intervention

was a 23, which indicated lower treatment acceptability than in phase B. During this phase, the target child was observed to be engaged in disruptive behavior for 20%, 6% and 2% of the intervals observed, respectively. This indicated an absolute value of 9%, compared to previous values of 68% (A) and 13% (B). Observations in this phase were considered stable and revealed a rapidly decreasing trend. Compared to the previous phase B, a decrease was shown in level and there was no change in trend.

Data from this phase revealed that when treatment acceptability was lower, rate of disruptive behavior slightly decreased. This would indicate that treatment acceptability did not influence treatment effectiveness during this phase.

*Target Child 3.* Three observations utilizing interval time sampling procedures were conducted in phase C. Observations during phase C occurred during the same time periods as in previous phases. Prior to implementation of phase C, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase C intervention was a 19, which indicated lower treatment acceptability than in phase B. During this phase, the target child was observed to be engaged in disruptive behavior for 13%, 5% and 8% of the intervals observed, respectively. This indicated an absolute value of 9%, compared to previous values of 60% (A) and 4% (B). Observations in this phase were considered stable and revealed a slightly decreasing trend. Compared to the previous phase B, an increase was shown in level, and a change in trend occurred, from zero to slightly decreasing.

Data from this phase revealed that when treatment acceptability was lower, rate of disruptive behavior slightly increased. Although this may indicate that treatment acceptability can influence treatment effectiveness, differences in effectiveness may not

be dramatic enough to make this claim. Because data points across phases overlapped, there was not a clear indication that a change in the independent variable caused a change in the dependent variable.

*Target Child 4.* Four observations utilizing interval time sampling procedures were conducted in phase C. Observations during phase C occurred during the same time periods as in previous phases. Prior to implementation of phase C, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase C intervention was a 14, which indicated lower treatment acceptability than in phase B. During this phase, the target child was observed to be engaged in disruptive behavior for 19%, 5%, 10% and 12% of the intervals observed, respectively. This indicated an absolute value of 12%, compared to previous values of 58% (A) and 6% (B). Observations in this phase were considered stable and revealed a slightly decreasing trend. Compared to the previous phase B, an increase was shown in level and no change occurred in trend.

Data from this phase revealed that when treatment acceptability was lower, rate of disruptive behavior slightly increased. Although this may indicate that treatment acceptability influences treatment effectiveness, differences in effectiveness may not be dramatic enough to make this claim. Because data points across phases overlapped, there was not a clear indication that a change in the independent variable caused a change in the dependent variable.

*Target Child 5.* Three observations utilizing interval time sampling procedures were conducted in phase C. Observations during phase C occurred during the same time periods as in previous phases. Prior to implementation of phase C, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase C intervention

was a 23, which indicated lower treatment acceptability than in phase B. During this phase, the target child was observed to be engaged in disruptive behavior for 13%, 21% and 9% of the intervals observed, respectively. This indicated an absolute value of 14%, compared to previous values of 59% (A) and 13% (B). Observations in this phase were considered stable and revealed a slightly decreasing trend. Compared to the previous phase B, a slight increase was shown in level, and a change in trend occurred, from zero to slightly decreasing.

Data from this phase revealed that when treatment acceptability was lower, rate of disruptive behavior slightly increased. Although this may indicate that treatment acceptability influences treatment effectiveness during this phase, differences in effectiveness may not be dramatic enough to make this claim. Because data points across phases overlapped, there was not a clear indication that a change in the independent variable caused a change in the dependent variable.

*Target Child 6.* Three observations utilizing interval time sampling procedures were conducted in phase C. Observations during phase C occurred during the same time periods as in previous phases. Prior to implementation of phase C, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase C intervention was a 25, which indicated lower treatment acceptability than in phase B. During this phase, the target child was observed to be engaged in disruptive behavior for 43%, 40% and 44% of the intervals observed, respectively. This indicated an absolute value of 42%, compared to previous values of 89% (A) and 14% (B). Observations in this phase were considered stable and revealed a zero trend. Compared to the previous phase B, a significant increase was shown in level, and the trend remained at zero.

Data from this phase revealed that when treatment acceptability was lower, rate of disruptive behaviors increased. This indicates that treatment acceptability may have influenced treatment effectiveness during this phase. Support is provided for this claim by no data points overlapping across phases.

*Target Child 7.* Four observations utilizing interval time sampling procedures were conducted in phase C. Observations during phase C occurred during the same time periods as in previous phases. Prior to implementation of phase C, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase C intervention was a 20, which indicated lower treatment acceptability than in phase B. During this phase, the target child was observed to be engaged in disruptive behavior for 64%, 30%, 46% and 60% of the intervals observed, respectively. This indicated an absolute value of 50%, compared to previous values of 77% (A) and 12% (B). Observations in this phase were variable and revealed a zero trend. Compared to the previous phase B, an increase was shown in level, and a change in trend occurred, from slightly decreasing to zero.

Data from this phase revealed that when treatment acceptability was lower, rate of disruptive behavior increased. This indicates that treatment acceptability may have influenced treatment effectiveness during this phase. Support is provided for this claim by no data points overlapping across phases.

#### *Phase A*

*Target Child 1.* Two baseline observations were conducted after removing the treatment from the target child. This was done to determine if the intervention was in fact causing the change in behavior. Baseline observations were conducted utilizing interval time sampling procedures during time periods in which the child was expected to

be in his seat and either working independently or following along with a teacher-directed lesson. The target child was observed to be engaged in disruptive behavior for 33% and 35% of the intervals observed, respectively. This indicated an absolute value of 34%, which was higher than B and C levels. Baseline observations indicated a slightly increasing trend and were considered stable. Although rates of disruptive behavior did not return to previous levels of baseline behavior, an increased level change did occur above previous treatment levels. Given the child's exposure to the intervention, an immediate return to previous levels of baseline functioning may not be expected.

According to Cooper, Heron and Heward (1987):

Once improved, many target behaviors of interest to the applied behavior analyst remain at their newly enhanced level even when the intervention responsible for the behavior change is removed. Such a state of affairs is desirable from a clinic standpoint: the behavior change is shown to be durable, capable of persisting even in the absence of the deliberate treatment. (p.177)

*Target Child 2.* Three baseline observations were conducted after removing the treatment from the target child. This was done in order to determine if the intervention was in fact causing the change in behavior. Baseline observations were conducted utilizing interval time sampling procedures during time periods in which the child was expected to be in his seat and either working independently or following along with a teacher-directed lesson. The target child was observed to be engaged in disruptive behavior for 47%, 35% and 35% of the intervals observed, respectively. This indicated an absolute value of 39%, which was higher than B and C levels. Baseline observations indicated a slightly decreasing trend and were considered stable. Again, although rates of

disruptive behavior did not return to previous levels of baseline behavior, an increased level change did occur above previous treatment levels.

*Target Child 3.* Three baseline observations were conducted after removing the treatment from the target child. This was done in order to determine if the intervention was in fact causing the change in behavior. Baseline observations were conducted utilizing interval time sampling procedures during time periods in which the child was expected to be in his seat and either working independently or following along with a teacher-directed lesson. The target child was observed to be engaged in disruptive behavior for 23%, 37% and 34% of the intervals observed, respectively. This indicated an absolute value of 31%, which was higher than B and C levels. Baseline observations indicated a slightly increasing trend and were considered stable. Again, although rates of disruptive behavior did not return to previous levels of baseline behavior, an increased level change did occur above previous treatment levels.

*Target Child 4.* Two baseline observations were conducted after removing the treatment from the target child. This was done in order to determine if the intervention was in fact causing the change in behavior. Baseline observations were conducted utilizing interval time sampling procedures during time periods in which the child was expected to be in his seat and either working independently or following along with a teacher-directed lesson. The target child was observed to be engaged in disruptive behavior for 39% and 46% of the intervals observed, respectively. This indicated an absolute value of 43% which was higher than B and C levels. Baseline observations indicated a slightly increasing trend and were considered stable. Again, although rates of

disruptive behavior did not return to previous levels of baseline behavior, an increased level change did occur above previous treatment levels.

*Target Child 5.* Two baseline observations were conducted after removing the treatment from the target child. This was done in order to determine if the intervention was in fact causing the change in behavior. Baseline observations were conducted utilizing interval time sampling procedures during time periods in which the child was expected to be in his seat and either working independently or following along with a teacher-directed lesson. The target child was observed to be engaged in disruptive behavior for 45% and 43% of the intervals observed, respectively. This indicated an absolute value of 44%, which was higher than B and C levels. Baseline observations indicated a zero trend and were considered stable. Again, although rates of disruptive behavior did not return to previous levels of baseline behavior, an increased level change did occur above previous treatment levels.

*Target Child 6.* Two baseline observations were conducted after removing the treatment from the target child. This was done in order to determine if the intervention was in fact causing the change in behavior. Baseline observations were conducted utilizing interval time sampling procedures during time periods in which the child was expected to be in his seat and either working independently or following along with a teacher-directed lesson. The target child was observed to be engaged in disruptive behavior for 66% and 76% of the intervals observed, respectively. This indicated an absolute value of 71%, which was higher than B and C levels. Baseline observations indicated a slightly increasing trend and were considered stable. Again, although rates of



disruptive behavior did not return to previous levels of baseline behavior, an increased level change did occur above previous treatment levels.

*Target Child 7.* Three baseline observations were conducted after removing the treatment from the target child. This was done in order to determine if the intervention was in fact causing the change in behavior. Baseline observations were conducted utilizing interval time sampling procedures during time periods in which the child was expected to be in his seat and either working independently or following along with a teacher-directed lesson. The target child was observed to be engaged in disruptive behavior for 77%, 65% and 83% of the intervals observed, respectively. This indicated an absolute value of 75%, which was higher than B and C levels. Baseline observations indicated a slightly increasing trend and were not considered stable. However, because rates of behavior were impacting student performance in the classroom, a return to treatment phases was conducted following the third baseline observation. Again, although rates of disruptive behavior did not return to previous levels of baseline behavior, an increased level change did occur above previous treatment levels.

#### *Final Phase C*

*Target Child 1.* Three observations utilizing interval time sampling procedures were conducted in phase C. Observations during phase C occurred during the same time periods as in previous phases. Prior to implementation of phase C, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase C intervention was a 13, compared to previous ratings of 8 (B) and 17 (C). During this phase, the target child was observed to be engaged in disruptive behavior for 0%, 6% and 1% of the intervals observed, respectively. This indicated an absolute value of 2%, compared to

previous treatment phases of 12% (B) and 7% (C). Observations in this phase were considered stable and revealed a zero trend.

Compared to behavior levels found in a return to baseline, a return to phase C indicated a lower level of disruptive behaviors and a change in trend, from slightly increasing to zero. Compared to the initial phase C, a decrease was shown in behavioral level and a change in trend occurred, from slightly increasing to zero. Based on the effectiveness data in the initial phase C, these approximate levels of functioning could have been predicted. Treatment acceptability data compared between C phases indicated an increased level of treatment acceptability associated with the second presentation of phase C. Compared to the initial phase B, a decrease was shown in behavioral level and a change in trend occurred, from slightly decreasing to zero. Overall, data do not support a relationship between treatment acceptability and treatment effectiveness.

*Target Child 2.* Three observations utilizing interval time sampling procedures were conducted in phase C. Observations during phase C occurred during the same time periods as in previous phases. Prior to implementation of phase C, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase C intervention was a 7, compared to previous ratings of 7 (B) and 23 (C). During this phase, the target child was observed to be engaged in disruptive behavior for 12%, 12% and 7% of the intervals observed, respectively. This indicated an absolute value of 10%, compared to previous treatment phases of 13% (B) and 9% (C). Observations in this phase were considered stable and revealed a slightly decreasing trend.

Compared to behavior levels found in a return to baseline, a return to phase C indicated a lower level of disruptive behaviors and no change in trend. Compared to the

initial phase C, a minimal increase was shown in behavioral level and there was no change in trend. Based on the effectiveness data in the initial phase C, the effectiveness levels in this phase could have been predicted. Treatment acceptability data compared between C phases, indicated an increased level of treatment acceptability associated with the second presentation of phase C. Compared to the initial phase B, a decrease was shown in the behavior level and there was no change in trend. Overall, data do not support a relationship between treatment acceptability and treatment effectiveness.

*Target Child 3.* Three observations utilizing interval time sampling procedures were conducted in phase C. Observations during phase C occurred during the same time periods as in previous phases. Prior to implementation of phase C, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase C intervention was a 16, compared to previous ratings of 12 (B) and 19(C). During this phase, the target child was observed to be engaged in disruptive behavior for 5%, 13% and 5% of the intervals observed, respectively. This indicated an absolute value of 8%, compared to previous treatment phases of 4% (B) and 9% (C). Observations in this phase were considered stable and revealed a slightly decreasing trend.

Compared to behavior levels found in a return to baseline, a return to phase C indicated a lower level of disruptive behaviors and a change in trend, from slightly increasing to slightly decreasing. Compared to the initial phase C, a small decrease was shown in behavior level and there was no change in trend. Based on the effectiveness data in the initial phase C, this effectiveness data could have been predicted. Treatment acceptability data compared between C phases indicated an increased level of treatment acceptability associated with the second presentation of phase C. Compared to the initial

phase B, an increase was shown in behavior level and a change in trend occurred, from zero to slightly decreasing. In addition, the CIRP rating for the final phase C indicated a lower level of treatment acceptability as compared to the initial phase B. Overall, data may support a relationship between treatment acceptability and treatment effectiveness. However, differences in effectiveness may not be dramatic enough to make this claim, and may just be due to chance fluctuation in behavior.

*Target Child 4.* Three observations utilizing interval time sampling procedures were conducted in phase C. Observations during phase C occurred during the same time periods as in previous phases. Prior to implementation of phase C, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase C intervention was an 11, compared to previous ratings of 9 (B) and 14 (C). During this phase, the target child was observed to be engaged in disruptive behavior for 15%, 12% and 16% of the intervals observed, respectively. This indicated an absolute value of 14%, compared to previous treatment phases of 6% (B) and 12% (C). Observations in this phase were considered stable and revealed a zero trend.

Compared to behavior levels found in a return to baseline, a return to phase C indicated a lower level of disruptive behaviors and a change in trend, from slightly increasing to zero. Compared to the initial phase C, an increase was shown in behavior level and a change in trend occurred, from slightly decreasing to zero. Based on the effectiveness data in the initial phase C, the effectiveness data found in this phase C was not unreasonable. Treatment acceptability data compared between C phases indicated an increased level of treatment acceptability associated with the second presentation of phase C. Compared to the initial phase B, an increase was shown in behavior level and a

change in trend occurred, from slightly decreasing to zero. In addition, the CIRP rating for the final phase C indicated a lower level of treatment acceptability as compared to the initial phase B. Overall, data may support a relationship between treatment acceptability and treatment effectiveness. However, differences in effectiveness may not be dramatic enough to make this claim, and may just be due to chance fluctuations in behavior.

*Target Child 5.* Three observations utilizing interval time sampling procedures were conducted in phase C. Observations during phase C occurred during the same time periods as in previous phases. Prior to implementation of phase C, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase C intervention was an 11, compared to previous ratings of 11 (B) and 23 (C). During this phase, the target child was observed to be engaged in disruptive behavior for 15%, 7% and 8% of the intervals observed, respectively. This indicated an absolute value of 10%, compared to previous treatment phases of 13% (B) and 14% (C). Observations in this phase were considered stable and revealed a slightly decreasing trend.

Compared to behavior levels found in a return to baseline, a return to phase C indicated a lower level of disruptive behaviors and no change in trend. Compared to the initial phase C, a there was a decrease in behavior level and no change in trend.

Treatment acceptability data compared between C phases indicated an increased level of treatment acceptability associated with the second presentation of phase C. Compared to the initial phase B, a decrease was shown in behavior level and a change in trend occurred, from zero to slightly decreasing. In addition, the CIRP rating for the final phase C indicated the same level of treatment acceptability as compared to the initial phase B. Overall, day may support a relationship between treatment acceptability and

treatment effectiveness. However, because data points overlap across phases it cannot be definitely stated that a change in the independent variable caused a change in the treatment effectiveness.

*Target Child 6.* Three observations utilizing interval time sampling procedures were conducted in phase C. Observations during phase C occurred during the same time periods as in previous phases. Prior to implementation of phase C, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase C intervention was a 27, compared to previous ratings of 22 (B) and 25 (C). During this phase, the target child was observed to be engaged in disruptive behavior for 52%, 44% and 51% of the intervals observed, respectively. This indicated an absolute value of 49%, compared to previous treatment phases of 14% (B) and 42% (C). Observations in this phase were considered stable and revealed a slightly decreasing trend.

Compared to behavior levels found in a return to baseline, a return to phase C indicated a lower level of disruptive behaviors and a change in trend, from slightly increasing to slightly decreasing. Compared to the initial phase C, an increase was shown in behavior level and a change in trend occurred, from zero to slightly decreasing. Based on the effectiveness data in the initial phase C, effectiveness levels were approximately where they would have been predicted in the current phase. Treatment acceptability data compared between C phases indicated a decreased level of treatment acceptability associated with the second presentation of phase C. Compared to the initial phase B, an increase was shown in behavior level and a change in trend occurred, from zero to slightly decreasing. In addition, the CIRP rating for the final phase C indicated a lower level of treatment acceptability as compared to the initial phase B. Overall, the continued

increase in behavioral level and the elevated CIRP rating support a relationship between treatment acceptability and treatment effectiveness. This is further supported by none of the data points within this phase overlapping with data points from the previous phase B or A phases.

*Target Child 7.* Four observations utilizing interval time sampling procedures were conducted in phase C. Observations during phase C occurred during the same time periods as in previous phases. Prior to implementation of phase C, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase C intervention was a 25, compared to previous ratings of 11 (B) and 20 (C). During this phase, the target child was observed to be engaged in disruptive behavior for 50%, 52%, 43% and 18% of the intervals observed, respectively. This indicated an absolute value of 486%, compared to previous treatment phases of 12% (B) and 50% (C). Observations in this phase were not considered stable.

Compared to behavior levels found in a return to baseline, a return to phase C indicated a lower level of disruptive behaviors and no change in trend. Compared to the initial phase C, a small decrease was shown in behavior level and a change in trend occurred, from zero to slightly increasing. Based on the effectiveness data in the initial phase C, effectiveness levels were approximately where they would have been predicted. Treatment acceptability data compared between C phases indicated a decreased level of treatment acceptability associated with the second presentation of phase C. Compared to the initial phase B, an increase was shown in behavior level and a change in trend occurred, from slightly decreasing to slightly increasing. In addition, the CIRP rating for the final phase C indicated a lower level of treatment acceptability as compared to the

initial phase B. Overall, the continued increase in behavioral level and the elevated CIRP rating support a relationship between treatment acceptability and treatment effectiveness. This is further supported none of the data points within this phase overlapping with data points from the previous phase B or A phases.

#### *Final Phase B*

*Target Child 1.* Four observations utilizing interval time sampling procedures were conducted in phase B. Observations during phase B occurred during the same time periods as in previous phases. Prior to implementation of phase B, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase B intervention was a 12, compared to previous ratings of 8 (B), 17 (C) and 13 (C). During this phase, the target child was observed to be engaged in disruptive behavior for 3%, 5%, 13% and 12% of the intervals observed, respectively. This indicated an absolute value of 8%, compared to previous treatment phases of 12% (B), 7% (C) and 2% (C). Observations in this phase were considered stable and revealed a zero trend.

Compared to the previous phase C, an increase was shown in level and there was no change in trend. Based on the effectiveness data in the initial phase B, this slight elevation between the final phase C and final phase B in disruptive behaviors could be predicted given previous levels of functioning within phases. The treatment acceptability rating compared to the final phase C treatment acceptability rating indicated an increased level of treatment acceptability associated with the intervention in phase B. Compared to the initial phase B, a decrease was shown in level and a change in trend occurred, from slightly decreasing to zero. In addition, the CIRP rating for the final phase B indicated a lower level of treatment acceptability as compared to the initial phase B. Overall, data



obtained during the final phase B verify data obtained in previous phases, and does not support a relationship between treatment acceptability and treatment effectiveness.

*Target Child 2.* Three observations utilizing interval time sampling procedures were conducted in phase B. Observations during phase B occurred during the same time periods as in previous phases. Prior to implementation of phase B, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase B intervention was an 8, compared to previous ratings of 7 (B), 23 (C) and 7 (C). During this phase, the target child was observed to be engaged in disruptive behavior for 12%, 15% and 17% of the intervals observed, respectively. This indicated an absolute value of 15%, compared to previous treatment phases of 13% (B), 9% (C) and 10% (C). Observations in this phase were considered stable and revealed a slightly increasing trend.

Compared to the previous phase C, an increase was shown in level and there was a change in trend from decreasing to increasing. The treatment acceptability rating compared to the final phase C treatment acceptability rating indicated a lower level of treatment acceptability associated with the intervention in phase B. Compared to the initial phase B, an increase was shown in level and a change in trend occurred, from slightly decreasing to increasing. In addition, the CIRP rating for the final phase B indicated a lower level of treatment acceptability as compared to the initial phase B. Overall, there is no discernable pattern for the data associated with subject two, therefore it does not appear that treatment acceptability is influencing treatment effectiveness in any way.

*Target Child 3.* Three observations utilizing interval time sampling procedures were conducted in phase B. Observations during phase B occurred during the same time

periods as in previous phases. Prior to implementation of phase B, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase B intervention was a 12, compared to previous ratings of 12 (B), 19 (C) and 16 (C). During this phase, the target child was observed to be engaged in disruptive behavior for 12%, 3% and 3% of the intervals observed, respectively. This indicated an absolute value of 6%, compared to previous treatment phases of 4% (B), 9% (C) and 8% (C). Observations in this phase were considered stable and revealed a slightly decreasing trend.

Compared to the previous phase C, a decrease was shown in level and there was no apparent change in trend. The treatment acceptability rating compared to the final phase C rating indicated a higher level of treatment acceptability associated with the intervention in phase B. Compared to the initial phase B, an increase was shown in level and a change in trend occurred, from zero to slightly decreasing. In addition, the CIRP rating for the final phase B indicated the same level of treatment acceptability as compared to the initial phase B. Overall, although a relationship between acceptability and effectiveness may be apparent from examination of subject three's data, the differences in effectiveness may not be dramatic enough to claim the relationship.

*Target Child 4.* Three observations utilizing interval time sampling procedures were conducted in phase B. Observations during phase B occurred during the same time periods as in previous phases. Prior to implementation of phase B, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase B intervention was a 7, compared to previous ratings of 9 (B), 14 (C) and 11 (C). During this phase, the target child was observed to be engaged in disruptive behavior for 9%, 10% and 2% of the intervals observed, respectively. This indicated an absolute value of 7%, compared to

previous treatment phases of 6% (B), 12% (C) and 14% (C). Observations in this phase were considered stable and revealed a slightly decreasing trend.

Compared to the previous phase C, a decrease was shown in level and there was a change in trend from zero to decreasing. The treatment acceptability rating compared to the final phase C treatment acceptability rating indicated a higher level of treatment acceptability associated with the intervention in phase B. Compared to the initial phase B, a small increase was shown in level and no change in trend was evident. In addition, the CIRP rating for the final phase B indicated a higher level of treatment acceptability as compared to the initial phase B. Overall, although a relationship between acceptability and effectiveness may be apparent from examination of subject four's data, the differences in effectiveness may not be dramatic enough to claim the relationship.

*Target Child 5.* Three observations utilizing interval time sampling procedures were conducted in phase B. Observations during phase B occurred during the same time periods as in previous phases. Prior to implementation of phase B, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase B intervention was an 8, compared to previous ratings of 1(B), 23 (C) and 11 (C). During this phase, the target child was observed to be engaged in disruptive behavior for 9%, 12% and 14% of the intervals observed, respectively. This indicated an absolute value of 12%, compared to previous treatment phases of 13% (B), 14% (C) and 10% (C). Observations in this phase were considered stable and revealed a slightly increasing trend.

Compared to the previous phase C, an increase was shown in level and there was a change in trend from decreasing to increasing. The treatment acceptability rating compared to the final phase C treatment acceptability rating indicated a higher level of

treatment acceptability associated with the intervention in phase B. Compared to the initial phase B, a small increase was shown in level and a change in trend occurred, from zero to slightly increasing. In addition, the CIRP rating for the final phase B indicated a higher level of treatment acceptability as compared to the initial phase B. Overall, there is no discernable pattern for the data associated with subject five, therefore it does not appear that treatment acceptability is influencing treatment effectiveness in any way.

*Target Child 6.* Three observations utilizing interval time sampling procedures were conducted in phase B. Observations during phase B occurred during the same time periods as in previous phases. Prior to implementation of phase B, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase B intervention was a 15, compared to previous ratings of 22 (B), 25 (C) and 27 (C). During this phase, the target child was observed to be engaged in disruptive behavior for 33%, 29% and 27% of the intervals observed, respectively. This indicated an absolute value of 30%, compared to previous treatment phases of 14% (B), 42% (C) and 40% (C). Observations in this phase were considered stable and revealed a slightly decreasing trend.

Compared to the previous phase C, a decrease was shown in level and there was no apparent change in trend. The treatment acceptability rating compared to the final phase C treatment acceptability rating indicated a higher level of treatment acceptability associated with the intervention in phase B. Compared to the initial phase B, an increase was shown in level and a change in trend was evident, from zero to decreasing. In addition, the CIRP rating for the final phase B indicated a higher level of treatment acceptability as compared to the initial phase B. Overall, a relationship between acceptability and treatment effectiveness is supported with data from this subject. When

changes in the independent variable occur, simultaneous changes occur in the dependent variable.

*Target Child 7.* Four observations utilizing interval time sampling procedures were conducted in phase B. Observations during phase B occurred during the same time periods as in previous phases. Prior to implementation of phase B, the target child rated the respective intervention using the CIRP. The CIRP rating for the phase B intervention was a 7, compared to previous ratings of 11 (B), 20 (C) and 25 (C). During this phase, the target child was observed to be engaged in disruptive behavior for 22%, 60%, 3% and 18% of the intervals observed, respectively. This indicated an absolute value of 26%, compared to previous treatment phases of 12% (B), 50% (C) and 49% (C). Observations in this phase were variable and revealed a zero trend. However, even though data was variable, data collection ended due to the child being removed to a smaller classroom.

Compared to the previous phase C, a decrease was shown in level and there was a change in trend from increasing to zero. The treatment acceptability rating compared to the final phase C treatment acceptability rating indicated a higher level of treatment acceptability associated with the intervention in phase B. Compared to the initial phase B, an increase was shown in level and a change in trend is evident, from decreasing to zero. In addition, the CIRP rating for the final phase B indicated a higher level of treatment acceptability as compared to the initial phase B. Overall, a relationship between acceptability and treatment effectiveness is supported with data from this subject. When changes in the independent variable occur, simultaneous changes occur in the dependent variable.

Figure 2 TC1 Graph of Treatment Acceptability and Treatment Effectiveness.

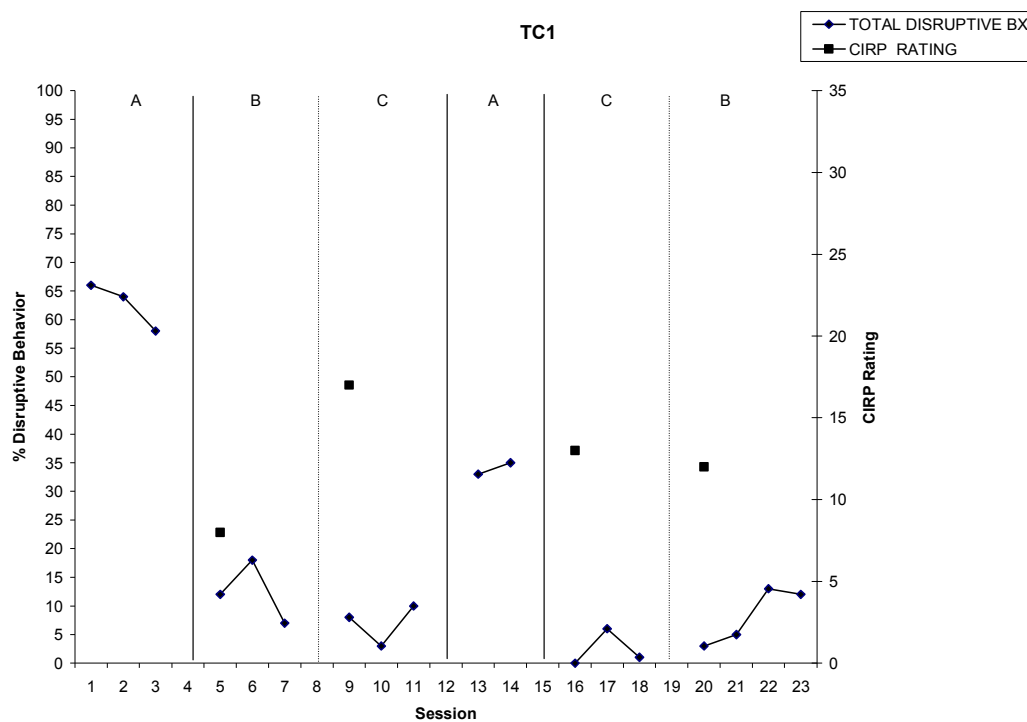


Figure 3 TC2 Graph of Treatment Acceptability and Treatment Effectiveness.

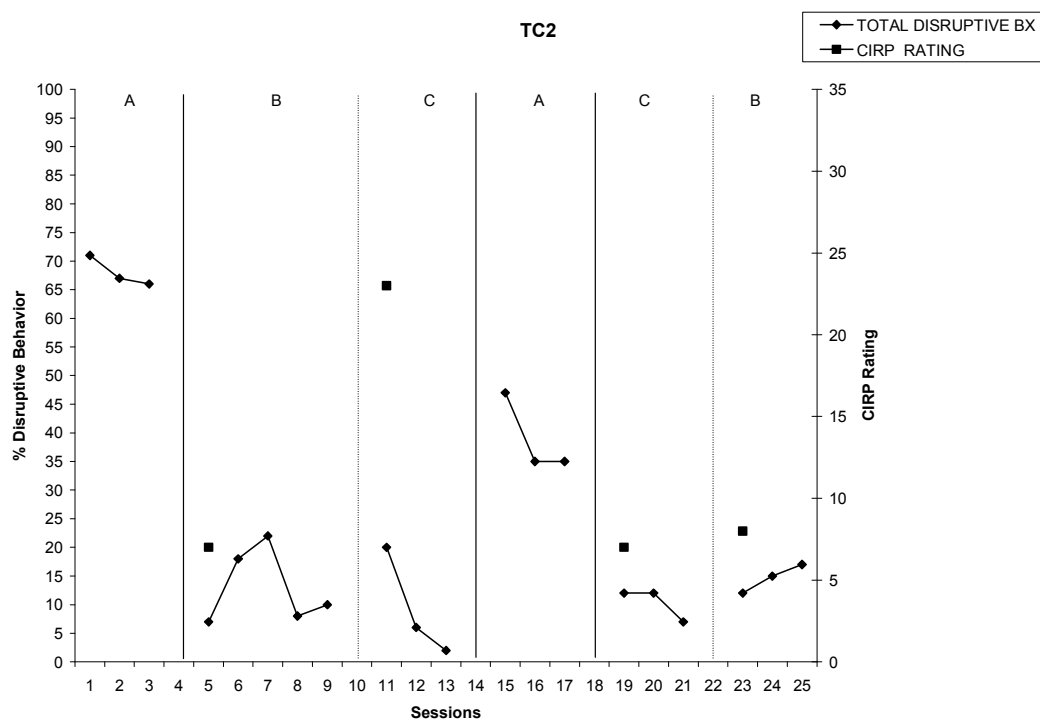


Figure 4 TC3 Graph of Treatment Acceptability and Treatment Effectiveness.

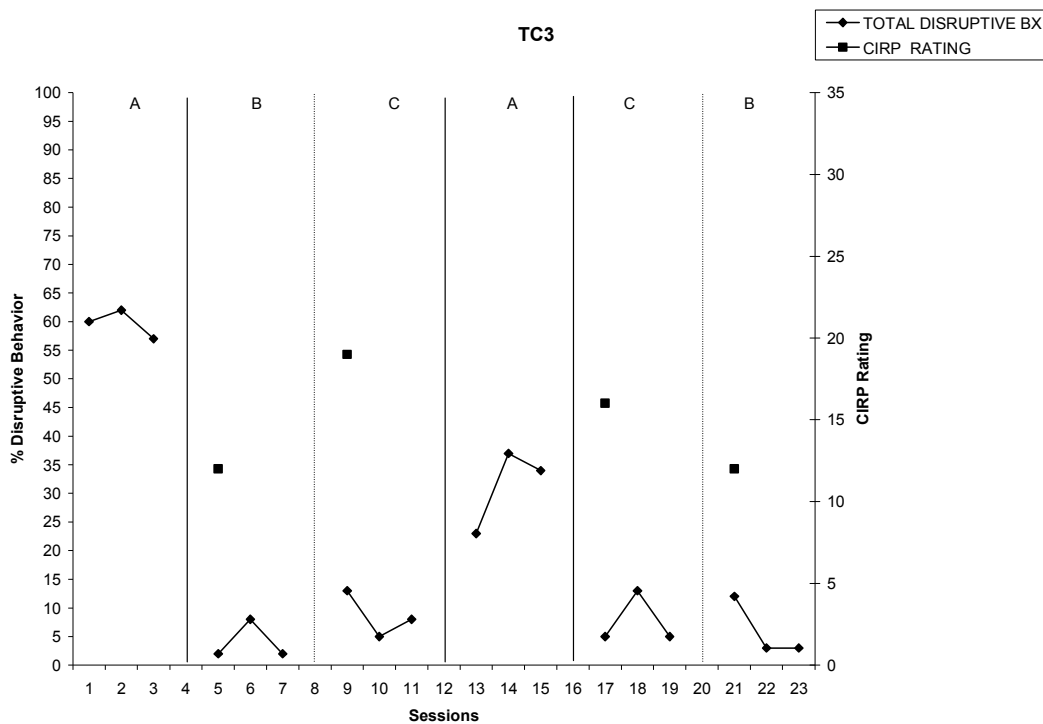


Figure 5 TC4 Graph of Treatment Acceptability and Treatment Effectiveness.

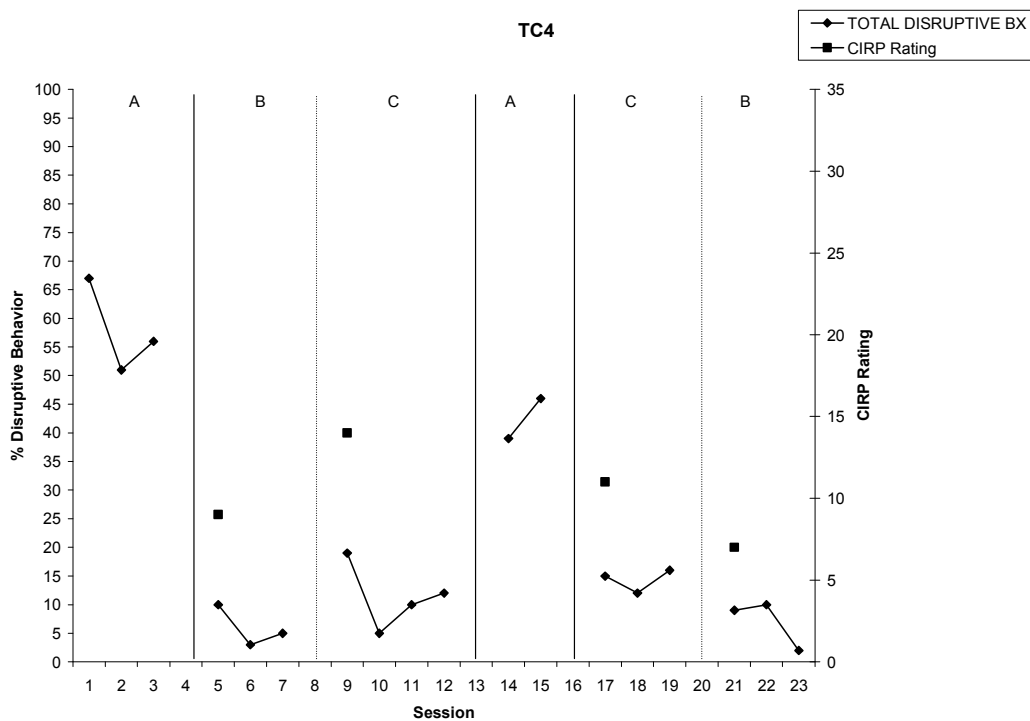


Figure 6 TC5 Graph of Treatment Acceptability and Treatment Effectiveness.

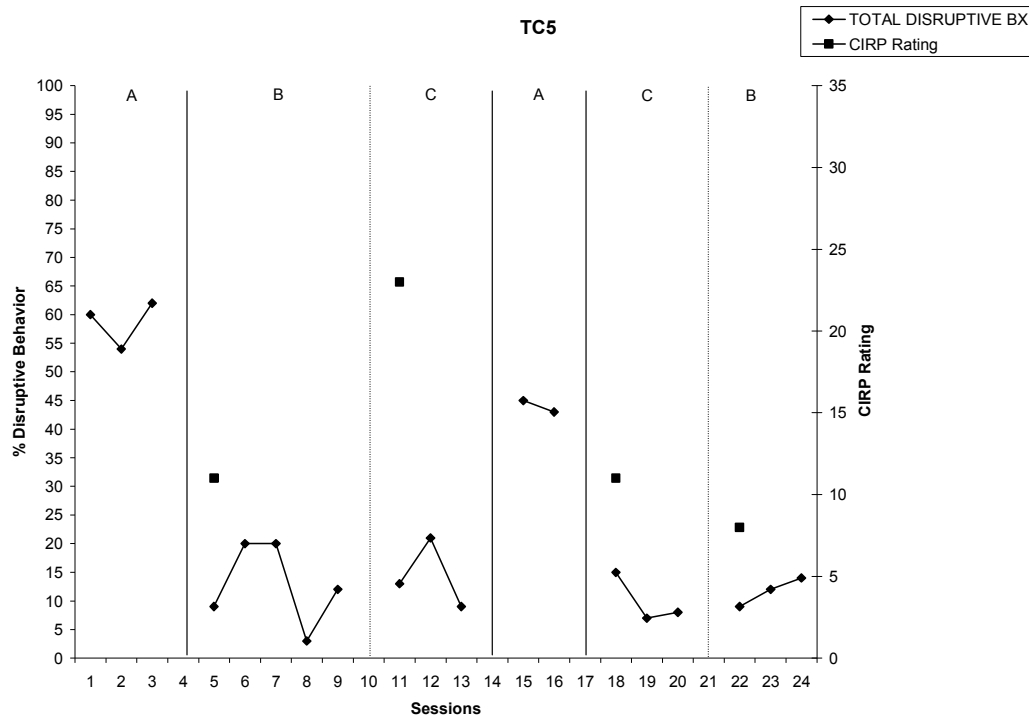


Figure 7 TC6 Graph of Treatment Acceptability and Treatment Effectiveness.

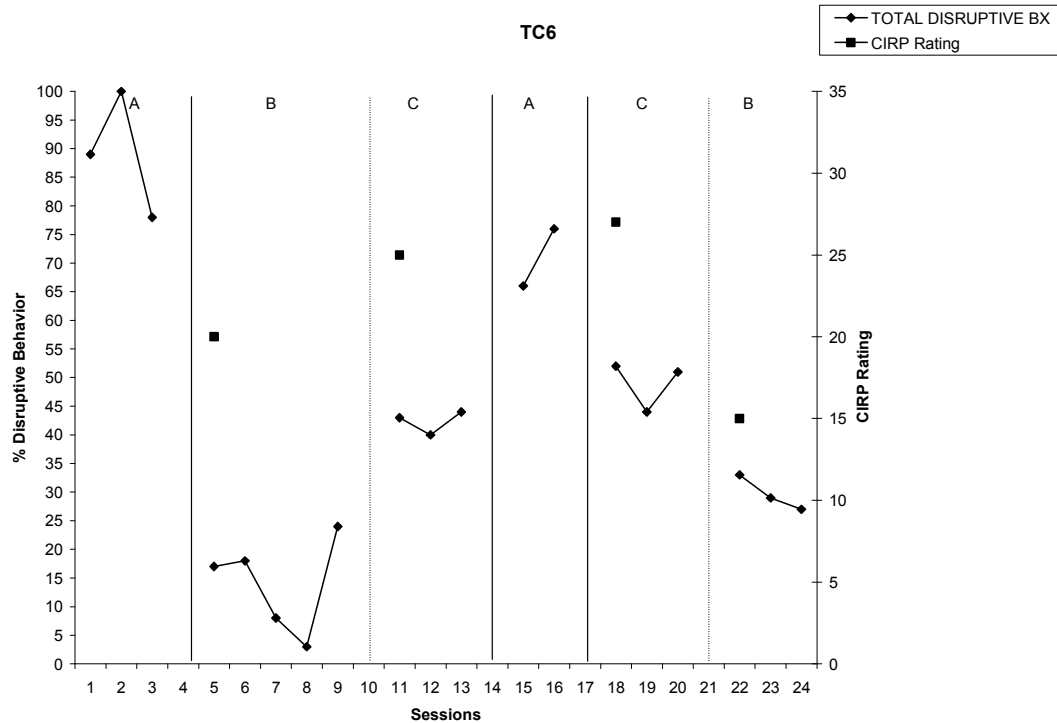
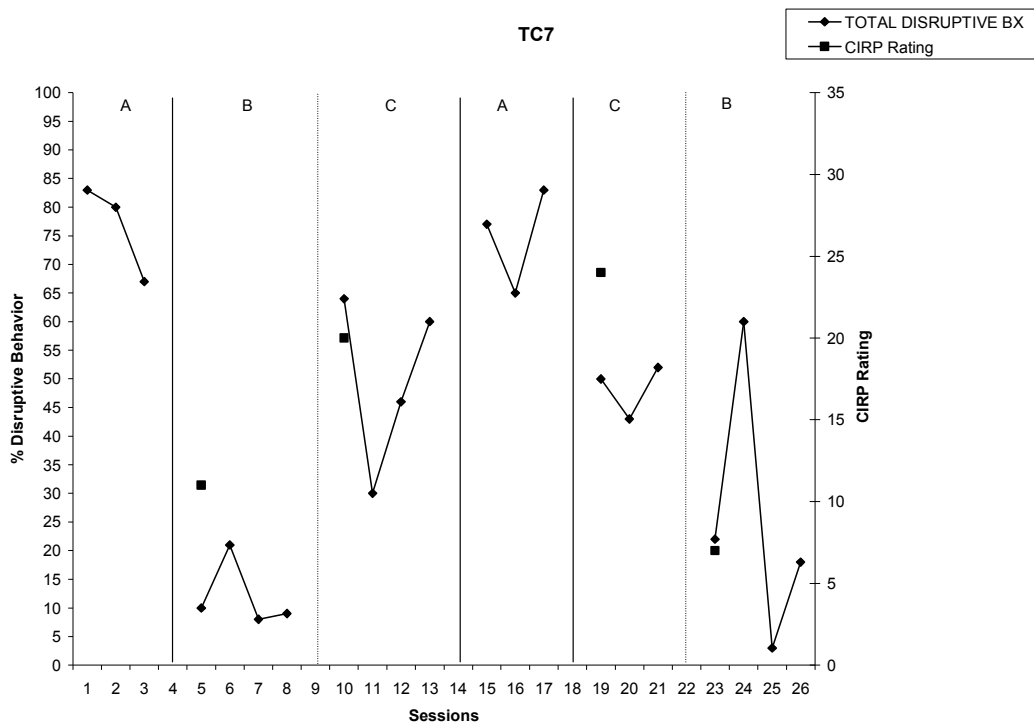




Figure 8 TC7 Graph of Treatment Acceptability and Treatment Effectiveness.



Overall, the researcher was successful in manipulating the independent variable as reflected in varying treatment acceptability scores on the CIRP across phases. However, based on the data obtained from the current study, a causal relationship between treatment acceptability and treatment effectiveness does not appear to exist. Although a change in treatment acceptability did appear to influence the overall treatment effectiveness for two of the subjects, this may be considered more of the exception than the rule.

### *Research Question 7*

*Does an alteration in treatment acceptability produce long-term effects on the effectiveness of a treatment?*

It was hypothesized that the impact of treatment acceptability on treatment effectiveness would produce long-term effects on the effectiveness of a treatment if a child does not achieve success with the intervention.

Before visually inspecting this data, it is important to note that researchers of this study did not actually run interventions long enough to necessarily be considered long-term; however this term was used to demonstrate the potential extended effects of a change in treatment acceptability on treatment effectiveness. It could have been considered unethical to run a less effective intervention for an extended period of time when another intervention had already been shown to produce increased efficacy. This is especially true in the classroom setting where the education of other children can be impacted by the disruptive behavior of another child.

Overall, target children one through five experienced success with the intervention across all treatment phases. A change in the independent variable (treatment acceptability) did not initially produce a substantial change in the dependent variable (treatment effectiveness) as seen by observations of overall disruptive behavior, nor did it produce long-term effects on the effectiveness of the treatment. Due to the target children's success with the intervention and due to behaviors maintaining at a stable rate across phases, no change was determined to occur across phases. Therefore, an alteration in treatment acceptability did not appear to produce long-term effects on the effectiveness of the treatment for subjects one through five.

For target children six and seven, a change in the independent variable (treatment acceptability) immediately produced an observable change in the dependent variable (treatment effectiveness) as seen by observations of overall disruptive behavior. This change in behavior continued through the duration of the respective phase, thus indicating long-term effects on treatment effectiveness. After leaving the initial phase B, target children six and seven never did return to the more stable, lower behavior levels that were associated with that initial phase (refer to Figures 7 and 8 above). Therefore, for subjects six and seven, an alteration in treatment acceptability did appear to produce long-term effects on the effectiveness of the treatment when the child did not achieve success with the intervention. Of note, Table 16 (below) is provided to assist in examining behavior levels across phases.

Table 16 *Comparison of disruptive behavior rates across phases and subjects (n = 7)*

	Target Child						
	1	2	3	4	5	6	7
<b>Phase A</b>							
1.	66.00%	71.00%	60.00%	67.00%	60.00%	89.00%	83.00%
2.	64.00%	66.00%	62.00%	51.00%	54.00%	100.00%	80.00%
3.	58.00%	67.00%	57.00%	56.00%	62.00%	78.00%	67.00%
<b>Phase B</b>							
1.	12.00%	7.00%	2.00%	10.00%	9.00%	17.00%	10.00%
2.	18.00%	18.00%	8.00%	3.00%	20.00%	18.00%	21.00%
3.	7.00%	22.00%	2.00%	5.00%	20.00%	8.00%	8.00%
4.	--	8.00%	--	--	3.00%	3.00%	9.00%
5.	--	10.00%	--	--	12.00%	24.00%	--

Table 16 (continued)

	Target Child						
	1	2	3	4	5	6	7
<b>Phase C</b>							
1.	8.00%	20.00%	13.00%	19.00%	13.00%	43.00%	64.00%
2.	3.00%	6.00%	5.00%	5.00%	21.00%	40.00%	30.00%
3.	10.00%	2.00%	8.00%	10.00%	9.00%	44.00%	46.00%
4.	--	--	--	12.00%	--	--	60.00%
<b>Phase A</b>							
1.	33.00%	47.00%	23.00%	39.00%	45.00%	66.00%	77.00%
2.	35.00%	35.00%	37.00%	46.00%	43.00%	76.00%	65.00%
3.	--	35.00%	34.00%	--	--	--	83.00%
<b>Phase C</b>							
1.	0.00%	12.00%	5.00%	15.00%	15.00%	52.00%	50.00%
2.	6.00%	12.00%	13.00%	12.00%	7.00%	44.00%	43.00%
3.	1.00%	7.00%	5.00%	16.00%	8.00%	51.00%	52.00%
<b>Phase B</b>							
1.	3.00%	12.00%	12.00%	9.00%	9.00%	33.00%	22.00%
2.	5.00%	15.00%	3.00%	10.00%	12.00%	29.00%	60.00%
3.	13.00%	17.00%	3.00%	2.00%	14.00%	27.00	3.00%
4.	12.00%	--	--	--	--	--	18.00%

### *Research Question 8*

*Does previous experience with a behavior intervention that was implemented in the classroom influence children's future ratings of treatment acceptability for that same intervention?*

It was hypothesized that previous experience with a behavioral intervention in the classroom will influence children's future ratings of treatment acceptability for that same intervention.

Results from part two of the study suggest that previous experience with an intervention influences future ratings of that same intervention. Examination of the data reveals that those children who experienced success with an intervention that they initially perceived as less acceptable (first phase C), later rated that same intervention as more acceptable (second phase C). On the other hand, those children who did not experience success with an intervention that they initially perceived as less acceptable (first phase C), later rated that same intervention less acceptable than before (second phase C). Additionally, with the exception of subjects one and two, subjects consistently rated the intervention presented in the second phase B as equal to or more acceptable than the intervention in the initial phase B. This again suggests that previous experience with an intervention can influence future ratings of an intervention. Because children experienced success with the initial intervention, they rated it as more acceptable the second time it was presented to them.

Table 17 (below) utilizes the average rate of disruptive behavior within each phase to depict on average how successful a child was with the intervention during the respective phase.

Table 17 *Comparison of CIRP ratings with average percent (%) of disruptive behaviors for each treatment phase*

<u>Target Child</u>		<u>B</u>	<u>C</u>	<u>C</u>	<u>B</u>
1	CIRP rating	8	<b>17</b>	13	12
	Avg. % Disruptive Behavior	12.33%	7.00%	2.33%	8.25%
2	CIRP rating	7	<b>23</b>	7	8
	Avg. % Disruptive Behavior	13.00%	9.33%	10.33%	14.67%
3	CIRP rating	12	<b>19</b>	16	12
	Avg. % Disruptive Behavior	4.00%	8.67%	7.67%	6.00%
4	CIRP rating	9	<b>14</b>	11	7
	Avg. % Disruptive Behavior	6.00%	11.50%	14.30%	7.00%
5	CIRP rating	11	<b>23</b>	11	8
	Avg. % Disruptive Behavior	12.80%	14.33%	10.00%	11.67%
6	CIRP rating	22	25	<b>27</b>	15
	Avg. % Disruptive Behavior	14.00%	42.33%	49.00%	29.67%
7	CIRP rating	11	20	<b>25</b>	7
	Avg. % Disruptive Behavior	12.00%	50.00%	48.00%	25.75%

Note: Bold number indicates lowest level of treatment acceptability for each subject

## CHAPTER V

### DISCUSSION

This main purpose of the current study was to investigate children's treatment acceptability of behavior interventions implemented in the general education classroom for problem behaviors. More specifically, the purpose of part one was to collect information regarding variables which may contribute to children's treatment acceptability ratings of behavior interventions. The purpose of part two was to determine if there is a causal relationship between pre-treatment acceptability ratings of behavior interventions proposed to be implemented in the classroom and the post-treatment effectiveness data of those proposed interventions when actually implemented in the classroom.

Results of the first hypothesis were inconclusive based on the amount of data obtained for the independent variable, previous experience, during data collection in part one of the study. However results of the eighth hypothesis, which examined the same variables but in a naturalistic setting, suggest that previous experience can influence the treatment acceptability ratings of children in grades one through four. This finding is critical in the current study. As discussed earlier, treatment acceptability may be influenced by previous experience with an intervention as predicted from both behavioral and social learning theories.

That is, a child is presented an intervention that is to be used with him in the classroom. The child perceives the intervention to be less acceptable than other interventions, therefore fails to engage in the desired behavior. The child in turn does not receive reinforcement for his behavior. The failure to receive the reinforcement then adds to the negative expectations the child has with the intervention, and thus the cycle continues. When the child is again asked to rate the same intervention, the negative learning history that has been created from his experience with the intervention now leads to an even lower perceived treatment acceptability. On the other hand, some children who originally rated an intervention as less acceptable rated that same intervention as more acceptable once they had experience with the intervention. Therefore, they began with a lower treatment acceptability of the proposed intervention, but were able to engage in the desired behavior long enough to receive the associated reinforcement. Thus, they found success with the intervention and began to build a positive learning history. When asked to again rate the intervention, they then found the intervention to be more acceptable than they previously believed.

This finding has good implications for practice and is consistent with past research that has suggested a relationship between treatment effectiveness and treatment acceptability via analogue studies (Clark & Elliott, 1987; Kazdin, 1981; Tingstrom, McPhail & Bolton, 1988; and VonBrock & Elliott, 1987). Although analogue in nature, findings from the previous research have found that the more an intervention is utilized with success, the more acceptable a rater will find the intervention. This is consistent with the current study's findings which show that the success a child has with an intervention, influences later ratings of treatment acceptability for that same intervention.



Children who found success with the intervention in phase C, later rated it as more acceptable than initially perceived. Additionally, children who found less success with the intervention in phase C, later rated it as less acceptable than originally perceived. Thus, the effectiveness of the intervention influenced future ratings of treatment acceptability. Results again support the learning model proposed for this study.

Overall, the data suggest that a less acceptable intervention can be as effective as a more acceptable intervention if the child is able to achieve success with the proposed intervention. This may suggest that practitioners shorten the reinforcement schedule for children when implementing a less acceptable intervention, so that the child may experience success and begin to create a positive learning history with the intervention. As can be seen in combination with the results from hypothesis six, creating this positive learning history may, for some children, lead to a more effective treatment in the classroom. Ultimately, if practitioners are aware of those treatments which children have a negative learning history with, or are aware of interventions that the target child perceives as less acceptable, they can use this information to build an intervention that will have enhanced effectiveness in the classroom.

Results of the second hypothesis support the null hypothesis. Grade level was not found to have a statistically significant effect on treatment acceptability scores. However, although not significant, mean treatment acceptability scores indicate that fourth graders rate all interventions at a higher acceptability rate than their first, second and third grade counterparts. In addition, although not significant, the mean treatment acceptability scores for second graders indicated that they perceived the majority of presented intervention at a lower acceptability rate than their first, third and fourth grade

counterparts. Although this study did not find statistical significance with this variable, it may be important to further explore the influence that grade level may have on treatment acceptability. Previous research has failed to incorporate children as young as first grade. However, this study shows that these children are able to provide information consistent with their similar aged peers.

Results of the third hypothesis support the idea that treatment acceptability ratings are influenced by the type of intervention proposed to be implemented in the classroom. Findings show that children rate positive reinforcement and negative reinforcement interventions as statistically more significant than type I punishment interventions. These findings support previous research about the treatment acceptability of various interventions (Kazdin et al., 1981; Martens et al., 1986; Sing & Katz, 1985; Witt & Martens, 1983). Thus, predictably, children rated those interventions which either provided a positive reinforcer or removed an aversive stimulus as more acceptable than the intervention which applied an aversive stimulus. As supported in subsequent and following hypothesis, this variable should be considered when developing an intervention for a child in the classroom, as previous experience and/or treatment acceptability may influence treatment effectiveness in the classroom. Of note, the current study asked children to rate their perception of an intervention as it would be applied with themselves in the classroom. This is a departure from the rest of the literature which either asked caregivers (e.g. teachers, parents) to rate interventions applied to children, or asked children to rate interventions applied to the 'disruptive child' in the classroom.

Results of the fourth hypothesis support the null hypothesis. Although small to medium correlations were found between treatment acceptability and behavior severity

categories including opposition, inattention, hyperactivity and ADHD, results were not found to be significant. Previous research reported that behavior severity of the target child influenced teacher ratings of treatment acceptability (Elliott et al., 1984; Higgins, 2000; Witt & Matens, 1983; Witt, Martens & Elliott, 1984; Witt et al., 1984; Witt & Robbins, 1985), therefore this author incorporated this variable in the current study by using a naturalistic approach to determine if children who exhibited higher levels of disruptive behavior rated interventions differently than their counterparts who exhibited lower levels of disruptive behavior. Because children who exhibit higher levels of disruptive behavior are more likely to need behavioral interventions in the classroom, thus are more likely to have been exposed to interventions in the past, it was predicted that a relationship would exist between treatment acceptability and behavior severity levels. Although the current study failed to find significant results, the information that was gathered in this study may be beneficial for practitioners to consider in order to spur future research. For example, although not significant, results indicated that as inattention and ADHD symptoms increased, the child's acceptability of negative reinforcement increased. This would make sense, seeing that these children often times have a difficult time completing work. Therefore, when work was removed for displaying the appropriate behavior, the more inattentive the child, the more acceptable they found that intervention. Practically, the data associated with this hypothesis suggest benefits towards further exploring this variable in order to more accurately match intervention presentations with children in the classroom.

Results of the fifth hypothesis support the null hypothesis. Together, grade level and behavior severity level were not determined to influence the treatment acceptability

ratings of children in grades one through four. In fact, negative values for the adjusted  $R^2$  values indicate that there were variables in the regression equation that did not help to predict the criterion variable. This finding may not be unreasonable given examination of other results for this study (e.g. grade level not significantly influencing treatment acceptability ratings). However, further exploration of these variables and their impact on treatment acceptability is warranted. With  $n = 21$  used for this analysis, the sample size may have been too low to create a reliable equation using these specific variables. A study which garners a larger  $N$  for these variables may provide varied results that will further assist practitioners in the classroom.

Results of the sixth hypothesis support the null hypothesis. Overall, data obtained within this part of the study indicate that a causal relationship does not exist between treatment acceptability and treatment effectiveness. However, although five of the seven subjects in part two of the study did not produce behavioral change when presented with a less acceptable intervention, two of the seven subjects did produce change. Interestingly, these two children were the only two children in the study with a diagnosed behavioral disorder, ADHD, and were the only two children currently on stimulant medication. Thus, a closer look at the data suggests that causality may not be the rule, but may be the exception. And the exception, may apply to special populations such as those identified with a behavioral disorder.

Overall, target child six and seven indicated a high level of dissatisfaction with the treatments presented in phase C of the study by stating things such as, “I don’t want more work”, “I’m not going to do it anyway”, “Can’t we go back to the way we were doing it before”, and “I don’t care, I won’t do it.” In addition, neither of these children

were able to access the reinforcer for the intervention after entering into phase C of the study, therefore the behavioral intervention was less effective in supporting positive behaviors in the classroom. Ultimately, the intervention proposed in phase C provided visual reminders of inappropriate behavior, removed the tangible reinforcer, and added a work component for display of inappropriate behavior. Considering that children with behavioral disorders can have a more difficult time delaying gratification, can become more easily frustrated/agitated with tasks, and can be difficult to engage in school work due to the effort that is required of them, this may have influenced their reactivity to the proposed intervention more quickly than those children without a diagnosed behavioral disorder. In addition, once the intervention began to be implemented, and the children began to receive indications of having to do more work, they may have given up more quickly and may have decided they were not going to do the work anyway, as previously described.

Because these children were more likely to have previous behavior interventions in their repertoire, they may have had a more in depth and ingrained learning history than the other children in the study, thus influencing their initial perception of the intervention in phase C. This relates to the researcher's proposed model which suggests that a negative learning history may create lower treatment acceptability, and thus decrease intervention effectiveness. If these children were exposed to interventions similar to those presented in phase C in the past, and they were not successful with them at that time, they may have been more likely to rate them as less acceptable in the current study.

Thus, although a clear relationship cannot be established, data suggest that for some children treatment acceptability may in fact influence treatment effectiveness.

Therefore future research surrounding these variables, and using these special populations, is warranted; especially given that these populations are predominately served by school psychologists with interventions on a daily basis.

Results of the seventh hypothesis support the idea that an alteration in treatment acceptability can produce long-term (extended) effects on the effectiveness of a treatment. Although not evidenced for most target children, those children who were sensitive enough to react to the first manipulation demonstrated behavior that continued to be impacted throughout the study. As seen with the data obtained from subjects six and seven, once the child's acceptability of the intervention was lowered in phase C, and increases were seen in the percent of disruptive behaviors elicited in the classroom, the child never was able to return to the lower, more stable, rate of behavior found during the initial phase B, even when returning to the phase B intervention. Of note, although neither child returned to previous levels of behavioral functioning found in the initial phase B, the effectiveness of the intervention in the second phase B was still greater than that found in either C phases. Thus, it may indicate that a combination of treatment acceptability and previous experience influenced the treatment effectiveness during this phase for these children.

#### Implications for this study

The primary goal of part one of this study was to collect information regarding variables which may contribute to children's treatment acceptability ratings of behavior interventions. This part of the study focused on whether previous experience influenced treatment acceptability ratings of children; whether grade level influenced treatment acceptability ratings of children; whether type of intervention influenced treatment

acceptability of children; whether a relationship exists between behavior severity level and treatment acceptability level; and whether treatment acceptability can be influenced by a combination of grade level and behavior severity level. Although much research has been conducted in the area of treatment acceptability, its primary focus has been with teachers and caregivers. In addition, the literature that does exist with children has been primarily analogue in nature and conducted with children in grades six and beyond. Because younger children are involved with behavioral interventions in the classroom on a daily basis, it is important that factors which may influence their perceived treatment acceptability be studied.

The primary goal of part two of this study was to determine if there is a causal relationship between pre-treatment acceptability ratings of behavior interventions proposed to be implemented in the classroom and the post-treatment effectiveness data of those proposed interventions when actually implemented in the classroom. This part of the study focused on whether treatment acceptability influenced treatment effectiveness; whether changes in treatment acceptability produced long-term effects in treatment effectiveness; and whether previous experience with an intervention influenced future treatment acceptability scores. Research examining the combination of these variables is limited, especially as applied in the natural environment. Therefore, determining the practical significance of these factors is warranted in assisting practitioners in developing more appropriate interventions for the classroom.

Improving the quality of treatment recommendations for teachers in the classroom is essential to best practices in the field of school psychology. Thus, factors which may impact treatment acceptability, and in turn, impact treatment effectiveness were examined

in this study. Results were then compared to previous research findings in the field. The following implications may be inferred from the data obtained in this study:

- Children as young as first grade are able to differentiate between treatments proposed to them for use in the regular education classroom.
- Children, regardless of being in first grade, second grade, third grade or fourth grade, rate the treatment acceptability of behavioral interventions proposed for use in the regular education classroom similarly.
- Children in grades one through four perceive positive reinforcement interventions and negative reinforcement interventions as significantly more acceptable than type one punishment interventions.
- Previous experience with an intervention can influence future ratings of treatment acceptability for that same intervention.

These implications are relevant to practitioners in the field of school psychology who develop behavioral interventions for children in the classroom. Allowing children to participate in the development of interventions used with them, may enhance the benefits that child receives from various treatments in the classroom. This may be particularly important if a child has had previous experience with an intervention. The input that the child provides may prevent school psychologists from using interventions for which the child has a negative learning history, and thus lowered treatment acceptability.

Therefore, asking a child to participate in the development of an intervention seems imperative to creating the best intervention possible for use in the classroom.



## Limitations

### *Part One*

Generalizability is one limitation of this part of the study. Because all participants came from a rural school district in Oklahoma, caution should be taken when attempting to generalize these results to all children in grades one through four.

Sample size produced for questions one, four and five is another limitation for this part of the study. Due to a combination of poor teacher interest in participation and a low number of students whom had previous experience with interventions, this researcher was unable to analyze data for question one. For question four, the sample detected small to medium correlations; however, the sample may not have been large enough to detect a possibly significant relationship. For question five, the sample did not detect significant results and was potentially unable to produce a reliable equation based on available sample size. Thus, sample size associated with these questions should be considered a limitation of this study's results.

A final limitation to this part of the study is the lack of psychometric data to support the *Children's Intervention Rating Profile* for use with children in grades one through four. To attempt to resolve this limitation, reliability analyses of this scale with the population included in the study was conducted. Results from the analysis revealed adequate reliability, however further exploration of this instrument with this young population may be warranted.

### *Part Two*

Although the single subject reversal design is a good indicator of a functional relationship between an independent variable and a dependent variable, caution must be

taken with the particular design chosen for use in this study. Because treatment conditions were not counterbalanced across subjects (i.e. ABCACB, ACBABC), it is not possible to determine if treatment carryover effects contributed to the behaviors in subsequent phases. Future studies should address this issue by having one-half of the participants follow one treatment sequence, and the other half of the participants follow the other treatment sequence. This would help to ensure that treatment effects from B were not impacting treatment effects in C, and vice versa.

Another limitation of this study's design may be that it utilizes repeated measures of treatment acceptability within a short time span. This threat is frequently guarded against in studies by implementing both a no-treatment control group and a treatment group. Researchers may then evaluate the effects of the intervention beyond the influence of repeated testing. Unfortunately, since this study utilizes a single subject design, no real control group was used because the subject him/herself acted as the control.

Reactive experimental arrangement and reactive assessment may be two more limitations to this study. Reactive experimental arrangement may have occurred because the participants were aware of their participation in the study. They may have behaved out of the norm due to their knowledge of participation. Reactive assessment may occur if participants respond differently than they may normally respond on measures because they were aware their behavior was being assessed. To help reduce these threats, children in this study were only told they were going to receive an intervention to help them control their behavior in the classroom. Additionally, they were told that their teacher wanted to know what they thought of the intervention and that any answer they gave

would be the right answer. The researcher also spent time building rapport with the children so that she become part of the classroom environment rather than an outsider to the classroom. This was done to limit the impact that researcher presence had in the classroom and to limit the likelihood that the child would be unwilling to respond openly in the presence of the researcher.

A final limitation for this part of the study may be generalizability of the results to other settings or subjects. Although seven subjects in a single-case design can be considered adequate for interpretation, it is important to consider that only two of the seven subjects received services through a special education program. Therefore, it would behoove researchers to collect additional data using this sample. In addition, because this part of the study only used children from an urban school district in Maryland, there is reason to believe that generalizability outside of this sample would be difficult unless children have similar environments and backgrounds. However, consistent results between subjects used in this study could suggest reasonable generalizability across settings and subjects. It is also important to note that since this part of the study utilized only used children in grades one through three, therefore interpretations must be made cautiously as not to generalize beyond that aged population.

#### Suggestions for Future Research

Not only do results from this study add to the literature on children's treatment acceptability, the results of this study provide future direction for researchers and practitioners. Suggestions for future research include:

1. This study looked at manipulating the perceived treatment acceptability of a child to see if a change in treatment acceptability directly impacted treatment

effectiveness. Treatment integrity was monitored on a daily basis by the researcher via direct observation and permanent products, therefore treatment integrity remained high. However, future researchers may wish to add treatment integrity as an independent variable to explore the impact that varying degree's of treatment integrity has on a child's perceived treatment acceptability, and in turn, how that impacts treatment effectiveness. As was discussed previously in the literature review, children who were once exposed to intervention procedures that were implemented incorrectly may have adverse reactions to methods intended to be used in a new intervention. Determining the extent to which this may be true may be critical in further enhancing the effectiveness of treatments in the classroom.

2. This study limited its population to children in grades one through four. Because of this limitation, it cannot be determined whether children in higher grades would produce data with similar results. Although treatment acceptability has been gathered from older grade level populations in the past, this study is unique in its use of naturalistic methods when collecting data. Therefore, repetition of a similar study with an older population would be beneficial in determining the extent to which these results may be generalized.
3. This study provided a glimpse of potential relationships between treatment acceptability and behavior severity levels. A study which produces a larger N for behavior severity level ratings, may establish stronger relationships that would add to not only the intervention literature, but to the behavior disorder literature. As gleaned from the results of this study, children's acceptability of

negative reinforcement interventions increases, as a component of their behavior severity level increases. Further exploring this potential relationship may provide practitioners with a clearer picture of the interventions that these children prefer, and which may in fact be more effective for them in the classroom.

4. Expanding into the teacher treatment acceptability literature, researchers should work to create naturalistic studies which examine treatment acceptability as perceived by the teacher for interventions actually being implemented in the classroom. Taking the behavior severity variable, teachers could be asked to rate the behavior severity level of a child prior to treatment. Then, teachers could implement a variety of interventions for a target child and researchers could obtain acceptability ratings before and after each treatment. This could enhance the teacher treatment acceptability literature by not only providing a naturalistic study, but further exploring the influence that the actual behavior severity level of child has on how willing a teacher is to implement a particular classroom intervention.
5. The relationship between treatment acceptability and treatment effectiveness should continue to be explored via naturalistic methods, and with a larger N, as results from this study suggest that a relationship may exist within special populations. More specifically, a relationship may exist for children who have diagnosed behavioral disorders. In addition, the long-term (extended) effects of one variable on the other should continue to be explored with this population. Ultimately, results could aide school intervention teams in

modifying interventions appropriately in order to better meet the needs of targeted students in the classroom.

6. Researchers should continue to collect treatment acceptability data for younger populations using the *Children's Intervention Rating Profile*. This will add to not only the treatment acceptability literature, but will verify this instruments use with younger populations.
7. Researchers should consider examining the influence of reinforcement schedules on treatment acceptability. As the proposed model for this literature review suggests, children who perceive an intervention as less acceptable may later perceive it as more acceptable if they are successful with the intervention. Varying how successful a child is with an intervention (e.g. creating a positive or negative learning history), and then obtaining treatment acceptability ratings, would further support the idea that previous experience impacts treatment acceptability and, ultimately, treatment effectiveness.
8. Researchers should continue to explore variables which may impact children's treatment acceptability of interventions in the classroom. Because results of this study suggest that treatment acceptability may influence treatment effectiveness for certain populations, it will be important for researchers to tease out those factors which can be controlled and which directly influence children's treatment acceptability ratings of behavioral interventions.
9. It important to note that this study is unique in that it asked children to rate interventions as they would be applied to themselves in the classroom. Children were not asked to rate how they would perceive an intervention that

was applied to another child in the classroom. Therefore, future studies which again look at this variable from the child's perspective who is receiving the actual intervention is necessary and encouraged. It may be that a child's perception changes when the intervention is going to be applied with them as opposed to another child.

### Summary

Results of this study indicate a need for involving children in intervention development. Not only were factors identified which influence treatment acceptability ratings, data suggested that a causal relationship may exist between treatment acceptability and treatment effectiveness for students with behavioral difficulties. This is critical, considering that no other research study has produced results like this in the past. Results from this study indicate that, for some children, implementation of a less desirable intervention in the classroom leads to less behavior change in the classroom. In addition, results from this study suggest that a child who does not experience success with an intervention, later rates that intervention as less acceptable than before they were exposed to the intervention. For some children, a negative learning history may in fact impact the level of treatment acceptability associated with an intervention. And that, may then impact the level of treatment effectiveness for that intervention in the future. This is in alignment with the learning model depicted earlier in the literature review for this study, which combined both behavioral and social learning theories.

Findings of this study add to the research base in both the areas of treatment acceptability and treatment effectiveness. The findings also have implications for not only school psychology practitioners, but school intervention teams whom serve children

with behavioral needs on a daily basis. Further exploration of both of these areas is warranted based on results obtained in this study. Ultimately, it is up to those individuals who support children's behavior not only in the classroom, but across settings, to explore, develop and implement interventions that will best meet the needs of children and ensure that they are as successful as possible in all facets of their life.



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## APPENDICES

APPENDIX A  
CONSENT FORMS AND COVER LETTERS

APPENDIX A-1  
DISTRICT AND SCHOOL CONSENT FORM

Dear Treatment Acceptability Researchers,

The \_\_\_\_\_ School agrees to participate in your study, *Variables that Influence and are influenced by Treatment Acceptability as Perceived by Children for Behavior Interventions: A two part investigation*. We understand that the purpose of the study is to examine children's treatment acceptability of behavioral interventions and how this impacts overall treatment outcome.

The \_\_\_\_\_ School understands that in order for children to benefit from interventions in the classroom, they need to be as effective as possible. In this study, a research assistant will solicit participation from children in grades 1-5. Children participating in phase one will be removed from the classroom in order to complete this phase of the study. The children will be removed from the classroom on only one day, for a time period just long enough to complete the study. Children participating in phase two of the study will be removed from the classroom at multiple points during this phase of the study. However, removal will be brief and teachers will be notified before hand.

For phase one of this study, consent forms and demographic forms will be sent home with all children in grades 1-5. Consent forms will allow researchers' access to the respective child and his/her school records. In addition, consent will allow researchers' access to the child's teachers' ratings of behavior and previous intervention experience. Each child who brings back a signed consent form will receive an incentive. Our teachers will be asked to rate up to five participating children, at random, using the *Conner's Teacher Rating Scale-Short Form*. Teachers will be asked to rate current students only. In addition, our teachers may be asked to rate previous intervention experience for up to five randomly selected students. Total rating time should take each teacher approximately 30-45 minutes to complete and each participating teacher will be entered in a raffle for an incentive.

For phase two of this study, teachers will be asked to nominate students they feel meet the research requirements of inappropriate behaviors displayed in the classroom. Once a target child has been nominated, researchers will come into the classroom to conduct systematic observations. Although the child will be targeted, no identifying information will be provided until the child is determined a good candidate for the study. If the researchers agree that the child is a good candidate, the nominating teacher will be asked to send home a consent form and demographic form to the child's parents. Consent forms will allow researchers' access to the respective child, his/her teacher, and his/her school records. Our teacher will then work with the researchers to develop an appropriate intervention for the classroom. The intervention will be implemented and observations will be continued in the classroom. During the intervention implementation, children will be asked to rate the intervention they are receiving in the classroom. The \_\_\_\_\_ School understands that at one point during the study children will be told that a different intervention is to be implemented with them in the classroom. This may lead to an increase in inappropriate behaviors, and the \_\_\_\_\_ School agrees that we will not take any measures to correct the behavior that are not in accordance to normal school and classroom procedures. All teachers who participate in phase two of this study will be given an incentive for their participation.

We understand that our teachers will be contributing to the professional by participating in this study. We also understand that results of this study will be made available to our school and teachers at the conclusion of the study.

We have been asked to contact the lead researcher, Reagan Rinderknecht at Oklahoma State University (405-747-9434), [Reagan.rinderknecht@okstate.edu](mailto:Reagan.rinderknecht@okstate.edu), if we have any questions or concerns about the process of this study. Our school retains the option to withdraw from participating if we are not satisfied with the manner in which the study is being conducted. Our school contact person that you can call with questions is \_\_\_\_\_, who can be reached by phone at \_\_\_\_\_.

Sincerely,

(principal's/administrator's name and address)

\_\_\_\_\_  
Date

APPENDIX A-2  
CONSENT AND ASSENT FORMS FOR PART ONE



Dear Parent/Guardian:

My name is Reagan Rinderknecht and I am a Doctoral Student in the School Psychology Program at Oklahoma State University. I am currently conducting a study entitled: *Variables that Influence and are Influenced by Treatment Acceptability as Perceived by Children for Behavior Interventions: A two part investigation.*

In order to explore reasons for the use of interventions used in the classroom with children, there have been many studies which have examined whether or not a teacher agrees with or disagrees with the strategies being used. This is otherwise known as treatment acceptability. Treatment acceptability has been previously defined as the degree to which an individual perceives a treatment procedure to be fair, reasonable, appropriate, and unintrusive (Kazdin, 1980). It is assumed that the more acceptable a teacher finds an intervention; the more likely they are to use the intervention. Unfortunately, few studies exist which have examined what the child thinks about the intervention. As the primary researcher of this study, I am examining this variable. I would like to investigate which interventions children in grades one through five find more acceptable. I would also like to know if their current behavior (as rated by their teacher) influences their thoughts and/or if their previous experience with interventions influences their thoughts.

Determining whether or not children can tell the difference between treatments at this young age is important. More importantly, if they can tell the difference, determining what influences their acceptability ratings may be essential in future intervention development. Results of this study will provide school psychologists with missing data on treatment acceptability and will begin to explore the importance of child input to intervention development.

As an incentive, each child who returns a signed parent consent form will be allowed to select an item from the research treasure box.

If you are willing to allow your child to participate in this investigation, please read and complete the enclosed consent form which details your child's participation. An extra copy of the consent form has been included for your files. In addition, please complete the enclosed demographic form. After you have completed both forms, return them to your child's teacher in the enclosed envelope by \_\_\_\_\_. Please **DO NOT** put your child's name on the demographic form.

Thank you so much for your consideration of participation in this study! At the conclusion of the study, results will be available to you at your request.

Respectfully,

*Reagan Rinderknecht, M.S.*

Reagan Rinderknecht, M.S.  
Oklahoma State University  
School Psychology Doctoral Program

Part 1







### CONSENT FORM

Dear Parent/Guardian:

We appreciate your consent for your child's participation in this study. In this package of materials you will find a demographic sheet. Please complete the demographic sheet and return it with this two-page consent form to your child's teacher. Thank you for your time and participation.

I, \_\_\_\_\_ hereby authorize or direct Reagan Rinderknecht, M.S. and/or her research assistants, to perform the following treatment or procedure with my child \_\_\_\_\_:

(child's name)

Present my child with four story's describing behavioral interventions proposed to be used in the classroom and four rating forms, the *Children's Intervention Rating Profile*, that ask the child what he/she thinks about the intervention. (Interventions are strategies used in the classroom to help increase appropriate behaviors and decrease inappropriate behaviors such as talking out, being out of seat, or being off task.) Researchers may also present my child's teacher with a behavior rating scale, the *Conner's Teacher Rating Scale- Short Form*, to complete on my child based on behaviors that my child presents in the classroom. In addition, researchers may access my child's school records and may contact previous teachers of my child in order to obtain information on past interventions used with my child in the classroom. Researchers may present my child's previous teachers with a *Behavior Intervention Rating Scale* that examines the effectiveness of the previously used interventions with my child.

My child's participation is minimal and should take approximately 15-20 minutes. I understand that my child's participation is completely voluntary and that procedures will be explained to my child prior to their participation in the study. I also understand that: 1) there is no penalty for not choosing to participate, 2) that I may withdraw my child and/or my child may withdraw from the study at any time with no penalty to me and/or my child, and 3) that me and my child's participation and responses will be completely confidential. There is little risk or possible discomfort to my child for participating. I understand that only responses as a group are to be used and that individual responses will not be identified. I understand that the researchers will assign my child to an identification number to be used only for the purposes of this study and only the researchers will have access to it. Responses will be kept confidential under lock and key in the primary investigator's office. All responses and my child's ID number will be destroyed at the completion of the project. I understand that this study may help educators and other professional who work with students in developing more appropriate and effective behavior interventions for the classroom.

This is done as part of an investigation entitled:

Variables that Influence and are Influenced by Treatment Acceptability as Perceived by Children for Behavior Interventions: A two part investigation

I may contact Reagan Rinderknecht, M.S. at 410-868-6811 or at reagan.rinderknecht@okstate.edu. I may also contact Eric Mesmer, Ph.D. (faculty advisor) at 405-744-4808 or at mesmer@okstate.edu. I may also contact Sue Jacobs, Ph.D., IRB Chair, Oklahoma State University, 415 Whitehurst, Stillwater, OK 74078. Phone: 405-744-5700.



I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

Date: \_\_\_\_\_ Time: \_\_\_\_\_ (a.m./p.m.)

Signature: \_\_\_\_\_  
Parent/Guardian

\_\_\_\_\_  
Parent/Guardian's Name (PRINTED)

\_\_\_\_\_  
Child's Full Name (PRINTED)

I certify that I have explained all elements of this form to the parent/guardian or his/her representative before requesting the parent/guardian or his/her representative to sign it.

Signature: \_\_\_\_\_  
Project director or her authorized representative

Treatment Acceptability Study: Phase One (page 2 of 2)

OSU	
Institutional Review Board	
Approved	4/13/06
Expires	4/11/07
Initials	01
ED0547 (cont)	



<b>OSU</b>	
Institutional Review Board	
Approved	4/13/06
Expires	4/11/07
Initials	01
60254260014	

**Child Assent Form (Part One)**

Research Project Title: *Variables that Influence and are Influenced by Treatment*  
Acceptability: *A two part investigation*

**Read the following sections to the student*****What is the project about?***

I want to know what you think about some new rules to help you do better in school.

***What will I have to do?***

You will be read some rules that your teacher may use with you in the classroom when she wants you to behave better. Then, I will ask you to tell me what you think about the new rules.

***What are the risks of the project?***

Helping me out with this project will not hurt you in any way. If at any point you don't want to do the project anymore, you don't have to, and you can stop at any time.

***What are the good things about the project?***

Completing this project may help teachers and school psychologists to help you do better in school.

***Alternative Procedures:***

You don't have to do the study if you do not want to. You do not have to do anything that makes you feel uncomfortable or sad. No one will be upset with you if you say "no" or if you say "yes" and then change your mind.

You have been told about what will happen during the project.

You have been told what you have to do for the project.

You have been told that you do not have to do this if you do not want to.

You have been told that you can stop whenever you want to.

\_\_\_\_\_  
Signature of Child

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Person Reading and Obtaining Consent

\_\_\_\_\_  
Date

**Primary Investigator: Reagan Rinderknecht, M.S.**  
**Phone Number: (410) 868-6811**



Dear Teachers:

My name is Reagan Rinderknecht and I am a Doctoral Student in the School Psychology Program at Oklahoma State University. I am currently conducting a study entitled: *Variables that Influence and are Influenced by Treatment Acceptability as Perceived by Children for Behavior Interventions: A two part investigation.*

In order to explore reasons for implementation of interventions used in the classroom with children, there have been many studies which have examined treatment acceptability from the perspective of the teacher. Treatment acceptability has been previously defined as the degree to which an individual perceives a treatment procedure to be fair, reasonable, appropriate, and unintrusive (Kazdin, 1980). It is assumed that the more acceptable a teacher finds an intervention, the more likely they are to use the intervention. Unfortunately, few studies exist which have examined treatment acceptability from the perspective of the child. As the primary researcher of this study, I am examining this variable. I would like to investigate which interventions children in grades one through five find more acceptable, if their current behavior (as rated by their teacher) influences their perception, and if their previous experience with interventions influences their perception.

Determining whether or not children can discriminate between treatments at this young age is important. More importantly, if they can discriminate, determining what influences their acceptability ratings may be essential in future intervention development. For this part of the study, teachers will be asked to rate the behavior of several students in their classroom. In addition, they may be asked to rate interventions used in the past with previous students.

As an incentive for participation, all teachers who participate in this part of the study will be provided a \$1 movie rental coupon for each form they complete. Participation from teachers is minimal and requires rating approximately 5-10 students via brief behavior and intervention ratings scales. Total time required to complete the forms should range between 30 and 45 minutes.

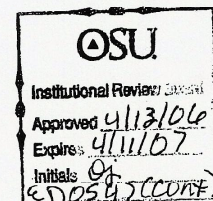
If you are willing to participate, please read and complete the enclosed consent form. An extra copy of the consent form has been included for your files. Results of this study will provide school psychologists with missing data on treatment acceptability and will begin to explore the importance of child input to intervention development. Thank you so much for your consideration of participation in this study! At the conclusion of the study, results will be available to you at your request.

Respectfully,

*Reagan Rinderknecht, M.S.*

Reagan Rinderknecht, M.S.  
Oklahoma State University  
School Psychology Doctoral Program

Part 1





## CONSENT FORM (PART ONE)

Dear Teacher:

We appreciate your consent for participation in this study. Thank you for your time and participation.

I, \_\_\_\_\_ hereby authorize or direct Reagan Rinderknecht, M.S. and/or her research assistants, to perform the following treatment or procedure:

Present me with behavior ratings scales on children enrolled in my class. I will complete the *Conner's Teacher Rating Scale* on each child that is randomly selected from my classroom. This scale will allow me to rate the behaviors of each child selected. In addition, researchers may ask me to rate interventions that I used last year with children who have graduated to the next grade. I will complete the *Behavior Intervention Rating Scale* to assess the effectiveness of the previously implemented procedures with each respective child.

My participation in this study is minimal and should take between 30 and 45 minutes. I understand that my participation is completely voluntary and that procedures will be explained to me prior to my participation in the study. I also understand that there is no penalty for not choosing to participate, that I may withdraw from the study at any time with no penalty to me, and that my participation and responses will be completely confidential. There is minimal risk or possible discomfort to me for participating. I understand that only aggregate data are to be used and that individual responses will not be identified. I understand that the researchers will assign me to an identification number to be used only for the purposes of this study and only the researchers will have access to it. Responses will be kept confidential under lock and key in the primary investigator's office. All responses will be destroyed at the completion of the project. I understand that this study may help educators and other professional who work with students in developing more appropriate and effective behavior interventions for the classroom.

This is done as part of an investigation entitled:

Variables that Influence and are Influenced by Treatment Acceptability as Perceived by Children for Behavior Interventions: A two part investigation

I may contact Reagan Rinderknecht, M.S. at 410-868-6811 or at reagan.rinderknecht@okstate.edu. I may also contact Eric Mesmer, Ph.D. (faculty advisor) at 405-744-4808 or at [mesmere@okstate.edu](mailto:mesmere@okstate.edu). I may also contact Sue Jacobs, Ph.D., IRB Chair, Oklahoma State University, 415 Whitehurst, Stillwater, OK 74078. Phone: 405-744-5700.





I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

Date: \_\_\_\_\_ Time: \_\_\_\_\_ (a.m./p.m.)

Signature: \_\_\_\_\_  
Teacher

\_\_\_\_\_  
Teacher's Name (PRINTED)

I certify that I have explained all elements of this form to the teacher before requesting him/her to sign it.

Signature: \_\_\_\_\_  
Project director or her authorized representative

Treatment Acceptability Study: Teachers Part One (page 2 of 2)

OSU	
Institutional Review Board	
Approved	4/13/06
Expires	4/11/07
Initials	ST
ED05426004	

APPENDIX A-3

CONSENT AND ASSENT FORMS FOR PART TWO



Dear Parent/Guardian:

My name is Reagan Rinderknecht and I am a Doctoral Student in the School Psychology Program at Oklahoma State University. I am currently conducting a study entitled: *Variables that Influence and are Influenced by Treatment Acceptability as Perceived by Children for Behavior Interventions: A two part Investigation.*

In order to explore reasons for the use of interventions used in the classroom with children, there have been many studies which have examined whether or not a teacher agrees with or disagrees with the strategies being used. This is otherwise known as treatment acceptability. Treatment acceptability has been previously defined as the degree to which an individual perceives a treatment procedure to be fair, reasonable, appropriate, and unintrusive (Kazdin, 1980). It is assumed that the more acceptable a teacher finds an intervention, the more likely they are to use the intervention. Unfortunately, few studies exist which have examined what the child thinks about the intervention and how this may impact overall treatment effectiveness. As the primary researcher of this study, I am examining this relationship. I would like to implement various interventions in the classroom, after the targeted child has rated what they think about each intervention, in order to determine if a change in what they think leads to a change in effectiveness.

Your child's teacher has nominated him/her for participation in this study. It is the goal of the researcher to work with your child's teacher to develop a behavior intervention that increases appropriate classroom behaviors and increases overall success for your child in the classroom. Not only will the intervention assist your child at succeeding in the classroom, results of this study will provide school psychologists with missing data on treatment acceptability and will begin to explore the importance of child input to intervention development.

All children will be provided incentives as a direct component of the behavior intervention. Appropriate incentives will be determined by discussion with the child and the child's teacher. If you would prefer that specific items not be included (e.g. candy), please let your child's teacher know.

If you are willing to allow your child to participate in this investigation, please read and complete the enclosed consent form which details your child's participation. An extra copy of the consent form has been included for your files. In addition, please complete the enclosed demographic form. Then return both forms to your child's teacher in the enclosed envelope by \_\_\_\_\_. Please **DO NOT** put your child's name on the demographic form.

Thank you so much for your consideration of participation in this study! At the conclusion of the study, results will be available to you at your request.

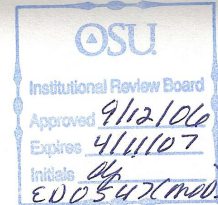
Respectfully,

Reagan Rinderknecht, M.S.  
Oklahoma State University  
School Psychology Doctoral Program

Part 2

OSU	
Institutional Review Board	
Approved	4/13/06
Expires	4/11/07
Initials	at
602547-cont	

CONSENT FORM (PART TWO)



Dear Parent/Guardian:

We appreciate your consent for your child's participation in this study. In this package of materials you will find a demographic sheet. Please complete the demographic sheet and return it with this consent form to your child's teacher. Thank you for your time and participation.

I, \_\_\_\_\_ hereby authorize or direct Reagan Rinderknecht, M.S.  
and/or her research assistants, to perform the following treatment or procedure with my child \_\_\_\_\_  
\_\_\_\_\_  
(child's name)

**Develop a behavior intervention to increase my child's appropriate behaviors in the classroom.**

I understand that researchers will conduct observations of my child and work with his/her teacher to develop an intervention appropriate to my child's needs in order to help him/her perform better in the classroom. I understand that in order to develop an appropriate intervention, researchers will need to access background information on my child. This information may include information on my child's behavior, cumulative, confidential and class records. It may also include information from my child's current teacher. I understand that my child will be removed from the classroom and asked to report what he/she thinks about the intervention being used with him/her in the classroom several times using the *Children's Intervention Rating Profile*. In addition, my child will be asked to complete a Reward Acceptability Worksheet in order to determine appropriate reinforcement to use during the intervention. I understand that my child's teacher will be the individual responsible for implementing the intervention, and that the researcher will assist in the development and monitoring of the intervention.

At one point during the intervention, my child will be told that a less acceptable intervention is to be implemented with him/her in the classroom. I understand that my child's inappropriate behavior may increase in the classroom during this time, but no punitive measures will be taken with my child to correct the behavior besides normal classroom behavior procedures. This phase will only last for a few days at the most and then my child will be told that the original, more acceptable intervention is to be implemented with him/her in the classroom.

I understand that my child's behavior will be monitored throughout the intervention by observations conducted by the researcher and/or her research assistants. My child's participation should take approximately one month; however, participation should not interfere with his/her ability to perform in the classroom. I understand that my child's participation is completely voluntary and that intervention procedures will be explained to my child prior to their participation in the study. I also understand that: 1) there is no penalty for not choosing to participate, 2) that I may withdraw my child from the study at any time with no penalty to me and/or my child, and 3) that me and my child's participation and responses will be completely confidential. There is little risk or possible discomfort to my child for participating. I understand that all data will be compiled specific to my child; however, specific identifying information will not be revealed in the results of this study. I understand that the researchers will assign my child to an identification code to be used only for the purposes of this study and only the researchers will have access to it. Data will be kept confidential under lock and key in the primary investigator's office. All data and my child's ID code will be destroyed at the completion of the project. I understand that this study may help educators and other professional who work with



students in developing more appropriate and effective behavior interventions for the classroom.

This is done as part of an investigation entitled:

Variables that Influence and are Influenced by Treatment Acceptability as Perceived by Children for Behavior Interventions: A two part investigation

I may contact Reagan Rinderknecht, M.S. at 410-868-6811 or at reagan.rinderknecht@okstate.edu. I may also contact Eric Mesmer, Ph.D. (faculty advisor) at 405-744-4808 or at mesmere@okstate.edu. I may also contact Sue Jacobs, Ph.D., IRB Chair, Oklahoma State University, 219 Cordell North, Stillwater, OK 74078. Phone: 405-744-5700.

I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

Date: \_\_\_\_\_ Time: \_\_\_\_\_ (a.m./p.m.)

Signature: \_\_\_\_\_  
Parent/Guardian

\_\_\_\_\_  
Parent/Guardian's Name (PRINTED)

\_\_\_\_\_  
Child's Full Name (PRINTED)

I certify that I have explained all elements of this form to the parent/guardian or his/her representative before requesting the parent/guardian or his/her representative to sign it.

Signature: \_\_\_\_\_  
Project director or her authorized representative

Treatment Acceptability Study (page 2 of 2)





**Child Assent Form (Part Two)**

Research Project Title: *Variables that Influence and are Influenced by Treatment Acceptability: A two part investigation*



Read the following sections to the student

*What is the project about?*

I want to know what you think about some new rules to help you do better in school.

*What will I have to do?*

Your teacher and I will work together on helping you do better in school by making some rules that you and your teacher will follow in the classroom. You will tell me what you think about the rules.

*What are the risks of the project?*

You will not be hurt in any way by this project. If at any point you don't want to do the project you don't have to and you can stop at any time.

*What are the good things about the project?*

Working with your teacher and I in this project may help you to do better in school.

*Alternative Procedures:*

You don't have to do this if you do not want to. You can stop whenever you want to. You do not have to do anything that makes you feel uncomfortable or sad. No one will be upset with you if you say "no" or if you say "yes" and then change your mind.

You have been told about what will happen during the project.

You have been told what you have to do for the project.

You have been told that you do not have to do this if you do not want to.

You have been told that you can stop whenever you want to.

\_\_\_\_\_  
Signature of Child

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Person Reading and Obtaining Consent

\_\_\_\_\_  
Date

**Primary Investigator: Reagan Rinderknecht, M.S.**  
**Phone Number: (410) 868-6811**



Dear Teachers:

My name is Reagan Rinderknecht and I am a Doctoral Student in the School Psychology Program at Oklahoma State University. I am currently conducting a study entitled: *Variables that Influence and are Influenced by Treatment Acceptability as Perceived by Children for Behavior Interventions: A two part investigation.*

In order to explore reasons for implementation of interventions used in the classroom with children, there have been many studies which have examined treatment acceptability from the perspective of the teacher. Treatment acceptability has been previously defined as the degree to which an individual perceives a treatment procedure to be fair, reasonable, appropriate, and unintrusive (Kazdin, 1980). It is assumed that the more acceptable a teacher finds an intervention; the more likely they are to use the intervention. Unfortunately, few studies exist which have examined treatment acceptability from the perspective of the child and how it may impact intervention effectiveness. As the primary researcher of this study, I am examining these variables.

Determining whether or not children's reported treatment acceptability ratings influence interventions implemented in the classroom is important. Therefore, this part of the study will examine how treatment acceptability as reported by the child, influences overall treatment effectiveness. For this part of the study, teachers will be asked to implement a behavior intervention in the classroom with a target child whom they select for participation.

As an incentive for participation, all teachers who participate will be given a gift card to a restaurant of their choice at the conclusion of the study. Participation is limited to a minimal number of participants and will be based upon teacher interest and behavior observations in the classroom. After behavior observations have been conducted, target children and their respective teachers will be asked to participate.

If you are interested in nominating a child to participate, please read and complete the enclosed consent form. An extra copy of the consent form has been included for your files. Results of this study will provide school psychologists with missing data on treatment acceptability and will begin to explore the importance of child input to intervention development. Thank you so much for your consideration of participation in this study! At the conclusion of the study, results will be available to you at your request.

Respectfully,

*Reagan Rinderknecht, M.S.*

Reagan Rinderknecht, M.S.  
Oklahoma State University  
School Psychology Doctoral Program

Part 2

OSU	
Institutional Review Board	
Approved	4/13/06
Expires	4/11/07
Initials	Q
ED0542 (cont)	

## CONSENT FORM (PART TWO)

Dear Teacher:

We appreciate your consent for participation in this study. Thank you for your time and participation.



I, \_\_\_\_\_ hereby authorize or direct Reagan Rinderknecht, M.S. and/or her research assistants, to perform the following treatment or procedure: **Develop a behavior intervention to increase a target child's appropriate behaviors in the classroom.**

I understand that researchers will conduct observations of the target child and work with me to develop an intervention appropriate to the child's needs. I understand that in order to develop an appropriate intervention, researchers will need to access background information. This information may include data from myself. I understand that the target child will be asked to rate the intervention being implemented with him/her in the classroom several times using the *Children's Intervention Rating Profile*. In addition, the target child will be asked to complete a Reward Acceptability Worksheet in order to determine appropriate reinforcers to use during the intervention. I understand that I will be the individual responsible for implementing the intervention, and that the researcher will assist in the development and monitoring of the intervention.

At one point during the intervention, the target child will be told that a less acceptable intervention is to be implemented with him/her in the classroom. I understand that the target child's inappropriate behavior may increase in the classroom during this time, but I will take no punitive measures with the child to correct the behavior besides normal classroom behavior procedures. This phase will only last for a few days at the most and then the target child will be told that the original, more acceptable intervention is to be implemented with him/her in the classroom.

I understand that the target child's behavior will be monitored throughout the intervention via observations conducted by the researcher and/or her research assistants. My participation should take approximately one month; however, participation should not interfere with my ability to work within the classroom. I understand that my participation is completely voluntary and that intervention procedures will be explained to myself and the target child prior to participation in the study. I also understand that there is no penalty for not choosing to participate, that I may withdraw from the study at any time with no penalty to myself. There is minimal risk or possible discomfort to me for participating. I understand that only aggregate data are to be used. I understand that the researchers will assign myself and the target child to an identification number to be used only for the purposes of this study and only the researchers will have access to it. Data will be kept confidential under lock and key in the primary investigator's office. All data will be destroyed at the completion of the project. I understand that this study may help educators and other professional who work with students in developing more appropriate and effective behavior interventions for the classroom.

This is done as part of an investigation entitled:



Variables that Influence and are Influenced by Treatment Acceptability as Perceived by Children  
for Behavior Interventions: A two part investigation

Children nominated for this study should display at least one of the following inappropriate behaviors in the classroom that is at rate significantly higher than his/her peers: Talking Out, Being Out of Seat, Not Attending to Task.

I may contact Reagan Rinderknecht, M.S. at 410-868-6811 or at reagan.rinderknecht@okstate.edu. I may also contact Eric Mesmer, Ph.D. (faculty advisor) at 405-744-4808 or at mesmere@okstate.edu. I may also contact Sue Jacobs, Ph.D., IRB Chair, Oklahoma State University, 219 Cordell North, Stillwater, OK 74078. Phone: 405-744-5700.

I have read and fully understand the consent form and am interested in nominating a target child for participation in the study. Researchers may contact me in order to begin observations of the target child. If the target child is selected for participation, I will send home a letter to the target child's parent(s) explaining the study in order to finalize my participation in the study. I sign this consent freely and voluntarily. A copy has been given to me.

Date: \_\_\_\_\_ Time: \_\_\_\_\_ (a.m./p.m.)

Signature: \_\_\_\_\_  
Teacher

\_\_\_\_\_  
Teacher's Name (PRINTED)

I certify that I have explained all elements of this form to the teacher before requesting him/her to sign it.

Signature: \_\_\_\_\_  
Project director or her authorized representative

Treatment Acceptability Study: Part Two (page 2 of 2)



APPENDIX B

SCRIPTS



### Script for Soliciting Participants in Part One

“Hi. My name is \_\_\_\_\_ and I am a graduate student at Oklahoma State University. Today I am here to ask for your help. I am working on a very important research project focusing on student behaviors in the classroom. I would like for each one of you to be able to help me out, but first your parents have to say that it is okay. I am going to give each one of you a packet to give your parents. The packet has information about what I would like to do as a part of the project. If your parent says it is okay, they will complete the forms and you should bring the forms back to your classroom teacher. I will be back in a couple of days to pick up the forms and see who is able to help me out. Everyone who brings back a signed form will get to choose something from the research treasure box. Does anyone have any questions? Okay. I will be back on \_\_\_\_\_ to pick up the forms.

*(pass out forms to students and instruct them to put them in their take home folders when their teachers says it's okay to do so)*

So, who should you give this packet to?

What do your parents need to do with the packet?

Who do you bring the packet back to?

When should you bring the packet back by?

Okay. Have a fun day at school!

## Order of Presentation – Part One

### **Read assent statements to student.**

Ask if student has any questions. Answer questions.

Have student sign name and date. Researcher should sign and date.

### **Demographic Form (if applicable)**

If this form is included, get marked information from student and then proceed.

### **Present CIRP practice sheet.**

“For this project you will be asked to mark whether you agree or disagree with a statement using this type of scale or line.

If you agree with the statement, you will mark here (point).

If you kind of agree with the statement, you will mark here (point).

If you think both or can't decide, you will mark in the middle (point).

If you kind of do not agree with the statement, you will mark here (point).

If you do not agree with the statement, you will mark here (point).

Let's practice.”

*I like to eat worms.*

Do you agree with this statement? If so, mark here (point). If not, mark here (point). Or you can mark somewhere in the middle.

Allow student to make mark.

Clarify student response: so you 'like to eat worms', so you 'kind of like to eat worms', so you 'can't decide', so you 'kind of don't like to eat worms', so you 'don't like to eat worms'

If clarification was correct, move to next item.

If incorrect, show student where he/she should have marked and then move to next item.

REPEAT THIS PROCEDURE FOR ALL THREE PRACTICE ITEMS.

Ask student if he/she understands. If so, present 1<sup>st</sup> vignette. If not, repeat practice item #1-3 once more.

\*If student still does not understand after repeating practice items, indicate so on practice sheet (DID NOT UNDERSTAND) and move on to vignette presentation.

**Present Vignettes:** Keep them in the order that they are in child's respective packet.....they have been counterbalanced for the study: See Vignette script.

**Present CIRP:** See Script for Presentation of CIRP

**Present all 4 permanent products-**Place all 4 permanent products in front of child in order of original presentation.

- Ask student which one they like the best. Record answer.
- Place remaining 3 permanent products in front of child in order of original presentation.
- Ask student which one they like the best. Record answer.
- Place remaining 2 permanent products in front of child in order of original presentation.
- Ask student which one they like the best. Record answer.
- Record remaining answer on sheet.

**Thank student for their time. Wait until other researchers have finished with their student and then send students back to class in one group.**

**Place completed packet in appropriate data collection bin and wait for instruction to proceed to next classroom.**

## Script for Presentation of Vignettes - Part One

### **Present Vignette. (repeat for interventions A-D)**

Read paragraphs 1 and 2 for first vignette ONLY. Read paragraph 3 for all vignette presentations. When read paragraph 3, begin to visually demonstrate intervention using appropriate card.

Continue through specified condition paragraph while continuing to demonstrate. (e.g. use expression in face and tone of voice to emphasize main points, point to card, put stickers on, pull squares off, cross off problems, circles numbers, etc.) Be VISUAL!!!

Ask if student understands.

IF SO, move to manipulation check (MC).

Ask manipulation check items. (ask 'what else?' if students gets partially correct)

If correct, allow student to rate intervention with CIRP.

If incorrect, provide final vignette statement again, ask manipulation check items again, and then immediately move to CIRP.

\* MC is recorded correct if student responds appropriately, period. It does not matter if it was attempt #1 or #2.

MC Key: a check mark = correct response and a question mark = incorrect response

<b>What does your teacher want you to do?</b>	<b>What happens if you stay in your seat?</b>	<b>Do you like this method?</b>
<b>*Stay in my seat. Do my work.</b>	<b>*I get more recess. *I won't lose recess. I will get a sticker. I won't lose my squares. I won't get circles. Cross out.</b>	<b>*Yes *No</b>
<b>*necessary response</b>	<b>*necessary response</b>	<b>*necessary response</b>

If student DOES NOT understand vignette, write 'summary' at top of appropriate CIRP sheet, refer to appropriate vignette summary below and read to child.

Ask if student understands.

If not, repeat summary demonstration.

If so, ask manipulation check items (Refer to above procedure).

*A summary (demonstrate):*

If you are in your seat and working you will get a sticker on your card. The more stickers you get on your card, the more recess time you will be given.

*B summary (demonstrate):*

If you are NOT in your seat and working your teacher will take away one of these recess squares. The more recess squares your teacher removes, the more recess time you will lose.

*C summary (demonstrate):*

If you are NOT in your seat and working your teacher will circle a number on this card.

Every time a number is circled, you will have an extra work problem that you have to do.

The more work problems you have, the more recess time you will lose.

*D summary (demonstrate):*

If you are in your seat and working your teacher will cross off a work problem at the end of your worksheet. The more work problems that your teacher marks off, the less work you will have to do, and the more recess time you will be given.

## Script for Presentation of CIRP

### **Present CIRP.**

**NOTE: ALL 1<sup>st</sup> graders will ONLY be read the clarification items found below. DO NOT attempt to read the more complicated CIRP items to them...they will not understand.**

Remind child of what scale means.

Read each item to student and have them mark their response.

If student does not understand an item on the CIRP as it is originally read to them, refer to the clarification items below. Place a check next to the CIRP item that requires clarification and read item on clarification sheet.

*This is a fair way to keep me in my seat and working (point to intervention).*

*My teacher is being mean by having me do this (point).*

*This (point) may cause problems with my friends.*

*There are better things to do to help me stay in my seat than this (point).*

*This would be good to use with other children (point).*

*I like this (point).*

*I think that this (point) will help me do better in school.*

\*\*CIRP statements may be read aloud to the student as many times as necessary for the student to comprehend what is being asked of him/her.....words can be changed around, just DO NOT change meaning of statement.

## Script for Interaction with Students - Part Two

### **Read assent statements to student.**

Ask if student has any questions. Answer questions.

Have student sign name and date. Researcher should sign and date.

### **Present CIRP practice sheet.**

“For this project you will be asked to mark whether you agree or disagree with a statement using this type of scale or line.

If you agree with the statement, you will mark here (point).

If you kind of agree with the statement, you will mark here (point).

If you think both or can’t decide, you will mark in the middle (point).

If you kind of do not agree with the statement, you will mark here (point).

If you do not agree with the statement, you will mark here (point).

Let’s practice.”

*I like to eat worms.*

Do you agree with this statement? If so, mark here (point). If not, mark here (point). Or you can mark somewhere in the middle.

Allow student to make mark.

Clarify student response: so you ‘like to eat worms’, so you ‘kind of like to eat worms’, so you ‘can’t decide’, so you ‘kind of don’t like to eat worms’, so you ‘don’t like to eat worms’

If clarification was correct, move to next item.

If incorrect, show student where he/she should have marked and then move to next item.

REPEAT THIS PROCEDURE FOR ALL THREE PRACTICE ITEMS.

Ask student if he/she understands. If so, introduce classroom intervention. If not, repeat practice item #1-3 once more.

\*If student still does not understand after repeating practice items, indicate so on practice sheet (DID NOT UNDERSTAND) and move on to presentation of classroom intervention.

### **Present Reward Acceptability Sheet**

Assist student in completing the reward acceptability sheet. Rewards from this sheet are to be used contingent upon behaviors associated with the classroom intervention.

### **Present Classroom Intervention**

Explain intervention that is to be used in the classroom. Answer any questions the child may have.

### **Ask Initial Intervention Phase B Manipulation Check Items**

If student answers questions correctly, move on to CIRP presentation. If student does not answer questions correctly, re-explain the intervention as appropriate.

**Present CIRP:** See Script for Presentation of CIRP

**Thank student for their time and send them back to the classroom.**

## Script for Interaction with Students for Manipulation of IV - Part Two

### **Pull Child from Classroom**

Tell child that the classroom intervention is going to be changing.

### **Present Classroom Intervention**

Explain intervention that is to be used in the classroom. Tell the student what has changed and/or tell the child that they are going back to the original intervention. Answer any questions the child may have.

### **Ask Phase C/C/B Manipulation Check Items**

If student answers questions correctly, move on to CIRP presentation. If student does not answer questions correctly, re-explain the intervention as appropriate.

**Present CIRP:** See Script for Presentation of CIRP

**Thank student for their time and send them back to the classroom.**

APPENDIX C  
DEMOGRAPHIC FORM

*Demographic Form*

Date of Birth \_\_\_\_\_

Gender \_\_\_\_\_

Grade \_\_\_\_\_

Ethnicity \_\_\_\_\_

Family Income Level (check one):

- ☐ Below \$18,000
- ☐ \$18,000 - \$40,000
- ☐ \$40,000 - \$75,000
- ☐ \$75,000 and up

Previous Schooling (check all that apply):

- ☐ Preschool
- ☐ Sooner Start
- ☐ Kindergarten

Number of moves child has made during academic career: \_\_\_\_\_

Does your child receive special education services?

Yes                      No                      If yes, please specify: \_\_\_\_\_

Under what category does your child receive services? \_\_\_\_\_

What is his/her diagnosis? \_\_\_\_\_

Does your child receive title I services?

Yes                      No

Has your child received individual home-school interventions?

Yes                      No                      If yes, please describe: \_\_\_\_\_

Has child ever been suspended from school for behavior reasons?

Yes                      No                      If yes, how many days? \_\_\_\_\_



APPENDIX D  
CHILDREN'S INTERVENTION RATING PROFILE (CIRP)

Participant Number: \_\_\_\_\_ Children's Intervention Rating Profile

The method used to deal with the behavior problem was fair.

I agree

I do not agree

I-----I-----I-----I-----I-----I

My teacher was too harsh.

I agree

I do not agree

I-----I-----I-----I-----I-----I

The method used to deal with the behavior may cause problems with my friends.

I agree

I do not agree

I-----I-----I-----I-----I-----I

There are better ways to handle this problem than the one described here.

I agree

I do not agree

I-----I-----I-----I-----I-----I

The method used by my teacher would be a good one to use with other children.

I agree

I do not agree

I-----I-----I-----I-----I-----I

I like the method used for this behavior problem.

I agree

I do not agree

I-----I-----I-----I-----I-----I

I think that the method used for this problem would help me do better in school.

I agree

I do not agree

I-----I-----I-----I-----I-----I

APPENDIX E

VIGNETTES

## Intervention Vignette

Let's say that you are having a hard time staying in your seat in the classroom. Your teacher always has to tell you to sit down and quit moving around the room. She is doing this because she wants you to be able to finish your school work. You don't like sitting in your seat, so you don't listen to her when she asks you to sit down. Instead, you choose to walk around the room and visit with your friends.

-----

In order to help you stay in your seat when you are supposed to, the school psychologist has talked with your teacher and come up with several ideas to help you stay in your seat.

This *first/second/third/fourth* idea is this. You will have a card face down on your desk. When your teacher wants you to stay in your seat and work hard, she will come over to your desk and flip this card over. This tells you that you should stay in your seat and complete your work. Your teacher will now be watching you.

### **A-PR**

**For every five problems that you complete while you are sitting in your seat, your teacher will give you a sticker on your card. Each sticker earns you 3 minutes of your class recess time. When you have finished your work, your teacher will tell you how many minutes of your class recess time you have earned. So if you stay in your seat and work on your assignment you will earn MORE stickers, and you will earn MORE of your class recess time.**

### **B-T2P**

**Every few minutes your teacher will come to your desk to see how many work problems you have completed. If you have not completed the assigned work problems, she will remove a recess square from your card. Each time your teacher removes a recess square from your card, you will LOSE 3 minutes of your class recess time. At the end of the class activity, your teacher will tell you how many minutes of your class recess time you have LOST. During the time you are unable to go to recess, you will complete your class work. So if you stay in your seat and work on your assignment you will NOT lose your recess squares, and you will NOT LOSE recess time.**

### **C-T1P**

**Every few minutes your teacher will come to your desk to see how many work problems you have completed. If you have not completed the assigned work problems, she will circle the next highest number on your card. At the end of the activity, the HIGHEST number circled will be how many EXTRA work problems you will have to do before you can go to recess. The MORE numbers you have circled, the MORE problems you will have to do and the LESS recess time you will have. So if you stay in your seat, you will NOT have to do more work and you will NOT lose recess time.**

### **D-NR**

**For every five problems that you complete while in your seat, the teacher will come over and cross out a work problem at the end of your worksheet. You will NOT have to complete the problems that have been crossed out. When you finish your work, you will be ready to go to your class recess. So if you stay in your seat and work hard, the LESS of your assignment you will have to complete and the MORE of your class recess time you will earn.**

APPENDIX F  
INTERVENTION PROTOCOLS

APPENDIX F-1  
INTERVENTION PROTOCOLS – PART 1

# ☺ My Work Hard Card ☺

--	--	--	--	--

Amount of recess time I have earned? \_\_\_\_\_

## REMEMBER

1. Stay in your seat.
2. Do your work.

(Intervention A)

---

# ☺ ‘I Can Do It!’ Card ☺

Number of EXTRA problems I have to do during my recess time.

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

## REMEMBER

1. Stay in your seat.
2. Do your work.

(Intervention C)

# ☺ My 'Be Good' Card ☺

<b>Recess Square</b>	<b>Recess Square</b>	<b>Recess Square</b>	<b>Recess Square</b>	<b>Recess Square</b>
<b>3 minutes</b>	<b>3 minutes</b>	<b>3 minutes</b>	<b>3 minutes</b>	<b>3 minutes</b>

How much recess time have I lost for today? \_\_\_\_\_

## REMEMBER

1. Stay in your seat.
2. Do your work.

(Intervention B)

---

# ☺ My Focus Card ☺

## REMEMBER

1. Stay in your seat.
2. Do your work.

(Intervention D)



## Example Mathematics Probe for Intervention D

$$\begin{array}{r} 2 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 1 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ + 1 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ + 1 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ + 1 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ + 6 \\ \hline \end{array}$$

APPENDIX F-2  
INTERVENTION PROTOCOLS- PART 2

### Football Intervention Protocol for Teacher

- ☒ Tape a new card on the child's desk at the beginning of the day, and after the completion of a card.
- ☒ Remind the child of the rules whenever you give a new card:
  1. I am going to be watching you today and looking for good behavior.
  2. Remember to stay in your seat and raise your hand to speak.
  3. If you are doing a good job staying in your seat/assigned area and raising your hand to speak, then I will give you a sticker on your card.
  4. If I have to remind you to follow the rules, you will receive an X on your card.
  5. When you have scored a touchdown, you will be able to help me with a special task in the classroom.
  6. As long as you do not have more than 10 X's on your card, you will be able to trade in your card at the end of the day for a prize out of the prize bag.
  7. Do you have any questions?
- ☒ Approximately every 15 minutes, go over to the child's desk.
  1. If during the last 15 minutes they were in their seat/assigned area and/or raised their hand to speak, give them a sticker(s) and provide increased verbal praise for use of the appropriate behaviors.
  2. If during the last 15 minutes they were not doing one, or both, of the behaviors, place an X on their card and redirect with minimal attention, while reminding them that they need to stay in their seat and/or raise their hand if they want to earn stickers on their chart.

**Remember, DO NOT provide attention (or the least amount possible) for out of seat behavior or talking out between giving stickers/X's.**

---

#### **Rewards:**

- ☒ Once the child has scored a touchdown, allow the child to help you with a special task in the classroom.
  - ☒ If the child has 10 or less X's on their card once it is complete, tell him/her they will be able to choose a prize out of the prize bag at the end of the day. NOTE: Children may earn multiple prizes each day if multiple cards are completed successfully each day.
- 

- ☒ Place completed card on your desk for pick up at the end of the day.

## Football Intervention Protocol for Student

- ☒ Your teacher will tape a football field on your desk.
- ☒ When the card is on your desk you need to stay seated, on your pockets, and raise your hand to speak.
- ☒ Your teacher will come to your desk and check on you every once in a while.
- ☒ If you have been in your seat, you will get a football sticker on your card.
- ☒ If you raised your hand to speak, you will get a football sticker on your card.
- ☒ If you have to be reminded to remain in your seat or raise your hand, your teacher will put an X at the bottom of the card.
- ☒ When you have scored a touchdown for good behavior, you will be able to help the teacher with a special task.
- ☒ At the end of the day, you will earn 1 prize from the prize bag for each card that had 10 or less X's on it.



Score a TOUCHDOWN!!  
Remember to  
RAISE your HAND & STAY in your SEAT

[illegible]

I was reminded of the rules:

### **Basketball Intervention Protocol for Teacher**

- ☒ Tape a new card on the child's desk at the beginning of the day, and after the completion of a card.
- ☒ Remind the child of the rules whenever you give a new card:
  1. I am going to be watching you today and looking for good behavior and work completion.
  2. Remember to raise your hand to speak and to work hard at completing your assignments.
  3. If you are doing a good job raising your hand to speak and you are completing your work, then I will give you a sticker on your card.
  4. If I have to remind you to follow the rules or complete your work, you will receive an X on your card.
  5. When you have scored a basket, you will be able to help me with a special task in the classroom.
  6. As long as you do not have more than 10 X's on your card, you will be able to trade in your card at the end of the day for a prize out of the prize bag.
  7. Do you have any questions?
- ☒ Approximately every 15 minutes, go over to the child's desk.
  1. If during the last 15 minutes the child raised his hand to speak, give him a sticker(s) and provide increased verbal praise for use of the appropriate behaviors.
  2. If during the last 15 minutes he spoke out of turn, place an X on his card and redirect him with minimal attention, while reminding him that he needs to raise his hand if he wants to earn stickers on his chart.
- ☒ During independent and teacher-led desk assignments, sporadically go over the child's desk:
  1. When you go by the child's desk, if he has completed at least three problems on his work page, provide him a sticker. In addition, provide increased verbal praise for working hard.
  2. When you go by the child's desk, if he has yet to complete at least three problems on his work page, redirect him with minimal attention and place an X on his card.

**Remember, DO NOT provide attention (or the least amount possible) for talking out between giving stickers/X's.**

---

#### **Rewards:**

- ☒ Once the child has scored a basket, allow the child to help you with a special task in the classroom.
- ☒ If the child has 10 or less X's on their card once it is complete, tell him that he will be able to choose a prize out of the prize bag at the end of the day. NOTE: Children may earn multiple prizes each day if multiple cards are completed successfully each day.

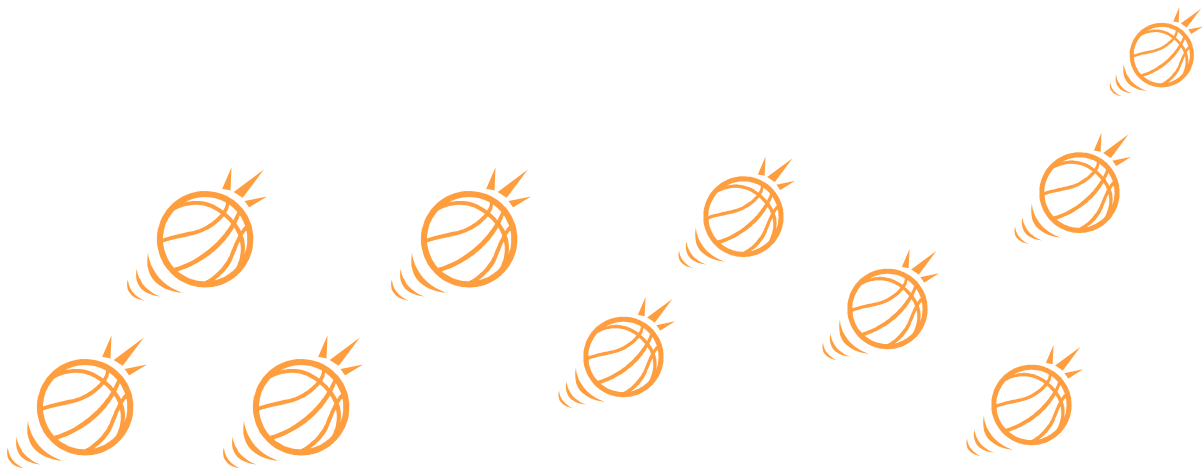
- 
- ☒ Place completed card on your desk for pick up at the end of the day.

### **Basketball Intervention Protocol for Student**

- ☒ Your teacher will tape a basketball card on your desk.
- ☒ When the card is on your desk you need to remember to raise your hand to speak and work hard.
- ☒ Your teacher will come to your desk and check on you every once in a while.
- ☒ If you have completed at least three work problems, you will get a basketball sticker on your card.
- ☒ If you raised your hand to speak, you will get a basketball sticker on your card.
- ☒ If you have to be reminded to remain in your seat or raise your hand or complete your work, your teacher will put an X at the bottom of the card.
- ☒ When you have scored a basket for good behavior, you will be able to help the teacher with a special task.
- ☒ At the end of the day, you will earn 1 prize from the prize bag for each card that had 10 or less X's on it.

## **Score 2-Points!**

**Listen to Teacher ..... Complete Work ..... Raise Hand to Speak**



**I needed a reminder:**

### Soccer Intervention Protocol for Teacher

- ☒ Tape a new card on the child's desk at the beginning of the day, and after the completion of a card.
- ☒ Remind the child of the rules whenever you give a new card:
  1. I am going to be watching you today and looking for good behavior.
  2. Remember to raise your hand to speak and to use classroom materials appropriately.
  3. If you are doing a good job raising your hand to speak, and if you are not playing with items, then I will give you a sticker on your card.
  4. If I have to remind you to follow the rules, you will receive an X on your card.
  5. When you have covered all of the soccer balls on your card, you will be able to help me with a special task in the classroom.
  6. As long as you do not have more than 10 X's on your card, you will be able to trade in your card at the end of the day for a prize out of the prize bag.
  7. Do you have any questions?
- ☒ Approximately every 15 minutes, go over to the child's desk.
  1. If during the last 15 minutes the child raised his hand to speak and/or was caught appropriately using items, give him a sticker(s) and provide increased verbal praise for use of the appropriate behaviors.
  2. If during the last 15 minutes he was not doing one, or both, of the behaviors, place an X on his card and redirect with minimal attention, while reminding him that he needs to raise his hand and/or use materials appropriately if he wants to earn stickers on his chart.

**Remember, DO NOT provide attention (or the least amount possible) for talking out or inappropriately using materials between giving stickers/X's.**

---

#### **Rewards:**

- ☒ Once the child has covered all soccer balls, allow the child to help you with a special task in the classroom.
  - ☒ If the child has 10 or less X's on their card once it is complete, tell him that he will be able to choose a prize out of the prize bag at the end of the day. NOTE: Children may earn multiple prizes each day if multiple cards are completed successfully each day.
- 

- ☒ Place completed card on your desk for pick up at the end of the day.

### Soccer Intervention Protocol for Student

- ☒ Your teacher will tape a soccer sheet to your desk.
- ☒ When the card is on your desk you need to stay raise your hand to speak and use materials appropriately.
- ☒ Your teacher will come to your desk and check on you every once in a while.
- ☒ If you have been using materials appropriately and not playing with them during a lesson, you will get a sticker on your card.
- ☒ If you raised your hand to speak, you will get a sticker on your card.
- ☒ If you have to be reminded to raise your hand or if you have to be told to not play with objects, your teacher will put an X at the bottom of the card.
- ☒ When you have covered all of the soccer balls for good behavior, you will be able to help the teacher with a special task.
- ☒ At the end of the day, you will earn 1 prize from the prize bag for each card that had 10 or less X's on it.



**Score a Goal with Good Behavior!**  
...cover all of the soccer balls...



**Caught Using a  
Quiet Voice / Hand**



**Caught Not Playing  
with Objects**




---

My teacher reminded me of the rules:



### GYBR Intervention Protocol for Teacher

- ☒ Tape a new card on the child's desk at the beginning of the day.
  - ☒ Remind the child of the rules whenever you give a new card:
    1. I am going to be watching you today and looking for good behavior.
    2. Remember to stay in your seat, raise your hand to speak, follow directions, complete your work and play nicely with your classmates.
    3. If you are doing a good job with these behaviors, then I will circle a G or a Y on your card.
    4. If you have not been doing a good job with these behaviors, then I will circle a B or an R on your card.
    5. Before lunch, I will check to see if you have met your half-day goal. If you have met the goal, you will help me with a special task.
    6. At the end of the day, I will also check to see if you have met your half-day goal. If you have met the goal, you will help me with a special task.
    7. At the end of the day, I will also check to see if you have met your daily goal. If you have met the daily goal, you will be able to choose a prize out of the prize bag.
    8. Do you have any questions?
  - ☒ Catch the child being good throughout the day. Provide increased praise for displaying the appropriate behaviors on the card. **DO NOT** provide attention (or the least amount possible) for inappropriate behaviors (e.g. talking out, out of seat).
- 

#### **Rewards:**

- ☒ If the child meets a half-day goal, allow the child to help you with a special task in the classroom.
  - ☒ If the child meets the daily goal, allow him access to a prize out of the prize bag.
- 

- ☒ Place completed card on your desk for pick up at the end of the day.

### GYBR Intervention Protocol for Student

- ☒ Your teacher will tape a behavior card on your desk.
- ☒ When the card is on your desk, your teacher will be watching you and looking for good behavior.
- ☒ Before you go to lunch for the day, your teacher will come to your desk and circle how well you have done with your behaviors during the morning activities. Your teacher will also come to your desk right before you leave at the end of the day, and will circle how well you have done with your behaviors during the afternoon activities.
- ☒ If you have been doing a good job, your teacher will circle a G or a Y. You will get a G for doing a great job and Y for doing a good job.
- ☒ If you have not been doing a good job, your teacher will circle a B or an R. You will get a B if you had a lot of difficulty with the behavior and you will get an R if you were unable to use the behavior at all.
- ☒ Your teacher will then look to see if you have met your half-day goal. If you have, you will be allowed to help your teacher with a special task.
- ☒ At the end of the day, your teacher will also look to see if you have met your daily goal. If you have, you will be allowed to choose a prize out of the prize bag before you leave school.



**Don't Forget!**



	Before Lunch				After Lunch			
<b>Follow Directions</b>	G	Y	B	R	G	Y	B	R
<b>Be Nice to Others</b>	G	Y	B	R	G	Y	B	R
<b>Raise Hand</b>	G	Y	B	R	G	Y	B	R
<b>Stay in Seat</b>	G	Y	B	R	G	Y	B	R
<b>Work Quietly / Participate</b>	G	Y	B	R	G	Y	B	R

Half-Day Goal: 1) NO R's or B's and 2) at least 2 G's

Daily Goals: 1) at least 8 G's and Y's TOTAL and 2) at least 4 have to be G's

**Met Daily Goal? \_\_\_\_\_**

### Point System Intervention Protocol for Teacher

- ☒ Tape a new card on the child's desk at the beginning of the day.
- ☒ Remind the child of the rules whenever you give a new card:
  1. I am going to be watching you today and looking for good behavior.
  2. Remember to stay in your seat, raise your hand to speak, follow directions and complete your work.
  3. Every hour I will come to your desk and give you points on your card if you have done a good job with these behaviors.
  4. You will get one point for each behavior. You will get one point for completing at least half of your work for that time period, and you will get three points for completing all of your required work for that time period.
  5. You will not receive any points if you have not done a good job showing the behaviors.
  6. If you have at least 18 points at the end of the day, you will earn a special prize out of the prize bag.
  7. Do you have any questions?
- ☒ Catch the child being good throughout the day. Provide increased praise for the display of all appropriate behaviors as often as possible.
- ☒ At the end of each hour, go over to the child's desk.
  1. If during the last hour the child was appropriately engaged in a behavior, provide one point for that behavior. In addition, provide increased verbal praise for use of the appropriate behaviors and tell the child how many more points he needs to earn a prize at the end of the day.
  2. If during the last hour the child was not appropriately engaged in a behavior, briefly remind the child to do a better job with that behavior in the next hour and do not provide a point.

**Remember, DO NOT provide attention (or the least amount possible) for out inappropriate behaviors (e.g. talking out, out of seat).**

---

#### **Rewards:**

- ☒ Once the child has met his daily goal, tell him that he has earned his prize. If he meets his goal early in the day, create a new goal (as per discussion with the researcher) and allow the child to work towards earning a second prize.
- 

- ☒ Place completed card on your desk for pick up at the end of the day.

### Point System Intervention Protocol for Student

- ☒ Your teacher will tape a point card to your desk.
- ☒ When the card is on your desk you need to stay seated, on your pockets, raise your hand to speak, follow directions, and complete your work.
- ☒ Your teacher will come to your desk at the end of each hour and provide points to you for all of the behaviors that you have done a good job using in the classroom.
- ☒ You will receive one point for each behavior. You will receive one point for completing at least half of the required work during the specific time period, or you will receive three points for completing all of the required work during the specific time period.
- ☒ Your goal is to get at least 18 points by the end of the day in order to earn a special prize out of the prize bag.



**REMEMBER to WORK HARD**



	7:50-9:00	9:00-10:00	10:00-11:00	11:00-12:30	12:30-1:30	1:30-2:30
Follow Directions						
Complete Work*						
Raise Hand to Speak						
Stay in Assigned Seat/Space						
TOTAL pts.						

\*Completed at least ½ of assignment = 1 pt.; Completed all of assignment = 3 pt.

\*Give FULL points if there is no opportunity for the behavior to be displayed during the time period.

**GOAL = 18 daily points**

## APPENDIX G

### CONNER'S PARENT RATING SCALE: SHORT FORM



# Conners' Teacher Rating Scale-Revised (S)

by C. Keith Conners, Ph.D.

Student's ID: \_\_\_\_\_ Gender: **M** **F**  
(Circle One)

Birthdate: \_\_\_\_/\_\_\_\_/\_\_\_\_ Age: \_\_\_\_ School Grade: \_\_\_\_  
Month Day Year

Teacher's ID: \_\_\_\_\_ Today's Date: \_\_\_\_/\_\_\_\_/\_\_\_\_  
Month Day Year

**Instructions:** Below are a number of common problems that children have in school. Please rate each item according to how much of a problem it has been in the last month. For each item, ask yourself, "How much of a problem has this been in the last month?", and circle the best answer for each one. If none, not at all, seldom, or very infrequently, you would circle 0. If very much true, or it occurs very often or frequently, you would circle 3. You would circle 1 or 2 for ratings in between. Please respond to each item.

NOT TRUE AT ALL (Never, Seldom)    JUST A LITTLE TRUE (Occasionally)    PRETTY MUCH TRUE (Often, Quite a Bit)    VERY MUCH TRUE (Very Often, Very Frequent)

1. Inattentive, easily distracted .....	0	1	2	3
2. Defiant .....	0	1	2	3
3. Restless in the "squirmy" sense .....	0	1	2	3
4. Forgets things he/she has already learned .....	0	1	2	3
5. Disturbs other children .....	0	1	2	3
6. Actively defies or refuses to comply with adults' requests .....	0	1	2	3
7. Is always "on the go" or acts as if driven by a motor .....	0	1	2	3
8. Poor in spelling .....	0	1	2	3
9. Cannot remain still .....	0	1	2	3
10. Spiteful or vindictive .....	0	1	2	3
11. Leaves seat in classroom or in other situations in which remaining seated is expected .....	0	1	2	3
12. Fidgets with hands or feet or squirms in seat .....	0	1	2	3
13. Not reading up to par .....	0	1	2	3
14. Short attention span .....	0	1	2	3
15. Argues with adults .....	0	1	2	3
16. Only pays attention to things he/she is really interested in .....	0	1	2	3
17. Has difficulty waiting his/her turn .....	0	1	2	3
18. Lacks interest in schoolwork .....	0	1	2	3
19. Distractibility or attention span a problem .....	0	1	2	3
20. Temper outbursts; explosive, unpredictable behavior .....	0	1	2	3
21. Runs about or climbs excessively in situations where it is inappropriate ..	0	1	2	3
22. Poor in arithmetic .....	0	1	2	3
23. Interrupts or intrudes on others (e.g., butts into others' conversations or games)	0	1	2	3
24. Has difficulty playing or engaging in leisure activities quietly .....	0	1	2	3
25. Fails to finish things he/she starts .....	0	1	2	3
26. Does not follow through on instructions and fails to finish schoolwork (not due to oppositional behavior or failure to understand instructions) ....	0	1	2	3
27. Excitable, impulsive .....	0	1	2	3
28. Restless, always up and on the go .....	0	1	2	3



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APPENDIX H  
BEHAVIOR INTERVENTIONRATING SCALE (BIRS)

### Behavior Intervention Rating Scale (Part One)

Specify intervention implemented: \_\_\_\_\_

[Please evaluate the intervention by circling the number which best describes your agreement or disagreement with each statement. You *must* answer each question.]

1) Strongly Disagree   2) Disagree   3) Slightly Disagree   4) Slightly Agree   5) Agree

The intervention quickly improved the child's behavior.

1                      2                      3                      4                      5

The intervention produced a lasting improvement in the child's behavior.

1                      2                      3                      4                      5

The intervention improved the child's behavior to the point that it did not noticeably deviate from other classmate's behavior.

1                      2                      3                      4                      5

Soon after using the intervention, I noticed a positive change in the problem behavior.

1                      2                      3                      4                      5

The child's behavior remained at an improved level even after the intervention was discontinued.

1                      2                      3                      4                      5

Using the intervention not only improved the child's behavior in the classroom, but also in other settings (e.g., other classrooms, home).

1                      2                      3                      4                      5

When comparing this child with a well-behaved peer before and after use of the intervention, the child's and the peer's behavior were more alike after using the intervention.

1                      2                      3                      4                      5

The intervention produced enough improvement in the child's behavior so the behavior was no longer is a problem in the classroom.

1                      2                      3                      4                      5

Other behaviors related to the problem behavior improved by the intervention.

1                      2                      3                      4                      5



APPENDIX I  
BACKGROUND FORM

***Background Form (Part Two)***

Completed by (Researcher): \_\_\_\_\_

Participant Number: \_\_\_\_\_

Current grades:

Previous grades in school:

Standardized Test Scores (including year tested):

Number of TOTAL Behavior Referrals: \_\_\_\_\_

Describe behaviors on referrals and consequences (including dates):

Current Interventions used in the classroom:

APPENDIX J

REWARD ACCEPTABILITY WORKSHEET

***Reward Acceptability Worksheet (Part Two)***

Completed by (Child): \_\_\_\_\_

Assisted by (Researcher): \_\_\_\_\_

Please place a check next to all rewards you would LIKE to receive as a part of an intervention. Please cross out all rewards you would NOT LIKE to receive as part of an intervention.

- ☐ Stickers
- ☐ Free computer time
- ☐ Free time
- ☐ Candy – chocolate
- ☐ Candy – non-chocolate
- ☐ Plain Pencils
- ☐ Help the teacher
- ☐ Play with a friend
- ☐ Extra math work
- ☐ Pencils with Designs
- ☐ Extra reading
- ☐ Erasers
- ☐ \_\_\_\_\_
- ☐ \_\_\_\_\_
- ☐ \_\_\_\_\_
- ☐ \_\_\_\_\_
- ☐ \_\_\_\_\_

APPENDIX K  
OBSERVATION FORM

***Target Child Observation Form (Part Two)***

Completed by (Researcher): \_\_\_\_\_

Target Child: \_\_\_\_\_

Date / Phase: \_\_\_\_\_

Time (15 minutes): \_\_\_\_\_

Interrater Reliability?            Yes    No    If Yes, attach additional observation.

If Interrater Reliability obtained, was it at least 80%?            Yes            No

Behaviors Defined

**Engaged (mark through entire box):** The target child is appropriately attending to and completing the required task and/or is appropriately moving around the room.

**Out of Seat (OS):** The target child inappropriately loses contact between his/her back pant pockets and respective seat for more than two seconds without teacher permission.

**Talking Out (TO):** The target child inappropriately makes any vocalization without permission of the teacher. This may include talking, humming, singing, unrecognizable noises, etc.

**Object Play (OP):** The target child is inappropriately manipulating an object inconsistent with task completion.

**Passive Off Task (POT):** The target child is not out of seat, talking out, or engaged in object play; however is not appropriately attending to the required task.

**Teacher Attention (TA):** The teacher is within one foot of the target child for more than two seconds or is directly talking to or gesturing to the target child.

**Peer Attention (PA):** peer is within one foot of the target child, excluding adjacent peers, for more than two seconds or a peer is talking directly to or gesturing to the target child.

### OBSERVATION FORM

OS TO	OS TO	OS TO	OS TO	OS TO	OS TO	OS TO
OP POT	OP POT	OP POT	OP POT	OP POT	OP POT	OP POT
TA PA	TA PA	TA PA	TA PA	TA PA	TA PA	TA PA
OS TO	OS TO	OS TO	OS TO	OS TO	OS TO	OS TO
OP POT	OP POT	OP POT	OP POT	OP POT	OP POT	OP POT
TA PA	TA PA	TA PA	TA PA	TA PA	TA PA	TA PA
OS TO	OS TO	OS TO	OS TO	OS TO	OS TO	OS TO
OP POT	OP POT	OP POT	OP POT	OP POT	OP POT	OP POT
TA PA	TA PA	TA PA	TA PA	TA PA	TA PA	TA PA
OS TO	OS TO	OS TO	OS TO	OS TO	OS TO	OS TO
OP POT	OP POT	OP POT	OP POT	OP POT	OP POT	OP POT
TA PA	TA PA	TA PA	TA PA	TA PA	TA PA	TA PA
OS TO	OS TO	OS TO	OS TO	OS TO	OS TO	OS TO
OP POT	OP POT	OP POT	OP POT	OP POT	OP POT	OP POT
TA PA	TA PA	TA PA	TA PA	TA PA	TA PA	TA PA
OS TO	OS TO	OS TO	OS TO	OS TO	OS TO	OS TO
OP POT	OP POT	OP POT	OP POT	OP POT	OP POT	OP POT
TA PA	TA PA	TA PA	TA PA	TA PA	TA PA	TA PA

OS	TO	OS	TO	OS	TO	OS	TO	OS	TO	OS	TO
OP	POT	OP	POT	OP	POT	OP	POT	OP	POT	OP	POT
TA	PA	TA	PA	TA	PA	TA	PA	TA	PA	TA	PA
OS	TO	OS	TO	OS	TO	OS	TO	OS	TO	OS	TO
OP	POT	OP	POT	OP	POT	OP	POT	OP	POT	OP	POT
TA	PA	TA	PA	TA	PA	TA	PA	TA	PA	TA	PA
OS	TO	OS	TO	OS	TO	OS	TO	OS	TO	OS	TO
OP	POT	OP	POT	OP	POT	OP	POT	OP	POT	OP	POT
TA	PA	TA	PA	TA	PA	TA	PA	TA	PA	TA	PA
OS	TO	OS	TO	OS	TO	OS	TO	OS	TO	OS	TO
OP	POT	OP	POT	OP	POT	OP	POT	OP	POT	OP	POT
TA	PA	TA	PA	TA	PA	TA	PA	TA	PA	TA	PA
OS	TO	OS	TO	OS	TO	OS	TO	OS	TO	OS	TO
OP	POT	OP	POT	OP	POT	OP	POT	OP	POT	OP	POT
TA	PA	TA	PA	TA	PA	TA	PA	TA	PA	TA	PA
OS	TO	OS	TO	OS	TO	OS	TO	OS	TO	OS	TO
OP	POT	OP	POT	OP	POT	OP	POT	OP	POT	OP	POT
TA	PA	TA	PA	TA	PA	TA	PA	TA	PA	TA	PA
OS	TO	OS	TO	OS	TO	OS	TO	OS	TO	OS	TO
OP	POT	OP	POT	OP	POT	OP	POT	OP	POT	OP	POT
TA	PA	TA	PA	TA	PA	TA	PA	TA	PA	TA	PA
OS	TO	OS	TO	OS	TO	OS	TO	OS	TO	OS	TO
OP	POT	OP	POT	OP	POT	OP	POT	OP	POT	OP	POT
TA	PA	TA	PA	TA	PA	TA	PA	TA	PA	TA	PA



APPENDIX L  
TEACHER INTERVIEW

## Teacher Interview – Part Two

Target behavior: \_\_\_\_\_

Antecedents: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Consequences: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Frequency: \_\_\_\_\_

Intensity: \_\_\_\_\_

Duration: \_\_\_\_\_

What is the appropriate/expected level of behavioral functioning in the classroom? \_\_\_\_\_

\_\_\_\_\_

At what level would you like the target child's behavior to be? What is your goal? \_\_\_\_\_

\_\_\_\_\_

Function of behavior determined to be: \_\_\_\_\_

## APPENDIX M

CIRP PRACTIC SHEETS / MANIPULATION CHECKS / PREFERENCE SHEEETS

## Children's Intervention Rating Profile (Practice Sheet)- Part One

I like to eat worms.

I agree

I do not agree

I-----I-----I-----I-----I-----I

I like candy.

I agree

I do not agree

I-----I-----I-----I-----I-----I

I do not like candy.

I agree

I do not agree

I-----I-----I-----I-----I-----I

### Intervention Vignette Manipulation Checks

<b>Vignette</b>	<b>What does your teacher want you to do?</b>	<b>What happens if you stay in your seat?</b>	<b>Do you like this method?</b>
<b>A</b>			
<b>B</b>			
<b>C</b>			
<b>D</b>			

### Intervention Preference Sheet

Present all 4 interventions. Which of these do you like best? \_\_\_\_\_

Present remaining 3 interventions. Which of these do you like best? \_\_\_\_\_

Present remaining 2 interventions. Which of these do you like best? \_\_\_\_\_

Remaining intervention. \_\_\_\_\_

## Children's Intervention Rating Profile (Practice Sheet) –Part Two

I like to eat worms.

I agree

I do not agree

I-----I-----I-----I-----I-----I

I like candy.

I agree

I do not agree

I-----I-----I-----I-----I-----I

I do not like candy.

I agree

I do not agree

I-----I-----I-----I-----I-----I

### MANIPULATION CHECK

#### Presentation of Intervention B

What is the intervention for? \_\_\_\_\_

What happens if you \_\_\_\_\_ ? \_\_\_\_\_

#### Presentation of Intervention C

What is different about this intervention from the last? \_\_\_\_\_

Is that a good or bad thing? \_\_\_\_\_

#### Presentation of Intervention C

What is different about this intervention from the last? \_\_\_\_\_

Is that a good or bad thing? \_\_\_\_\_

#### Presentation of Intervention B

What is different about this intervention from the last? \_\_\_\_\_

Is that a good or bad thing? \_\_\_\_\_

APPENDIX N

INSTITUTIONAL REVIEW BOARD APPROVAL

**Oklahoma State University Institutional Review Board**

Date: Thursday, March 03, 2005  
IRB Application No ED0547  
Proposal Title: Variables that Influence and are Influenced by Treatment Acceptability as Perceived by Children for Behavior Interventions: A two part investigation

Reviewed and Processed as: Expedited (Spec Pop)

**Status Recommended by Reviewer(s): Approved Protocol Expires: 3/2/2006**

Principal Investigator(s)

Reagan Rinderknecht	Eric Mesmer
325 Willard	434 Willard
Stillwater, OK 74078	Stillwater, OK 74078

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The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

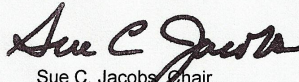
☒ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Beth McTernan in 415 Whitehurst (phone: 405-744-5700, emct@okstate.edu).

Sincerely,

  
Sue C. Jacobs, Chair  
Institutional Review Board



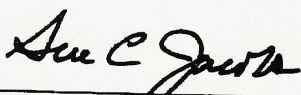
**Oklahoma State University Institutional Review Board**

Date Thursday, April 13, 2006 Protocol Expires: 4/11/2007  
IRB Application No: ED0547  
Proposal Title: Variables that Influence and are Influenced by Treatment Acceptability as Perceived by Children for Behavior Interventions: A two part investigation  
Reviewed and Processed as: Expedited (Spec Pop)  
**Continuation**  
Status Recommended by Reviewer(s): **Approved**  
Principal Investigator(s):  
Reagan Rinderknecht Eric Mesmer  
325 Willard 420 Willard  
Stillwater, OK 74078 Stillwater, OK 74078

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modifications to the research project approved by the IRB must be submitted for approval with the advisor's signature. The IRB office MUST be notified in writing when a project is complete. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

- ☒ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

Signature:



Sue C. Jacobs, Chair, Institutional Review Board

Thursday, April 13, 2006  
Date



VITA

Reagan Lynn Rinderknecht

Candidate for the Degree of

Doctorate of Philosophy

Dissertation: TREATMENT ACCEPTABILITY AS PERCEIVED BY CHILDREN FOR  
BEHAVIOR INTERVENTIONS: A TWO-PART INVESTIGATION

Major Field: Educational Psychology  
Option: School Psychology

Biographical:

Personal Data: Born in Austin, Texas, on September 18, 1979, the daughter of  
Ronny and Susan Rinderknecht.

Education: Graduated from Grapevine High School, Grapevine, Texas in May  
1997; received Bachelor of Arts degree with a major in Psychology and a minor in  
English from Texas Tech University, Lubbock, Texas in May 2001; received Master of  
Science degree in Applied Behavioral Studies from Oklahoma State University,  
Stillwater, Oklahoma in December 2002. Completed the requirements for the Doctorate  
of Philosophy degree with a major in Educational Psychology and option in School  
Psychology at Oklahoma State University in December, 2006.

Experience: Completed independent research study at Texas Tech University that  
focused on the Social Anxiety Scale for Children-Revised under the supervision of  
Dr. Catherine Epkins; employed by Oklahoma State University, Department of  
Educational Psychology as a graduate teaching assistant; completed school-based and  
clinic-based practicums in intervention, consultation and assessment at Oklahoma State  
University; completed pre-doctoral internship at the Johns Hopkins School of Medicine,  
Kennedy Krieger Institute's, Child and Family Therapy and Behavior Management  
Clinics.

Professional Membership: American Psychological Association, National  
Association of School Psychologists, Oklahoma School Psychological  
Association, Association for the Advancement of Behavior Therapy

Name: Reagan Rinderknecht

Date of Degree: December, 2006

Institution: Oklahoma State University

Location: Stillwater, Oklahoma

Title of Study: TREATMENT ACCEPTABILITY AS PERCEIVED BY CHILDREN FOR BEHAVIOR INTERVENTIONS: A TWO-PART INVESTIGATION

Pages in Study: 242

Candidate for the Degree of Doctorate of Philosophy

Major Field: Educational Psychology

Option: School Psychology

Scope and Method of Study: The purpose of the study is to investigate variables that may influence children's treatment acceptability of behavior interventions. An additional objective is to examine if a causal relationship exists between treatment acceptability and treatment effectiveness. One-hundred and eighty three children participated in part one of this study, and seven children participated in part two of this study.

In part one of the study, each child was presented four behavioral interventions. They were then asked to rate the treatment acceptability of each intervention using the *Children's Intervention Rating Profile (CIRP)*. Teachers were asked to rate the behavior severity of up to six randomly selected students in their classroom using the *Conner's Teacher Rating Scale: Revised-Short Form (CTRS:R-S)*. They were also asked to complete the *Effectiveness Rating Profile(ERP)* of the *Behavior Intervention Rating Scale (BIRS)* for children who they had run classroom behavioral interventions with during the previous school year.

In part two of the study, each child was originally nominated by their teacher based on a high incidence of classroom behaviors including, talking out, being out of seat and/or being passively off task. Individual behavioral interventions were then implemented in the classroom by the child's respective teacher. An ABCACB single-subject design was utilized in this part of the study. Children experienced two versions of an intervention, a more acceptable version (phase B) and a less acceptable version (phase C). Children were asked to rate the acceptability of the intervention prior to the start of each treatment phase using the *CIRP*. Treatment effectiveness data was gathered using interval-time sampling procedures on a daily basis.

Findings and Conclusions: Results revealed that children in grades one through four found positive and negative reinforcement interventions significantly more acceptable than type I punishment interventions. Grade did not significantly influence treatment acceptability ratings. Small to medium correlations were found between behavior severity levels of children and treatment acceptability ratings. In addition, a causal relationship was not found to exist between treatment acceptability and treatment effectiveness for most subjects. Previous experience was found to influence treatment acceptability following intervention exposure.

Advisor's Approval: Eric. M. Mesmer, Ph.D.