

THE RELATIONSHIP OF TEACHER EFFICACY, GENERAL BEHAVIORAL  
KNOWLEDGE AND CAUSAL BELIEFS TO THE ACCEPTABILITY OF  
BEHAVIOR INTERVENTIONS

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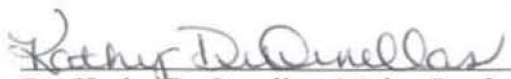
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I am submitting herewith a dissertation written by Robert D. Lackey, entitled "The Relationship of Teacher Efficacy, General Behavioral Knowledge and Causal Beliefs to the Acceptability of Behavior Interventions." I have examined this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy with a Major in School Psychology.


  
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We have read this dissertation and recommend its acceptance:

  
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I would like to dedicate this project to my extraordinary mother, Mary Jane Lackey, and father, Robert Paul Lackey. You have supported and encouraged me throughout my life and I am truly grateful for all the love and support that I have been given.

“My God what has science done?”

Dr. Weird



## ABSTRACT

### THE RELATIONSHIP OF TEACHER EFFICACY, GENERAL BEHAVIORAL KNOWLEDGE AND CAUSAL BELIEFS TO THE ACCEPTABILITY OF BEHAVIOR INTERVENTIONS

ROBERT D. LACKEY

MAY, 2006

The primary purpose of this teacher-focused study was to investigate the impact of specific personal characteristics including self-efficacy, knowledge of behavior principles, and causal beliefs on the acceptability of a specific behavioral intervention. The target population included special and general education public school teachers. Participants were recruited via E-mail containing the purpose of the study, description of the incentive, and a link to an online survey. Participants completed demographic information, the Teacher Efficacy Scale, the Knowledge of Behavioral Principles as Applied to Children and the Teacher Variance Inventory-IV. Participants then read a hypothetical case vignette, sample behavioral intervention and completed the Intervention Rating Profile. The utilization of these instruments provide data to school psychologists and educators assisting in improving the consultative relationship between school psychologist and classroom teachers working with challenging students. Results showed that a specific causal belief, specific training, class size, and overall teaching efficacy predicted greater treatment acceptability.

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## CHAPTER I

### INTRODUCTION

Emotional and behavioral problems of students are rated as a major concern for teachers, administrators, and the public (Hardman & Smith, 2003). These problems make it very difficult for classroom teachers to achieve a positive and productive classroom. The most effective model for producing behavior change and preventing the development of maladaptive behaviors is the behavioral model (Wielkiewicz, 1995). Behavioral approaches in schools have been very effective, and, in certain special education situations, are mandated by law. Much of the foundation for school psychology applications in the areas of outcomes criteria, response to intervention, and problem solving are deeply rooted in behavioral interventions (Reschly, 2004).

The present study explored specific teacher characteristics related to the acceptability of behavioral interventions. Specifically, this study investigated how a teacher's sense of self-efficacy, general knowledge regarding basic behavioral principles, and fundamental beliefs about the causes of student behavior predicted their probability of accepting specific behavioral interventions.

Treatment acceptability is defined as the extent to which interventions are considered appropriate, effective, and fair (Finn & Sladeczek, 2001). In the present study, treatment acceptability was explored in how it relates to a teacher's acceptance of

specific behavioral strategies and interventions. Witt and Elliott (1985) emphasize the sequential and reciprocal relationships of treatment acceptability, treatment use, treatment integrity, and treatment effectiveness. The authors of this model hypothesize that treatment selection is guided by initial treatment acceptability that impacts the use of its treatment, which affects the way the treatment is implemented, and ultimately in determining its effectiveness.

Research suggests teachers' beliefs in their abilities to instruct students account for individual differences in teacher effectiveness (Berman & McLaughlin, 1977). These authors also found that the most important characteristic determining the effectiveness of change-agent projects was teachers' sense of efficacy – a belief that teachers can help even the most difficult or unmotivated students. Bandura (1977) was one of the first to suggest that one's abilities were mediated by individual expectations of personal efficacy, or self-efficacy. Teachers who are confident in their ability to reach the most difficult students also tend to believe that they can manage problem behaviors effectively (Safran, Safran, & Barcikowski, 1990). If a teacher believes that he or she possesses the ability to manage a disruptive child's behavior himself or herself, then that teacher may be more willing to accept behavioral interventions in an attempt to alleviate these behaviors.

Prior research also indicates teacher knowledge of interventions is related positively to their use and acceptance of those interventions (Hall & Wahrman, 1988). Teacher perceptions of their efficacy in reaching difficult-to-teach children are also positively related to knowledge of interventions (Hagen, Gutkin, Wilson, & Oats, 1998).



In two studies, classroom teachers with high general knowledge of behavioral principles were found to be more likely to accept behavioral treatments (Clark & Elliott, 1988; McKee cited in Elliott, 1988).

Teacher attributes or a teacher's unique set of beliefs, experiences, and attitudes determine their approach to student misbehavior (Hyman, Dahbany, Blum, Weiler, Brooks-Klein, & Pokalo, 1997). The authors termed each teacher's unique set of beliefs, experiences, and attitudes - teacher variance. For these attributes to be beneficial they must be grounded in theory. Teacher variance includes the perspectives of cognitive/behavioral, psychodynamic/interpersonal, humanistic, ecological/systems, and biophysical approaches to discipline and behavior management. Each perspective is grounded in a separate body of assumptions about child misbehavior. Therefore, teachers derive an understanding of how misbehavior develops and how to design and implement programs of remediation within their personal perspective (Hyman et al.). The teacher variance approach (TVA) is a multidimensional model for teacher training and school based consultation. Further, it addresses many issues related to overcoming teacher resistance (Winchell & Hyman, 2001).

To address these issues related to behavior intervention and self-efficacy, a group of classroom teachers was obtained for the present study. The concept of self-efficacy was measured in each of the participants using the constructs of personal self-efficacy and teacher self-efficacy as rated on the Teacher Efficacy Scale (TES; Gibson & Dembo, 1984). Teacher's general knowledge of behavioral principles was measured with the

Knowledge of Behavioral Principles as Applied to Children (KBPAC; O'Dell, Tarler-Benlolo, & Flynn, 1979) and teacher attributes or teacher variance was measured with the Teacher Variance Inventory-IV (Winchell & Hyman, 2001). The construct of teacher variance or teacher orientation as a theoretical view of causes of behavior was measured by the Teacher Variance Inventory-IV (TVI-IV; Winchell & Hyman, 2001), which evaluated a teacher's perception of both the causation and preferred remediation of student misbehavior.

Treatment acceptability was measured with the Intervention Rating Profile-20 (IRP; Witt & Martens, 1983). The IRP was given in conjunction with a sample case of a student exhibiting behavioral concerns. This hypothetical case vignette was used in a study exploring teacher biases and decision to refer a student for special education (Hayes & Havey, 1999). Behavioral interventions based on a modified "precision requests" program were provided and teachers rated the acceptability of the given treatment plan (DeMartini-Scully, Bray, & Kehle, 2000).

While research has been conducted in these areas separately, to date no research has been conducted focusing on the combination of these factors. There is ample research in the area of treatment acceptability; however, there is no research that examines teacher variance utilizing the teacher variance approach and treatment acceptability. The concept of teacher efficacy is also an area that has received a great deal of examination; however, there are no studies that examine its specific relationship with treatment acceptability.

This study examined the relationship of these specific factors and the acceptability of behavior interventions.

Outcomes of the present study provide further support for broad training of teachers in general behavioral principles (Clark & Elliott, 1988; McKee, cited in Elliott, 1988), matching interventions to individual teacher “beliefs” (Hyman et al., 1997; Hyman, Winchell, & Tillman, 2001), and raising teacher confidence in working with behavioral interventions (Rose & Medway, 1981; Woolfolk, Rosoff, & Hoy, 1990).

The overall purpose of the present study was to explore the relationship between specific teacher characteristics and their acceptance of behavioral interventions. The main hypothesis of this study was that specific teacher characteristics influence their likelihood of accepting behavioral interventions. The characteristics that were explored include teacher efficacy, knowledge of general behavioral principles, personal demographic information, and causal beliefs about student misbehavior (independent variables). The dependent variable was level of acceptance of the behavioral intervention. Specifically, the present study examined the following hypotheses:

1. Teacher efficacy, knowledge of general behavioral principles, and causal beliefs predict the acceptability of behavioral interventions, in that an increase in these characteristics will lead to an increase in the treatment acceptability of behavioral interventions.

2. Special educators and general educators will differ in their levels of behavioral knowledge, in that special educators will have higher levels of knowledge of general behavioral principles.
3. Special educators and general educators will differ in their levels of acceptability of behavioral interventions, in that special educators will have higher levels of acceptance of behavioral interventions.
4. Teachers who teach a smaller number of students will be more likely to accept behavioral interventions than teachers who teach a larger number of students.

Results of the present study can benefit school psychologists working in consultative relationships with classroom teachers, influence teacher training programs, and ultimately, child outcomes by increasing the acceptance and implementation of behavioral interventions.



## CHAPTER II

### LITERATURE REVIEW

Research has shown that well-established patterns of disruptive behaviors during school years increase the risk for later antisocial behavior (Huesmann, Eron, Leftkowitz, & Walder, 1984). These patterns of misbehavior place students at greater risk for academic failure, less academic engagement, lower grades, and poor performance on standardized tests (Shinn, Ramsey, Walker, Steiber, & O'Neil, 1987; Swift & Spivack, 1969; Wentzel, 1993). A prevailing myth continues to exist, in that disruptive classroom behaviors cannot be effectively managed in public education, in the face of copious amounts of research suggesting the contrary (Kratochwill & Stoiber, 2000; Stage & Quiroz, 1997).

The earliest behavioral interventions consisted of teacher approval, disapproval, and ignoring, to shape student's behavior in the classroom (Becker, Madsen, Arnold, & Thomas, 1967). When these teacher behaviors proved insufficient, other techniques such as a token economy, a program that provides tangible rewards for appropriate behavior, were utilized (O'Leary, Becker, Evans, & Saudargas, 1969). Procedures such as time-out were also utilized to decrease unwanted behaviors. Group contingencies are similar to token economies; however, group membership parameters determine reinforcement. Home-based contingencies (Barth, 1979) are programs where teachers use daily or



weekly progress reports to notify parents of a child's classroom behavior. Parents then reward their own child based on classroom behavior.

Recently, Gresham (2004) indicated that school-based behavioral interventions can be conceptualized using four broad theoretical categories: applied behavior analysis, social learning theory, cognitive behavior therapy, and neobehavioristic S-R theory (Powers & Franks, 1988). S-R theories define learning as an associative link between a particular stimulus and a particular response. "Behavior interventions in schools may require intervention strategies from one model whereas other behavioral difficulties may require strategies from all four theoretical models" (Gresham, 2004, p. 328).

Stage and Quiroz (1997) conducted a meta-analysis of 99 studies that used specific interventions to decrease disruptive classroom behavior. The overall effect size suggests that the reported interventions were successful in reducing disruptive classroom behavior in 78% of the treated students. A comparison of this study to meta-analytic studies of psychotherapy research conducted in school settings (Prout & DeMartino, 1986) indicated comparable results. Another empirically supported study was conducted by Kratochwill and Stoiber (2000). A meta-analysis of 300 research studies conducted with children and youth ages 2 to 18 suggests that children in the behavioral intervention groups outscore between 76% and 81% of the children in control groups. These meta-analytic studies, whether based on applied behavior analysis, behavior therapy, or cognitive-behavior therapy methods, have been shown to be equal or superior to other

child or adolescent psychotherapy techniques (Gresham, 2004), suggesting that behavioral interventions do reduce disruptive classroom behaviors.

Recent research has indicated that system-wide positive behavior supports (PBS) involving schools and parents can be successful in reducing challenging behavior by implementing a proactive prevention and early intervention program (Lewis & Sugai, 1999). School wide PBS focus on ways to support appropriate social behavior for all students within a school. Using PBS, school personnel can improve the school climate, student social-behavioral functioning, and learning environment (Schaughency & Goodman, 2003).

Although research indicates that PBS are helpful in all school environments, in some specific situations, behavioral interventions and supports are legally mandated. With the 1997 amendments of the Individual's with Disabilities Education Act (IDEA), the law explicitly mandated that school districts focus on prevention of and early intervention in problem behavior (Seltzer, 2003). As the U. S. Department of Education stated in its comments, this revision emphasized a proactive approach to behaviors that interfere with learning, specifically mandating positive behavioral interventions and supports to help children avoid engaging in maladaptive behaviors (Seltzer, 2003). This mandate indicates that whenever students impede their own learning or that of others, and whenever discipline beyond ten days of suspension occurs, functional assessment of behavior must be conducted and a behavior intervention plan developed. The child's general education teacher, who is a mandated member of the Individual Education Plan

(IEP) team must, to the extent appropriate, assist in the team's determination of positive behavioral interventions and strategies for a child whose behavior interferes with learning [34 CFR 300.346(a)(2)(i); 34CFR 300.520 (b)(1)].

Congress did not invent the terms behavioral intervention plan and positive behavior support. "Rather, Congress deliberately inserted these concepts in the IDEA 1997 to reflect the importance of evidence-based practices in the education of children with disabilities" (Seltzer, 2003, p. 7). In order to assist school districts in implementing these new mandates, the Office of Special Education Programs (the federal agency responsible for administering the IDEA) created sites to disseminate the professional literature on positive behavior supports, behavior intervention plans, and functional behavioral assessments.

Hoagwood (2003-2004) indicated that defining evidence-based practices (EBP) has been problematic. She defines them as referring to a body of scientific knowledge about treatments, prevention-intervention approaches, or service practices. They are research-based, structured, and manualized practices that have been tested via randomized trials in which experimental and control groups are established to show causation and to assess the magnitude of effects. One of the exciting areas in the development and acceptance of EBP is in the area of PBS. The Effective Behavioral Support (EBS) program, developed by Horner, Sugai, Lewis-Palmer, and Todd (2001) is a well-researched, highly effective, and broadly accepted approach. Currently, the EBS



program is being implemented in 500 schools, representing the majority of the 50 states (Walker, 2004).

An important concept related to evidence based practices, is IDEA's mandate of measurable short term and annual goals. IDEA states that the IEP team must develop measurable goals, develop strategies that are most effective in realizing these goals, and monitor progress during the year. A child's behavioral progress is not immune to this "measurability" mandate. Behavioral interventions are more amenable to current acceptable research methodology, which depends on techniques using single-subject designs allowing them to be empirically measured (Hyman et al., 2001). Behavioral intervention outcomes and efficacy are more easily demonstrated than other less observable and measurable constructs.

The implementation of behavioral intervention plans can present challenges for many schools. Lack of time, administrative support, differences in philosophical orientations toward discipline, negative attitudes about special education, and a general lack of knowledge regarding the legal and procedural aspects of behavior assessments and interventions are factors that may impede the development of effective behavior plans (Buck, Polloway, Kirkpatrick, Patton, & Fad, 2000). These authors continue by adding that three reasons stand out to explain the failure of schools in addressing the behavior problems of students with disabilities. In many instances, school personnel fail to identify the true cause of misbehavior, and in turn, apply inappropriate behavioral interventions. Second, behavioral interventions are often implemented haphazardly with

little consistency and poor attention to monitoring and evaluating implementation (treatment integrity). Third, their interventions have tended to be punitive, rather than positive. The study of implementation processes, treatment integrity variables, and adherence to recommended program protocols is of great importance in the continuing development of evidence-based interventions (Walker, 2004).

Treatment integrity refers to the degree to which a treatment is implemented as planned or intended (Gresham, 1989). The ineffectiveness of many behavioral interventions may be related to the poor implementation of these interventions. The teacher consultation literature would suggest that little is known about the degree to which teachers actually implement suggested interventions (Noell & Witt, 1999). One study that did explore treatment implementation was conducted by Wickstrom and colleagues in 1998. Twenty-nine teachers participated in a consultant-consultee behavioral consultation program including problem identification, analysis, and implementation of a specific behavioral intervention. Results indicated that teachers reported utilizing the intervention 62% of the time; however, independent researcher observation indicated that teachers implemented the treatment as planned only 4% of the time. Although observed treatment integrity was very low, outcome data suggested reductions in disruptive behavior (Wickstrom, Jones, LaFleur, & Witt, 1998).

Treatment integrity is greatly affected by the consumer's acceptance of the treatment. Witt and Elliott (1985) hypothesize that treatment selection is guided by initial

acceptability judgments that impact the implementation and use of the treatment, and ultimately play a role in determining the treatment's effectiveness.

Despite the innovations in classroom management techniques, the empirical basis for the use of behavioral interventions, and the legal mandates in certain situations, consultants still encounter teacher resistance to the adoption of behavioral interventions. "Studies of regular classroom teachers' perceptions of and tolerance for problem behavior have suggested that accommodation of behavioral difficulties may be less feasible than accommodation of instructional needs" (Ritter, 1989, p. 559).

### *Treatment Acceptability*

Social validity is viewed as an important consideration in intervention research (Gresham & Lopez, 1996; Kazdin, 1977; Wolf, 1978). The concept of social validity has been greatly explored and is widely acknowledged in the mental health and school psychology disciplines (Gresham & Lopez, 1996). For example in the field of school psychology, research has focused on treatment acceptability with specific behavioral intervention types, populations, and service delivery models.

Wolf (1978) coined the term social validity and defined the term as it related to three interrelated levels: social significance, social appropriateness, and social importance. Kazdin (1977) explained that social validity could be explored by two means, subjective evaluation and social comparison. Subjective evaluation techniques use questionnaires and interviews to solicit judgments about an intervention, while social



comparison compares targeted behaviors before and after intervention (Finn & Sladeczek, 2001).

The predominant focus of social validity research has centered on the appropriateness of treatment procedures, an area known as treatment acceptability (Gresham & Lopez, 1996). Kazdin (1981) pioneered research in the area of treatment acceptability, defined as “judgments of lay persons, clients, and others of whether the procedures proposed for treatment are appropriate, fair, and reasonable for the problem or client” (p. 493). Kazdin (1980) provided cases of deviant children to 88 undergraduate students along with four different treatments. The treatments were reinforcement of incompatible behavior, time out from reinforcement, drug therapy, and electric shock. The treatments were then rated as to their acceptability. Results indicated reinforcement of incompatible behavior was more acceptable than other treatments which followed, in order, time out from reinforcement, drug therapy, and electric shock. A similar study, consisting of two experiments, explored the acceptability ratings of 224 undergraduate students (Kazdin, 1981). Students read clinical case descriptions of children and rated the acceptability of four treatments (reinforcement of incompatible behavior, positive practice, time out from reinforcement and medication). Results revealed reinforcement was the most acceptable in both experiments. The report of strong side effects reduced the acceptability ratings of all of the treatments.

Using Kazdin’s initial research, other scholars developed theoretical models of treatment acceptability. The first model of treatment acceptability, developed by Witt and

Elliott (1985), emphasizes the sequential and reciprocal relationships between treatment acceptability, treatment use, treatment integrity, and treatment effectiveness. Elliott (1988) proposed that the elements of treatment acceptability, adherence, and integrity are reciprocally dependent, that they influence and are influenced by each other. Reimers, Wacker, and Koepl (1987) indicated that initial acceptability judgments are mediated by the level of knowledge and understanding one has about an intervention prior to implementation.

Typically, treatment acceptability is assessed through a questionnaire format where respondents rate statements or questions as to the fairness and expected effectiveness of interventions using a Likert-type scale (Finn & Sladeczek, 2001). The use of fictitious cases and hypothesized intervention plans is also standard practice. Treatment acceptability studies have explored intervention acceptance related to the variables of problem severity, consumers of services, service delivery models, as well as many others.

A teacher's judgment on what type of behavioral intervention technique is considered most acceptable under certain conditions has been explored in several research studies. Witt and Martens (1983) set out to develop and evaluate an instrument for assessing the acceptability of behavior interventions used in classroom settings. Such an instrument is helpful in identifying factors that would contribute to teacher judgments of acceptability of interventions. At the time of this study, no studies had specifically explored treatment acceptability in school settings. The acceptability of six classroom



interventions was measured in two steps: first the 180 teachers read a case study with a description of a boy with behavior problems; second the teachers rated the acceptability of the intervention described in the study using a 20-item rating form, the Intervention Rating Profile (IRP). Results indicated that the IRP was a reliable and valid instrument in identifying important factors contributing to teachers' evaluations of the acceptability of behavioral interventions. Judgments of the acceptability of behavioral interventions are comprised of one major general acceptability factor and four secondary factors, including: the amount of risk for the target child, the amount of time teachers need to devote to the intervention, whether the intervention would affect other children, and the skill level required by teachers to implement the treatment. This finding is especially important for those who consult with teachers on behavioral issues, in that, consultants would be wise to check for initial treatment acceptability prior to the implementation of an intervention. This study also extended the findings of Kazdin into the area of classroom behavioral interventions.

In addition, Witt, Martens, and Elliott (1984) conducted a study that explored teachers' judgments pertaining to the acceptability of behavioral interventions. The Intervention Rating Profile (IRP) was administered to 180 classroom teachers after they read a written case description. The first part of the description presented one of three behavior problems (low, moderate, and high levels of severity) exhibited by a hypothetical fifth-grade boy. One of six interventions applied to the problem followed the case description. The intervention section varied along the dimensions of time

involvement and type of intervention (positive or reductive). Results of this study indicate that the most influencing factor in teacher's judgments concerning the acceptability of classroom behavioral management techniques is the amount of time needed to plan and implement the intervention. Another finding that matching the type of intervention (positive or reductive) to the severity of behavior or "the old adage that the punishment (and the time invested in delivering the punishment) should fit the crime" (p. 209) was also important. This is consistent with Gresham (2004) who posits that the most important concept in delivering school-based behavioral interventions is the notion of matching the intensity of the intervention to the intensity and severity of the presenting problem behavior. This study also provides support emphasizing the need to explore teacher acceptability during the planning stages of behavioral interventions (Gresham, 2004).

Research in treatment acceptability has also explored differences in treatment acceptability among different consumers of such treatments. Much of the research in the school psychology literature has been done with classroom teachers, either service or pre-service, general education or special education. However, researchers have also explored the treatment acceptability judgments of parents and children. Kazdin, French, and Sherick (1981) explored treatment acceptability ratings of 32 child psychiatric inpatients, their parents, and 32 hospital staff. Participants completed two treatment acceptability scales, the Treatment Evaluation Inventory (TEI; Kazdin, 1980) and Semantic Differential scales (Osgood, Suci, & Tannenbaum, 1957) to evaluate the acceptability of

specific interventions, including positive reinforcement, time out, positive practice, and medication. Results of this study indicated that like the IRP, the TEI is a reliable and valid measure of treatment acceptability. The TEI discriminated between the various treatments with positive reinforcement rated as most acceptable (Kazdin et al., 1981).

The Children's Intervention Rating Profile (CIRP; Witt & Elliott, 1985) is the only rating scale specifically designed to assess treatment acceptability in children. Studies indicate the CIRP has adequate reliability and validity (Witt & Elliott, 1985; Waas & Anderson, 1991). Internal consistency was measured in a study involving 180 participants (60 second graders, 60 fifth graders, and 60 college students) who were asked to evaluate three treatment options (token economy, weekly counseling, and special education placement) to treat a child with disruptive behaviors (Waas & Anderson, 1991). Another study explored treatment acceptability among 6 children in first grade through third grade. Participants rated the acceptability of home notes and consultation-based procedures after participating in a program aimed at improving math homework completion and accuracy (Galloway & Sheridan, 1994). Both types of interventions, home notes and consultation, demonstrated increased math completion and accuracy among participants. Treatment integrity, maintenance, and acceptability were rated greater in the consultation-based interventions. This study explored consumer acceptance and represents a move away from analogue studies to the actual discernment of children's perceptions of treatment acceptability after treatment implementation (Finn & Sladeczek, 2001).



Treatment acceptability has also greatly been explored in the area of behavioral consultation. Researchers have not only explored the relationship between the type of intervention and acceptability judgments, but how the intervention is implemented. Rhoades and Kratochwill (1998) evaluated acceptability judgments of parents and teachers participating in a homework intervention program implemented using a behavioral consultation framework. Post-treatment and follow-up ratings of acceptability were measured using the TEI-Short Form (Kelley, Heffer, Gresham, & Elliott, 1989), a modified version of the TEI.

Similarly, Schill, Kratochwill, and Elliott (1998) examined treatment acceptability as part of an intervention study assessing the effectiveness of two forms of behavioral consultation for children with identified social or behavioral problems. Participants were classroom teachers of 19 preschool students placed in one of two conditions: a treatment approach based on a functional analysis of the students behavior or a standardized self-help treatment plan. At the completion of the program, teachers completed the TEI-SF to rate their satisfaction with their respective program. Other studies have explored school psychologist's acceptability of different service delivery approaches, such as conjoint-behavioral consultation, parent-only consultation, teacher-only consultation, and direct services (Illsley, Sladeczek, & Finn, 1999; Sheridan & Steck, 1995).

### *Teacher Efficacy*

Efficacy has been defined by Bandura (1977) as an individual's belief that he or she can produce an outcome by successfully performing necessary behaviors. Bandura

indicates that efficacy expectations can influence how an individual initiates and persists at behavior in the face of obstacles and adversity. Individuals with high self-efficacy will put forth great effort and will persist at activities even when faced with stressful situations (Bandura, 1977). Bandura's theory of self-efficacy proposed two cognitively-based sources of motivation: outcome expectations and efficacy expectations. Outcome expectations refer to an individual's judgment that a given behavior will lead to a certain outcome. Efficacy expectations refer to the person's individual belief that he or she has the ability to demonstrate the behaviors necessary to achieve the outcome. These two expectations interact to determine the initiation and persistence of goal-directed behaviors.

Teachers' beliefs about their own effectiveness, known as teacher efficacy, underlie many important instructional decisions (Soodak & Podell, 1997). Teacher efficacy has been found to predict the success of program implementation (Berman & McLaughlin, 1977) and discriminate between effective teachers and less effective teachers (Brookover & Lezotte, 1979). Various researchers have explored the concept of teacher efficacy as it relates to teacher demographic variables, referrals to special education, instructional practices, classroom/educational program type, and managing student behavior (Allinder, 1994; Meijer & Foster, 1988; Rose & Medway, 1981; Woolfolk, Rosoff, & Hoy, 1990;).

Ashton and Webb (1982) were among the first to apply Bandura's theory to the study of teacher efficacy. The authors utilized a measure of teacher efficacy developed by

the Rand Corporation (Berman & McLaughlin, 1977) to assess two measures of the construct of teacher efficacy: teacher and personal. The authors created two constructs, teaching efficacy, which they believed corresponded with Bandura's outcome expectations, and personal efficacy, which corresponded with Bandura's efficacy expectation. Results of this research supported the independence of at least two different efficacy dimensions. Teacher efficacy researchers traditionally have labeled the two sets of beliefs *teaching efficacy* and *personal teaching efficacy* (Ashton & Webb, 1986; Gibson & Dembo, 1984).

Gibson and Dembo (1984) created the Teacher Efficacy Scale (TES) in an attempt to measure efficacy in teachers. The TES is a 30-item Likert-type scale of teacher efficacy. They administered the TES to 208 elementary school teachers and concluded that teacher efficacy is multidimensional, consisting of at least two dimensions that correspond to Bandura's two-component model of self-efficacy. The resulting two dimensions, teaching efficacy and personal teaching efficacy, support Ashton and Webb's (1982) model of teaching efficacy and also support the applicability of Bandura's conceptualization of self-efficacy. Gibson and Dembo's (1984) study indicated the TES was a reliable and valid instrument in identifying important factors related to teacher efficacy. A sub-sample of participants (4 high efficacy and 4 low efficacy) was selected to explore the relationship between teacher efficacy and classroom teacher behavior. Classroom behavior was measured through direct observation with results suggesting that



teacher efficacy may influence certain patterns of classroom teacher behaviors known to yield achievement gains.

Several researchers have explored the relationship between personal teacher characteristics and self-efficacy beliefs. Safran (1985) explored a teacher's sense of general self-efficacy (outcome expectancy) and personal competence (efficacy expectation). Forty-six special education teachers of mildly handicapped students completed a demographic questionnaire measuring items such as student type, socioeconomic status of students, degree, number of years employed, sex, age, school level, pupil enrollment, and classroom structure. Results indicate no significant correlation between general efficacy and the variables analyzed; however, several of the variables significantly correlated with personal efficacy. Number of years employed, school level, class size, teacher role, and administrative support were significantly correlated with personal efficacy. A teacher's sense of personal efficacy appears to be elevated by observable student gains. Administrative support, in the form of a uniform standard for judging students and smaller classes, tends to correlate to personal feelings that their efforts will result in positive outcomes for their students. Finally, the author found that an increased level of personal self-efficacy is found in less experienced teachers and probably due to "youthful enthusiasm and idealism" (Safran, 1985, p. 66).

Soodak and Podell (1997) explored the self-efficacy beliefs of pre-service and currently practicing elementary and secondary school teachers. The participants, 626 New York metropolitan teachers, completed the TES (Gibson & Dembo, 1984) and a

demographic questionnaire. The results of this study indicate that elementary teachers' beliefs about their own effectiveness (personal efficacy) evolve in the course of their teaching career. Findings suggest that an elementary teacher's feelings of personal efficacy are highest during the pre-service and student teaching portions of training. In the first years of teaching, however, their sense of their own effectiveness drops dramatically. Gradually, over the course of a teaching career, elementary teachers recover their confidence, although, never to pre-service levels. Secondary teachers progress in a similar manner; however, their patterns are far less dramatic and not statistically significant. These findings highlight the vulnerability of novice teachers and the importance of teacher educators and school administration in developing realistic expectations and providing meaningful teaching experiences and ample support during their first years of teaching (Soodak & Podell, 1997).

Researchers have also explored the relationship between the multi-dimensional construct of teacher efficacy and the different instructional and behavioral practices of teachers. Allinder (1994) surveyed 200 special education teachers of elementary students with specific learning disabilities, mild mental difficulty, or behavior disorders. The study addressed two questions: (1) the extent to which there is a relationship between teacher efficacy and instructional components, namely, instructional experimentation, a business-like approach, and assuredness, and (2) type of service a special educator provided. Results indicate that associations between the facets of efficacy and instructional practices emerged. Personal efficacy was significantly related to each of the instructional



practice components, indicating teachers who had a stronger belief in their ability were more likely to try different ways of teaching, be organized and structured in their instruction, and confident and enthusiastic about teaching. Teaching efficacy, a general efficacy belief, was related to assuredness, or confidence and enthusiasm, about teaching. The second research question relating to service was not significantly correlated with either facet of efficacy (Allinder, 1994).

A teacher's sense of efficacy appears to be related to the teacher's classroom management and control strategies. Ashton and Webb (1986) using a multi-dimensional measure of teacher efficacy developed by the Rand Cooperation (Berman & McLaughlin, 1977), discovered that secondary school teachers rated low in efficacy were more controlling and punitive in their approaches to classroom management. In contrast, teachers rated high in efficacy were more likely to be friendly, relaxed, and trusting of students. Misbehavior was less frequent and typically handled in a much more positive manner. Teachers that are more efficacious are also more likely to adopt change proposals associated with formal innovations and staff development programs (Berman & McLaughlin, 1977; Rose & Medway, 1981). Rose and Medway (1981) developed a scale designed to measure teachers' generalized expectancies for control over student success or failure in the classroom. These authors also found that their instrument predicted teachers' behaviors in the classroom, including their willingness to adopt a new instructional technique following an in-service training. Significant associations were

discovered between teachers' control beliefs and teachers' management of the classroom environment.

Woolfolk et al. (1990) also explored the relationship between teachers' sense of efficacy and classroom management approaches. Fifty-five teachers in 40 Hebrew supplemental schools completed questionnaires measuring self-efficacy, pupil control ideology, problems in school, and student motivation. Results indicate that the two dimensions of teacher efficacy (personal efficacy and teacher efficacy) show different patterns of relationships with measures of teacher beliefs about control, management, and motivation. Individual confidence in one's instructional abilities (personal efficacy) is related to more humanistic attitudes about classroom control. An optimistic belief that all students can be taught (teacher efficacy) was related to both humanistic beliefs about pupil control and a greater tendency to support student autonomy (Woolfolk et al., 1990).

Another area of teacher efficacy research is that of its relationship to referral to special education. Meijer and Foster (1988) explored the effect of teachers' sense of self-efficacy and referral chance in a sample of primary school teachers in the Netherlands. The authors used a measure of self-efficacy, the Self-Efficacy Scale, which is a revised version of the Dutch Teacher Self-Efficacy Scale (Span, Abbring, & Meijer, 1985), based on the TES (Gibson & Dembo, 1984). Consistent with common efficacy research practice, teachers were provided with a hypothetical case vignette concerning a child demonstrating a learning problem, a behavior problem, or both a learning and behavior problem. Participants were asked whether this child "would pose a problem for providing

adequate education” (p. 380) and the likelihood they would refer the child to special education. Results of this study indicated teachers with a higher sense of self-efficacy were less likely to choose to refer a hypothetical child to special education (Meijer & Foster, 1988).

In a similar study, Soodak and Podell (1993) explored whether a teacher’s sense of efficacy affected his or her referral rate of students with behavior problems. Both special and general education teachers read hypothetical scenarios concerning a boy displaying a behavior problem, a learning problem, or both types of problems. Teachers completed the TES and then indicated the appropriateness of the child’s current educational placement and the degree to which they agreed the child should be referred to special education. Results suggested a negative correlation between a teacher’s sense of efficacy and willingness to refer a child exhibiting behavior problems. Regular education teachers with a high sense of personal efficacy believed that the child’s placement was appropriate, while teachers with a low sense of personal efficacy believed placement was not appropriate. Special education teacher’s sense of personal efficacy did not affect their judgments of the appropriateness of placement. Results also found that students with both learning and behavior problems were more likely to be referred to special education than students with only a behavior or learning problem (Soodak & Podell, 1993).

#### *General Knowledge of Behavioral Principles*

One of the first studies that explored the concept of teacher knowledge was conducted by Lambert (1976). She discovered that teachers were typically unable to



operationally define problem behaviors, had a paucity of knowledge of behavioral principles and intervention strategies, and relied primarily on global solutions to all problems. This lack of content and process knowledge by teachers creates a difficult environment for consulting school psychologists, and those operating under the assumption that teachers have a depth of knowledge will be consigned to poor results and dissatisfied consumers (Hagen, Gutkin, Wilson, & Oats, 1998).

Researchers have just recently begun to measure, control, or manipulate rater variables such as knowledge of behavior interventions, past experience with treatments, and type of education or training (Elliott, 1988). Reimers et al.'s (1981) understanding component of their treatment acceptability model suggests that improved treatment acceptability and potentially increased use may be facilitated through increased familiarity with basic behavioral principles. Several researchers (e.g., Jeger & McClure, 1979; McMahon, Forehand, & Griest, 1981) suggest that more positive attitudes toward behavioral techniques follow increases in knowledge of such techniques.

Based on this assumption, McKee (as cited in Elliott, 1988) set out to replicate Kazdin's initial investigations of treatment acceptability with specific behavioral interventions. McKee's participants were teachers with varied knowledge of behavioral principles. McKee utilized the TEI and Semantic Differential (Osgood et al., 1957) to assess acceptability judgments to four treatments (reinforcement of incompatible behavior, positive practice, time-out from reinforcement, and medication). Results supported McKee's hypothesis, specifically teachers with greater knowledge of



behavioral principles rated all treatments as more acceptable than did those teachers in the low-knowledge group.

Clark and Elliott (1988) evaluated 133 teachers' knowledge of behavioral principles as a component of treatment strength and its impact on acceptability ratings. Knowledge was measured with the Knowledge Assessment and Intervention Use Assessment and acceptability was rated on the Behavior Intervention Rating Scale (Von Brock, cited in Elliott, 1988; Von Brock & Elliott, 1987) after the participants read written case vignettes. Results indicate moderate correlations between teacher's knowledge and their treatment acceptability. Overall, in school based settings, data suggests that more knowledge of behavioral principles is predictive of higher acceptance for behavioral treatments.

In settings other than schools, the results have not been as clear. Rasnake, Martin, Tarnowski, and Mulick (1993) examined knowledge of direct-care staff employed at an intermediate care facility for non-ambulatory adults with severe or profound mental retardation. Staff members completed a 25-item measure of general knowledge of behavioral principles. After reading a case vignette concerning an adult with severe mental retardation exhibiting self-injurious behavior, staff members rated the acceptability of six behavioral interventions. Results indicated that staff demographics, such as age and education attainment correlated with higher acceptability ratings, while general knowledge did not.

These previous studies explored general knowledge of behavioral principles and their relationship to judgments of acceptability. However, Singh and Katz (1985) explored the relationship of knowledge of specific interventions, detailed information about the use of three child behavior therapy techniques (differential reinforcement of incompatible behavior, positive practice overcorrection, and time-out from reinforcement), on the acceptability of those techniques. Participants were 96 first year undergraduate students. These students received several lectures on the specifics of these interventions and results indicate a significant relationship between specific information and acceptability ratings. “More importantly, the results also show that these ratings can be easily modified by a relatively straightforward educational intervention” (p. 384). Others have also reported improved acceptability ratings following dissemination of efficacy data (Clark & Elliott, 1988; Kazdin, 1981). Specific knowledge of interventions may be a more important determinant of treatment acceptability than the general principles on which they are based (Finn & Sladeczek, 2001).

### *Causal Beliefs*

Clark and Peterson (1986) argue that the types of theories that have the most significant and far-reaching implications are those that focus on the general causes of human behavior. Heider (1958) was the first to propose a psychological theory of attribution. He discussed what he termed naïve or commonsense psychology, in which individuals attempted to understand other people’s behavior by piecing together information until they arrive at a reasonable explanation or cause. Heider explained that

there is a strong individual need to understand events by attributing them to another individual's disposition or to stable characteristics of the environment. The area of teachers' causal attributions has been studied extensively (Clark & Peterson, 1996; Guttman, 1982; Hughes, 1992; Weiner, 1974; Rohrkemper & Brophy, 1983). Several studies have indicated that teachers are more likely to endorse factors external to them as the cause of student misbehavior (Christenson, Ysseldyke, Wang, & Algozzine, 1983; Guttman, 1982; Medway, 1979; Vernberg & Medway, 1981).

Medway (1979) explored teacher attributions related to student discipline referrals. Teachers were asked to attribute causality for the cited referral problem. Teachers generally attributed academic problems to student ability factors and attributed behavioral problems to home factors. Vernberg and Medway (1981) also explored the concept of teacher attribution and similarly found that teachers tended to attribute home factors for the leading cause of misbehavior. The authors identified self-controllable child characteristics as the second leading cause. These studies described, and others cited, indicate that teachers generally attribute student misbehavior to factors within the student or to others in the student's life. Rarely do teachers ascribe student misbehavior to teachers' own attempts to prevent, intervene, or punish misbehavior (Hyman, Winchell, & Tillman, 2001).

Teachers and school psychologists often work together to develop appropriate behavioral interventions and these plans frequently are undermined as a result of conscious or unconscious resistance manifested by the teacher's failure to maintain



treatment integrity (Hyman et al., 2001). The consultative relationship between school psychologists and teachers is an area where resistance is of concern. Several researchers address the concept of resistance within the context of treatment acceptability and its relationship to a variety of factors, including goodness of fit between attitudes, values, understanding of the causes of problem behavior, and intervention strategy (Conoley, Conoley, Ivey, & Scheel, 1991; Zins & Erchul, 2002). As noted, resistance may be based on a mismatch between interventions provided by the consultant and the individual teacher's causal beliefs and ideology. Resistance, also called lack of treatment acceptability, is also a contributing factor in the lack of treatment integrity (Hyman et al., 2001). Teacher attribution research provides evidence that teachers' idiosyncratic beliefs, attitudes, and behaviors cannot be ignored in consultation, and it is these beliefs that form the basis for much of the resistance that is reported, both anecdotally and in the literature (Hyman et al., 2001).

The Teacher Variance Approach (TVA) was developed by Hyman, Dahbany, Blum, Weiler, Brooks-Klein, and Pokalo (1997) to combat teacher resistance and stresses that teacher views about children vary. The basis of teacher variance is the belief that effective discipline and intervention occurs best when teachers use theory-driven approaches that match their own value systems. Teacher variance is based on five theoretical approaches to preventing, diagnosing, and remedying student misbehavior (Hyman et al., 1997). This model provides a powerful solution to the problem of teacher resistance (Hyman et al., 2001). The Teacher Variance Training Method (TVTM) allows



a consultant to match a teacher's causal beliefs about misbehavior to the most effective intervention method, thus complementing the teacher's beliefs and improving the chances of treatment acceptance. Teacher Variance theory stresses the importance of goodness of fit between consultant and consultee (Hyman et al., 2001).

The five theoretical perspectives included within TVTM are: (1) Behavior/Cognitive-Behavioral, (2) Psychodynamic/Interpersonal, (3) Humanistic, (4) Ecological/Systems, and (5) Biophysical (Hyman et al. 1997). Hyman and colleagues (1997) used four specific criteria to select each of the five theories. To be included a theory must: use similar methodologies for determining the underlying concepts and for studying behavior and misbehavior, share a common view for explaining behavior and misbehavior, share a common origin, and propose solutions to misbehavior that are consistent with the theory.

According to Hyman et al. (1997), the underlying assumption of the Behavioral/Cognitive-Behavioral theory is that behavior, thoughts, feelings, and emotions are learned according to principles of reinforcement and punishment. Diagnostic endeavors typically include problem identification, identifying target behaviors, antecedents, consequences, and replacement behaviors. Interventions include reinforcement, group contingencies, contracts, reinforcement schedules, and copious amounts of data collection (baseline and treatment).

The Psychodynamic/Interpersonal model of TVTM assumes that behavior and personality are a function of internal, inherent drives and motivations in interactions with

significant others, developmental stages, and individual life experiences (Hyman et al., 1997). This approach is rooted in the works of Sigmund Freud (1933) and later Anna Freud's (1965) work with school children (cited in Hall, 1979). The goals of this model are to help the students gain insight into their problems, increase ego strength and self-esteem, and develop emotionally appropriate impulse expression. The techniques used in this model are psychotherapy, counseling, psychodrama, and staff changes.

“The Humanistic approach within the teacher variance model comprises a constellation of beliefs that intertwine with philosophy, psychology, history, religion, politics, ethics, and psychobiological research” (Hyman et al., 1997, p. 137). All individuals are born with a “tabula rasa” (blank slate) with an inherent capacity for empathy, goodness, and strivings for competence and self-actualization. Diagnostic considerations in the areas of unmet needs, demands for conformity, and feelings of worth are explored in the Humanistic model. Interventions include open education, democracy, empowerment, and cooperation rather than competition.

The underlying theory of the Biophysical model is that behavior is greatly influenced by brain structure and chemistry, genetic programming, and health status (Hyman et al., 1997). Intervention goals related to the Biophysical model are related to maintaining the optimum health of the student through medication and drug therapies, nutrition plans, and other specific therapies (i.e., speech therapy, physical therapy, occupational therapy).

The Ecological/Systems model of TVTM assumes personality and behavior are a function of the interaction of all ecological and interpersonal forces that impact individuals (Hyman et al., 1997). Diagnostic implications are viewed in the areas of consistency of behavior within a system, group behavioral norms, class ecologies, and teacher behavior and style. Areas of intervention include: climate assessment, conflict resolution, class control techniques, and appropriate curriculums.

The Teacher Variance Training Method (TVTM) and its components are important tools to assist in establishing compatibility between consultant and consultee (Hyman et al., 2001). It provides a method by which a consultant can identify attitudinal beliefs about the nature and causes of student behavior and misbehavior and then match a recommended intervention type to these philosophies and beliefs. This approach also allows for the determination of inconsistencies between perceived causes of behavior, actual interventions, interventions which may be used, and ideal interventions (Hyman et al., 2001). By complementing a teacher's attitudinal beliefs, a treatment is more likely to be accepted. Matching teacher beliefs and intervention type will result in greater acceptance and is consistent with Wolf's (1978) original idea that if participants "like" the proposed intervention they may be more likely to attempt and carry out that intervention.

The past research discussed in the present chapter reveals a focus on specific teacher characteristics and how each individually may relate to treatment acceptability or an associated subject such as decision to refer for special education services. However,

this research reveals a lack of focus on multiple teacher characteristics and treatment acceptability which the present study examined by exploring the relationship of teacher efficacy, general knowledge of behavioral principles, causal attributes, and acceptability of behavioral interventions.



## CHAPTER III

### METHODOLOGY

The use of behavioral interventions in school settings has been shown to be efficacious in reducing disruptive classroom behaviors and in certain situations these interventions are legally mandated. Treatment acceptability or the appropriateness of the treatment is an initial step in treatment implementation and an important area of concern for those consulting with classroom teachers. Specific teacher characteristics have been shown to influence teacher classroom management behavior. The present study investigated how a teacher's sense of self-efficacy, general knowledge regarding basic behavioral principles, and fundamental beliefs about the causes of student behavior predicted their probability of accepting specific behavioral interventions.

#### *Participants*

Initially, general education and special education teachers from a suburban school district, Mansfield Independent School District, were asked to participate. They were solicited during the district's curriculum conference at the end of the school year. Mansfield ISD is a suburban school district in the Dallas-Ft Worth, Texas area with an enrollment of approximately 23,000 students. This study was also expanded to other teachers in the state of Texas via an online survey. Participant did not receive compensation for their participation, but were enrolled in a drawing for \$50.00 gift

certificate as incentive to participate. These sampling methods allowed for the collection of data from 198 participants; however 36 individuals did not complete the survey and were removed from further analyses, leaving a final sample of 162 respondents in the final analyses with 100 working as general education teachers and 62 working as special education teachers.

### *Instrumentation*

*Intervention Rating Profile (IRP).* The IRP was utilized to measure teacher's acceptability of the intervention. The IRP consists of twenty statements that are rated on a 6-point Likert-type scale ranging from 1 (strongly disagree) to 6 (strongly agree). These items are summed to yield an overall acceptability rating with higher scores suggesting greater acceptability; conversely lower scores indicate lesser acceptability. The IRP has been used primarily with school personnel in treatment acceptability studies (Witt, Martens, & Elliott, 1984). There is ample research evidence documenting the psychometric properties of the IRP (e.g., Witt et al., 1984; Witt & Martens 1983). Reliability estimates indicate good internal consistency. Two studies have focused on the IRP's stability across the individual questions and underlying characteristics of this measuring instrument. Witt and Martens (1983) asked a group of 180 preservice teachers and student teachers to rate the acceptability of six behavioral interventions (praise, ignoring, response cost, token economy, time out, and positive reinforcement). A Cronbach's alpha of .89 was reported indicating sufficient reliability. A similar coefficient of .85 was reported based on the responses of 159 college students who

completed the IRP as part of a study assessing the impact of treatment acceptability judgments on issues of liability and risk management in school psychology (Mellar, Martens, & Hurwitz, 1990). These studies demonstrate the IRP's profile has sufficient reliability.

Validity efforts have focused on factor analysis using samples of classroom teachers. Results from a principal components analysis of teacher responses on the IRP reveal a general acceptability factor, overall acceptability, accounting for 41% of the variance (Witt & Martens, 1983). Four secondary factors were also identified.

A correlation of .86 was cited between the IRP and the Evaluation Scale of the Semantic Differential (Osgood, Suci, & Tannenbaum, 1957) providing evidence of the measure's validity. This study also demonstrated the measure's ability to discriminate among treatments. Results indicate that the IRP effectively discriminates between various treatments.

*Teacher Efficacy Scale (TES).* The TES was utilized to measure a teacher's perceived self-efficacy. This is a 16-item version of Gibson and Dembo's Teacher Efficacy Scale (1984) that was reduced from the original thirty items. This reduction was due to the 16-item version achieving adequate reliability at .79. Gibson and Dembo administered the 30-item scale to 208 elementary school teachers. A principal components factor analysis yielded a 16 item scale with two factors, Teaching Efficacy (TE) and Personal Teaching Efficacy (PTE). Measures of internal consistency revealed a



Cronbach's alpha of .75 for the TE scale and .78 for the PTE scale. Total item reliability for the 16-item scale was high with a coefficient alpha of .79 (Gibson & Dembo, 1984).

A multi-trait, multi-method analysis was conducted to assess the scale's validity. Convergent validity was obtained by administering the TES with another measure of teacher efficacy, two measures of verbal ability, and two measures of flexibility to 55 teachers in graduate education courses (Gibson & Dembo, 1984). One measure of each of the three constructs was open-ended and the other measure of the construct was close-ended. Discriminant validity was demonstrated in the correlation between the two methods of efficacy was higher than the correlation between efficacy and verbal ability and efficacy and flexibility.

*Knowledge of Behavioral Principles as Applied to Children (KBPAC).* Verbal understanding of basic behavioral principles was measured with the KBPAC. The KBPAC is a 50-item multiple forced-choice test designed to assess the understanding of the application of basic behavioral principles with children (O'Dell, Tarler-Benlolo, & Flynn, 1979). This instrument has been useful in research and educational assessment of general behavioral knowledge.

The questions of the KBPAC were drawn from four textbooks and represent specific behavioral principles. The questions avoid behavioral terminology and attempt to represent practical situations. The KBPAC appears to possess satisfactory content validity and good internal consistency (O'Dell et al., 1979). The authors posit that the content validity of this measure is based on the assumption that the content of the



textbooks represent the set of behavioral principles most readily utilized by persons who work on behavioral programs with children. Two samples of respondents completed this instrument and analyzed data provide a Kuder-Richardson reliability coefficient of 0.94 and a split-half correlation of 0.93, providing the basis for excellent internal consistency (O'Dell et al., 1979).

*Teacher Variance Inventory-IV (TVI-IV).* The TVI-IV (Winchell & Hyman, 2001) was used to evaluate a teacher's perception of both the causation and preferred remediation of student misbehavior. The TVI-IV is a self-report measure based on Teacher Variance theory, a multidimensional model for teacher consultation and training. The TVI-IV consists of 75 items equally distributed among three sections: Causes, Actual Interventions, and Ideal Interventions. The TVI-IV consists of five neutral scenarios. After reading a scenario and indicating their agreement with various causes of behavior, teachers are then instructed to indicate agreement with possible interventions under both actual and ideal classroom conditions. Each item requires the respondent to determine both the cause and possible intervention for each given scenario. This provides a stronger rationale for linking perceived causes of behavior with the interventions intended to modify that behavior (Winchell & Hyman, 2001). The interventions are framed within the five theoretical approaches of Teacher Variance theory (Humanistic, Psychodynamic/Interpersonal, Biophysical, Behavioral, and Ecological/Systems).

Analyses from 250 participants (159 teachers and 91 psychologists) were used to assess the reliability and validity of the TVI-IV (Winchell & Hyman, 2001). The internal

consistency reliability among the 75 items for the entire TVI-IV was .926. Cronbach's alpha reliabilities for each of the three sections (Causes, Actual Interventions, and Ideal Interventions) were .871, .875, and .881, respectively. These analyses demonstrate that the TVI-IV possesses satisfactory internal reliability. Test-retest reliability was determined using 21 teachers and 5 school psychologists who initially completed the TVI-IV and then completed the measure again after a two week interval. A Pearson's  $r$  correlation was performed on all 75 items of the TVI-IV, yielding adequate test-retest reliability (Winchell & Hyman, 2001).

Construct validity was demonstrated for the TVI-IV through three separate Principle Components Analyses (PCA) of each section (Causes, Actual Interventions, and Ideal Interventions). Each exploratory PCA was followed by varimax rotation. Results from a PCA of teacher responses to the causes of inappropriate behavior reveal seven factors consistent with the theoretical orientation of the TVI-IV. These seven factors accounted for more than half of the variance (59.59%). PCA of teacher responses to actual interventions again demonstrated the seven factors consistent with this theory and these factors accounted for 60.49% of the total variance. PCA of teacher responses to ideal interventions indicated six factors accounting for more than half of the variance (59.28%). This research provides ample empirical support for the proposed theoretical basis of the items presented in the TVI-IV (Winchell & Hyman, 2001).

Construct validity was further investigated by using a measure of criterion-related validity. The orientation of the TVI-IV was compared with orientations as identified by

the Teacher Variance Attitude Scale (Cozzi, 1998). The number of matches in orientation between the Attitudes Scale and the TVI-IV were analyzed. Results indicated a significant positive relationship between the two measures.

*Behavioral Vignette.* In accordance with the standard practice of treatment acceptability research, a hypothetical case vignette (Hayes & Havey, 2001) was utilized in this study. The case study provided a written description of an eight-year-old child exhibiting behavior difficulties, specifically noncompliance. Students with social and emotional disorders typically exhibit noncompliance to teacher requests along with numerous other disruptive behaviors (DeMartini-Scully, Bray, & Kehle, 2000). Accompanying the case vignette was a hypothetical behavior intervention, based on the precision requests program developed by DeMartini-Scully et al. (2000). Training teachers and parents to effectively issue commands and deliver consequences has been shown to increase compliance rates in children (Musser, Bray, Kehle, & Jenson, 2001).

*Demographic Information.* A demographic questionnaire was also utilized. The questionnaire gathered data related to participant sex, age, training (Typical or Alternative certification), highest educational attainment, current grade level taught, type of class taught, size of class, and number of years of experience.

### *Procedure*

Permission to use the TES, IRP, TVI-IV, and KBPAC was obtained from each of these instruments respective authors. A copy of the materials and consent forms for this study was sent to the Institutional Review Board at Texas Woman's University for a



human subjects review. This review was expedited because this study poses minimal risk and the responses were anonymous. Permission to undertake this study was also granted from the Mansfield ISD research committee.

Recruitment flyers directed participants to an internet link for an online survey. The online survey included a cover page that described the nature and purpose of the study and a consent form that was agreed upon and its documentation was provided to the researcher. A demographic questionnaire (Appendix A), case vignette (Appendix B), a hypothetical behavior intervention (Appendix C), the IRP (Appendix D), TES (Appendix E), KBPAC (Appendix F), and TVI-IV (Appendix G) were also included in this survey.

First, participants completed a consent form, then they answered demographic questions including: sex, age, training, educational level, grade taught, type of class, class size, and number of years of experience. Second, they read a case vignette and recommended behavioral intervention plan. Third, they completed the IRP in regards to the suggested plan. They then completed the TES. Fifth, teachers completed the KBPAC and finally, they completed the TVI-IV.

### *Statistical Analysis*

Associations between the demographic variables and the dependent measures, acceptance and knowledge, were tested to determine possible predictors in the multiple regression analyses. Correlations between the continuous demographic variables (age, grade assignment, typical class size, years teaching, and years in current position) and acceptance and knowledge scores were conducted. Independent samples *t* tests were



conducted for the categorical variables, gender and type of teacher, on acceptance and knowledge. One-way Analyses of Variances (ANOVAs) were conducted on acceptance and knowledge between the levels of the categorical variables: education level and teacher assignment. Demographic variables with significant associations to the dependent variables were included as possible predictors in the multiple regression analyses mentioned below.

The present study examined the following hypotheses with the following tests:

*Hypothesis 1.* Teacher efficacy, knowledge of general behavioral principles, and causal beliefs will predict the acceptability of behavioral interventions, in that an increase in these characteristics will lead to an increase in the treatment acceptability of behavioral interventions.

A stepwise multiple regression of teacher efficacy, knowledge, and causal beliefs on treatment acceptability was conducted.

*Hypothesis 2.* Special educators and general educators will differ in their levels of behavioral knowledge, in that special educators will have higher levels of knowledge of general behavioral principles.

A one-way ANOVA between special and general educators on knowledge was conducted.

*Hypothesis 3.* Special educators and general educators will differ in their levels of acceptability of behavioral interventions, in that special educators will have higher levels of acceptance of behavioral interventions.

A one-way ANOVA between special and general educators on acceptance was conducted.

*Hypothesis 4.* Teachers who teach a smaller number of students will be more likely to accept behavioral interventions than teachers who teach a larger number of students.

A Pearson's Product Moment Correlation between number of students and acceptance was conducted.

## CHAPTER IV

### RESULTS

Emotional and behavioral problems of students make it very difficult for classroom teachers to achieve a positive and productive classroom (Hardman & Smith, 2003). The Behavioral Model has been the most effective model for producing behavior change and preventing the development of maladaptive behaviors (Wielkiewicz, 1995). Behavioral approaches in schools have been very effective, and, in certain special education situations, are mandated by law. The present study explored specific teacher characteristics related to the acceptability of behavioral interventions. Specifically, this study investigated how a teacher's sense of self-efficacy, general knowledge regarding basic behavioral principles, and fundamental beliefs about the causes of student behavior predicted their probability of accepting specific behavioral interventions with an online survey of special education and general education teachers.

#### *Demographic Characteristics*

One hundred and sixty-two participants completed the online survey. The majority of respondents were female (80.9%) and trained in general education (61.7%). Sixty-two (38.3%) were trained as special education teachers. More than half of the participants had a Bachelor's degree (69.8%). Only 30.2% of the sample reported having an alternative certificate (see Table 1).

Table 1

*Frequencies and Percentages of Demographic Variables (N = 162)*

Variable	Frequency	%
Gender		
Male	31	19.1
Female	131	80.9
Trained		
Special Education	62	38.3
General	100	61.7
Education		
Bachelor's	113	69.8
Masters	49	30.2
Alternative Certificate		
No	113	69.8
Yes	49	30.2

Note: Frequencies not equal to 162 and percentages not equal to 100, reflect missing data.

The majority of the teachers in the present sample taught all content areas (35.8%), followed by science (24.7%), administrative (16.0%), English/Language Arts (10.5%), and Social Sciences (7.5%). Math was the least represented content area with only 5.6%. The most represented grade level was sixth grade with 13.0%, followed by twelfth grade (11.7%), seventh grade (11.1%), eleventh grade (10.5%), and kindergarten (10.5%) (see Table 2).



Table 2

*Frequencies and Percentages of Classroom Type and Grade Level (N = 162)*

Variable	Frequency	%
Classroom Type		
Administrative	26	16.0
All Areas	58	35.8
English/Language Arts	17	10.5
Math	9	5.6
Science	40	24.7
Social Science	12	7.4
Grade Level		
Kindergarten	17	10.5
1	7	4.3
2	9	5.6
3	9	5.6
4	7	4.3
5	8	4.9
6	21	13.0
7	18	11.1
8	5	3.1
9	9	5.6
10	16	9.9
11	17	10.5
12	19	11.7

Note: Frequencies not equal to 162 and percentages not equal to 100, reflect missing data.

The average age of participants was 40 years ( $M = 40.10$ ,  $SD = 11.14$ ) and their ages ranged from 21 to 63 years old. Participants reported having an average class size of 15 students ( $M = 15.34$ ,  $SD = 7.71$ ) and ranged from 4 to 35 students. The number of

years participants taught ranged from 1 to 40. In addition, teachers reported that they had an average of six years in their current position ( $M = 5.82$ ,  $SD = 6.02$ ), with a range from 1 to 31. Teachers also reported an average of 49 hours of training in teacher education hours ( $M = 48.96$ ,  $SD = 38.07$ ) with a range of 0 to 160 hours, as well as an average of 11 hours of training in special education hours ( $M = 10.69$ ,  $SD = 13.90$ ) with a range of 0 to 60 hours (see Table 3).

Table 3

*Descriptive Statistics of Continuous Demographic Variables (N = 162)*

Variable	Mean	SD	Minimum	Maximum
Age	40.10	11.14	21	63
Class Size	15.34	7.71	4	35
Years Teaching	12.78	10.27	1	40
Years in Current Position	5.82	6.02	1	31
Teacher Education Hours	48.96	38.07	0	160
Special Education Hours	10.69	13.90	0	60

### *Teacher Variance Inventory*

The Teacher Variance Inventory was used to evaluate a teacher's perception of both the causation and preferred remediation of student misbehavior. The TVI-IV items are equally distributed among three sections: Causes or Importance, Actual Interventions, and Ideal Interventions. The TVI-IV consists of five neutral scenarios. After reading each of the five neutral scenarios, participants indicate their agreement with the five intervention types, which are framed within the five theoretical approaches of Teacher Variance Theory (Humanistic, Psychodynamic/Interpersonal, Biophysical, Behavioral, and Ecological/Systems). Table 4 shows the average scores of the five intervention types for their importance ratings, as well as their actual and ideal intervention ratings. For all teachers, behavioral interventions were rated with the highest importance ( $M = 3.76$ ,  $SD = .59$ ), followed by ecological interventions ( $M = 3.46$ ,  $SD = .60$ ). For the actual intervention scenarios, behavioral interventions were also rated as the most effective ( $M = 3.88$ ,  $SD = .58$ ), followed by psychodynamic interventions ( $M = 3.34$ ,  $SD = .55$ ). For the ideal scenarios, behavioral interventions were also rated as the most effective ( $M = 3.93$ ,  $SD = .58$ ), followed by ecological interventions ( $M = 3.82$ ,  $SD = .59$ ).

For each of the neutral scenarios participants were also asked to pick which of the five intervention types they considered the best choice of an intervention for that scenario. From these five "best choices," each participant was categorized into one of the five intervention categories based on which intervention type they chose the most often. In the event that two intervention types were chosen, a hybrid category was created, as

well as an “all” category, which was created for those few individuals who chose all five intervention types equally. Table 5 shows the frequencies and percentages of participants’ “best choice” code for the importance of the intervention, as well as the actual and ideal situations. The most represented category was behavioral for the importance (34.0%), actual situation (45.1%), and the ideal situation (30.2%).

Table 4

*Teacher Variance Inventory Demographic Variables (N = 162)*

<u>Factors</u>	<u>Mean</u>	<u>SD</u>	<u>Minimum</u>	<u>Maximum</u>
Importance				
Ecological	3.46	.60	1.00	5.00
Behavioral	3.76	.59	1.06	5.00
Humanistic	3.35	.61	1.20	4.60
Psychodynamic	3.34	.55	1.40	4.40
Biophysical	3.17	.56	1.20	5.00
Actual				
Ecological	3.40	.58	1.00	5.00
Behavioral	3.88	.58	1.40	5.00
Humanistic	3.42	.59	1.40	5.00
Psychodynamic	2.79	.58	1.40	4.60
Biophysical	2.54	.55	1.20	4.60
Ideal				
Ecological	3.82	.59	1.20	5.00
Behavioral	3.93	.59	1.40	5.00
Humanistic	3.67	.62	1.40	4.80
Psychodynamic	3.25	.72	1.40	4.60
Biophysical	2.96	.75	1.00	4.80



Table 5

*Teacher Variance Inventory Frequency and Percentage of Best Choice*

	<i>Importance</i>		<i>Actual</i>		<i>Ideal</i>	
	Freq	%	Freq	%	Freq	%
Ecological	33	20.4	37	22.8	43	26.5
Behavioral	55	34	73	45.1	49	30.2
Humanistic	11	6.8	9	5.6	20	12.3
Psychodynamic	8	4.9	0	0	17	10.5
Biophysical	16	9.9	5	3.1	5	3.1
Ecological/Behavioral	8	4.9	24	14.8	11	6.8
Humanistic/Behavioral	6	3.7	9	5.6	9	5.6
Humanistic/Biophysical	6	3.7	1	0.6	0	0.0
Humanistic/Ecological	4	2.5	3	1.9	1	0.6
Humanistic/Psychodynamic	1	0.6	0	0	3	1.9
Behavioral/Psychodynamic	3	1.9	0	0	0	0.0
Ecological/ Biophysical	5	3.1	1	0.6	0	0.0
Behavioral/ Biophysical	1	0.6	0	0	1	0.6
All	5	3.1	0	0	1	0.6

Note: Frequencies not equal to 162 and percentages not equal to 100, reflect missing data.

As shown in Table 6, Pearson's Product Moment Correlations showed that the relationships between the importance scores for the five interventions were significant and positive, all  $r_s$  (162),  $p < .01$ . These correlations show that increased importance on one intervention type was related to increased importance on the other intervention types.

Table 6

*Pearson's Product Moment Correlations between Importance Ratings of TVI Interventions (N = 162)*

	<u>Behavioral</u>	<u>Humanistic</u>	<u>Psychodynamic</u>	<u>Biophysical</u>
Ecological	.378**	.377**	.358**	.406**
Behavioral		.635**	.483**	.360**
Humanistic			.592**	.317**
Psychodynamic				.550**

Note: \*  $p < .05$ ; \*\*  $p < .01$

As shown in Table 7, Pearson's Product Moment Correlations showed that the relationships of the effectiveness between the interventions in actual situations were significant and positive, except for the relationship between the biophysical and behavioral interventions,  $r(162) = .070$ ,  $ns$ . These significant correlations show that increased actual effectiveness on one intervention was related to increased actual

effectiveness on the other interventions, except between the biophysical and behavioral interventions.

Table 7

*Pearson's Product Moment Correlations between Actual Effectiveness Ratings of TVI Interventions (N = 162)*

	<u>Behavioral</u>	<u>Humanistic</u>	<u>Psychodynamic</u>	<u>Biophysical</u>
Ecological	.571**	.481**	.397**	.412**
Behavioral		.584**	.206**	.070
Humanistic			.496**	.317**
Psychodynamic				.729**

Note: \*  $p < .05$ ; \*\*  $p < .01$

Similar to the relationships found for importance of the interventions, Pearson's Product Moment Correlations showed that the relationships between the effectiveness ratings in an ideal situation for the five interventions were significant and positive, all  $r$ s (162),  $p < .01$ . These correlations show that increased effectiveness in an ideal situation for one intervention was related to increased effectiveness on the other interventions (see Table 8).

Table 8

*Pearson's Product Moment Correlations between Actual Effectiveness Ratings of TVI Interventions (N = 162)*

	<u>Behavioral</u>	<u>Humanistic</u>	<u>Psychodynamic</u>	<u>Biophysical</u>
Ecological	.542**	.452**	.565**	.479**
Behavioral		.653**	.297**	.258**
Humanistic			.205**	.250**
Psychodynamic				.758**

Note: \*  $p < .05$ ; \*\*  $p < .01$

As shown in Table 9, Pearson's Product Moment Correlations showed that the relationships between the importance ratings and the effectiveness ratings in an actual situation for the five interventions were significant and positive, all  $r_s(162)$ ,  $p < .05$ , except for the relationships between the importance of the behavioral intervention with the actual effectiveness of the psychodynamic intervention,  $r(162) = .116$ , *ns*, and the actual effectiveness of the biophysical intervention,  $r(162) = .145$ , *ns*. Overall, these significant correlations show that increased importance for the different intervention types was related to an increased effectiveness for actual situations.



Table 9

*Pearson's Product Moment Correlations between TVI Importance and TVI Actual Effectiveness (N = 162)*

	<u>Importance</u>				
	<u>Ecological</u>	<u>Behavioral</u>	<u>Humanistic</u>	<u>Psychodynamic</u>	<u>Biophysical</u>
<i>Actual</i>					
Ecological	.515**	.544**	.552**	.589**	.374**
Behavioral	.356**	.456**	.490**	.477**	.340**
Humanistic	.165*	.315**	.616**	.480**	.326**
Psychodynamic	.245**	.116	.327**	.295**	.319**
Biophysical	.431**	.145	.264**	.219**	.410**

Note: \*  $p < .05$ ; \*\*  $p < .01$

Similarly, as shown in Table 10, Pearson's Product Moment Correlations showed that the relationships between the importance ratings and the effectiveness ratings in an ideal situation for the five interventions were significant and positive, all  $r_s$  (162),  $p < .01$ , except for the relationships between the ideal effectiveness of the biophysical intervention with the importance of the behavioral intervention,  $r$  (162) = .119,  $ns$ , and the importance of the humanistic intervention,  $r$  (162) = .119,  $ns$ . Overall, these

significant correlations show that increased importance for the different intervention types was related to an increased effectiveness in an ideal situation.

Table 10

*Pearson's Product Moment Correlations between TVI Importance and TVI Ideal Effectiveness (N = 162)*

	<u>Importance</u>				
	<u>Ecological</u>	<u>Behavioral</u>	<u>Humanistic</u>	<u>Psychodynamic</u>	<u>Biophysical</u>
<i>Ideal</i>					
Ecological	.543**	.357**	.372**	.479**	.318**
Behavioral	.287**	.537**	.385**	.406**	.255**
Humanistic	.231**	.278**	.458**	.437**	.294**
Psychodynamic	.307**	.287**	.344**	.401**	.371**
Biophysical	.270**	.119	.119	.236**	.391**

Note: \*  $p < .05$ ; \*\*  $p < .01$

Pearson's Product Moment Correlations also showed that the relationships between the actual and ideal effectiveness ratings for the five interventions were significant and positive, all  $r_s$  (162),  $p < .05$ , except for the relationships between the ideal effectiveness of the behavioral intervention and the actual effectiveness of the

biophysical intervention,  $r(162) = .119$ , *ns*. Overall, these significant correlations show that increased effectiveness for the different intervention types in an actual teaching situation was related to an increased effectiveness in an ideal situation for the five intervention types.

Table 11

*Pearson's Product Moment Correlations between TVI Actual and Ideal Effectiveness Ratings (N = 162)*

<i>Ideal</i>	<u>Actual</u>				
	<u>Ecological</u>	<u>Behavioral</u>	<u>Humanistic</u>	<u>Psychodynamic</u>	<u>Biophysical</u>
Ecological	.573**	.511**	.270**	.185*	.197*
Behavioral	.405**	.593**	.394**	.161*	.035
Humanistic	.336**	.451**	.630**	.449**	.268**
Psychodynamic	.337**	.300**	.193*	.381**	.347**
Biophysical	.284**	.241**	.174*	.436**	.450**

Note: \*  $p < .05$ ; \*\*  $p < .01$

### *Intervention Rating Profile*

The Intervention Rating Profile (IRP) measured teacher's acceptability of the intervention and has been used primarily with school personnel in treatment acceptability studies. A factor analysis was conducted to determine if questions statistically measured what they were conceptually intended to measure, as well as to determine if the question loadings were statistically supported.

A varimax rotated factor analysis revealed 5 factors and accounted for 83.2% of the variance. Factor 1 was made up of the items 1, 2, 3, 4, 5, 6, 7, and 8, all of which were related to the effectiveness and appropriateness of the behavioral intervention, thus this factor was titled "Appropriate/Effective Use." Factor 2 was made up of the items 11, 12, 13, 14, and 15, all of which were related to the time of the behavioral intervention, thus this factor was titled "Time Practicality." Factor 3 was made up of the items 16, 17, and 18, all of which were related to the difficulty of the behavioral intervention to the students, thus this factor was titled "Ease to Students." Factor 4 was made up of the items 19, and 20, both of which were related to the difficulty of the behavioral intervention to the teachers, thus this factor was titled "Ease to Teachers." Finally, factor 5 was made up of the items 9, and 10, both of which were related to the risk of the behavioral intervention to the students, thus this factor was titled "No Risk" (see Table 12). See Appendix D for the specific content of the IRP items.



Table 12

*Varimax Rotated Component Matrix of Intervention Rating Profile Items*

	<u>Factors</u>				
	<u>Appropriate/ Effective Use</u>	<u>Time Practicality</u>	<u>Ease to Students</u>	<u>Ease to Teachers</u>	<u>No Risk</u>
IRP Item 1	<b>.831</b>	.183	.086	.277	.086
IRP Item 2	<b>.800</b>	.115	-.028	.428	.021
IRP Item 3	<b>.711</b>	.032	.148	.166	.127
IRP Item 4	<b>.848</b>	.220	.279	-.006	.154
IRP Item 5	<b>.842</b>	.259	.240	.143	.172
IRP Item 6	<b>.804</b>	.342	.167	.078	.213
IRP Item 7	<b>.673</b>	.309	.369	-.010	.338
IRP Item 8	<b>.715</b>	.425	-.035	.022	.194
IRP Item 9	.490	.114	.232	.051	<b>.751</b>
IRP Item 10	.173	.117	.076	-.025	<b>.939</b>
IRP Item 11	.416	<b>.524</b>	.035	.214	.396
IRP Item 12	.229	<b>.848</b>	.135	-.115	.146
IRP Item 13	.090	<b>.863</b>	.293	.119	.153
IRP Item 14	.275	<b>.799</b>	.442	-.062	-.003
IRP Item 15	.446	<b>.740</b>	.225	-.033	-.033
IRP Item 16	-.035	.259	<b>.852</b>	-.084	.295
IRP Item 17	.281	.281	<b>.815</b>	.169	.010
IRP Item 18	.295	.206	<b>.848</b>	.052	.026
IRP Item 19	.277	-.043	.119	<b>.911</b>	-.016
IRP Item 20	.154	.001	-.022	<b>.939</b>	.034

Note: Bold Eigen Values represent the strongest factor loading for that item. Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 7 iterations.

Inter-item analyses were conducted to test the consistency between the items within the five subscales (see Table 13). For the eight items in the Appropriate/Effective Use subscale, Cronbach's  $\alpha = .947$ , for the five items of the Time Practicality subscale, Cronbach's  $\alpha = .905$ , for the three items of the Ease to Students subscale, Cronbach's  $\alpha = .885$ , for the two items of the Ease to Teachers subscale, Cronbach's  $\alpha = .913$ , and for the two items of the No Risk Subscale, Cronbach's  $\alpha = .864$ . These excellent inter-item reliability coefficients show that the items within each subscale are highly consistent with one another. Based on the factor analysis and inter item analyses, the items within each factor were averaged to create five subscale scores. An overall behavioral intervention acceptability score was also created from the average of all 20 items.

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Table 13

*Inter-item Reliability of Intervention Rating Profile Subscale Items (N = 162)*

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<u>Factors</u>	<u>Cronbach's <math>\alpha</math></u>
Appropriate/Effective Use	.947
Time Practicality	.905
Ease to Students	.885
Ease to Teachers	.913
No Risk	.864

---

Table 14 shows the average scores for the five IRP subscales. For all teachers, the No Risk subscale had the highest acceptability ( $M = 5.18$ ,  $SD = 1.34$ ), followed by the Ease to Teachers ( $M = 4.86$ ,  $SD = 1.31$ ) and Time Practicality ( $M = 4.85$ ,  $SD = 1.42$ ). Appropriate/Effective Use ( $M = 4.53$ ,  $SD = 1.48$ ) and Ease to Students ( $M = 4.22$ ,  $SD = 1.61$ ) had the lowest acceptability ratings.

Table 14

*Descriptive Statistics of Intervention Rating Profile Subscales (N = 162)*

<u>Factors</u>	<u>Mean</u>	<u>SD</u>	<u>Minimum</u>	<u>Maximum</u>
Appropriate/ Effective Use	4.53	1.48	2.13	7.00
Time Practicality	4.85	1.42	1.80	7.00
Ease to Students	4.22	1.61	1.67	7.00
Ease to Teachers	4.86	1.31	2.00	7.00
No Risk	5.18	1.34	2.50	7.00

Pearson's Product Moment Correlations between the IRP subscales showed that appropriate/effective use was significantly, positively correlated with the other four subscales, all  $r_s (162)$ ,  $p < .01$ , indicating that teachers who had increased acceptability for the appropriateness/effective use of the behavioral intervention, had increased acceptability scores on the other four subscales. Time practicality was significantly

positively correlated to ease to students,  $r(162) = .577, p < .01$ , and no risk,  $r(162) = .417, p < .01$ , but not to ease to teachers,  $r(162) = .095, ns$ . Increased acceptability that the behavioral intervention was time practical was also related to increased ratings that the behavioral intervention was easy to students and of little risk. Ease to students was also significantly correlated to the no risk subscale,  $r(162) = .376, p < .01$ , but not to ease to teachers,  $r(162) = .117, ns$ . Teachers who rated the behavioral intervention as easy for students, also rated it as little risk to students, but not necessarily as easy to teachers. Ease to teachers and no risk were not significantly related,  $r(162) = .111, ns$ , indicating that rating the behavioral intervention as easy for teachers, did not necessarily mean they rated the intervention as little risk for students.

Table 15

*Pearson's Product Moment Correlations between the Five IRP Subscales (N = 162)*

	<u>Time Practicality</u>	<u>Ease to Students</u>	<u>Ease to Teachers</u>	<u>No Risk</u>
Appropriate/Effective Use	.633**	.447**	.365**	.561**
Time Practicality		.577**	.095	.417**
Ease to Students			.117	.376**
Ease to Teachers				.111

Note: \*  $p < .05$ ; \*\*  $p < .01$



### *Knowledge of Behavioral Principles as Applied to Children (KBPAC)*

The KBPAC was used to assess the understanding of the application of basic behavioral principles with children. A total correct score was created for each participant from a sum of the correctly answered items. The average number of correct items was 24 ( $M = 23.75$ ,  $SD = 6.31$ ) with a range of nine to 40 correct items (see Table 16).

Table 16

*Average Knowledge of Behavioral Principles (KBPAC) Total Correct Score (N=162)*

	<u>Mean</u>	<u>SD</u>	<u>Minimum</u>	<u>Maximum</u>
Correct Responses	23.753	6.314	9.00	40.00

Nonparametric  $\chi^2$  tests of association for the correct versus incorrect answers to the 50 individual KBPAC items showed that participants were significantly more likely to have an incorrect answer than the correct answer for items 1, 2, 3, 4, 5, 6, 8, 10, 11, 20, 21, 26, 29, 34, 35, 39, 40, 44, 46, 47, 48, and 50,  $p < .05$ . Nonparametric  $\chi^2$  tests of association also showed that participants were significantly more likely to have the correct answer than an incorrect answer for the items 9, 14, 15, 16, 17, 18, 19, 22, 23, 24, 25, 28, 30, 33, 36, 37, 38, 42, 43, and 45,  $p < .05$ . Participants were not more likely to get correct or incorrect the items 7, 12, 13, 27, 31, 33, 41, and 49,  $p < .05$  (see Table 17).

Table 17

*Frequencies of Correct and Incorrect Answers to KBPAC Items*

	<u>Correct</u>		<u>Incorrect</u>		$\chi^2$	<i>p</i>
	<u>Freq</u>	<u>%</u>	<u>Freq</u>	<u>%</u>		
KBPAC item 1	28	.17	134	.83	69.37	.00
KBPAC item 2	61	.38	101	.62	9.88	.00
KBPAC item 3	48	.30	114	.70	26.89	.00
KBPAC item 4	46	.28	116	.72	30.26	.00
KBPAC item 5	52	.32	110	.68	20.77	.00
KBPAC item 6	22	.14	140	.86	85.95	.00
KBPAC item 7	84	.52	78	.48	.22	.64
KBPAC item 8	50	.31	112	.69	23.73	.00
KBPAC item 9	135	.83	27	.17	72.00	.00
KBPAC item 10	39	.24	123	.76	43.56	.00
KBPAC item 11	41	.25	121	.75	39.51	.00
KBPAC item 12	71	.44	91	.56	2.47	.12
KBPAC item 13	76	.47	86	.53	.62	.43
KBPAC item 14	128	.79	34	.21	54.55	.00
KBPAC item 15	98	.60	64	.40	7.14	.01
KBPAC item 16	83	.51	79	.49	.75	.01
KBPAC item 17	113	.70	49	.30	25.28	.00
KBPAC item 18	98	.60	64	.40	7.14	.01
KBPAC item 19	147	.91	15	.09	107.56	.00
KBPAC item 20	62	.38	100	.62	8.91	.00
KBPAC item 21	54	.33	108	.67	18.00	.00
KBPAC item 22	118	.73	44	.17	33.80	.00
KBPAC item 23	132	.81	30	.19	64.22	.00
KBPAC item 24	124	.77	38	.23	45.65	.00
KBPAC item 25	126	.78	36	.22	50.00	.00

Note: Row frequencies not equal to 162 and percentages not equal to 100, reflect missing data.

Table 17, continued

*Frequencies of Correct and Incorrect Answers to KBPAC Items*

	<u>Correct</u>		<u>Incorrect</u>		$\chi^2$	<i>p</i>
	<u>Freq</u>	<u>%</u>	<u>Freq</u>	<u>%</u>		
KBPAC item 26	17	.10	145	.90	101.14	.00
KBPAC item 27	71	.44	91	.56	2.47	.12
KBPAC item 28	133	.82	29	.18	66.77	.00
KBPAC item 29	41	.25	121	.75	39.51	.00
KBPAC item 30	100	.62	62	.38	8.91	.00
KBPAC item 31	87	.54	75	.46	.89	.35
KBPAC item 32	142	.88	20	.12	91.88	.00
KBPAC item 33	82	.51	80	.49	.03	.88
KBPAC item 34	17	.10	145	.90	101.14	.00
KBPAC item 35	14	.09	148	.91	110.84	.00
KBPAC item 36	104	.64	58	.36	13.06	.00
KBPAC item 37	99	.61	63	.39	8.00	.01
KBPAC item 38	105	.65	57	.35	14.22	.00
KBPAC item 39	40	.25	122	.75	41.51	.00
KBPAC item 40	59	.36	81	.64	11.95	.00
KBPAC item 41	72	.44	90	.56	2.00	.16
KBPAC item 42	142	.88	20	.12	91.88	.00
KBPAC item 43	105	.65	57	.35	14.22	.00
KBPAC item 44	47	.29	115	.71	28.54	.00
KBPAC item 45	97	.60	65	.40	6.32	.01
KBPAC item 46	6	.04	156	.96	138.89	.00
KBPAC item 47	48	.30	114	.70	26.89	.00
KBPAC item 48	43	.27	119	.73	35.65	.00
KBPAC item 49	75	.46	87	.54	.89	.35
KBPAC item 50	66	.41	96	.59	5.56	.02

Note: Row frequencies not equal to 162 and percentages not equal to 100, reflect missing data.

Table 18 shows the frequency who chose each of the four answer choices for each of the 50 items (Bold values in each row indicate the best answer choice for that item).

Table 18

*Frequency of Each Answer Choice for KBPAC Items*

	A	<u>Answer Choice</u>		D
		B	C	
KBPAC item 1	54	46	34	<b>28</b>
KBPAC item 2	12	<b>0</b>	61	89
KBPAC item 3	75	16	<b>48</b>	23
KBPAC item 4	47	6	63	<b>46</b>
KBPAC item 5	22	26	<b>52</b>	62
KBPAC item 6	37	28	75	<b>22</b>
KBPAC item 7	29	<b>84</b>	27	22
KBPAC item 8	6	<b>50</b>	0	106
KBPAC item 9	10	17	<b>135</b>	0
KBPAC item 10	6	111	<b>39</b>	6
KBPAC item 11	62	54	<b>41</b>	5
KBPAC item 12	16	65	10	<b>71</b>
KBPAC item 13	<b>76</b>	13	68	5
KBPAC item 14	<b>128</b>	0	7	27
KBPAC item 15	37	17	10	<b>98</b>
KBPAC item 16	6	<b>83</b>	73	0
KBPAC item 17	37	12	<b>113</b>	0
KBPAC item 18	34	19	<b>98</b>	11
KBPAC item 19	0	<b>147</b>	15	0
KBPAC item 20	43	<b>62</b>	14	43
KBPAC item 21	33	46	29	<b>54</b>
KBPAC item 22	16	<b>118</b>	17	11
KBPAC item 23	11	<b>132</b>	5	14

Note: Row frequencies not equal to 162 and percentages not equal to 100, reflect missing data. Bold values reflect the best answer choice.



Table 18, continued

*Frequency of Each Answer Choice for KBPAC Items*

	<u>Answer Choice</u>			
	A	B	C	D
KBPAC item 24	13	<b>124</b>	6	19
KBPAC item 25	3	13	20	<b>126</b>
KBPAC item 26	<b>17</b>	65	11	69
KBPAC item 27	10	55	<b>71</b>	26
KBPAC item 28	<b>133</b>	7	8	14
KBPAC item 29	41	32	<b>41</b>	48
KBPAC item 30	9	<b>100</b>	10	43
KBPAC item 31	<b>87</b>	17	51	7
KBPAC item 32	5	4	<b>142</b>	11
KBPAC item 33	7	45	<b>82</b>	28
KBPAC item 34	55	<b>17</b>	63	27
KBPAC item 35	<b>14</b>	89	24	35
KBPAC item 36	19	<b>104</b>	20	19
KBPAC item 37	<b>99</b>	14	11	38
KBPAC item 38	41	4	<b>105</b>	11
KBPAC item 39	21	<b>40</b>	46	55
KBPAC item 40	9	<b>59</b>	84	10
KBPAC item 41	10	78	<b>72</b>	2
KBPAC item 42	2	6	<b>142</b>	12
KBPAC item 43	12	28	<b>105</b>	17
KBPAC item 44	38	<b>47</b>	18	59
KBPAC item 45	17	<b>97</b>	14	34
KBPAC item 46	<b>6</b>	15	133	8
KBPAC item 47	60	<b>48</b>	17	37
KBPAC item 48	52	58	<b>43</b>	9
KBPAC item 49	<b>75</b>	37	8	42
KBPAC item 50	14	43	39	<b>66</b>

Note: Row frequencies not equal to 162 and percentages not equal to 100, reflect missing data. Bold values reflect the best answer choice.

### *Teacher Efficacy Scale*

The TES measured a teacher's perceived self-efficacy and the 16 items were divided into two subscales, teaching efficacy and personal efficacy. As shown in Table 19, personal efficacy and teaching efficacy were not significantly correlated,  $r(162) = -.097$ , *ns*. For the present sample of teachers, having high or low personal efficacy was not related to high or low teaching efficacy.

Table 19

*Pearson's Product Moment Correlations between Teacher Efficacy Subscales (N = 162)*

<i>Subscales</i>	<u>Teaching Efficacy</u>	<u>Overall TES Score</u>
Personal Efficacy	-.097	.902**
Teaching Efficacy		.342**

Note: \*  $p < .05$ ; \*\*  $p < .01$

### *Instrument Correlations*

Table 20 shows the relationships the TVI importance ratings for each of the five interventions with the five IRP subscales. Appropriate/Effective Use was significantly positively correlated to the importance of the humanistic,  $r(162) = .331$ ,  $p < .01$ , and psychodynamic,  $r(162) = .285$ ,  $p < .01$ , interventions. The time practicality subscale was also significantly positively related to these two interventions, all  $r$ s,  $p < .05$ , while the

ease to students subscale was not significantly correlated to the importance of any of the five intervention types. A significant positive correlation was also found between the ease to teachers subscale and the importance of the psychodynamic intervention,  $r(162) = .232, p < .01$ . The no risk subscale was significantly positively correlated to the importance of the ecological intervention,  $r(162) = .202, p < .01$ , and the humanistic intervention,  $r(162) = .283, p < .01$ .

Table 20

*Pearson's Product Moment Correlations between TVI Importance Ratings and IRP Subscales (N = 162)*

<u>IRP</u>	<u>Importance</u>				
	<u>Ecological</u>	<u>Behavioral</u>	<u>Humanistic</u>	<u>Psychodynamic</u>	<u>Biophysical</u>
Appropriate/ Effective Use	.085	.094	.331**	.285**	.000
Time Practicality	.133	.012	.169*	.191*	.040
Ease to Students	.133	-.092	.093	.090	.022
Ease to Teachers	-.081	.133	.112	.232**	.024
No Risk	.202**	.142	.283**	-.050	-.109

Note: \*  $p < .05$ ; \*\*  $p < .01$

The top half of Table 21 shows the relationships between the TVI actual effectiveness ratings for each of the five interventions and the five IRP subscales. Appropriate/Effective Use was significantly positively correlated to the actual effectiveness of the ecological,  $r(162) = .200, p < .05$ , behavioral,  $r(162) = .206, p < .05$ , and humanistic,  $r(162) = .240, p < .05$ , interventions. The time practicality subscale was also significantly positively related to all of the interventions, except the humanistic intervention,  $r(162) = .144, ns$ . The ease to students subscale was significantly positively correlated to only the biophysical intervention,  $r(162) = .186, p < .05$ , while the ease to teacher subscale was not significantly correlated to the actual effectiveness of any of the five intervention types. A significant positive correlation was also found between the no risk subscale and the humanistic,  $r(162) = .170, p < .05$ , psychodynamic,  $r(162) = .196, p < .05$ , and the biophysical,  $r(162) = .172, p < .05$ , interventions.

As shown in the bottom half of Table 21, the only significant correlation for effectiveness ratings of the interventions in an ideal teaching situation and the five IRP subscales was found between the No Risk subscale and the ideal effectiveness of the biophysical intervention,  $r(162) = -.174, p < .05$ . This weak (Cohen & Cohen, 1975) negative correlation indicates that individuals with increased acceptability that the behavioral intervention would not be risky to students, had decreased effectiveness to the biophysical intervention in an ideal situation.



Table 21

*Pearson's Product Moment Correlations between TVI Actual and Ideal Effectiveness and IRP Subscales (N = 162)*

	<u>Actual</u>				
	<u>Eco</u>	<u>Behav</u>	<u>Human</u>	<u>Psycho</u>	<u>Bio</u>
Appropriate/Effective Use	.200*	.206*	.240*	.141	.073
Time Practicality	.236**	.156*	.144	.212**	.172*
Ease to Student	.084	.107	.152	.147	.186*
Ease to Teacher	.075	.025	.081	.008	-.009
No Risk	.058	.074	.170*	.196*	.172*
	<u>Ideal</u>				
Appropriate/Effective Use	.049	.068	.125	-.024	-.111
Time Practicality	-.062	-.107	-.045	-.071	-.143
Ease to Students	.020	-.098	-.015	-.047	-.021
Ease to Teachers	-.004	.095	-.011	.103	.027
No Risk	-.036	.018	.099	-.087	-.174*

Note: \*  $p < .05$ ; \*\*  $p < .01$

Pearson's Product Moment Correlations between the TVI importance ratings for the five interventions and the TES efficacy scales are shown in Table 22. Personal efficacy was significantly positively correlated with the importance ratings of all five interventions, all  $r_s, p < .05$ , however teaching efficacy was not significantly correlated with any of the five importance ratings. Increased personal efficacy was related to increased importance of the various interventions. Similar findings occurred for the relationships between personal and teaching efficacy with the actual and ideal effectiveness of the five interventions (see Table 23).

Table 22

*Pearson's Product Moment Correlations between TVI Importance Ratings and TES Subscales (N = 162)*

	<u>Importance</u>				
	<u>Ecological</u>	<u>Behavioral</u>	<u>Humanistic</u>	<u>Psychodynamic</u>	<u>Biophysical</u>
<u>TES</u>					
Personal	.314**	.325**	.405**	.381**	.180*
Teaching	.048	-.041	-.067	-.055	-.045
Overall	.317**	.289**	.353**	.335**	.151

Note: \*  $p < .05$ ; \*\*  $p < .01$

Table 23

*Pearson's Product Moment Correlations between TVI Actual and Ideal Effectiveness and Teacher Efficacy Scales (N = 162)*

	<u>Actual</u>				
<u>TES</u>	<u>Ecological</u>	<u>Behavioral</u>	<u>Humanistic</u>	<u>Psychodynamic</u>	<u>Biophysical</u>
Personal	.413**	.280**	.296**	.227**	.181*
Teaching	-.002	.125	-.069	.011	-.018
Overall	.389**	.318**	.249**	.219**	.163*
	<u>Ideal</u>				
Personal	.200*	.180*	.157*	.168*	.092
Teaching	-.011	.019	-.103	-.058	-.055
Overall	.184*	.179*	.104	.134	.063

Note: \*  $p < .05$ ; \*\*  $p < .01$

Pearson's Product Moment Correlations between the IRP subscales and the efficacy subscales are shown in Table 24. Personal efficacy was significantly positively related to all of the IRP subscales, except ease to teachers, all  $r_s, p < .05$ . While increased

personal efficacy was related to increased appropriate/effective use, time practicality, ease to students, and no risk, increased personal efficacy was not related to increased ease to teacher scores. Teaching efficacy was also significantly positively related to appropriate/effective use and no risk, as well as ease to teachers, all  $r_s, p < .05$ .

Table 24

*Pearson's Product Moment Correlations between IRP and TES Subscales (N = 162)*

<i>TES</i>	<u>IRP</u>				
	<u>Appropriate/ Effective Use</u>	<u>Time Practicality</u>	<u>Ease to Students</u>	<u>Ease to Teachers</u>	<u>No Risk</u>
Personal	.264**	.319**	.240**	.098	.321**
Teaching	.160*	.110	.058	.169*	.309**
Overall	.318**	.349**	.252**	.166*	.437**

Note: \*  $p < .05$ ; \*\*  $p < .01$

As shown in Table 25, Pearson's Product Moment Correlations showed that the number of correct answers on the KBPAC was significantly positively correlated with the importance of all five interventions, all  $r_s, p < .05$ . Increased knowledge scores were related to increased ratings of importance for the five interventions. Analyses also



showed that correct answer scores were significantly positively correlated with the actual effectiveness of the ecological, behavioral, and humanistic interventions, all  $r_s, p < .05$ . Increased knowledge was related to increased actual effectiveness ratings for interventions of an ecological, behavioral, and humanistic focus. Similarly, correct answer scores were significantly positively correlated for the ideal effectiveness of the ecological, behavioral, humanistic, and psychodynamic interventions, all  $r_s, p < .05$ , but not to the biophysical intervention. Increased knowledge was related to increased effectiveness ratings in an ideal teaching situation for interventions of an ecological, behavioral, humanistic, and psychodynamic focus.

Table 25

*Pearson's Product Moment Correlations between TVI Importance, Actual and Ideal Effectiveness and Knowledge Scores (N = 162)*

	<u>Importance</u>	<u>Actual</u>	<u>Ideal</u>
Ecological	.271**	.354**	.378**
Behavioral	.329**	.194*	.260**
Humanistic	.325**	.225**	.305**
Psychodynamic	.447**	.074	.180*
Biophysical	.235**	.019	.043

Note: \*  $p < .05$ ; \*\*  $p < .01$

Correlations between the IRP subscales and knowledge scores showed that increased knowledge was significantly negatively related to ease to students,  $r(162) = -.171, p < .05$ , but significantly positively correlated to ease to teachers,  $r(162) = .192, p < .05$ , (see Table 26).

Table 26

*Pearson's Product Moment Correlations between the Five IRP Subscales and Knowledge Scores (N = 162)*

<i>IRP</i>	<u>Total Correct</u>
Appropriate/Effective Use	.124
Time Practicality	.065
Ease to Students	-.171*
Ease to Teachers	.192*
No Risk	-.030

Note: \*  $p < .05$ ; \*\*  $p < .01$

As shown in Table 27, personal efficacy was not significantly correlated to knowledge scores,  $r(162) = .106, ns$ , while teaching efficacy was significantly negatively correlated to knowledge,  $r(162) = -.166, p < .05$ . This weak negative correlation indicates that increased knowledge scores are related to decreased teacher efficacy.

Table 27

*Pearson's Product Moment Correlations between TES Subscales and Knowledge Scores (N = 162)*

<i>TES</i>	<u>Best Choice</u>
Personal	.106
Teaching	-.166*
Overall	.028

Note: \*  $p < .05$ ; \*\*  $p < .01$

### *Gender*

A one-way Multivariate Analysis of Variance (MANOVA) on the TVI importance ratings for the five intervention types between males and females did not revealed a significant multivariate test,  $F(5, 156) = 1.88$ , *ns*. Across the five intervention types, males and females did not significantly differ on importance (see Table 28).

A one-way MANOVA on the TVI effectiveness ratings for an actual situation between males and females revealed a significant multivariate test,  $F(5, 156) = 2.67$ ,  $p < .05$ . Examination of the univariate analyses, however, revealed significant differences between males and females on the humanistic intervention,  $F(1, 160) = 3.94$ ,  $p < .05$ , and

the psychodynamic intervention,  $F(1, 160) = 8.80, p < .01$ . Males had significantly lower actual effectiveness scores than females on both interventions. Males and females, however, did not significantly differ on the other three interventions: ecological, behavioral, and biophysical (see Table 29).

Table 28

*Average TVI Importance Ratings of the Five Interventions between Male and Female Participants*

	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Ecological					
Male	31	3.50	0.45	0.19	.661
Female	131	3.45	0.63		
Behavioral					
Male	31	3.83	0.45	0.51	.477
Female	131	3.74	0.63		
Humanistic					
Male	31	3.24	0.40	1.22	.271
Female	131	3.37	0.64		
Psychodynamic					
Male	31	3.45	0.42	1.40	.239
Female	131	3.32	0.57		
Biophysical					
Male	31	3.31	0.26	2.27	.134
Female	131	3.14	0.61		



Table 29

*Average TVI Actual Effectiveness Ratings of the Five Interventions between Male and Female Participants*

	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Ecological					
Male	31	3.41	0.37	.007	.935
Female	131	3.40	0.63		
Behavioral					
Male	31	3.87	0.48	.012	.911
Female	131	3.88	0.60		
Humanistic					
Male	31	3.23	0.42	3.94	.049
Female	131	3.46	0.61		
Psychodynamic					
Male	31	2.52	0.45	8.80	.003
Female	131	2.85	0.59		
Biophysical					
Male	31	2.44	0.40	1.42	.234
Female	131	2.57	0.58		

A one-way MANOVA on the TVI effectiveness ratings for an ideal situation between males and females also revealed a significant multivariate test,  $F(5, 156) = 2.48$ ,  $p < .05$ . Examination of the univariate analyses, however, revealed significant differences between males and females only on the humanistic intervention,  $F(1, 160) = 5.03$ ,

$p < .05$ . Males had significantly lower ideal effectiveness scores than females on humanistic interventions. Males and females, however, did not significantly differ on the other four interventions; ecological, behavioral, psychodynamic and biophysical (see Table 30).

Table 30

*Average TVI Ideal Effectiveness Ratings of the Five Interventions between Male and Female Participants*

	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Ecological					
Male	31	3.89	0.51	0.88	.383
Female	131	3.80	0.60		
Behavioral					
Male	31	3.93	0.44	-0.01	.994
Female	131	3.93	0.62		
Humanistic					
Male	31	3.45	0.49	-2.63	.011
Female	131	3.72	0.63		
Psychodynamic					
Male	31	3.31	0.57	0.60	.549
Female	131	3.24	0.75		
Biophysical					
Male	31	3.06	0.56	1.08	.282
Female	131	2.93	0.79		

A one-way MANOVA on the IRP subscales between males and females did not reveal a significant multivariate test,  $F(5, 156) = 2.19, ns$  (see Table 31). A one-way ANOVA on the overall IRP score between males and females, however, was significant,  $F(1, 160) = 7.94, p < .01$ . Males ( $M = 4.27, SD = 1.03$ ) had significantly lower overall acceptability of the behavioral intervention than females ( $M = 4.83, SD = 1.02$ ).

Table 31

*Average IRP Subscale Scores between Male and Female Participants*

	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Appropriate/Effective Use					
Male	31	3.94	1.10	6.12	.014
Female	131	4.66	1.52		
Time Practicality					
Male	31	4.37	1.19	4.50	.035
Female	131	4.96	1.45		
Student Ease					
Male	31	3.86	1.38	1.94	.166
Female	131	4.31	1.65		
Teacher Ease					
Male	31	4.68	1.19	.701	.404
Female	131	4.90	1.34		
No Risk					
Male	31	4.52	0.85	.989	.002
Female	131	5.33	1.38		

A MANOVA on the TES subscales between males and females also did not reveal a significant multivariate test,  $F(5, 156) = 2.89, ns$ . Males and females did not significantly differ on personal and teaching efficacy (see Table 31). A one-way ANOVA on the overall efficacy score between males and females was also not significant,  $F(1, 160) = .404, ns$ . Males ( $M = 4.92, SD = .79$ ) and Females ( $M = 4.82, SD = .77$ ) did not significantly differ on their overall efficacy.

Table 32

*Average TES Subscale Scores between Male and Female Participants*

	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
TES Personal					
Male	31	5.70	1.16	1.45	.154
Female	131	5.37	1.03		
TES Teaching					
Male	31	3.19	1.29	-1.67	.104
Female	131	3.61	1.00		

A one-way ANOVA on the knowledge correct score between males and females was also not significant,  $F(1, 160) = 2.56, ns$ . Males ( $M = 22.13, SD = 5.66$ ) and females ( $M = 24.14, SD = 6.42$ ) did not significantly differ on their overall knowledge of behavioral interventions.



## Age

As shown in Table 33, Pearson's Product Moment Correlations between participants' age and the importance ratings of the five interventions show a significant, positive correlation for the Humanistic intervention,  $r(162) = .176, p < .05$ . Significant relationships between age and the actual effectiveness ratings were significant and positive for the humanistic, psychodynamic, and biophysical interventions, all  $rs(162), p < .01$ . Similarly, significant positive correlations between age and ideal effectiveness ratings were found for the humanistic intervention and the biophysical intervention, all  $rs(162), p < .01$ .

Table 33

*Pearson's Product Moment Correlations between TVI Importance, Actual and Ideal Effectiveness Ratings and Age (N = 162)*

	<u>Importance</u>	<u>Actual</u>	<u>Ideal</u>
Ecological	.071	.102	.018
Behavioral	.097	-.009	.075
Humanistic	.176*	.301**	.251**
Psychodynamic	.134	.332**	.152
Biophysical	.114	.324**	.239**

Note: \*  $p < .05$ , \*\*  $p < .01$

As shown in Table 34, Pearson's Product Moment Correlations between participants' age and the IRP subscales show a significant, positive correlation for the Ease to Teachers subscale,  $r(162) = .198, p < .05$ . An increased age was related to an increased acceptability that the intervention was easier for teachers.

Table 34

*Pearson's Product Moment Correlations between IRP Subscales and Age (N = 162)*

<i>IRP</i>	<u>Age</u>
Appropriate/Effective Use	.003
Time Practicality	.020
Ease to Students	.038
Ease to Teachers	.198*
No risk	-.003

Note: \*  $p < .05$ , \*\*  $p < .01$

As shown in Table 35, Pearson's Product Moment Correlations between participants' age and the TES subscales were not significant, all  $rs(162), ns$ . No significant correlations were found between age and overall TES scores  $r(162) = .071, ns$ , or with knowledge scores,  $r(162) = -.066, ns$ , as well.

Table 35

*Pearson's Product Moment Correlations between TES Subscales and Age (N = 162)*

<u>TES</u>	<u>Age</u>
Personal	.089
Teaching	-.030

Note: \*  $p < .05$ , \*\*  $p < .01$

### *Training*

A one-way MANOVA on the TVI importance ratings between special education and general education teachers revealed a significant multivariate test,  $F(5, 156) = 11.82$ ,  $p < .001$ . Examination of the univariate analyses revealed significant differences between special education and general education teachers on the behavioral intervention,  $F(1, 160) = 12.98$ ,  $p < .001$ , the humanistic intervention,  $F(1, 160) = 7.83$ ,  $p < .01$ , and the psychodynamic intervention,  $F(1, 160) = 44.68$ ,  $p < .001$ . General education teachers had significantly lower importance ratings for all three interventions than special education teachers. Special education and general education teachers, however, did not significantly differ on the other two interventions: ecological and biophysical (see Table 36).

Table 36

*Average TVI Importance Ratings of the Five Interventions between Special Education and General Education Teachers*

<u>Trained</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Ecological				0.11	.738
Special Education	62	3.48	0.41		
General Education	100	3.45	0.70		
Behavioral				12.98	<.001
Special Education	62	3.96	0.49		
General Education	100	3.63	0.63		
Humanistic				7.83	.006
Special Education	62	3.51	0.49		
General Education	100	3.24	0.65		
Psychodynamic				44.68	<.001
Special Education	62	3.66	0.40		
General Education	100	3.14	0.53		
Biophysical				3.26	.073
Special Education	62	3.27	0.33		
General Education	100	3.11	0.66		

An additional one-way MANOVA on the TVI effectiveness ratings for actual teaching situations between special education and general education teachers also revealed a significant multivariate test,  $F(5, 156) = 21.35, p < .001$ . Examination of the univariate analyses revealed significant differences between special education and



general education teachers on all of the interventions, all  $F_s(1, 160)$ ,  $p < .01$ , except the humanistic intervention. General education teachers had significantly lower actual effectiveness ratings than special education teachers for ecological and behavioral interventions, but significantly greater actual effectiveness ratings than special education teachers for the psychodynamic and biophysical interventions (see Table 37).

Table 37

*Average TVI Actual Effectiveness Ratings of the Five Interventions between Special Education and General Education Teachers*

<u>Trained</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Ecological				18.80	<.001
Special Education	62	3.64	0.27		
General Education	100	3.25	0.67		
Behavioral				17.57	<.001
Special Education	62	4.11	0.32		
General Education	100	3.74	0.66		
Humanistic				0.07	.795
Special Education	62	3.40	0.47		
General Education	100	3.43	0.65		
Psychodynamic				19.00	<.001
Special Education	62	2.55	0.45		
General Education	100	2.94	0.61		
Biophysical				15.88	<.001
Special Education	62	2.34	0.27		
General Education	100	2.67	0.63		

A one-way MANOVA on the TVI effectiveness ratings for ideal teaching situations between special education and general education teachers also revealed a significant multivariate test,  $F(5, 156) = 11.86, p < .001$ . Examination of the univariate analyses revealed significant differences between special education and general education teachers on the ecological,  $F(1, 160) = 20.46, p < .001$ , and behavioral,  $F(1, 160) = 8.82, p < .01$ , interventions. General education teachers had significantly lower ideal effectiveness ratings than special education teachers for ecological and behavioral interventions (see Table 38).

A one-way MANOVA on the IRP subscales between special education and general education teachers also revealed a significant multivariate test,  $F(5, 156) = 5.78, p < .001$ . Examination of the univariate analyses revealed significant differences between special education and general education teachers on the Appropriate/Effective Use subscale,  $F(1, 160) = 5.89, p < .05$ , and the No Risk subscale,  $F(1, 160) = 4.82, p < .05$ . General education teachers had significantly lower appropriate and effective use scores for the behavioral intervention than special education teachers, but higher risk scores for the behavioral intervention. Special education and general education teachers did not statistically differ on their ratings of the behavioral intervention for time practicality, student ease and teacher ease (see Table 39).

A one-way ANOVA on overall IRP scores revealed that special education ( $M = 4.89, SD = 1.04$ ) and general education ( $M = 4.64, SD = .99$ ) teachers did not

significantly differ on their overall acceptability of the behavioral intervention,  $F(1, 160) = 1.78, ns$ .

Table 38

*Average TVI Ideal Effectiveness Ratings of the Five Interventions between Special Education and General Education Teachers*

<u>Alternative</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Ecological				20.46	<.001
Special Education	62	4.06	0.38		
General Education	100	3.66	0.64		
Behavioral				8.82	.003
Special Education	62	4.10	0.47		
General Education	100	3.82	0.63		
Humanistic				0.00	.950
Special Education	62	3.67	0.53		
General Education	100	3.67	0.66		
Psychodynamic				3.54	.062
Special Education	62	3.38	0.66		
General Education	100	3.17	0.74		
Biophysical				1.26	.263
Special Education	62	2.87	0.64		
General Education	100	3.01	0.81		

A one-way MANOVA on the TES subscales between special education and general education teachers also revealed a significant multivariate test,  $F(5, 156) = 5.78$ ,  $p < .001$ . Examination of the univariate analyses revealed significant differences between special education and general education teachers on the personal efficacy subscale,  $F(1, 160) = 6.24$ ,  $p < .05$ , but not the teaching efficacy subscale,  $F(1, 160) = 1.29$ , *ns*. General education teachers had significantly lower personal efficacy than special education teachers (see Table 40).

Table 39

*Average IRP Subscales between Special Education and General Education Teachers*

<u>Trained</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Appropriate/Effective Use				5.89	.016
Special Education	62	4.88	1.33		
General Education	100	4.31	1.53		
Time Practicality				3.65	.058
Special Education	62	5.12	1.34		
General Education	100	4.68	1.45		
Student Ease				0.33	.569
Special Education	62	4.31	1.62		
General Education	100	4.16	1.60		
Teacher Ease				3.71	.056
Special Education	62	5.10	1.29		
General Education	100	4.70	1.31		
No Risk				4.82	.030
Special Education	62	4.89	1.44		
General Education	100	5.36	1.24		



Table 40

*Average TES Subscales between Special Education and General Education Teachers*

<u>Trained</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Personal				6.24	.013
Special Education	62	5.69	0.91		
General Education	100	5.27	1.11		
Teaching				1.29	.258
Special Education	62	3.41	1.06		
General Education	100	3.60	1.07		

A one-way ANOVA on overall TES scores revealed that special education ( $M = 4.98$ ,  $SD = .64$ ) and general education ( $M = 4.75$ ,  $SD = .83$ ) teachers did not significantly differ,  $F(1, 160) = 3.40$ , *ns*.

A one-way ANOVA on knowledge scores between special education and general education teachers was significant,  $F(1, 160) = 35.96$ ,  $p < .001$ . Examination of the means revealed that special education teachers ( $M = 27.18$ ,  $SD = 7.13$ ) had significantly greater knowledge scores than general education teachers ( $M = 21.63$ ,  $SD = 4.64$ ).

*Alternative Certification*

A one-way MANOVA on the TVI importance ratings for the five intervention types between teachers with and without an alternative teaching certificate did not reveal a significant multivariate test,  $F(5, 156) = 1.93$ , *ns*. In general, across the five intervention

types teachers with an alternative certificate and teachers without one did not significantly differ on importance (see Table 41).

Table 41

*Average TVI Importance Ratings of the Five Interventions between Teachers with and without an Alternative Teaching Certificate*

<u>Alternative</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Ecological					
No	113	3.47	0.53	0.05	.829
Yes	49	3.44	0.75		
Behavioral					
No	113	3.79	0.54	0.88	.350
Yes	49	3.69	0.73		
Humanistic					
No	113	3.42	0.57	5.76	.017
Yes	49	3.18	0.66		
Psychodynamic					
No	113	3.35	0.52	0.02	.877
Yes	49	3.33	0.62		
Biophysical					
No	113	3.19	0.53	0.51	.478
Yes	49	3.13	0.62		

A one-way MANOVA on the TVI effectiveness ratings for actual teaching situations between teachers with and without an alternative certificate revealed a

significant multivariate test,  $F(5, 156) = 6.77, p < .001$ . Examination of the univariate analyses revealed significant differences between teachers with and without an alternative certification on the humanistic, psychodynamic, and biophysical interventions, all  $F_s(1, 160), p < .01$ . Examination of the means showed that teachers with an alternative certification had significantly lower actual effectiveness ratings than teachers without an alternative certification for all three interventions (see Table 42).

Table 42

*Average TVI Actual Effectiveness Ratings of the Five Interventions between Teachers with and without an Alternative Teaching Certificate*

<u>Alternative</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Ecological				3.06	.082
No	113	3.45	0.53		
Yes	49	3.28	0.68		
Behavioral				0.67	.413
No	113	3.91	0.52		
Yes	49	3.82	0.70		
Humanistic				23.30	<.001
No	113	3.56	0.55		
Yes	49	3.10	0.54		
Psychodynamic				16.04	<.001
No	113	2.90	0.57		
Yes	49	2.52	0.52		
Biophysical				11.80	.001
No	113	2.64	0.57		
Yes	49	2.33	0.42		

A one-way MANOVA on the TVI effectiveness ratings for ideal teaching situations between teachers with and without an alternative certificate also revealed a significant multivariate test,  $F(5, 156) = 4.41, p < .01$ . Examination of the univariate analyses revealed significant differences between teachers with and without an alternative certification on the ecological, humanistic, and psychodynamic interventions, all  $F(1, 160), p < .05$ . The means showed that teachers with an alternative certification had significantly lower actual effectiveness ratings than teachers without an alternative certification for the humanistic intervention, but higher scores for the ecological and psychodynamic interventions (see Table 43).

A one-way MANOVA on the IRP subscales between teachers with and without an alternative teaching certificate did not reveal a significant multivariate test,  $F(5, 156) = 2.02, ns$ . Overall, teachers with an alternative certificate and teachers without one did not significantly differ on the IRP subscales (see Table 44).

A one-way ANOVA on overall IRP scores between teachers with and without an alternative teaching certificate, however, was significant,  $F(1, 160) = 6.11, p < .05$ . Examination of the means revealed that teachers with an alternative certificate ( $M = 4.43, SD = .95$ ) had significantly lower overall acceptability of the behavioral intervention than teachers without an alternative certificate ( $M = 4.85, SD = 1.02$ ).



Table 43

*Average TVI Ideal Effectiveness Ratings of the Five Interventions between Teachers with and without an Alternative Teaching Certificate*

<u>Alternative</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Ecological				4.61	.033
No	113	3.75	0.48		
Yes	49	3.96	0.76		
Behavioral				0.15	.696
No	113	3.94	0.49		
Yes	49	3.90	0.77		
Humanistic				4.96	.027
No	113	3.74	0.58		
Yes	49	3.51	0.67		
Psychodynamic				4.24	.041
No	113	3.18	0.65		
Yes	49	3.42	0.84		
Biophysical				0.14	.706
No	113	2.94	0.74		
Yes	49	2.99	0.78		

An additional one-way MANOVA on the TES subscales between teachers with and without an alternative teaching certificate also did not reveal a significant multivariate test,  $F(2, 159) = 1.58$ , *ns*. Overall, teachers with and without an alternative

teaching certificate did not significantly differ on personal and teaching efficacy (see Table 45).

Table 44

*Average IRP Subscales between Teachers with and without an Alternative Teaching Certificate*

<u>Alternative</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Alternative/Effective Use				1.14	.288
No	113	4.61	1.58		
Yes	49	4.34	1.20		
Time Practicality				5.27	.023
No	113	5.01	1.48		
Yes	49	4.47	1.18		
Student Ease				5.72	.018
No	113	4.42	1.60		
Yes	49	3.77	1.54		
Teacher Ease				1.20	.275
No	113	4.93	1.29		
Yes	49	4.68	1.35		
No Risk				3.09	.081
No	113	5.30	1.30		
Yes	49	4.90	1.39		

In addition, a one-way ANOVA on overall TES scores between teachers with and without an alternative teaching certificate was also not significant,  $F(1, 160) = .22, ns$ . Teachers with an alternative certificate ( $M = 4.88, SD = .83$ ) did not have significantly different overall efficacy scores from teachers without an alternative certificate ( $M = 4.82, SD = .75$ ).

Table 45

*Average TES Subscales between Teachers with and without an Alternative Teaching Certificate*

<u>Alternative</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
TES Personal				1.34	.249
No	113	5.37	0.98		
Yes	49	5.58	1.21		
TES Teaching				2.11	.148
No	113	3.61	0.97		
Yes	49	3.34	1.26		

A one-way ANOVA on knowledge scores between teachers with an alternative certificate and teachers without an alternative teaching certificate was also not significant,  $F(1, 160) = 2.86, ns$ . Teachers with an alternative certificate ( $M = 25.02, SD = 8.04$ ) did not have significantly different knowledge scores from teachers without an alternative certificate ( $M = 23.20, SD = 5.35$ ).

### *Class Size*

As shown in Table 46, Pearson's Product Moment Correlations between teachers' class size and the importance ratings of the five interventions show a significant, positive correlations with the five interventions, all  $r_s(162) = ns$ . Significant relationships between class size and the actual effectiveness ratings were significant and positive for the psychodynamic and biophysical interventions, all  $r_s(162), p < .01$ . A significant negative correlation between class size and ideal effectiveness rating for the behavioral intervention was also found  $r(162) = -.161, p < .05$ .

Table 46

*Pearson's Product Moment Correlations between TVI Importance, Actual and Ideal Effectiveness Ratings and Class Size (N = 162)*

	<u>Importance</u>	<u>Actual</u>	<u>Ideal</u>
Ecological	.091	-.063	-.145
Behavioral	.001	-.087	-.161*
Humanistic	.043	.115	-.044
Psychodynamic	-.067	.262**	.069
Biophysical	.025	.245**	.051

Note: \*  $p < .05$ , \*\*  $p < .01$



As shown in Table 47, Pearson's Product Moment Correlations between teachers' class size and the IRP subscales showed a significant, positive correlation for the No Risk subscale,  $r(162) = .311, p < .01$ . An increased class size was related to an increased rating that the intervention was not risky for students.

Table 47

*Pearson's Product Moment Correlations between Acceptability (IRP) Subscales and Class Size (N = 162)*

<i>IRP</i>	<u>Class Size</u>
Appropriate/Effective Use	.128
Time Practicality	.102
Ease to Students	.086
Ease to Teachers	.062
No risk	.311**

Note: \*  $p < .05$ , \*\*  $p < .01$

As shown in Table 48, Pearson's Product Moment Correlations between participants' class size and the TES subscales were not significant, all  $r_s(162)$ , *ns*. No significant correlations were found between class size and overall TES scores  $r(162) = -.012, ns$ , or with knowledge scores,  $r(162) = -.062, ns$ .

Table 48

*Pearson's Product Moment Correlations between Efficacy (TES) Subscales and Class Size (N = 162)*

<u>TES</u>	<u>Class Size</u>
Personal	-.033
Teaching	.044

Note: \*  $p < .05$ , \*\*  $p < .01$

### *Education*

A one-way MANOVA on the TVI importance ratings for the five intervention types between teachers with a bachelor's degree and teachers with a master's degree did not revealed a significant multivariate test,  $F(5, 156) = 1.85, ns$ . Overall, teachers with master's and bachelor's degrees did not significantly differ on the importance of the five intervention types (see Table 49).

A one-way MANOVA on the TVI effectiveness ratings for actual teaching situations between teachers with a bachelor's degree and teachers with a master's degree revealed a significant multivariate test,  $F(5, 156) = 2.32, p < .05$ . However, examination of the univariate analyses revealed no significant differences between teachers with a

bachelor's degree and teachers with a masters degree on any of the interventions, all  $F$ s (1, 160),  $ns$ , (see Table 50).

Table 49

*Average TVI Importance Ratings of the Five Interventions between Teachers with a Bachelor's Degree and Teacher's with a Master's Degree*

<u>Education</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Ecological				1.32	.252
Master's	49	3.54	0.51		
Bachelor's	113	3.42	0.63		
Behavioral				0.44	.510
Master's	49	3.80	0.53		
Bachelor's	113	3.74	0.63		
Humanistic				3.09	.081
Master's	49	3.47	0.48		
Bachelor's	113	3.29	0.65		
Psychodynamic				0.35	.555
Master's	49	3.30	0.51		
Bachelor's	113	3.36	0.57		
Biophysical				0.33	.569
Master's	49	3.21	0.51		
Bachelor's	113	3.16	0.58		

Table 50

*Average TVI Actual Effectiveness Ratings of the Five Interventions between Teachers with a Bachelor's Degree and Teacher's with a Master's Degree*

<u>Education</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Ecological				0.14	.713
Master's	49	3.42	0.50		
Bachelor's	113	3.39	0.62		
Behavioral				0.77	.380
Master's	49	3.82	0.56		
Bachelor's	113	3.91	0.59		
Humanistic				2.99	.086
Master's	49	3.54	0.50		
Bachelor's	113	3.37	0.61		
Psychodynamic				0.39	.531
Master's	49	2.83	0.57		
Bachelor's	113	2.77	0.59		
Biophysical				2.57	.111
Master's	49	2.65	0.59		
Bachelor's	113	2.50	0.53		

A one-way MANOVA on the TVI effectiveness ratings for ideal teaching situations between teachers with a bachelor's degree and teachers with a master's degree was not significant,  $F(5, 156) = 1.03, ns$ . Overall, teachers with more or less education did not differ on their effectiveness ratings in an ideal teaching situation (see Table 51).



Table 51

*Average TVI Ideal Effectiveness Ratings of the Five Interventions between Teachers with a Bachelor's Degree and Teacher's with a Master's Degree*

<u>Education</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Ecological				1.71	.192
Master's	49	3.91	0.55		
Bachelor's	113	3.78	0.60		
Behavioral				0.11	.739
Master's	49	3.91	0.48		
Bachelor's	113	3.94	0.63		
Humanistic				0.56	.456
Master's	49	3.73	0.52		
Bachelor's	113	3.65	0.65		
Psychodynamic				1.63	.204
Master's	49	3.36	0.67		
Bachelor's	113	3.20	0.73		
Biophysical				0.49	.487
Master's	49	3.02	0.77		
Bachelor's	113	2.93	0.74		

An additional MANOVA on the IRP subscales between teachers with a bachelor's and with a master's revealed a significant multivariate test,  $F(5, 156) = 5.50, p < .001$ . Examination of the univariate analyses revealed significant differences between the two groups on the Appropriate/Effective Use subscale and the Teacher Ease subscale, all

$F_s(1, 160), p < .05$ . The means showed that teachers with a bachelor's degree had significantly greater acceptability of the appropriate/effective use for the behavioral intervention, but significantly less acceptability that the behavioral intervention was easy to teachers than teachers with a master's degree (see Table 52).

Table 52

*Average IRP Subscales between Teachers with a Bachelor's Degree and Teacher's with a Master's Degree*

<u>Education</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Alternative/Effective Use				4.87	.029
Master's	49	4.14	1.55		
Bachelor's	113	4.69	1.42		
Time Practicality				1.69	.195
Master's	49	4.63	1.46		
Bachelor's	113	4.94	1.39		
Student Ease				0.69	.408
Master's	49	4.06	1.52		
Bachelor's	113	4.29	1.64		
Teacher Ease				5.42	.021
Master's	49	5.21	1.06		
Bachelor's	113	4.70	1.38		
No Risk				0.57	.453
Master's	49	5.30	1.14		
Bachelor's	113	5.12	1.41		

A one-way ANOVA on overall IRP scores between teachers with a bachelor's degree and teachers with a master's degree, however, was not significant,  $F(1, 160) = 2.19, ns$ , indicating that teachers with a bachelor's or a master's degree did not differ in their overall acceptability of the behavioral intervention.

An additional MANOVA on the TES subscales between teachers with a bachelor's and teachers with a master's revealed a significant multivariate test,  $F(2, 159) = 5.27, p < .01$ . Teachers with a bachelor's degree and those with a master's degree did not differ on personal efficacy, but significantly differed on teaching efficacy,  $F(1, 160) = 10.25, p < .01$ . Examination of the means showed that teachers with a bachelor's degree had significantly greater teacher efficacy than teachers with a master's degree (see Table 53).

Table 53

*Average TES Subscales between Teachers with a Bachelor's Degree and Teacher's with a Master's Degree*

<u>Education</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
TES Personal				0.06	.800
Master's	49	5.40	1.22		
Bachelor's	113	5.44	0.98		
TES Teaching				10.25	.002
Master's	49	3.13	1.00		
Bachelor's	113	3.70	1.06		

A one-way ANOVA on overall TES scores between teachers with a bachelor's degree and teachers with a master's degree was also not significant,  $F(1, 160) = 2.55, ns$ . Teachers with a bachelor's ( $M = 4.90, SD = .74$ ) did not have significantly different overall efficacy scores from teachers with a master's ( $M = 4.69, SD = .82$ ).

A one-way ANOVA on knowledge scores between teachers of different education levels was also not significant,  $F(1, 160) = 3.46, ns$ . Teachers with a bachelor's degree ( $M = 23.15, SD = 5.88$ ) did not have significantly different knowledge scores from teachers with a master's degree ( $M = 23.20, SD = 5.35$ ).

#### *Years Teaching*

As shown in Table 54, Pearson's Product Moment Correlations between the number of years participants have been teaching and the importance ratings of the five interventions show a significant, positive correlation for the Humanistic intervention,  $r(162) = .159, p < .05$ . Significant relationships between years teaching and the actual effectiveness ratings were significant and positive for the humanistic, psychodynamic, and biophysical interventions, all  $rs(162), p < .01$ . A significant positive correlation between years teaching and ideal effectiveness ratings was found for the biophysical intervention  $r(162) = .225, p < .01$ .



Table 54

*Pearson's Product Moment Correlations between TVI Importance, Actual and Ideal Effectiveness Ratings and Years Teaching (N = 162)*

	<u>Importance</u>	<u>Actual</u>	<u>Ideal</u>
Ecological	-.019	.064	-.085
Behavioral	.055	-.068	-.080
Humanistic	.159*	.244**	.116
Psychodynamic	.086	.306**	.082
Biophysical	.064	.286**	.225**

Note: \*  $p < .05$ , \*\*  $p < .01$

As shown in Table 55, Pearson's Product Moment Correlations between years teaching and the IRP subscales show a significant, positive correlation for the No Risk subscale,  $r(162) = .311, p < .01$ . Teaching for more years was related to an increased acceptance that the intervention was not risky for students.

As shown in Table 56, Pearson's Product Moment Correlations between years teaching and the TES subscales were not significant, all  $rs(162)$ , *ns*. No significant correlations were found between years teaching and overall TES scores  $r(162) = -.135$ , *ns*, or with knowledge scores,  $r(162) = -.092$ , *ns*.

Table 55

*Pearson's Product Moment Correlations between the Five IRP Subscales and Years Teaching (N = 162)*

<i>IRP</i>	<u>Years Teaching</u>
Appropriate/Effective Use	.128
Time Practicality	.102
Ease to Students	.086
Ease to Teachers	.062
No risk	.311**

Note: \*  $p < .05$ , \*\*  $p < .01$

Table 56

*Pearson's Product Moment Correlations between Efficacy (TES) Subscales and Years Teaching (N = 162)*

<u>TES</u>	<u>Years Teaching</u>
Personal	.115
Teaching	-.135

Note: \*  $p < .05$ , \*\*  $p < .01$

### *Years in Current Position*

As shown in Table 57, Pearson's Product Moment Correlations between the number of years teachers have been in their current position and the importance ratings of the five interventions showed no significant correlations, all  $r_s(162) = ns$ . Significant relationships between years in current position and the actual effectiveness ratings were significant and positive for the psychodynamic intervention,  $r(162) = .247, p < .01$ . Significant correlations between years in current position and ideal effectiveness ratings were not found for, all  $r_s(162), p < .01$ .

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Table 57

*Pearson's Product Moment Correlations between TVI Importance, Actual and Ideal Effectiveness Ratings and Years in Current Position (N = 162)*

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	<u>Importance</u>	<u>Actual</u>	<u>Ideal</u>
Ecological	-.105	-.015	-.099
Behavioral	-.140	-.073	-.125
Humanistic	-.034	.119	-.006
Psychodynamic	-.027	.247**	.042
Biophysical	-.049	.146	.145

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Note: \*  $p < .05$ , \*\*  $p < .01$

As shown in Table 58, Pearson's Product Moment Correlations between participants' years in current position and the IRP subscales showed a significant, positive correlation for the Ease to Teachers subscale,  $r(162) = .281, p < .05$ . A greater number of years in their current position was related to an increased acceptance that the behavioral intervention was easier for teachers.

Table 58

*Pearson's Product Moment Correlations between IRP Subscales and Years in Current Position (N = 162)*

<i>IRP</i>	<u>Years</u>
Appropriate/Effective Use	.112
Time Practicality	.133
Ease to Students	.081
Ease to Teachers	.281**
No risk	-.020

Note: \*  $p < .05$ , \*\*  $p < .01$

As shown in Table 59, Pearson's Product Moment Correlations between participants' years in current position and personal efficacy was not significant,  $r(162) =$



-.107, *ns*. A greater number of years in their current position, however, was correlated with a decreased teaching efficacy,  $r(162) = -.169, p < .05$ . A significant correlation was also found between years in current position and overall TES scores  $r(162) = -.174, p < .05$ , but not with knowledge scores,  $r(162) = -.086, ns$ .

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Table 59

*Pearson's Product Moment Correlations between TES Subscales and Years in Current Position (N = 162)*

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<u>TES</u>	<u>Years</u>
Personal	-.107
Teaching	-.169

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Note: \*  $p < .05$ , \*\*  $p < .01$

### *Class Type*

Due to a low number of teachers from some of the content areas, participants were coded into one of four content areas: Administrative, All Areas, English/Language Arts (LA)/Social Studies (SS), and Math/Science. A one-way MANOVA on the TVI importance ratings for the five intervention types between teachers of the various content areas revealed a significant multivariate test,  $F(5, 156) = 7.97, p < .001$ . Examination of the univariate analyses showed that the content areas differed on all five intervention

types all  $F_s(3, 158)$ ,  $p < .05$ . Scheffe Post Hoc Tests showed that teachers who taught all content areas had significantly lower importance for the ecological and biophysical interventions than English/LA/SS teachers,  $p < .05$ . All content area teachers also had significantly less importance of the behavioral intervention than teachers in the other three content areas,  $p < .05$ . Post hoc tests also showed that All content area teachers had significantly less importance for the humanistic and psychodynamic interventions than Math/Science teachers,  $p < .05$  (see Table 60).

A one-way MANOVA on the TVI effectiveness ratings for actual teaching situations between teachers of different content areas revealed a significant multivariate test,  $F(5, 156) = 8.58$ ,  $p < .001$ . Examination of the univariate analyses revealed significant differences between content areas on the ecological, behavioral, psychodynamic, and the biophysical interventions, all  $F_s(3, 158)$ ,  $p < .05$ . Scheffe Post Hoc Tests showed that teachers who taught all content areas had significantly lower actual effectiveness ratings for the ecological and behavioral interventions than teachers who taught Math/Science,  $p < .05$ . Post hoc tests also showed that Math/Science teachers had significantly lower actual effectiveness ratings on the psychodynamic and biophysical interventions than administrators,  $p < .05$  (see Table 61).

Table 60

*Average TVI Importance Ratings of the Five Interventions between Class Types*

<u>Class Types</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Ecological				3.19	.025
Administrative	26	3.43 <sup>ab</sup>	0.69		
All Areas	58	3.30 <sup>a</sup>	0.73		
English/LA/SS	29	3.68 <sup>b</sup>	0.36		
Math/Science	49	3.54 <sup>ab</sup>	0.42		
Behavioral				11.61	<.001
Administrative	26	3.82 <sup>b</sup>	0.60		
All Areas	58	3.43 <sup>a</sup>	0.60		
English/LA/SS	29	3.87 <sup>b</sup>	0.38		
Math/Science	49	4.04 <sup>b</sup>	0.53		
Humanistic				3.22	.024
Administrative	26	3.50 <sup>ab</sup>	0.69		
All Areas	58	3.18 <sup>a</sup>	0.61		
English/LA/SS	29	3.30 <sup>ab</sup>	0.50		
Math/Science	49	3.49 <sup>b</sup>	0.57		
Psychodynamic				4.83	.003
Administrative	26	3.45 <sup>ab</sup>	0.54		
All Areas	58	3.15 <sup>a</sup>	0.58		
English/LA/SS	29	3.31 <sup>ab</sup>	0.49		
Math/Science	49	3.52 <sup>b</sup>	0.48		
Biophysical				3.69	.013
Administrative	26	3.27 <sup>ab</sup>	0.61		
All Areas	58	3.01 <sup>a</sup>	0.61		
English/LA/SS	29	3.41 <sup>b</sup>	0.58		
Math/Science	49	3.18 <sup>ab</sup>	0.39		

Note: Group means with different superscripts differed significantly by Scheffe Post Hoc Test,  $p < .05$ .

Table 61

*Average TVI Actual Effectiveness Ratings of the Five Interventions between Class Types*

<u>Class Types</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Ecological				4.68	.004
Administrative	26	3.47 <sup>ab</sup>	0.71		
All Areas	58	3.20 <sup>a</sup>	0.68		
English/LA/SS	29	3.39 <sup>ab</sup>	0.45		
Math/Science	49	3.60 <sup>b</sup>	0.34		
Behavioral				2.91	.037
Administrative	26	3.99 <sup>ab</sup>	0.58		
All Areas	58	3.71 <sup>a</sup>	0.75		
English/LA/SS	29.00	3.89 <sup>ab</sup>	0.35		
Math/Science	49.00	4.02 <sup>b</sup>	0.40		
Humanistic				1.88	.135
Administrative	26.00	3.65	0.63		
All Areas	58.00	3.34	0.63		
English/LA/SS	29.00	3.46	0.52		
Math/Science	49.00	3.37	0.53		
Psychodynamic				6.61	<.001
Administrative	26.00	3.09 <sup>a</sup>	0.63		
All Areas	58.00	2.76 <sup>ab</sup>	0.60		
English/LA/SS	29.00	2.97 <sup>ab</sup>	0.53		
Math/Science	49.00	2.56 <sup>b</sup>	0.46		
Biophysical				3.49	.017
Administrative	26.00	2.74 <sup>a</sup>	0.71		
All Areas	58.00	2.50 <sup>ab</sup>	0.53		
English/LA/SS	29.00	2.71 <sup>ab</sup>	0.62		
Math/Science	49.00	2.39 <sup>b</sup>	0.36		

Note: Group means with different superscripts differed significantly by Scheffe Post Hoc Test,  $p < .05$ .



A one-way MANOVA on the TVI effectiveness ratings for ideal teaching situations between teachers in the various content areas also revealed a significant multivariate test,  $F(5, 156) = 6.45, p < .001$ . However, examination of the univariate analyses revealed no significant differences between the four content areas on the five individual interventions, all  $F(3, 158), ns$  (see Table 62).

An additional one-way MANOVA on the IRP subscales between teachers of the various content areas revealed a significant multivariate test,  $F(5, 156) = 6.25, p < .001$ . Univariate analyses revealed significant differences on the appropriate/effective use subscale, the time practicality subscale, and the teacher ease subscale, all  $F(3, 158), p < .05$ . Scheffe Post Hoc Tests revealed that teachers who taught all content areas had significantly lower acceptability that the behavioral intervention was appropriate and effective, was time practical, and was easy on teachers than administrators,  $p < .05$ . All content area teachers also had significantly lower acceptability that the behavioral intervention was appropriate/effective than Math/Science teachers,  $p < .05$  (see Table 63).

A one-way ANOVA on overall IRP scores between content areas, however, was also significant,  $F(3, 158) = 3.31, p < .05$ . Sheffe Post Hoc Tests revealed that all content area teachers ( $M = 4.41, SD = 1.05$ ) had significantly lower overall acceptability of the intervention than Math/Science teachers ( $M = 4.98, SD = 1.03$ ),  $p < .05$ . A MANOVA on the TES subscales between teachers of different content areas did not reveal a significant multivariate test,  $F(3, 158) = 2.79, ns$ , (see Table 64).

Table 62

*Average TVI Ideal Effectiveness Ratings of the Five Interventions between Class Types*

<u>Class Types</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Ecological				1.82	.145
Administrative	26	3.82	0.55		
All Areas	58	3.76	0.75		
English/LA/SS	29	3.68	0.54		
Math/Science	49	3.96	0.36		
Behavioral				1.88	.136
Administrative	26	4.10	0.53		
All Areas	58	3.80	0.72		
English/LA/SS	29	3.93	0.42		
Math/Science	49	3.99	0.51		
Humanistic				1.90	.132
Administrative	26	3.91	0.55		
All Areas	58	3.67	0.67		
English/LA/SS	29	3.66	0.55		
Math/Science	49	3.56	0.60		
Psychodynamic				0.24	.870
Administrative	26	3.27	0.70		
All Areas	58	3.30	0.77		
English/LA/SS	29	3.25	0.76		
Math/Science	49	3.18	0.64		
Biophysical				1.95	.124
Administrative	26	3.16	0.70		
All Areas	58	3.03	0.79		
English/LA/SS	29	2.97	0.85		
Math/Science	49	2.76	0.62		

Table 63

*Average IRP Subscales between Class Types*

<u>Class Types</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Alternative/Effective Use				6.22	.001
Administrative	26	5.19 <sup>b</sup>	1.58		
All Areas	58	3.93 <sup>a</sup>	1.47		
English/LA/SS	29	4.58 <sup>ab</sup>	1.33		
Math/Science	49	4.84 <sup>ab</sup>	1.29		
Time Practicality				4.74	.003
Administrative	26	4.74 <sup>ab</sup>	1.55		
All Areas	58	4.36 <sup>a</sup>	1.51		
English/LA/SS	29	5.17 <sup>ab</sup>	1.07		
Math/Science	49	5.29 <sup>ab</sup>	1.25		
Student Ease				1.64	.182
Administrative	26	4.09	1.38		
All Areas	58	4.08	1.60		
English/LA/SS	29	3.92	1.77		
Math/Science	49	4.63	1.59		
Teacher Ease				3.58	.015
Administrative	26	5.60 <sup>b</sup>	1.15		
All Areas	58	4.69 <sup>a</sup>	1.32		
English/LA/SS	29	4.62 <sup>ab</sup>	1.46		
Math/Science	49	4.80 <sup>ab</sup>	1.19		
No Risk				1.83	.143
Administrative	26	4.87	1.60		
All Areas	58	4.99	1.30		
English/LA/SS	29	5.53	1.22		
Math/Science	49	5.35	1.26		

Note: Group means with different superscripts differed significantly by Scheffe Post Hoc Test,  $p < .05$ .

Table 64

*Average TES Subscales between Class Types*

<u>Class Types</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
TES Personal				2.72	.046
Administrative	26	5.20	0.88		
All Areas	58	5.25	1.19		
English/LA/SS	29	5.44	1.03		
Math/Science	49	5.77	0.94		
TES Teaching				0.17	.917
Administrative	26	3.60	1.12		
All Areas	58	3.57	1.06		
English/LA/SS	29	3.53	1.08		
Math/Science	49	3.44	1.07		

A one-way ANOVA on overall TES scores between content area teachers was also not significant,  $F(3, 158) = 1.87, ns$ .

A one-way ANOVA on knowledge scores between content area teachers, however, was significant,  $F(3, 158) = 3.07, p < .05$ . Sheffe Post Hoc tests showed that Math/Science teachers ( $M = 25.76, SD = 7.47$ ) had significantly greater knowledge scores than all content area teachers ( $M = 22.12, SD = 6.06$ ),  $p < .05$ .

*Teaching Education Hours*

As shown in Table 65, Pearson's Product Moment Correlations between hours of teaching education and the importance ratings of the five interventions show a



significant, positive correlation for the psychodynamic intervention,  $r(162) = .231$ ,  $p < .01$ , and the biophysical intervention,  $r(162) = .181$ ,  $p < .05$ . Significant relationships between teaching education hours and the actual effectiveness ratings were significant and positive for only the behavioral intervention,  $r(162) = .215$ ,  $p < .01$ . No significant correlations between hours of teaching education and ideal effectiveness ratings were found, all  $r_s(162)$ , *ns*.

Table 65

*Pearson's Product Moment Correlations between TVI Importance, Actual and Ideal Effectiveness Ratings and Teaching Education Hours (N = 162)*

	<u>Importance</u>	<u>Actual</u>	<u>Ideal</u>
Ecological	.110	.145	.007
Behavioral	.008	.215**	.143
Humanistic	.082	.128	.021
Psychodynamic	.231**	.015	-.006
Biophysical	.181*	.079	.040

Note: \*  $p < .05$ , \*\*  $p < .01$

As shown in Table 66, Pearson's Product Moment Correlations between participants' teaching education hours and the IRP subscales showed a significant, positive correlation of teaching education hours with the Appropriate/Effective Use Subscale,  $r(162) = .285$ ,  $p < .01$ , and the Ease to Teachers subscale,  $r(162) = .190$ ,  $p < .05$ . More hours of education training was related to an increased acceptability that the intervention was appropriate and effective, as well as easier for teachers.

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Table 66

*Pearson's Product Moment Correlations between IRP Subscales and Teaching Education Hours (N = 162)*

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<i>IRP</i>	<u>Hours</u>
Appropriate/Effective Use	.285**
Time Practicality	.137
Ease to Students	.098
Ease to Teachers	.190*
No risk	-.016

---

Note: \*  $p < .05$ , \*\*  $p < .01$

As shown in Table 35, Pearson's Product Moment Correlations between participants' education training hours and the TES subscales were not significant, all  $r$ s (162), *ns*. No significant correlations were found between hours of education training and overall TES scores  $r$  (162) = .058, *ns*, or with knowledge scores,  $r$  (162) = -.049, *ns*.

Table 67

*Pearson's Product Moment Correlations between TES Subscales and Age (N = 162)*

<u>TES</u>	<u>Hours</u>
Personal	.043
Teaching	.040

Note: \*  $p < .05$ , \*\*  $p < .01$

#### *Special Education Hours*

As shown in Table 68, Pearson's Product Moment Correlations between the number of hours teachers had in special education training and the importance ratings of the five interventions showed a significant, positive correlations for the behavioral, humanistic, and psychodynamic interventions, all  $r$ s (162),  $p < .05$ . Relationships between special education and the actual effectiveness ratings were significant and positive for the ecological and behavioral interventions, all  $r$ s (162),  $p < .01$ . A significant negative relationship was also found between special education training hours and actual

effectiveness ratings of the psychodynamic intervention,  $r(162) = -.184, p < .05$ .

Similarly, a significant positive correlation between special education training hours and ideal effectiveness ratings were found for the ecological intervention,  $r(162) = .204, p < .01$ , and a significant negative correlation for the biophysical intervention,  $r(162) = -.186, p < .05$ .

Table 68

*Pearson's Product Moment Correlations between TVI Importance, Actual and Ideal Effectiveness Ratings and Special Education Hours (N = 162)*

	<u>Importance</u>	<u>Actual</u>	<u>Ideal</u>
Ecological	.063	.309**	.204**
Behavioral	.181*	.239**	.113
Humanistic	.242**	.145	.032
Psychodynamic	.365**	-.184*	-.062
Biophysical	.026	-.099	-.186*

Note: \*  $p < .05$ , \*\*  $p < .01$

As shown in Table 69, Pearson's Product Moment Correlations between participants' special education hours and the IRP subscales showed a significant, positive correlations for the Appropriate/Effective Use subscale,  $r(162) = .317, p < .01$ , the Time



Practicality subscale,  $r(162) = .225, p < .01$ , and the Ease to Students subscale,  $r(162) = .195, p < .05$ . More special education training hours was related to an increased acceptability that the intervention was appropriate and effective, was practical for time, and easier for students.

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Table 69

*Pearson's Product Moment Correlations between IRP Subscales and Special Education Hours (N = 162)*

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<i>IRP</i>	<u>Hours</u>
Appropriate/Effective Use	.317**
Time Practicality	.225**
Ease to Students	.195*
Ease to Teachers	.061
No risk	.050

---

Note: \*  $p < .05$ , \*\*  $p < .01$

As shown in Table 70, Pearson's Product Moment Correlations between participants' special education hours and the personal efficacy was not significant, but was significant with teaching efficacy,  $r(162) = -.231, p < .01$ . No significant

correlations were found between special education hours and overall TES scores  $r(162) = .022, ns$ , but a significant positive relationship was found with knowledge scores,  $r(162) = .185, p < .05$ . More hours of special education training was related to increased knowledge scores. More special education training hours was related to a decreased teaching efficacy.

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Table 70

*Pearson's Product Moment Correlations between TES Subscales and Special Education Hours (N = 162)*

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<u>TES</u>	<u>Hours</u>
Personal	.128
Teaching	-.231**

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Note: \*  $p < .05$ , \*\*  $p < .01$

#### *Grade Level*

Teachers were coded into elementary (K-5), middle (6-8), and high school (9-12) grade levels. A MANOVA on the TVI importance ratings for the five intervention types between elementary, middle, and high school teachers did not reveal a significant multivariate test,  $F(5, 156) = 1.98, ns$  (see Table 71).

An additional one-way MANOVA on the TVI effectiveness ratings for actual teaching situations between grade levels did not reveal a significant multivariate test,  $F(5, 156) = 2.38, ns$  (see Table 72).

Table 71

*Average TVI Importance Ratings of the Five Interventions between Grade Levels*

<u>Grade Levels</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Ecological				0.12	.889
K – 5	57	3.47	0.57		
6 – 8	44	3.42	0.48		
9 – 12	61	3.48	0.71		
Behavioral				2.61	.076
K – 5	57	3.79	0.54		
6 – 8	44	3.59	0.45		
9 – 12	61	3.85	0.72		
Humanistic				1.35	.263
K – 5	57	3.45	0.56		
6 – 8	44	3.28	0.49		
9 – 12	61	3.30	0.71		
Psychodynamic				0.62	.538
K – 5	57	3.28	0.48		
6 – 8	44	3.36	0.47		
9 – 12	61	3.39	0.65		
Biophysical				0.33	.721
K – 5	57	3.13	0.50		
6 – 8	44	3.19	0.41		
9 – 12	61	3.21	0.70		

Table 72

*Average TVI Actual Effectiveness Ratings of the Five Interventions between Elementary, Middle School, and High School Grade Levels*

<u>Grade Levels</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Ecological				0.28	.754
K – 5	57	3.36	0.58		
6 – 8	44	3.45	0.45		
9 – 12	61	3.40	0.68		
Behavioral				0.26	.774
K – 5	57	3.92	0.53		
6 – 8	44	3.89	0.51		
9 – 12	61	3.84	0.67		
Humanistic				3.51	.032
K – 5	57	3.58	0.53		
6 – 8	44	3.36	0.47		
9 – 12	61	3.31	0.68		
Psychodynamic				1.47	.233
K – 5	57	2.88	0.59		
6 – 8	44	2.68	0.51		
9 – 12	61	2.79	0.62		
Biophysical				0.67	.511
K – 5	57	2.59	0.54		
6 – 8	44	2.46	0.46		
9 – 12	61	2.56	0.62		



A one-way MANOVA on the TVI effectiveness ratings for ideal teaching situations between grade levels, however, revealed a significant multivariate test,  $F(5, 156) = 2.88, p < .05$ . Examination of the univariate analyses revealed significant differences between grade levels on the ecological and humanistic interventions, all  $F(2, 159), p < .05$ . Sheffe Post Hoc Tests showed that teachers who taught middle school had significantly greater ideal effectiveness ratings than teachers who taught high school for the ecological intervention,  $p < .05$ . Teachers who taught elementary had significantly greater ideal effectiveness scores for the humanistic intervention than teachers who taught middle school or high school,  $p < .05$  (see Table 73).

A one-way MANOVA on the IRP subscales between grade levels also revealed a significant multivariate test,  $F(5, 156) = 6.14, p < .001$ . Examination of the univariate ANOVAs revealed that teachers differed on the No Risk subscale,  $F(2, 159) = 8.43, p < .001$ . Scheffe Post Hoc tests showed that middle school (6-8) teachers had significantly less acceptability of the risk of the behavioral intervention than elementary (K-5) and high school (9-12) teachers,  $p < .05$  (see Table 74).

A one-way ANOVA on overall IRP scores between grade levels was not significant,  $F(2, 159) = 1.91, ns$ .

A MANOVA on the TES subscales between grade levels did not reveal a significant multivariate test,  $F(2, 159) = 2.75, ns$  (see Table 75).

Table 73

*Average TVI Ideal Effectiveness Ratings of the Five Interventions between Grade Levels*

<u>Grade Levels</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Ecological				4.62	.011
K – 5	57	3.87 <sup>ab</sup>	0.53		
6 – 8	44	3.97 <sup>a</sup>	0.46		
9 – 12	61	3.65 <sup>b</sup>	0.68		
Behavioral				1.97	.143
K – 5	57	4.05	0.50		
6 – 8	44	3.88	0.53		
9 – 12	61	3.85	0.69		
Humanistic				4.56	.012
K – 5	57	3.85 <sup>a</sup>	0.49		
6 – 8	44	3.66 <sup>b</sup>	0.54		
9 – 12	61	3.51 <sup>b</sup>	0.72		
Psychodynamic				0.16	.854
K – 5	57	3.28	0.71		
6 – 8	44	3.27	0.66		
9 – 12	61	3.21	0.77		
Biophysical				0.42	.657
K – 5	57	2.94	0.72		
6 – 8	44	3.05	0.70		
9 – 12	61	2.91	0.81		

Note: Group means with different superscripts differed significantly from each other, Scheffe Post Hoc Test,  $p < .05$

Table 74

*Average IRP Subscales between Grade Levels*

<u>Grade Levels</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
Alternative/Effective Use				1.16	.317
K – 5	57	4.64	1.69		
6 – 8	44	4.24	1.30		
9 – 12	61	4.63	1.37		
Time Practicality				2.73	.068
K – 5	57	4.60	1.70		
6 – 8	44	4.72	1.24		
9 – 12	61	5.17	1.19		
Student Ease				1.95	.146
K – 5	57	4.51	1.62		
6 – 8	44	3.88	1.56		
9 – 12	61	4.20	1.60		
Teacher Ease				0.38	.685
K – 5	57	4.78	1.34		
6 – 8	44	5.00	1.27		
9 – 12	61	4.82	1.33		
No Risk				8.43	<.001
K – 5	57	5.54 <sup>a</sup>	1.30		
6 – 8	44	4.52 <sup>b</sup>	1.21		
9 – 12	61	5.30 <sup>a</sup>	1.30		

Note: Group means with different superscripts differed significantly from each other, Scheffe Post Hoc Test,  $p < .05$

Table 75

*Average TES Subscales between Grade Levels*

<u>Grade Levels</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
TES Personal				2.61	.077
K – 5	57	5.43	0.99		
6 – 8	44	5.16	1.03		
9 – 12	61	5.63	1.11		
TES Teaching				0.51	.602
K – 5	57	3.45	1.13		
6 – 8	44	3.66	1.00		
9 – 12	61	3.51	1.07		

A one-way ANOVA on overall TES scores between grade levels was also not significant,  $F(2, 159) = 1.74$ , *ns*.

A one-way ANOVA on knowledge scores between grade levels, however, was significant,  $F(2, 159) = 4.87$ ,  $p < .01$ . Scheffe Post Hoc test showed that elementary teachers ( $M = 22.37$ ,  $SD = 4.66$ ) had significantly lower knowledge scores than middle school teachers ( $M = 26.14$ ,  $SD = 5.96$ ),  $p < .05$ .

*Stepwise Multiple Regressions*

Using predictors based on the above results, a stepwise regression analysis was performed to determine if overall teacher efficacy (TES), knowledge of general behavioral principles, and causal beliefs (TVI) significantly predicted the acceptability of

behavioral interventions, as well as to examine the other predictors, including special versus general education, having an alternative certificate, class size, years teaching, and number of special education hours.

As shown in Table 76, the final model including the predictors importance of the humanistic and behavioral TVI interventions, hours of training in special education, overall efficacy, and class size was significant,  $F(1, 154) = 12.02, p < .001$ , and accounted for 28% of the variance. Controlling for the other variables, an increase in the importance of the humanistic intervention predicted an increase in acceptance of the behavioral intervention,  $Beta = .293, t = 3.17, p < .01$ . Compared to a general education teacher, special education training predicted an increase in the acceptance of the behavioral intervention,  $Beta = .303, t = 4.24, p < .001$ . Similarly, controlling for the other variables, an increase in overall efficacy predicted an increase in acceptance of the behavioral intervention,  $Beta = .277, t = 3.77, p < .001$ . In contrast, controlling for the other variables, an increase in the importance of the behavioral intervention predicted a decrease in acceptance of the behavioral intervention,  $Beta = -.231, t = -2.61, p < .05$ . An increase in class size also predicted an increase in the acceptance of the behavioral intervention,  $Beta = .161, t = 2.33, p < .05$ .



Table 76

*Stepwise Regression Analyses of Overall TES, Knowledge and TVI Importance of the Five Intervention Types, Special versus General Education, Alternative Certificate, Class Size, Years Teaching, and Number of Special Education Hours on the Acceptability of Behavioral Interventions (IRP) (N = 162)*

Predictor	<i>B</i>	SE	Beta	<i>t</i>	<i>p</i>
(R <sup>2</sup> = .28, F = 12.02, <i>p</i> < .001)					
TVI Humanistic Importance	.718	.227	.293	3.167	.002
Special Education Hours	.032	.008	.303	4.235	.000
TES Overall	.531	.141	.277	3.756	.000
TVI Behavioral Importance	-.571	.219	-.231	-2.605	.010
Class Size	.031	.013	.161	2.329	.021

### *Hypotheses*

*Hypothesis 1.* Teacher efficacy, knowledge of general behavioral principles, and causal beliefs will predict the acceptability of behavioral interventions, in that an increase in these characteristics would lead to an increase in the treatment acceptability of behavioral interventions.

A stepwise multiple regression of teacher efficacy, knowledge, and causal beliefs on treatment acceptability found that increases in teacher efficacy and causal beliefs for

Humanistic interventions predicted an increase in treatment acceptability, but that increases in causal beliefs for a behavioral intervention predicted an decrease in behavior acceptability. In addition, knowledge scores were not significant predictors of treatment acceptability. Thus, this hypothesis was only partially supported.

*Hypothesis 2.* Special educators and general educators would differ in their levels of behavioral knowledge, in that special educators would have higher levels of knowledge of general behavioral principles.

A one-way ANOVA on knowledge scores between special education and general education teachers found that special education teachers had statistically better knowledge scores than general education teachers, thus this hypothesis was supported.

*Hypothesis 3.* Special educators and general educators will differ in their levels of acceptability of behavioral interventions, in that special educators will have higher levels of acceptance of behavioral interventions.

While differences did occur for some of the IRP subscales, a one-way ANOVA on behavioral intervention acceptability scores between special education and general education teachers found no significant differences, thus this hypothesis was not supported.

*Hypothesis 4.* Teachers who teach a smaller number of students will be more likely to accept behavioral interventions than teachers who teach a larger number of students.

A Pearson's Product Moment Correlation between number of students and acceptance found the opposite result, in that teachers with larger class sizes had more acceptability of the behavioral intervention, thus this hypothesis was not supported.

### *Summary*

The present study investigated the specific teacher characteristics related to the acceptability of behavioral interventions. Specifically, this study investigated how a teacher's sense of self-efficacy, general knowledge regarding basic behavioral principles, and fundamental beliefs about the causes of student behavior predicted their probability of accepting specific behavioral interventions with an online survey of special education and general education teachers. The utilization of the Teacher Variance Inventory (TVI), Intervention Rating Profile (IRP), Teacher Efficacy Scale (TES), and Knowledge of Behavioral Principles as Applied to Children (KBPAC) provided data that helped give educators a better understanding of the behavioral interventions used and preferred by teachers, providing an important component for teaching. Results showed teacher efficacy, knowledge of general behavioral principles, and causal beliefs were related to some aspects of the acceptability of behavioral interventions. The findings are discussed in Chapter 5.

## CHAPTER V

### DISCUSSION

The primary purpose of this teacher-focused study was to investigate the impact of specific personal characteristics including self-efficacy, knowledge of behavior principles, and causal beliefs on the acceptability of a specific behavioral intervention. The target population included special and general education public school teachers. Participants were recruited via E-mail containing the purpose of the study, description of the incentive, and a link to an online survey. Participants completed demographic information, the Teacher Efficacy Scale, the Knowledge of Behavioral Principles as Applied to Children and the Teacher Variance Inventory-IV. Participants then read a hypothetical case vignette, sample behavioral intervention and completed the Intervention Rating Profile. The present chapter provides a brief summary of results and an explanation of findings according to each hypothesis. This chapter also examines the limitations of this study, and offers suggestions for future research in the area of the acceptability of behavior interventions.

#### *Hypothesis One*

It was hypothesized that teachers with higher teacher efficacy, knowledge of behavioral principles, and behavioral causal beliefs would have higher scores (greater acceptability) of the sample behavioral intervention. This hypothesis was only partially



supported in that higher overall self efficacy scores (Overall TES) significantly predicted greater acceptability of the behavior intervention. However, greater knowledge of behavioral principles (a greater number of best choice responses on the KBPAC) and a behavioral causal belief (TVI Importance) did not significantly predicted greater acceptability of the behavioral intervention; in fact, as a participant's belief in behavioral causal beliefs increased, their acceptance of the intervention decreased.

The teacher efficacy results are consistent with findings of Rose and Medway (1981). They found that teachers high in teacher efficacy are more likely to adopt change proposals associated with formal innovations and staff development programs. Teachers with a high sense of teacher efficacy are more willing to attempt a proposed intervention than teachers lower in teacher efficacy.

Although the present study showed that higher scores on the KBPAC did not predict greater acceptability of the proposed behavioral intervention, these results are consistent with a study conducted by Rasnake, Martin, Tarnowski, and Mulick (1993). The authors also found that higher scores on a measure of general behavioral knowledge did not predict greater treatment acceptability. These authors hypothesized that limited knowledge of specific, rather than general, principles may be a more important determinant of treatment acceptability.

Finally, a teacher's behavioral causal belief was predicted to increase his/her likelihood of accepting the proposed behavioral intervention. The results of this study did not support this hypothesis. Hyman's (2001) multidimensional, theory driven model of



school consultation attempts to match a teacher's causal beliefs to the model of intervention utilized. Teachers tend to choose intervention strategies based on their causal attributions about student misbehavior (Rohrkemper & Brophy, 1983). The present study's results indicate that teachers with a behavioral attribution of student misbehavior do not accept the proposed intervention significantly more than others; however, this result may be due to the teachers not accepting this specific behavioral intervention. These participants may have been more accepting of an intervention that was more technical, rigid and overtly behavioral. The proposed intervention may have been viewed as more "humanistic" in nature than purely behavioral, as participants with a humanistic causal belief accepted this intervention significantly more than the other participants on the factors of Appropriate/Effective use and No Risk.

Several other measured characteristics predicted an increase in the acceptability of the behavioral intervention. The number of hours of university based special education coursework a participant possessed predicted greater acceptance of the hypothetical intervention. Participants who taught classes with a larger number of students were also more likely to accept the behavioral intervention. This finding is consistent with research of Witt, Martens, and Elliott (1984) who found that teachers were more likely to accept behavioral interventions that were less labor intensive and took less time. Participants with a general teacher certificate, as opposed to those participants who were alternatively certified, were more likely to accept the proposed intervention.

### *Hypothesis Two*

It was also predicted that special education teachers would have higher scores on the Knowledge of Behavioral Principles as Applied to Children than general education teachers indicating greater knowledge of behavioral principles. As expected, results showed that participants trained and working with special education students had higher scores on the Knowledge of Behavioral Principles as Applied to Children than participants trained in general education. These results were expected because participants trained in special education would have received more training in the specific area of behavioral interventions and have more experience in working with behavioral interventions in vivo than their general education counterparts. Participants currently teaching in a special education setting had significantly greater scores on Personal Teaching Efficacy than participants teaching in general education settings. This personal teaching efficacy may be the reason that these participants choose to work with special education students. A personal belief in one's ability to reach even the most difficult students may be the reason that participants have chosen to work in special education situations.

### *Hypothesis Three*

It was hypothesized that special educators would be more likely to accept the behavioral intervention than general education teachers. This overall hypothesis was not supported, in that participants that worked as special educators were not more likely to accept the proposed behavioral intervention (Overall IRP Score) than general education

teachers. However, when the IRP subscales were examined, special education participants rated the intervention significantly more acceptable on the factor of Appropriate/Effective Use. These results indicate that special education teachers thought that the intervention was more appropriate and effective than general education teachers. These participants were also significantly more likely to rate this intervention as a greater risk to the child (No Risk Factor). These significant findings are probably due to a special educator's greater experience and knowledge of these interventions and their effectiveness in actual classroom situations.

#### *Hypothesis Four*

It was also hypothesized that teachers who taught a smaller number of students in their classrooms would be more likely to accept the behavioral intervention than teachers who taught a larger number of students. Results of this study found the opposite, in that, as a participant's class size increased the likelihood of the intervention being acceptable increased. The proposed hypothetical intervention of "precision requests" (DeMartini-Scully, Bray, & Kehle, 2000) may be more applicable and useful in larger classes due to its brief and simple nature. In a classroom with a large number of students this intervention may be seen as less time consuming and easier to utilize due to its simplistic, brief nature. Treatments requiring less labor and time are rated as more acceptable than are interventions that are more laborious and time intensive (Witt et al., 1984).

### *Gender*

The present study found differences between males and females on various subscales of the dependent measures. With regard to the acceptability of the behavioral intervention, females had greater IRP factor scores of Appropriate/Effective use, Time Practicality, and No Risk when compared to males. Females were also significantly more likely to accept the offered behavioral intervention than males. Females were also more likely to choose a Humanistic or Psychodynamic intervention in the Actual scenario as compared to males. In addition, females were significantly more likely to choose a Humanistic intervention in the Ideal situation as compared to males. When the difference in the choice between the Actual and Ideal situations is examined, females had a significantly smaller difference between the Behavioral intervention in the Actual and Ideal situation than males.

### *Education Level*

When compared with participants with a Master's degree, participants with a Bachelor's degree had significantly greater Teaching efficacy scores. This result may be due to some naivety and inexperience. Participants with a Bachelor's degree also had significantly greater scores on the IRP factor of Appropriate/Effective Use and significantly lower scores on the IRP factor of Ease to Teachers when compared to participants with Master's degrees. Master's level teachers may have a more accurate view of the difficulty of implementing interventions in the classroom.



### *Teacher Certification*

This study found significant differences between participants who were certified in the typical fashion and those who had received an alternative certification. Participants who were certified with a “regular” teacher certification were significantly more likely to choose the Humanistic causal belief as most important as compared to participants with alternative certification. In the Actual scenario, participants with a regular certification were more likely to choose the Humanistic, Psychodynamic, and Biophysical interventions than participants who were alternatively certified. In the Ideal scenario, Participants with regular certification were significantly more likely to choose the Humanistic and Psychodynamic interventions than the participants with alternative certification. Participants who were alternatively certified were significantly more likely to choose the Ecological intervention than participants with regular certification. Participants with regular certification were significantly more likely to accept the behavior intervention than participants with an alternative certification. Participants with a regular certification also viewed the intervention as more acceptable on the IRP factors of time practicality and student ease than the participants with alternative certification. A participant’s with a regular certification acceptance of the proposed intervention may be due to specific coursework taken relating to classroom interventions and more specific knowledge of these interventions.



### *Age*

This study found that a participant's age correlated with their responses to the Teacher Variance Inventory and the Intervention Rating Profile. Older participants were more likely to choose a Humanistic cause for problem student behavior. Older participants were also significant more likely to rate the proposed intervention favorably as it related to the ease with which a teacher could utilize it in his/her classroom. Older participants may be more open to matching a student's unique needs to a specific intervention, understanding of individual student characteristics, and perceptive of unjust or meaningless rules and regulations. An older participant's maturity may have developed more humanistic tendencies related to interventions. Finally, as a participant has aged he or she may have developed a greater sense of respect and fairness, which are the underpinnings of the humanistic orientation.

### *Class Size*

Results of this study also found that as the number of students in a participant's classroom increases so does the likelihood of that participant choosing Psychodynamic and Biophysical interventions in the TVI Actual scenario. As the number of students increased in a participant's class, the likelihood of that participant choosing a behavioral intervention in the Ideal scenario decreased. As a participant's student number increased so did the likelihood of he/she accepting the proposed intervention, especially in the IRP factor of No Risk. As stated earlier, the proposed hypothetical intervention of "precision requests" (DeMartini-Scully et al., 2000) may be more applicable and useful in larger

classes due to its brief and simple nature. A teacher of a large number of students may only have a small amount of time to intervene with classroom problems and the proposed intervention is brief and simplistic in nature.

#### *Type of Class Taught*

Participants in this study were currently teaching in one of the following areas: English/Language Arts and Social Studies, Math and Sciences, Administration, and “All areas”. Results of this study found that participants currently teaching in “all areas” were significantly less likely to accept the intervention as appropriate and effective (IRP – Appropriate/Effective Use Factor) than those participants working as administrators or working in mathematics and science classrooms. Participants working in “all areas” also rated the intervention as significantly less acceptable in relation to time practicality as the math/science participants. Finally, participants working in an administrative position were significantly less likely to accept the intervention as it relates to Teacher Ease than of the other three groups measured. Participants who were working in the “all areas” designation may be described as teachers in an elementary classroom teaching all academic areas or a teacher in a “self contained” classroom teaching students in all academic areas. Participants working as administrators may not have experience in the actual use of behavioral interventions and may have rated this intervention as more acceptable and more effective. Participants working in “all areas” may also have a more realistic understanding of the actual implementation of interventions in real classroom situations.

### *Experience*

In addition, this study found significant trends in teacher experience. As the total years of a participant's teaching experience increased so did the likelihood he/she would choose a biophysical intervention in the Ideal scenario. As the number of years of experience increased so did the likelihood that the Humanistic, Psychodynamic, and Biophysical interventions would be chosen in the Actual scenario. As the time a participant stayed in his/her current teaching position increased so did the likelihood the proposed intervention would be accepted. However, as the time the participant stayed in the same position increased, the lower the reported teaching efficacy. Finally, as the number of college hours in special education increases so does the likelihood that the Ecological intervention would be chosen in the Ideal scenario. As these special education hours increased, the likelihood of the Biophysical interventions being chosen decreased. As special education college hours increased so did the number of correct best choices on a test of behavioral principles as applied to children. As these hours increased, the overall acceptability of the intervention and the factors of appropriate/effective use, time practicality, and ease to students increase. Participants with higher college hours in special education courses have significantly lower Teaching Efficacy scores.

### *Limitations*

Although this study attempted to examine the relationship between specific teacher characteristics and the acceptability of a behavioral intervention with the utmost respect for scientific methodology, limitations to this study existed. One limitation was



that the survey presented teachers with a restricted choice of behavioral intervention. Future studies should examine how the variables relate to interventions based on various theoretical beliefs, including medical interventions (Biophysical), environmental changes (Ecological), or therapy (Psychodynamic). Although participants may not have accepted this intervention, the addition of other choices may provide information into the theoretical type of intervention that would be accepted.

Another limitation was that participants were selected from a sample of convenience. While these teachers may represent many teachers throughout public education, generalizability of this sample is limited due to its lack of random sampling. This sample did not include teachers working in private schools or other types of educational facilities. All the participants completed the questionnaires via the internet, teachers without access to a computer with internet capability and those who did not have the time to complete the questionnaires would not have had access to participate in this study. In addition this study must be examined with the knowledge of the limitations of self-report. This study examined the independent and dependent variables using self-report as opposed to observation or some other objective measure. As with self-report there is always a threat to validity due to possible participant falsification or response bias.

### *Future Research*

Future research studies should include multiple intervention choices as opposed to one forced choice. Multiple participant choices would allow collection of data for each



theoretical type of intervention. This would allow researchers to examine each variable and multiple intervention choices. More research is needed to explore the relationship between special education and general education teachers in the area of Personal Teaching Efficacy. Is this factor innate or developed? If certain individual teacher characteristics are related to Personal Teaching Efficacy and it is related to treatment acceptability, understanding this construct and placing teachers high in Personal Teaching Efficacy in demanding academic situations would be beneficial to students.

Future studies should also examine specific knowledge of a behavioral intervention, as opposed to general information, and its relationship with treatment acceptability. Will specific knowledge of a behavioral intervention, as opposed to general knowledge, lead to greater acceptability of classroom interventions. Finally, with the current teacher shortage in many states, and the use of alternatively certified teachers becoming more commonplace, a closer examination of the differences in alternatively and generally certified teachers is warranted. These differences in acceptability of interventions may have a great impact on the behavioral atmosphere of a classroom and may be important factors for administrators to examine in the hiring of teacher candidates.

### *Summary*

The primary purpose of this teacher-focused study was to investigate the impact of specific personal characteristics including self-efficacy, knowledge of behavior principles, and causal beliefs on the acceptability of a specific behavioral intervention.

The target population included special and general education public school teachers. As hypothesized teachers with greater overall self efficacy, or the belief in one's ability to produce a successful outcome by producing the necessary behaviors, were more likely to accept the proposed intervention. These findings support previous research endeavors examining the relationship between self efficacy and specific teaching behaviors and classroom management approaches (Woolfolk, Rosoff, & Hoy, 1990) and add to the field of self efficacy in education which includes how self efficacy relates to program implementation (Berman & McLaughlin, 1977), discriminates between effective teachers and less effective teachers (Brookover & Lezotte, 1979), relates to special education referral chance (Soodak & Podell, 1993) and classroom management (Woolfolk, Rosoff, & Hoy, 1990).

In regards to acceptability of the proposed intervention, this study demonstrated a positive relationship between traditional university teacher preparation and the acceptability of this intervention. In that the number of university based training hours in special education and possession of a general teacher certificate, participants with a degree in education, were more likely to accept the proposed intervention. Participants in this study teaching classes with larger number of students were also more likely to accept the proposed intervention. These findings are consistent with previous research in the area of treatment acceptability in that teachers are more likely to accept behavioral interventions that are less labor intensive and take less time (Witt et al., 1984) and add to the growing field of acceptability research in education.

This study also found that teachers working in special education settings had greater general knowledge of behavioral principles as they are applied to children and greater Personal Efficacy, or a personal belief in their own personal effectiveness in teaching. A teacher's greater general knowledge of behavioral interventions and principles and high self confidence in their ability should lead to greater student outcomes. This study's results are of value to school psychologists who are working in consultative relationships with teachers. Data from this study can assist school psychologists in choosing an appropriate plan of action or focusing on certain teacher characteristics that may lead to beneficial outcomes. Results may also assist administrators who are hiring and assigning teachers to demanding classroom environments. Information from this study can assist administrators in matching teachers with specific characteristics to classroom situations where they can be more successful and thus improve child outcomes by increasing the acceptance and implementation of behavioral interventions. Finally, results of this study may assist university programs that develop teacher education programs by allowing them to tailor programs focusing on these characteristics related to accepting interventions.

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## APPENDIX A

### Demographic Information Questionnaire



What is your gender?                      Male    Female

What is your age? \_\_\_\_\_

Were you trained as a .....?

                    general education teacher

                    special education teacher

What is your highest level of educational achievement?

Bachelor's Degree

Master's Degree

Doctoral Degree

What grade do you currently teach? \_\_\_\_\_

If you teach more than one grade, please give details below.

What type of class do you teach?

Language Arts

English

Social Studies

Science

Mathematics

ALL AREAS: self contained

Reading

English as a Second Language/ Bilingual

Foreign Language (other than English)

Administrator

Special Education

Other

What is your typical class size? \_\_\_\_\_

How many years have you been teaching? \_\_\_\_\_

How many years in your current position? \_\_\_\_\_

How many college hours have you completed in teacher education? \_\_\_\_\_

How many college hours have you completed in special education? \_\_\_\_\_

## APPENDIX B

Case Vignette (Hayes & Havey, 1999)

Please read the following case and recommended behavioral interventions and answer the questions that will follow. A behavioral intervention is a technique based on behavioral principles intended to reduce unwanted behaviors or increase desired behaviors. Answer them to the best of your ability without seeking assistance from someone else.

Tom is an eight-year old student in your school. Though he can be attentive and gentle one moment, he is throwing a temper tantrum the next. Tom requires a great deal of attention from his teacher and frequently speaks out loudly, disrupting the classroom-learning environment. He is very argumentative and disobeys his teacher's requests to quiet his voice or to stop talking. Tom's teacher has tried to reason with him, but he is easily irritated and quite stubborn. At recess Tom often brags of breaking children's pencils and teases the girls. Sometimes he becomes physical and pushes other children if they do not share their jump ropes or balls. Tom's teacher is uncertain of the proper course of action, but knows that something must be done. Tom is currently noncompliant and will not obey teacher directives.

## APPENDIX C

Behavioral Program - Precision Requests (DeMartini-Scully, et al., 2000)



In order to increase Tom's compliance the school psychologist recommends the following behavioral program. The program is based on "precision requests" (DeMartini-Scully, et al., 2000), a program to assist teachers in delivering effective commands and consequences.

- The requests for compliance are made within three feet of Tom after establishing eye contact.
- The teacher will request compliance in a statement with a firm, but quiet tone of voice using the word "please", or a synonym. Example: "Tom, please take out your mathematics book."
- If Tom does not comply, a second request is given, usually introduced with the phrase, "you need to", or a similar instruction. The second request is given after a five second interval. Example: "Tom, I need you to take out your mathematics book."
- If Tom complies with the request, he is verbally reinforced and given a sticker.
- If Tom does not comply, he is given a brief "time-out".
- If Tom receives a specified number of stickers within a specified time frame, he is given the opportunity to choose from the "mystery bag", which contains various tangible rewards.

## APPENDIX D

### Intervention Rating Profile – 20 (Witt & Martens, 1983)

1. Most teachers would find the intervention suitable for the behavior problem described.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

2. Most teachers would find this intervention appropriate for behavior problems in addition to the one described.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

3. The child's behavior problem is severe enough to warrant use of this intervention.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

4. This intervention should prove effective in changing the child's problem.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

5. This would be an acceptable intervention for the child's problem behavior.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

6. Overall, the intervention would be beneficial for the child.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

7. I would be willing to use this intervention in the classroom setting.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

8. This intervention would be appropriate for use before making a referral.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree



9. This intervention would not result in negative side effects for the child.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

10. This intervention would not result in risk to the child.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

11. This intervention would not be considered a “last resort”.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

12. This intervention is practical in the amount of time required for parent contact.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

13. This intervention is practical in the amount of time required for contact with school staff.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

14. This intervention is practical in the amount of time required for record keeping.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

15. This intervention is practical in the amount of out-of-school time required for implementation.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

16. This intervention would not be difficult to implement in a classroom with 30 students.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

17. This intervention would not be disruptive to other students.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

18. It would not be difficult to use this intervention and still meet the needs of other children in the classroom.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

19. Teachers are likely to use this intervention because it requires little technical skill.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

20. Teachers are likely to use this intervention because it requires little training to implement effectively.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

## APPENDIX E

### Teacher Efficacy Scale (Gibson & Dembo, 1984)

Please indicate the degree to which you agree or disagree with each statement below by circling the appropriate numeral to the right of each statement.

1. When a student does better than usual, many times it is because I exerted a little extra effort.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

2. The hours in my class have little influence on students compared to the influence of their home environment.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

3. The amount a student can learn is primarily related to family background.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

4. If students aren't disciplined at home, they aren't likely to accept any discipline.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree



5. When a student is having difficulty with an assignment, I am usually able to adjust it to his/her level.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

6. When a student gets a better grade than usual, it is generally because I found better ways of teaching the student.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

7. When I really try, I can get through to the most difficult students.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

8. A teacher is very limited in what he/she can achieve because a student's home environment is a large influence of his/her achievements.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

9. When the grades of my students improve, it is usually because I found more effective teaching strategies.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

10. If a student masters a new concept quickly, this might be because I knew the necessary steps in teaching that concept.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

11. If parents would do more with their children, I could do more.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

12. If a student did not remember information I gave in a previous lesson, I would know how to increase his/her retention in the next lesson.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

13. If a student in my class becomes disruptive and noisy, I feel assured that I know some techniques to redirect him/her quickly.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

14. The influences of student's home experiences can be overcome by good teaching.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

15. If one of my students couldn't do an assignment, I would be able to accurately assess whether the assignment was at the correct level of difficulty.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

16. Even a teacher with good teaching abilities may not reach many students.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Disagree Slightly More than Agree	Agree Slightly More than Disagree	Moderately Agree	Strongly Agree

## APPENDIX F

Knowledge of Behavioral Principles As Applied to Children  
(O'Dell, Tarler-Benlolo, & Flynn, 1979)

Directions

Read each question and each of its four possible answers. Sometimes more than one answer could be correct under certain circumstances; however, you should select the best answer or the answer that is most generally true.

Example:

Probably the most important influence in a young child's life is his ...

- A. Toys
- B. Television
- C. Parents
- D. Friends

Please do not consult others while deciding how to answer the question. Be sure to choose only one answer for each question.

1. Desirable and undesirable behaviors are most alike in they are:
  - A. The result of emotions and feelings.
  - B. Habits and therefore difficult to change.
  - C. Ways the child expresses himself.
  - D. The result of learning.
2. Probably the most important idea to keep in mind when first changing behavior is:
  - A. To use both reward and punishment.
  - B. To reward every time the desired behavior occurs.
  - C. To be flexible about whether or not you reward.
  - D. To be sure the child understands why you want the behavior to change.
3. Most problem behavior in young children is probably:
  - A. A reaction to deeper emotional problems.
  - B. Due to lack of communication at home.
  - C. Accidentally taught by the child's family.
  - D. Due to a stage which the child will outgrow.
4. A child begins to whine and cry when his parent explains why he can't go outside. How should the parent react?
  - A. Ask the child why going outside is so important to him.
  - B. Explain that it is a parent's right to make such decisions.
  - C. Explain again why he should not go outside.
  - D. Ignore the whining and crying.



5. Which of the following is most important for parents in controlling their child's behavior?
- A. The rules the parents make about behavior.
  - B. The parents' understanding of the child's feelings.
  - C. The behaviors to which the parents attend.
  - D. Being strict, but also warm and gentle.
6. In changing a child's behavior a parent should try to use:
- A. About one reward for every punishment.
  - B. About one reward for every five punishments.
  - C. About five rewards for every punishment.
  - D. Practically all rewards.
7. Which of the following is the least likely way for children to react to the person who punishes them?
- A. The child will try to avoid the punisher.
  - B. The child will have admiration and respect for the punisher.
  - C. The child may copy the punisher's methods and do similar things to playmates.
  - D. The child will associate the punishment with the punisher.
8. Which of the following statements is most true?
- A. People usually fully understand the reasons for their actions.
  - B. People are often unaware of the reasons for their actions.
  - C. People's actions are mostly based on logic.
  - D. It is necessary to understand the reason for a person's behavior before trying to change the behavior.
9. If you are trying to teach a child to talk, you should first:
- A. Reward the child after speaking a sentence.
  - B. Reward the child for saying a word.
  - C. Reward the child for any vocalization.
  - D. Punish the child if he did not speak.
10. If punishment is used for a behavior such as playing football in the house, which type is probably best to use?
- A. Make the child do extra homework.
  - B. Clearly express your disapproval.
  - C. Remove the child to a boring situation each time.
  - D. Reasonable spanking.

11. A child has been rewarded each time he cleans his room. In order to keep the room clean without having to use a reward, the next step should probably be to:
- A. Have a talk about how pleased you are and then stop giving the reward.
  - B. Give the reward about one out of five times.
  - C. Give the reward almost every time.
  - D. You must always reward every time.
12. Parents who use lots of rewards for good behavior and few punishments will probably tend to have children who:
- A. Do not understand discipline.
  - B. Will not cooperate unless they are "paid".
  - C. Take advantage of their parents.
  - D. Are well-behaved and cooperative.
13. When should a child who is just learning to dress himself be praised the first time?
- A. When he gets his foot through the first hole in his underwear.
  - B. When he gets his underwear completely on.
  - C. When he asks to do it himself.
  - D. When he has completely finished dressing himself.
14. Which of the following is most effective in getting a child to do his homework?
- A. "When you finish your homework, you can watch television."
  - B. "You can watch this show on television if you promise to do your homework when the show is over."
  - C. "If you don't do your homework tonight, you can't watch television at all tomorrow."
  - D. Explain the importance of school work and dangers of putting it off.
15. Three of the following responses refer to forms of punishment which are mild and effective. Which one is not?
- A. Ignoring the undesirable behavior.
  - B. Sending the child to a dull room for a few minutes.
  - C. Taking away something the child likes (such as dessert after supper).
  - D. Scolding.

16. Each time Mother starts to read, Billy begins making a lot of noise which prevents her from enjoying her reading time. The best way for Mother to get Billy to be quiet while she reads is to:
- A. Severely reprimand him when this occurs.
  - B. Pay close attention and praise and hug him when he plays quietly while she is reading and ignore his noisy behavior.
  - C. Call him to her and carefully explain how important it is for her to have quiet time for herself each time this occurs.
  - D. Tell him that he won't get dessert after dinner if he continues.
17. Which of the following is the most effective form of punishment in the long run for reducing a child's undesirable behavior?
- A. Scolding him every time he does it.
  - B. Occasionally spanking him when he does it.
  - C. Sending him to his room for five minutes every time he does it.
  - D. Sending him to his room all afternoon every time he does it.
18. A young child often whines and cries when he is around his mother. In trying to find out why he cries, his mother should probably first consider the possibility that:
- A. He is trying to tell her something.
  - B. He needs more of her attention.
  - C. She is somehow rewarding his crying.
  - D. She is not giving him enough attention.
19. A good rule to remember is:
- A. Do not reward with money if possible.
  - B. Catch a child doing something right.
  - C. Reward good behavior and always punish bad behavior.
  - D. Punishment is always unnecessary.
20. If a child gradually receives a reward less and less often for a behavior, what is most likely to happen?
- A. He will soon stop the behavior.
  - B. He will be more likely to behave that way for a longtime.
  - C. He will not trust the person giving the rewards.
  - D. None of the above.



21. Which of the following is true about punishment?
- A. Punishment teaches respect.
  - B. Punishment should be delayed until it can be carefully determined that it is really necessary.
  - C. Punishment can teach a child new behaviors.
  - D. Some punishment can result in a child becoming aggressive.
22. In a reading group, the teacher gives each child candy plus praise for each correct answer. Which of the following statements is true?
- A. The candy is a bribe and does not belong in a school setting.
  - B. At first, the children work to earn the candy and may later work for praise alone.
  - C. Children should not be “paid” for doing their school work.
  - D. It probably doesn’t make much difference whether or not the candy is used because the children who want to learn to read will do so and the other’s won’t.
23. A boy loves football. What is most likely to happen if, each time he is playing nicely with his sister, his father invites him to play football?
- A. He will always be asking his father to play football.
  - B. He will play nicely with his sister more often.
  - C. He will be annoyed with his father for interfering with his activities.
  - D. He will be encouraged to teach his sister to play football.
24. To record, graph and note the direction of the change of a behavior is:
- A. A minor, optional step in a behavior change program.
  - B. An important step in a behavior change program.
  - C. A procedure employed only by scientists for research.
  - D. Time consuming and complicated. Therefore, these procedures should only be used in special cases.
25. A father is teaching his son to hit a thrown ball with a bat. Which of the following methods will probably most help his son to learn to hit?
- A. Let him try to hit the ball without saying anything, so the child can learn on his own.
  - B. Occasionally tell him what he is doing wrong.
  - C. Occasionally tell him what he is doing right.
  - D. Tell him almost every time that he is doing something right.

26. Which of the following is most true about physical punishment?
- A. It should immediately follow the undesirable behavior and at full intensity.
  - B. It should be mild and immediately follow the undesirable behavior and at full intensity.
  - C. It should begin in a mild form and if that doesn't work, intensity should gradually be increased.
  - D. It is ineffective and inappropriate.
27. Punishment, as a way to get rid of an undesirable behavior, is best used when:
- A. You are very upset.
  - B. You want to teach the child the right way to behave.
  - C. The behavior may be dangerous.
  - D. Scolding doesn't seem effective.
28. Which of the following is *not* an important step in a behavior change program?
- A. Make certain the child feels ashamed for his misbehavior.
  - B. Decide on a particular behavior that you wish to change.
  - C. If necessary, break the selected behavior down into smaller steps.
  - D. Select a proper time and situation for measuring the behavior.
29. If you want your child to develop study habits, you should:
- A. Encourage him to do his homework.
  - B. Help him to see school as pleasant.
  - C. Reward him whenever he studies.
  - D. Give him good reasons why he needs school.
30. Two brothers fight constantly. Their parents decide to praise them when they play together nicely. However, they still continue to fight. Punishment may be necessary. What is probably happening?
- A. They don't want their parents' praise.
  - B. The benefits of fighting are stronger to them than their parents' praise.
  - C. They have too much anger toward each other to control.
  - D. They are at a stage they will grow out of.
31. A child often cries over any small matter that bothers her. How should her parents react to best reduce her crying?
- A. Reward when she reacts without crying.
  - B. Use a mild punishment when she cries.
  - C. Try to find out what is really troubling the child and deal with that.
  - D. Provide her with something interesting so she will stop crying.



32. Mrs. Thomas found out that spanking her seven-year-old son, Bob, did not seem to stop him from using “naughty” words. A friend suggested that rather than spanking him, she should send him to be by himself. The room he is sent to should be:
- A. His own room, so he will still have something to do.
  - B. Small and dark.
  - C. As uninteresting as possible.
  - D. A large room.
33. If you want your child to say “please” and “thank you” at the table, it is probably most important to:
- A. Reprimand when he forgets to say them.
  - B. Explain why good manners are important.
  - C. Remember to compliment him when he remembers to say them.
  - D. Praise other members of the family when they use these words.
34. Which reward is probably best to help a 12-yr. old child improve his arithmetic skills?
- A. A dollar for each evening he studies.
  - B. A dollar for each problem he works correctly.
  - C. Ten dollars for each A he receives on his report card in arithmetic.
  - D. A bicycle for passing arithmetic for the rest of the school year.
35. A major problem has been getting Leon to bed in the evening. His mother has decided to change this and wants to measure the relevant behaviors. Which is the best way for her to do this?
- A. Each evening, record whether or not he goes to bed on time.
  - B. Chart his behavior all day long, up to and including bedtime to try to find out what causes his not wanting to go to bed.
  - C. Each week, make a note of how easy or difficult it has been to get him to bed.
  - D. Ask Leon to keep his own record each week.

36. Mr. Jones agreed to pay his son, Mike, 25 cents each day if he carries out the trash. If Mr. Jones forgets to give Mike the money for a few days, what is most likely to happen?
- A. Mike will continue to take out the trash because he realizes how important it is.
  - B. Mike will stop taking out the trash.
  - C. Mike will begin to do extra chores, as well as take out the trash, so his father will notice how well he's doing and remember to give Mike the money.
  - D. Mike will start to misbehave to take out his behavior about not being paid.
37. A father tells a child she cannot go to the store with him because she didn't clean her room like she promised. She reacts by shouting, crying, and promising she will clean the room when she gets home. What should the father do?
- A. Ignore her and go to the store.
  - B. Take her to the store but make her clean her room when they return.
  - C. Calm her down and go help her clean her room together.
  - D. Talk to her and find out why she doesn't take responsibility.
38. The first step in changing a problem behavior is to:
- A. Reward the child when he is behaving nicely.
  - B. Punish the child for misbehavior.
  - C. Carefully observe the behavior.
  - D. Seek help from someone who is more objective.
39. In changing a behavior it is most important to use:
- A. Methods which have been tested by others.
  - B. Consequences which are rewarding to the child.
  - C. Consequences which are punitive to the child.
  - D. Rewards which do not bribe the child.
40. Johnny has just torn up a new magazine. Of the following choices, which is the best way for his mother to discipline him?
- A. Tell him he will be spanked by his father when gets home.
  - B. Punish him then and there.
  - C. Explain to Johnny about the wrongness of his action.
  - D. Angrily scold Johnny so that he will learn that such an act is bad and upsetting to his mother.

41. Stan is doing a number of things that greatly disturb his parents. It would be best for them to:
- A. Try to quickly eliminate all of these undesirable behaviors at once.
  - B. Select just a few behaviors to deal with at first.
  - C. Select the single behavior they find the most disruptive and concentrate on changing that.
  - D. Wait for 28 to 30 days before beginning to try to change his behaviors to make certain they are stable and persistent.
42. Which would be the best example of an appropriate way to praise Mary?
- A. Good girl, Mary
  - B. I love you, Mary
  - C. I like the way you helped me put the dishes away.
  - D. I'll tell your father how nice you were when he comes home.
43. Listed below are four methods used to change behavior. Which is usually the best technique to Frank to stop sucking his thumb?
- A. Punish the undesired behavior.
  - B. Ignore the behavior.
  - C. Reward him for desirable behavior in the situation in which he usually misbehaves.
  - D. Explain to the child why the behavior is undesirable.
44. Jimmy sometimes says obscene words, but only in front of his mother. She has been shocked and makes her feelings clear to him. How should she react when he uses obscene words?
- A. Wash his mouth out with soap.
  - B. Ignore him when he uses obscene words.
  - C. Tell him how bad he is and how she doesn't like him when he uses those words.
  - D. Explain to him the reason such words are not used.
45. If you want to make a behavior a long-lasting habit, you should:
- A. Reward it every time.
  - B. First reward it every time and then reward it occasionally.
  - C. Promise something the child wants very much.
  - D. Give several reasons why it is important and remind the child of the reasons often.

45. Punishment will not be effective unless you:
- E. Prevent the child from escaping while you punish him.
  - F. Throw all of your emotions into the punishment.
  - G. Follow it with a careful explanation of your reasons for the punishment.
  - H. Have tried everything else.
46. The most likely reason a child misbehaves is because:
- A. He is expressing angry feelings which he often holds inside.
  - B. He has learned to misbehave.
  - C. He was born with a tendency to misbehave.
  - D. He has not been properly told that his behavior is wrong.
48. Which of the following is probably most important in helping a child behave in desirable ways:
- A. To teach him the importance of self-discipline.
  - B. To help him understand right and wrong.
  - C. Providing consistent consequences for his behavior.
  - D. Understanding his moods and feelings as a unique person.
49. A baby often screams for several minutes and gets his parents' attention. Which of the following is probably the best way for his parents to reduce his screaming?
- A. If there is nothing physically wrong with the child, ignore his screaming even though the first few times he screams even louder.
  - B. Distract the child with something he finds interesting whenever he screams.
  - C. Ignore all noises and sounds the child makes.
  - D. None of the above, babies usually have good reasons for screaming.
50. How often a behavior occurs is probably mostly controlled by:
- A. The person's attitude about his behavior.
  - B. What happens to him at the same time the behavior occurs.
  - C. What happens to him just before the behavior occurs.
  - D. What happens to just after the behavior occurs.

## APPENDIX G

Teacher Variance Inventory – IV (Winchell & Hyman, 2001)



This questionnaire lists reasons why student behaviors occur in school and what to do about them. There are 5 scenarios divided into two sections. Each scenario offers choices about the cause of a particular behavior and interventions for the behavior.

Please respond to all five of the scenarios. Otherwise, the results will not be valid. This is not a test. There are no right or wrong answers.

Directions:

- After reading each scenario, rate how important each available response is in determining the **cause** of the behavior by marking the appropriate number:

Not Important		Important		Very Important
1	2	3	4	5

- After you have indicated the level of importance for each of the five potential causes, select one response that you feel is the single best **cause** by marking the appropriate letter in the Best Choice column. Should you find it difficult to select one statement as being the best, just pick the one you agree with most (See the sample following these directions).
- For each scenario, rate the **level of effectiveness** of each available intervention in changing the problem behavior, by marking the appropriate number:

Not Important		Important		Very Important
1	2	3	4	5

- After you have indicated the level of effectiveness of each of the five potential interventions, select one response you feel is the single most effective intervention by marking the appropriate letter in the Best Choice column. Should you find it difficult to select one intervention as being the best, just pick the one you agree with most (See the sample following these directions).
- You will be given the opportunity to respond about intervention under two conditions: **Actual** and **Ideal**. In the **Actual** box, rate the items in terms of interventions you would actually employ, given the realistic conditions in your present classroom. In the **Ideal** box, rate the item in terms of an ideal situation where you are given unlimited resources (e.g. staff, financial, time, materials, etc.).

SAMPLE: A student continually taps fingers on the desk, fidgets, or foot shuffles when seated for an activity.

To understand the cause of this behavior how important is it for the teacher to determine if:

	Not Important		Important		Very Important	Best Choice
A. the student has unacknowledged anxiety	1	2	3	4	(5)	(A)
B. the student's behavior is encouraged by attention received from peers	1	2	3	(4)	5	B
C. the student may have ADHD	1	2	(3)	4	5	C
192 D. the student's individual needs are being met in school	(1)	2	3	4	5	D
E. the assignments in class are too difficult for the Student	1	2	3	4	(5)	E

\* Note that in the above SAMPLE, the respondent considered both A and E as "very important", and then decided on A as the single "best choice".

Rate the effectiveness of each intervention first as it could be implemented in an ACTUAL TEACHING SITUATION (real classroom with limited resources). Then rate the effectiveness of each intervention in an IDEAL TEACHING SITUATION (i.e., unlimited resources).

	ACTUAL TEACHING SITUATION						IDEAL TEACHING SITUATION					
	Not Effective	Effective	Effective	Very Effective	Best Choice		Not Effective	Effective	Effective	Very Effective	Best Choice	
A. Modify assignments to the student's skill level.	1	2	3	(4)	5	A	1	2	3	4	(5)	(A)
B. Find ways to decrease the student's feelings of inferiority, which underlie the student's anxiety.	1	2	3	4	(5)	(B)	1	2	3	4	(5)	B
C. Recommend a physical exam to understand the cause of the student's restlessness.	1	2	3	(4)	5	C	1	2	(3)	4	5	C
D. Find other ways to fulfill the student's unmet need for love and belonging.	1	2	(3)	4	5	D	1	2	3	(4)	5	D
E. Establish a reward system for the student when the student is able to remain seated appropriately.	1	2	(3)	4	5	E	1	(2)	3	4	5	E

\* Note that in the above SAMPLE, the respondent rated each response and then selected B as the single "best choice" (i.e., most effective) intervention option in the ACTUAL SITUATION column. The respondent selected response A as the single "best choice" (i.e., most effective) intervention option under the IDEAL SITUATION column.

Remember to rate each response and choose the best choice.

Item 1: A student is not achieving as well as the student's teacher expected.

To understand the cause of this behavior how important is it for the teacher to determine if:

		Not Important		Important		Very Important	Best Choice
	A. This classroom and the school, in general, do not have a program to motivate underachieving students.	1	2	3	4	5	A
194	B. The student is being consistently reinforced for good work habits.	1	2	3	4	5	B
	C. This is the student's reaction to classwork, which the student finds personally unfulfilling.	1	2	3	4	5	C
	D. The student has been daydreaming as a defense to anxiety.	1	2	3	4	5	D
	E. The student has had a recent hearing and vision check.	1	2	3	4	5	E

Rate the effectiveness of each intervention first as it could be implemented in an ACTUAL TEACHING SITUATION (real classroom with limited resources). Then rate the effectiveness of each intervention in an IDEAL TEACHING SITUATION (i.e., unlimited resources).

	ACTUAL TEACHING SITUATION						IDEAL TEACHING SITUATION					
	Not Effective	Effective			Very Effective	Best Choice	Not Effective	Effective			Very Effective	Best Choice
A. Develop a school-wide program to diagnose and remediate underachieving students.	1	2	3	4	5	A	1	2	3	4	5	A
B. Allow the student to earn rewards, based on achievement.	1	2	3	4	5	B	1	2	3	4	5	B
C. Recognize that the student's behavior is a genuine Expression of need for recognition and respond with empathy and acceptance.	1	2	3	4	5	C	1	2	3	4	5	C
D. Send the student to the school psychologist so that the student might address emotional issues in a therapeutic environment.	1	2	3	4	5	D	1	2	3	4	5	D
E. Suggest that the student visit the school nurse to Determine if a medical condition might be influencing the student's behavior.	1	2	3	4	5	E	1	2	3	4	5	E



Item 2: As the students line up for lunch, Student A cuts in front of Student B. The two students begin shoving each other.

To understand the cause of this behavior how important is it for the teacher to determine if:

	Not Important		Important		Very Important	Best Choice
A. Student A has poor inner controls.	1	2	3	4	5	A
B. Student A's acting out is a genuine expression of the student's frustration with the rules and expectations of the class, which do not address the student's unique needs.	1	2	3	4	5	B
196 C. Student A finds the attention the student receives from the teacher (for misbehaving) reinforcing.	1	2	3	4	5	C
D. Instruction and routines for lining up are insufficient for maintaining an orderly classroom.	1	2	3	4	5	D
E. Student A may be suffering from a nutritional deficiency, which causes these tantrums.	1	2	3	4	5	E

Rate the effectiveness of each intervention first as it could be implemented in an ACTUAL TEACHING SITUATION (real classroom with limited resources). Then rate the effectiveness of each intervention in an IDEAL TEACHING SITUATION (i.e., unlimited resources).

	ACTUAL TEACHING SITUATION						IDEAL TEACHING SITUATION					
	Not Effective	Effective		Very Effective	Best Choice		Not Effective	Effective		Very Effective	Best Choice	
A. Suggest to Student A's parents that they consult their family physician to determine if a medical condition is affecting the student's ability to control anger.	1	2	3	4	5	A	1	2	3	4	5	A
B. Establish better instructions and routines for lining up.	1	2	3	4	5	B	1	2	3	4	5	B
C. Establish a reward system for Student A for lining up appropriately.	1	2	3	4	5	C	1	2	3	4	5	C
D. View Student A's behavior as a genuine expression of the student's unmet need for recognition and, in the future, communicate acceptance to the student.	1	2	3	4	5	D	1	2	3	4	5	D
E. Make a referral for family therapy since the angry outbursts may be a part of the family history.	1	2	3	4	5	E	1	2	3	4	5	E

Item 3: A student has been the aggressor in many fights with other students. Classmates complain that this student is a bully.

To understand the **cause** of this behavior how important is it for the teacher to determine if:

	Not Important		Important		Very Important	Best Choice
A. The school has not developed a system wide program for dealing with bullying.	1	2	3	4	5	A
B. The student's misbehavior receives attention and is, therefore, reinforced.	1	2	3	4	5	B
C. The student requires a warmer, accepting classroom.	1	2	3	4	5	C
D. This is a subtle, perhaps, unconscious attempt to disrupt the class.	1	2	3	4	5	D
E. The student has a neurological disorder and is unable to control outbursts.	1	2	3	4	5	E

Rate the effectiveness of each intervention first as it could be implemented in an ACTUAL TEACHING SITUATION (real classroom with limited resources). Then rate the effectiveness of each intervention in an IDEAL TEACHING SITUATION (i.e., unlimited resources).

	ACTUAL TEACHING SITUATION						IDEAL TEACHING SITUATION					
	Not Effective	Effective	Effective	Very Effective	Best Choice		Not Effective	Effective	Effective	Very Effective	Best Choice	
A. Suggest that the school could develop a program to deal with bullying.	1	2	3	4	5	A	1	2	3	4	5	A
B. Praise the student whenever the student interacts with peers appropriately.	1	2	3	4	5	B	1	2	3	4	5	B
C. Try to create a warmer, more accepting classroom.	1	2	3	4	5	C	1	2	3	4	5	C
D. Ask the school psychologist to talk with the student to determine if upsetting feelings are contributing to the student's outbursts.	1	2	3	4	5	D	1	2	3	4	5	D
E. Arrange directly through the student's parents or school nurse to obtain an evaluation to determine if there are neurological causes for the student's chronic aggression.	1	2	3	4	5	E	1	2	3	4	5	E

Item 4: A student's desk area is always a mess.

To understand the **cause** of this behavior how important is it for the teacher to determine if:

	Not Important		Important		Very Important	Best Choice
A. There is no program available to help students learn how to organize their desks.	1	2	3	4	5	A
B. The student is consistently reinforced for neatness.	1	2	3	4	5	B
200 C. The expectations about the student's desk area allows the students freedom to adequately express the student's unique qualities.	1	2	3	4	5	C
D. The student's angry feelings toward the student's parents are carried over to all authority figures, including the teacher.	1	2	3	4	5	D
E. This is an indication of ADHD.	1	2	3	4	5	E



Rate the effectiveness of each intervention first as it could be implemented in an ACTUAL TEACHING SITUATION (real classroom with limited resources). Then rate the effectiveness of each intervention in an IDEAL TEACHING SITUATION (i.e., unlimited resources).

ACTUAL TEACHING SITUATION						IDEAL TEACHING SITUATION					
Not Effective						Very Effective					
1 2 3 4 5						1 2 3 4 5					
A. Suggest that a school-wide curriculum module be developed for teaching students to keep their desks clean.						A					
B. Establish reinforcement contingencies that reward the student for maintaining a neat desk area.						B					
C. Ask the student's parents if this type of misbehavior is seen at home in order to determine if this behavior seems to be rooted in defiance of authority figures.						C					
D. Suggest to the student's parents that they may wish to visit their pediatrician to pursue possible medical interventions (e.g., change in diet or medication, etc.) as a means of influencing the student's behavior.						D					
E. Allow the student to determine the student's own style for keeping materials and schoolwork.						E					

Item 5: A student often becomes inattentive in class.

To understand the **cause** of this behavior how important is it for the teacher to determine if:

	Not Important		Important		Very Important	Best Choice
A. The student has had a vision and hearing checkup recently.	1	2	3	4	5	A
B. The classroom environment, i.e, seating arrangement, lighting and noise level contribute to the student's inattentiveness.	1	2	3	4	5	B
C. Underlying emotional conflict is preventing the student from paying attention.	1	2	3	4	5	C
D. The classroom work is fulfilling the student's academic needs.	1	2	3	4	5	D
E. Reinforcement would increase the student's time on task.	1	2	3	4	5	E

Rate the effectiveness of each intervention first as it could be implemented in an ACTUAL TEACHING SITUATION (real classroom with limited resources). Then rate the effectiveness of each intervention in an IDEAL TEACHING SITUATION (i.e., unlimited resources).

	ACTUAL TEACHING SITUATION						IDEAL TEACHING SITUATION					
	Not Effective	Effective		Very Effective	Best Choice		Not Effective	Effective		Very Effective	Best Choice	
A. Suggest to the student's parents that they consult their family physician to determine if a medical condition is affecting the student's ability to pay attention.	1	2	3	4	5	A	1	2	3	4	5	A
B. Change the student's seat so that extraneous lighting and noises are minimized.	1	2	3	4	5	B	1	2	3	4	5	B
C. Incorporate the student's interests in the academic curriculum.	1	2	3	4	5	C	1	2	3	4	5	C
D. Verbally praise the student when they are attending to the lecture/teacher.	1	2	3	4	5	D	1	2	3	4	5	D
E. Send the student to school counselor to determine if underlying emotional distress is making it difficult for the student to pay attention.	1	2	3	4	5	E	1	2	3	4	5	E