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THE EFFECT OF TIME-MANAGEMENT TRAINING ON TEACHERS’ ACCEPTANCE OF HIGH AND LOW TIME-INVOLVED BEHAVIORAL INTERVENTIONS

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BEHAVIORAL INTERVENTIONS

by

Terri Elane Calhoun

A Dissertation
Submitted to the Graduate Studies Office
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

Approved:

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THE University of Southern Mississippi

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ABSTRACT

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December 2007

Consulting psychologists have encountered difficulty with third party acceptance (consultee acting on behalf of the client) of intervention strategies. Research literature suggests that despite substantial intervention effectiveness, interventions may fail because the strategy was not judged acceptable by consumers or participants in treatment. Typically, an analog research design is used to investigate factors influencing ratings of acceptability. That is, various interventions are described and defined. Participants are asked to rate the acceptability of each intervention while considering other factors such as problem severity, time-involvement, training or education of rater, interventionist, use of jargon, and philosophical orientation toward treatment.

The purpose of this study is to extend the literature by exploring how time management training effects the ratings of intervention acceptability. Specifically, the effects of time management training will be analyzed in relation to teachers' acceptability ratings of reinforcement-based interventions used with a mild problem behavior requiring low and high amounts of teacher time.
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CHAPTER I

INTRODUCTION

The issue of acceptability of interventions for children has endured over the past 20 years. Kazdin (1981) focused on the notion of treatment acceptability and defined it as "judgments by laypersons, clients, and others of whether treatment procedures are appropriate, fair and reasonable for the problem or client" (p. 493).

Specific definitions and the conceptual framework for studying acceptability may differ somewhat (Kazdin, 1981; Lennox & Miltenberger, 1990; Shapiro, 1987), but there is common agreement that the issue grew out of changing public opinion and the nature of psychologists' role in the delivery of intervention strategies (Epstein, Matson, Repp & Helsel, 1986; Hyatt & Tingstrom, 1993; Hyatt, Tingstrom & Edwards, 1991; Kazdin, 1980a, 1980b, 1981; McPhail, 1989; Shapiro, 1987; Tingstrom, 1989; Turco, Witt, & Elliott, 1985; Witt, 1986; Witt & Elliott, 1985; Witt, Elliott, & Martens, 1983). When behavioral procedures were first introduced for the treatment of problematic behavior, treatment effectiveness was the primary dimension on which treatment was evaluated. As issues of normalization, client rights, and use of restrictive treatment procedures evolved, and as public interest in available services increased, additional factors became important in evaluating treatment acceptability (Lennox & Miltenberger, 1990).

Intervention Acceptability

Background, Theoretical Rationale, and Historical Perspective

Much of the early discussion regarding intervention acceptability focused on the need to expand the criteria for evaluating treatment techniques. Until then, the major
focus for evaluating classroom interventions was to measure the extent of student behavior change (Workman, Helton, & Watson, 1982). Another criterion offered was to consider selecting appropriate interventions or treatments in terms of the treatment's social validity (Kazdin, 1981; Wolf, 1978). As defined by Wolf, the term social validity of treatments is three-fold in meaning and addresses judgments by consumers about: (a) the significance of treatment goals, (b) the appropriateness of treatment procedures, and (c) the importance of treatment effects. Kazdin (1980a) focused on the dimension of social validity involving the appropriateness of treatment procedures (i.e. intervention acceptability).

Another perspective is offered by Lennox and Miltenberger (1990) who define a broader concept of acceptability with a combination of 12 factors, grouped into four sequential categories, and grouped in order of consideration. These include: (a) efficacy considerations: motivation variables, treatment effectiveness; (b) secondary effects: side effects, abuse potential; (c) legal and social implications: treatment precedence, social acceptability, regulatory factors; and (d) practical considerations: staff competence, staff cooperation, treatment efficacy, and cost effectiveness.

Another view held is that treatment acceptability is one of four parameters that are critical in the evaluation of intervention research. The four parameters are: treatment effectiveness, treatment integrity, social validity, and treatment acceptability (Shapiro, 1987). Treatment effectiveness is defined as the combination of interrelated components: the degree of behavior change, immediacy of change once treatment is implemented, and the maintenance and generalization of behavior change once intervention strategies are no
longer in place. Treatment integrity involves the extent to which a specified treatment is actually implemented in the manner prescribed. Social validity refers to the evaluation of treatment by consumers. Shapiro states that, "closely related to social validity, treatment acceptability differs in that it represents judgments of the degree to which clients receiving or giving treatment like the treatment procedures" (Shapiro, p. 293). In summary, evidence has been found to suggest that treatment acceptability is a multifactored construct (Martens, Peterson, Witt, & Cirone, 1986; Witt & Elliott, 1985; Witt & Martens, 1983; Witt, Martens, & Elliott, 1984).

Initial Studies

Kazdin, one of the early researchers in treatment acceptability, demonstrated that consumers were able to distinguish between alternative treatments in terms of acceptability (Kazdin 1980a, 1980b, 1981). In his first study (1980a), undergraduates were presented with written descriptions of clinical cases of children with behavior problems, and then were asked to rate four different treatments: (a) reinforcement of incompatible behavior, (b) time-out, (c) drug therapy, and (d) electric shock. Also of interest was whether the severity of the child's problem behavior influenced treatment acceptability ratings. The results indicated that treatments were differentiated in terms of their acceptability ratings with the most positive intervention being most acceptable, and the most intrusive intervention being least acceptable. Specifically, reinforcement was rated most acceptable, followed by time-out, drug therapy, and electric shock. All treatments were rated as more acceptable for more severe problems.
In a subsequent study, Kazdin (1980b) compared the acceptability of exclusionary and non-exclusionary time-out, with reinforcement of incompatible behavior included as the comparison condition. He found that reinforcement was significantly more acceptable than the other procedures, with non-exclusionary time-out receiving higher ratings than exclusionary. A second part of this study was aimed at increasing acceptability of isolation by making alterations in one manner of its presentation and implementation. Results showed an increase in ratings of acceptability for isolation when used with a contingency contract and as the next step in intervention after lack of success with contingent observation and withdrawal of attention. Kazdin continued pioneering efforts in the study of intervention acceptability (Kazdin, 1981; Kazdin, French & Sherick, 1981). His studies, which were limited to those applied within a clinical setting, invited further research by psychologists to determine generalization of overall findings to other settings.

Subsequent Research

Following Kazdin’s initial lead in research on intervention acceptability, subsequent research has identified numerous factors affecting acceptability using the developed methodology in this growing area of interest. The following review will briefly discuss findings relative to the acceptability of interventions as a function of various types of interventions (Elliott, Witt, Galvin, & Peterson, 1984; Tarnowski, Kelly, & Mendlowitz, 1987; Tingstrom, 1989, 1990; Witt, Elliott & Martens, 1984; Witt & Martens, 1983; Witt, Martens, & Elliott, 1984); type of problem and problem severity (Elliott et al., 1984; Frentz & Kelly, 1986; Kazdin et al., 1981; Witt & Robbins, 1985); manner of
intervention presentation (Kazdin, 1980b; Tingstrom, 1990; Witt, Moe, Gutkin & Andrews, 1984); type of student disability (Epstein et al., 1986); teaching experience and/or level of education (Tingstrom, 1989; Witt, Moe, Gutkin, & Andrews, 1984); and the effects of child and classroom characteristics (Martens & Meller, 1989). Finally, because of its relevance to the present study, particular attention will be given to the time involvement factor.

The effects of three different theoretically oriented intervention strategies were investigated by Hall and Wahrman (1987, 1988). They found that a humanistic approach was more acceptable than either behavioral or pragmatic approaches, and that the pragmatic approach received ratings significantly lower than either the humanistic or behavioral approaches. When self-reported classroom utilization of interventions was examined, a positive correlation was found between behavioral orientation ratings and utilization of the behavioral approach.

Hall and Wahrman (1987, 1988) explored the acceptability of different intervention approaches but, typically, researchers have investigated the impact of more than one factor. Witt and Martens (1983) examined the influence of problem severity, type of intervention, and amount of time required for implementation. This study was conducted as one of the first empirical investigations of teacher acceptability of classroom interventions. Preservice and student teachers were asked to evaluate written case scenarios of various interventions implemented to correct a specific problem of either a mild, moderate, or severe nature. Treatments were described as reinforcement-based or punishment-based, which required low, moderate, or high amounts of teacher time.
Reinforcement-based interventions requiring low amounts of teacher time involvement were most acceptable, whereas punishment-based interventions requiring high amounts of teacher time were least acceptable. From their scale, four secondary factors emerged: risk to the target child, effects of the intervention on other children, amount of teacher skill required and amount of teacher time required. A major shortcoming of the study was the use of preservice and student teachers rather than those with experience.

From the cited research, it is apparent that not only do factors such as the severity of the problem behavior and type of intervention influence the acceptability of time-consuming interventions, but also it appears that teachers consider the intervention’s effectiveness when deciding how much time is acceptable. Although effectiveness information was not presented in any of these studies (i.e., Elliott et al., 1984; McPhail, 1989; Witt, Elliott, & Martens, 1984; Witt & Martens, 1983; Witt et al., 1984), there have since been efforts to determine how information about the effectiveness of classroom interventions influences teachers’ acceptability ratings. Von Brock and Elliott (1987) used a measure of treatment effectiveness, the Behavior Intervention Rating Scale (BIRS), designed to differentiate between the constructs of treatment effectiveness and treatment acceptability, to investigate the relationship among these variables. The independent variables that were manipulated in this study were type of intervention, severity of behavior problem, and type of effectiveness information presented. The findings of the study related to the construct validity of the instrument revealed three distinct factors (Acceptability, Effectiveness, and Time). The Time factor refers to the
Time of Effectiveness: how effective an intervention was with regard to rate of change. Additionally, high correlations were found between the Acceptability factor and both the Effectiveness factor and Time factor which supported the notion that the constructs of acceptability and effectiveness are unique but closely related. Findings related to influences on acceptability provided evidence that effectiveness information did influence ratings when problem severity was considered. Specifically, researched-based information interacted with problem severity to increase acceptability ratings as well as effectiveness ratings for a mild problem but not a severe problem. In addition, when teachers rated interventions as less acceptable they also rated them as less effective, which according to the author, “suggests that by manipulating one of the constructs (acceptability or effectiveness) by providing information...you may be able to influence treatment outcome” (p. 141).

Whereas Von Brock and Elliott (1987) varied the source of effectiveness information in their study, Tingstrom (1990) investigated the influence of reported effectiveness (effective vs. no information) employing the manipulation of strength of effects (70% reduction of problem behaviors) and speed of resulting behavioral change (within one week). It was found that teachers rated a time-out intervention as more acceptable when effectiveness information was provided than when no information about effectiveness was provided. These results suggest that teachers' acceptability of an intervention may be increased when effectiveness information describes relatively quick and powerful changes in behavior.
Whinnery, Fuchs, and Fuchs (1991) proposed that not only did teacher acceptance of behavioral interventions appear to be necessary for successful mainstreaming, but acceptance of academic interventions such as curriculum-based assessment was also essential. Whinnery et al. found that, with regard to mainstreaming students with mild handicaps, there was a relationship between perceived effectiveness of an intervention and willingness to implement. However, these results suggested that teachers may be familiar with a variety of behavioral interventions but view them as ineffective and therefore would be less willing to implement them. This study extended the literature on intervention acceptability by including investigation of instructional strategies.

Because it cannot be assumed that persons responsible for implementing interventions are knowledgeable of behavioral principles, much of the literature has focused on participants' experience, knowledge, or understanding; as well as on the effect of providing information or instruction to participants. A study by Rasnake, Martin, Tarnowski and Mulick (1993) investigated the influence of general knowledge of behavioral principles on direct-care staff's acceptability of various behavioral interventions for self-injurious behavior. They found evidence that knowledge of behavioral principles may not be significantly associated with judgements of acceptability. It was noted, however, that the study assessed general knowledge as opposed to knowledge of specific interventions and their effectiveness with specific problems.

Also extending research beyond the confines of the classroom and teacher participants, Burkett (1997) investigated the relationship between acceptability of home-
based interventions for behavioral problems and mothers' competence (i.e. ability to understand and differentiate) to participate in treatment decisions. Mothers demonstrated capability for understanding and differentially rating acceptability of three interventions, but not as a function of problem severity.

Walle, Hobbs, and Caldwell (1984) investigated the effects of understanding three alternative interventions on mothers' acceptability of a specific technique. Instructions were provided via a “bug-in-the-ear” device on a specific technique to use with their child, and then asked to complete a rating scale. The results suggested that use of an intervention increased its acceptability. Concerns were expressed that perhaps use of treatment was confounded with the effect of the treatment reducing problem behavior.

One of the first studies to involve experienced individuals who work directly with developmentally disabled children and adolescents in educational settings was conducted by Epstein et al. (1986). In this study it was reported that there may be a difference between general and special education teachers' judgments of acceptability of various interventions, as well as a difference in the impact of specific types of developmental disabilities on judgment of acceptability.

Epstein et al. (1986) explored acceptability of treatment alternatives as a function of teacher status. General and special educators rated the use of alternative treatments to modify a childhood behavior disorder. Participants were 27 special education teachers and 62 general education teachers enrolled in special education coursework. Participants were closely matched for experience, gender, and age. The Treatment Evaluation Inventory (Kazdin, 1980a) was used and provided a Likert-type format to evaluate
different treatment descriptions ordered in terms of preference for use with the hypothetical case.

Characteristics of the case included Attention-Deficit Disorder with Hyperactivity (American Psychiatric Association, 1980). The treatment procedures were described and not identified by name. The five treatments were: (a) medication treatment, (b) behavior modification using edible reinforcers, (c) counseling, (d) special education programming, and (e) affective education.

Epstein et al. (1986) concluded that teachers distinguished between alternative treatments on the basis of their acceptability. Additionally, special education programming was considered the most acceptable treatment for the described case, followed by counseling, affective education, behavior modification, and medication. General and special education teachers did not differ significantly in how they evaluated alternative treatments.

Many researchers were not necessarily interested in the effect of pre-existing skills, but rather on the influence of providing information or instruction. Von Brock and Elliott (1987) investigated the extent to which providing teachers with information regarding the effectiveness of three classroom interventions influenced teacher acceptability ratings. The sample consisted of experienced, certified teachers attending summer graduate courses. The majority of teachers were general education teachers with more than 7 years experience. Subjects read descriptions of either mild or severe behavior problems and rated the effectiveness of either token economy, response-cost, or time-out interventions. Time-out was rated as significantly less acceptable and less effective than a token
economy or response-cost procedure. Research-based effectiveness information interacted with problem severity to increase acceptability ratings for a mild problem but not a severe problem. Of particular interest was the finding that when teachers rated interventions as less acceptable they also rated them as less effective. These findings supported Witt and Elliott's (1985) hypothesis of a positive relationship between acceptability and perceived effectiveness.

Investigating the effect of an educational process on acceptability ratings of three behavioral interventions, Singh and Katz (1985) found increases in acceptability ratings of undergraduate students following lectures. These results suggest that increases in acceptability may be obtained by providing additional specific instruction. However, their study failed to use a nontreated control group which may limit the interpretation of their findings. A later study by Tingstrom (1989) also revealed that providing information to teachers impacts ratings significantly. Using prospective teachers enrolled in an educational psychology class as the experimental group, the investigator evaluated the effects of lectures covering general learning principles and four specific child behavioral interventions (differential reinforcement of incompatible behavior, home-based reinforcement program, ignoring, and time-out) on acceptability ratings of these specific interventions. Pre- and post-lecture ratings were compared with those of a control group. Pre-lecture acceptability ratings showed no differences between experimental and control groups, whereas post-lecture ratings indicated significant increases in acceptability of three interventions for the experimental group only.
More recently, Allen and Blackston (2003) examined the effects of consultation with preservice teachers who were receiving instruction in collaborative problem-solving (i.e. collaborative development of scripts). Results of the study found that consultation with teachers receiving instruction and training resulted in high levels of teacher adherence, positive outcomes for the student, and high levels of acceptability. The implications are that increased training or instruction prior to consultation efforts may positively influence the impact of consultation in real-world situations.

Contrasting the interest in participant characteristics, the emphasis of other studies have examined the process of development. Expanding the treatment acceptability literature, Kutsick, Gutkin, and Witt (1991) explored the impact of various processes through which interventions are developed. Teachers reviewed case studies and information describing the process by which the recommended treatments for the presenting problem were developed. The type of treatment recommended (positive versus reductive) and the seriousness of the presenting problem (mild versus severe) also were investigated. Teachers found interventions developed via a collaborative model to be more acceptable than those developed by either a teacher or a school psychologist working in isolation. Positive interventions were found to be more acceptable than those that were reductive or punishment-based. However, inconsistent with prior studies, teachers did not find treatment recommendations more acceptable when made in reference to a severe problem versus a mild problem. It was postulated that perhaps the teachers assumed that the mild condition was actually serious because it was referred to a school psychologist.
In conducting an analysis of treatment integrity, Wickstrom, Jones, LaFleur, and Witt (1998) sought also to determine the effects of collaborative development of intervention plan versus prescriptive. Findings of the study suggest that whether or not teachers implement the treatment component developed during consultation, either through collaborative or prescriptive process, partially depended upon the method used to measure implementation. Specifically, it was found that integrity estimates decreased as the level of methodological rigor increased, and that none of the variables examined (i.e. problem severity, degree of collaboration, or acceptability) were related to treatment integrity. These findings do not support the theoretical models based on analog methodology which predict that these very factors would be associated with treatment use. However, comparison of these results to previous investigations of intervention development is limited due to discrepancies in the definition of collaboration. Wickstrom et al. (1998) defined consultive approach in terms of verbal interactions rather than emphasis on truly arriving at common agreement through cooperative efforts. Collaborative consultation was defined in terms of frequency of consultant prompts for input and amount of input by the teacher (i.e. consultant requests for input on 8 of 14 problem identification issues and 11 of 14 problem analysis issues). Prescriptive consultation was defined as the absence of prompts by consultant for input during either the problem identification or problem analysis interview.

In consideration of teachers' preference for collaborative development of behavioral interventions, Gray, Gutkin and Riley (2001) examined the acceptability of specific rewards and reward categories, with a survey generated by participants themselves.
Participants included high school teachers, parents, administrators, and students who were asked to rate the rewards survey for acceptability. This exploratory study revealed that none of the seven rewards categories were viewed as highly acceptable. Suggestions were offered for future research in this area.

Rather than the process of developing interventions, some studies have investigated the effects of the person implementing the intervention. Tingstrom (1990), exploring the acceptability of time-out as a function of interventionist, problem severity, and reported effectiveness, found evidence that acceptability ratings were greater when the described time-out procedure was implemented for severe problems and when information was provided that suggested that the intervention was effective. No differences were found for teachers' versus school psychologists' implementation of time-out, suggesting that teachers may prefer to defer involvement when interventions are difficult and the problem is severe. These results appear contradictory to those of previous investigations that had shown teachers preferred to be directly involved (Algozzine, Ysseldyke, & Christenson, 1983; Martens, Witt, Elliott, & Darveaux, 1985; Witt & Robbins, 1985). It may be that Tingstrom's (1990) study serves to clarify conditions under which teachers' preference for involvement may be influenced.

McPhail (1988) focused on the influence of problem severity and interventionist on alternative interventions. Participants rated the acceptability of a positive but time-consuming intervention (token economy) and a negative, less time-consuming intervention (requiring child to miss recess). The findings were interesting. Previous studies had found a preference for positive interventions and low time-involvement. In
this study, no significant difference was found. It was postulated that results may have been affected by the "hybrid" (p. 54) of positive intervention described. The positive token economy incorporated a reductive response-cost procedure, rendering inconclusive evidence of subjects' preference for either positive or negative interventions. The data did indicate marginal increases in acceptability of the positive versus negative interventions despite the considerable differences in time required to implement them. The participants' preference for high or low time involvement was assessed but the time involvement factor was varied along the dimensions of problem severity, interventionist, and positive versus negative intervention. Without holding all factors except time-involvement constant, it is difficult to assess the impact of time involvement alone on teachers' acceptability.

_Time involvement factor._ Of particular relevance to the present study is a review of research conducted to investigate the influence of time requirements on teachers' ratings of acceptability. Very often teachers are required not only to educate, usually 25 or more students at once, but in the process must complete and handle large amounts of paperwork and documentation, attend meetings, assume extracurricular school duties, and participate in continuing educational activities, as well as deal with the demands and conflicts that arise from their multifaceted role as educator/interventionist/liaison/politician/organizer/entrepreneur/etcetera. However, research focusing on teacher-implemented interventions has not always taken the time factor into account. For example, Azrin, Azrin, and Armstrong (1977) investigated a teacher-implemented intervention requiring up to approximately 2 to 6 hours per week for direct intervention.
plus up to an additional 5 to 6 hours for consultation. It is of little surprise, then, that
"...time consumption is a very salient factor in teachers’ pretreatment acceptability ratings
of treatment procedures" (Elliott, Witt, & Kratochwill, 1991, p. 113).

Investigations of the effects of teacher time on acceptability of behavioral
interventions have generally found an interaction between time involvement and problem
severity. For example, when three punishment-based interventions were compared
(Elliott et al., 1984) it was found that the intervention requiring a moderate amount of
time was the most acceptable for all levels of behavior problem severity, but for the mild
and moderate behavior problems the least time-consuming intervention was judged more
acceptable than the most time-consuming. Results found in a study by Witt, Martens, and
Elliott (1984) were similar in that interventions which required medium and high
amounts of time were not rated significantly different for mild, moderate, and severe
behavior problems. An important finding was that the intervention requiring a low
amount of time was rated significantly less acceptable for severe problems than it was for
mild or moderate problems. The authors suggest this effect was due to teachers’
perception that a low-time intervention would be ineffective in dealing with a severe
behavior problem.

Another study of particular relevance to the investigation of time as a factor of
acceptability is that conducted by Witt and Martens (1983). In a comparison of three
factors, type of intervention, amount of time required, and severity of problem behavior,
the highest acceptability rating was given to a reinforcement-based intervention which
required low amounts of time and was used with a mild behavior problem. The least
acceptable intervention was a punishment-based intervention which required high amounts of teacher time and was used with a mild problem. McPhail (1989) investigated the same three variables within an institutional setting and obtained results contradictory to findings of previous studies. Preference for positive interventions with low time involvement was not found to be significant. No difference between high and low time involvement emerged as significant. McPhail found that differing amounts of time involvement did not significantly affect acceptability ratings of any treatment or problem severity. It was noted that previous studies have not traditionally identified medication as either reinforcement-based or punishment-based, and medication has not been examined along the dimensions of time involvement as a treatment intervention. In addition, research of factors influencing acceptability typically have utilized teachers’ responses and not the responses of direct-care staff.

Order. Historically, the methodological issue concerning order has been recognized as relevant to analog acceptability research. Numerous studies have attempted to control for order effects. Findings among those that did (Hyatt & Tingstrom, 1993; Kazdin, 1980a, 1980b, 1981; Kazdin, French & Sherick, 1981) are inconsistent due to the differences in variables studied. Kazdin (1980a) in studying the acceptability of alternative treatments with undergraduate students as participants used a 4 x 4 Latin Square analysis which required the four treatments presented to be described in different order. Results of the data analysis found that neither the sequence in which treatments were presented nor the order in which a treatment appeared were statistically significant. Kazdin, French, and Sherick (1981) found similar findings when inpatient children,
parents and staff rated the acceptability of alternative treatments. An aspect of the study sought to evaluate the impact of the way in which treatment was presented. For each analysis, neither the sequence in which treatments were presented nor the order in which a treatment appeared were significant. Hyatt and Tingstrom (1993) investigated order effects of the repeated measure, intervention type. Results of that study indicated that order effects may influence acceptability ratings. It was found that mean ratings of two intervention types (reinforcement-based and punishment-based) were lower when reinforcement-based was presented first than when the punishment-based intervention was presented first. Thus, it was postulated that teacher's acceptability of a reinforcement-based intervention may be best achieved in a consultation situation by presenting a punishment-based intervention first. Or conversely, acceptance of a punishment-based intervention by presenting it in isolation may increase its acceptance.

Limitations

A limitation shared by all the studies discussed is the lack of ecological validity given the nature of the analog study, pen-and-paper responses to written descriptions. It is unknown how the participants would have reacted under naturalistic conditions. To address this limitation, one study examined the correspondence between analog and naturalistic acceptability ratings of treatments. Reimers, Wacker, Cooper and DeRaad (1992) used, as participants, a total of 40 parents seeking services for their children in a behavior management outpatient clinic. All parents were new to the clinic and seeking assistance for their child's inappropriate behavior. Parents rated the acceptability of three alternative treatments applied to case descriptions, and also rated the acceptability of the
reinforcement-based treatment actually implemented. Parents were asked to rate acceptability of the treatment prescribed (positive reinforcement) for their own child’s problem behavior as well as the effectiveness and their compliance following parent training and again at 1-, 3-, and 6-month intervals. A comparison was made between the analog ratings (reinforcement-based component only) and the naturalistic ratings of the reinforcement-based treatment implemented in clinic and at home. Results indicated that when the severity of behavior problems was considered, a positive relationship existed between analog and naturalistic ratings. Analysis of analog data revealed that positive reinforcement was more acceptable for low severity behavior problems than for high severity, and medication was more acceptable for high severity. Similarly, analysis of clinical data found that parents of children with less severe behavior problems rated the prescribed treatment (used in clinic and home) of positive reinforcement as relatively more acceptable. This suggests that acceptability ratings of case descriptions using positive treatments may be indicative of acceptability ratings obtained in naturalistic context. Findings also revealed a strong, positive relationship between treatment effectiveness and acceptability at each point in time. And further, a gradual increase in the relationship between acceptability and compliance was observed over time.

Numerous limitations with this study should be considered. Primarily, the amount of control afforded by analog methods was not feasible within the clinical context of the study’s setting. The inability to directly match clinically prescribed treatment with analog treatment makes true comparisons of the two sets of data impossible. Any congruence of the findings is suspect. Related to the issue of control, descriptive scenarios were used to
obtain analog ratings, but naturalistic data was obtained from parents’ ratings of
prescribed treatment used with their own children, introducing the uncontrolled effect of
parents’ perception of their child’s problem behavior, their history of dealing with the
problem and the effectiveness of treatments used in the past to deal with the problems.
Findings further suggested that there may be a limited threshold to approaches that
parents are willing to accept in dealing with their own children. Other limitations of the
study are related to issues of assessing treatment effectiveness with lack of access to
direct measures of compliance and behavioral change. Statistical issues related to
participant attrition and including only one item dealing with compliance on the rating
scale.

Many researchers, in recognition of the limitations related to analog studies, are
involved with the development of alternative methodologies. For example, Ehrhardt,
Barnett, Lentz, Stollar and Reifin (1996) planned a study to incorporate the four
reciprocal factors proposed by Witt and Elliott (1985): acceptability, use, treatment
integrity, and effectiveness; and to provide ecologically valid research important to
practitioners. This study was designed to provide empirical evaluation of both the use of
interventions by consultants and consultees, and their acceptance by consultees. The
focus was on developing a functional and practical service delivery model based on
naturalistic intervention design principles. Methodology employed for investigative
purposes included the use of scripts to guide consultees in implementing interventions.
Collaboratively developed naturalistic intervention scripts, written in the vernacular of
consultees, were constructed to serve multiple purposes: (a) to ensure a more natural fit
with the ecological environment, (b) to provide intervention considered nonintrusive, (c) to allow for the evaluation of treatment integrity, (d) to serve as an observational tool for constructive feedback, and (e) if consultees consider scripts acceptable, to be used as self-monitoring during implementation in order to improve treatment integrity. Innovative features of this research were the use of data obtained from multiple sources and the experimental design using within series single case or case study designs. For each case, treatment integrity and treatment acceptability were measured repeatedly by consultants, consultees and independent data collectors. Although each case was evaluated separately, the overall findings provided evidence of significant treatment outcomes. In all cases behavior changed rapidly and significantly, concurrent with the introduction of the intervention. Other findings indicate that participants (parents and teachers) either initially found scripts acceptable, or found them increasingly acceptable through implementation. Accurate use of scripted interventions was verified, and interventions were successful in reducing problem behaviors. A notable, yet unavoidable, limitation of this study is the sacrifice, to some extent, of experimental control resulting from the nature of a real world or field setting.

Interested in addressing the limitations of analog methodology, several studies have focused on obtaining direct measures of integrity rather than self-reported measures, in naturalistic settings. Wickstrom et al. (1998) sought to investigate the relationship between variable thought to be related to integrity as identified through analog research, such as pretreatment acceptability and actual implementation of planned intervention. The independent variables of interest included severity of child’s problem, treatment
acceptability, and consultative condition (i.e., verbal interaction style of consultant). The relationship of the three variables with three different measures of treatment integrity was evaluated. In this study, the consultative process occurred using either a collaborative or prescriptive style of verbal interaction with 27 classroom teachers, each referring a student for disruptive target behavior. Measures of teachers' perceived severity of problem behavior were obtained using the Student Progress Rating Scale (a Likert-type instrument developed for this study), and a tradition acceptability rating scale was used to obtain measures of treatment acceptability. Direct observation using a 10-second partial-interval recording system was used to measure the occurrence or non-occurrence of disruptive behavior during 20-minute observation periods. Three different methods of measuring treatment integrity were used: (1) observation, teachers used the Baseline/Intervention Recording Form to monitor child's behavior at continuous intervals, (2) use of intervention stimulus products, independent observer noted on two occasions if product was visibly near child's desk, and (3) use of treatment as planned, independent observer calculated the percentage of target behaviors that were followed by a program response from teacher. It was found that mean integrity of a monitoring system based on teacher self-report was 54%, the average use of intervention stimulus products was 62%, and direct observation of use of intervention as planned was 4%. The extreme differences found when varying method of measuring of integrity raises serious questions about the validity of measures (i.e., self-report) used to evaluate treatment implementation. Another interesting finding was that none of the treatment integrity variables were related to problem severity, treatment acceptability, and collaboration, as
might be expected based on analog methodologies. Also, despite the low integrity scores, multiple measures indicated a decrease in child's disruptive behavior. It was postulated that behavior improvements may have been due not necessarily to nontreatment consequences, but to alternative teacher consequences.

Similarly, Peterson and McConnell (1996) evaluated treatment integrity using a direct measure, observational data, as related to the factors of treatment acceptability, consultative support for implementation, and individual child outcomes. Early childhood special education teachers served as participants and were randomly divided into two groups: those who receiving training only in use of the intervention, and those who received training with consultative support. Interventions for the study included four standardized packages for implementing interventions to increase social skills in preschool children. Results of this study found strong positive correlations between child outcome and intervention integrity as well as between overall level of intervention provided and child outcome. However, when teachers' acceptability ratings' for specific components were compared with actual implementation levels, it was found that teachers' preintervention acceptability ratings were weak predictors of subsequent implementation. Interestingly, this study did not find that consultative support was related to intervention integrity, as had been predicted. One surprising, unexpected finding in this study was the strong relationship between intervention type and intervention integrity. All eight teachers implementing the comprehensive intervention (the most complex intervention) did so with higher integrity levels than those implementing the other three interventions. This finding is contrary to the generally accepted notion that more complex interventions
are less likely to be chosen for implementation, and when chosen are likely to be implemented with lower levels of integrity.

Sterling-Turner and Watson (2002) sought to directly examine the relationship between analog acceptability ratings and a direct measure of integrity. Undergraduate students were used as participants. Participants were read a case description of a client exhibiting a facial tic, and a description of the intervention developed as plan of treatment. A measure of treatment acceptability was obtained from each participant using modified rating scales. Participants were then trained to implement the treatment protocol. The protocol was selected on the basis of a pilot study as the one among three that yielded the broadest range of acceptability scores. The multicomponent treatment protocol involved: (a) differential reinforcement of zero target behavior, (b) punishment, (c) increasing client awareness of antecedent behaviors, and (d) data collection on pre- and post-tiquing behavior. Participants implemented treatment protocols with a client (confederate). Measures of treatment integrity were obtained by coding participant’s videotaped adherence to each step of the treatment protocol. The results of this study have important implications for school-based consultation and acceptability research. Correlations between both pre- and post-treatment acceptability and treatment integrity were not significant. This investigation seems to refute the general assumptions made that a treatment must be acceptable in order to ensure treatment integrity. Contradictory to Reimers et al. (1992), the findings suggest not only that rating scales may not be the most accurate means of assessing acceptability, but may also have little predictive value in terms of treatment implementation and integrity. The authors suggest that researchers
and consultants should focus on means of increasing treatment integrity rather than increasing acceptability. Despite some noted limitations (e.g. issues of generalizability from controlled to applied settings, potential effects of demand characteristics, no separate measures for each component of treatment plan, and lack of collaborative development of treatment plan), this study does provide an alternative experimental approach to addressing future research in this area.

Current Time Management Research

The concept of time management is often a topic in popular literature and has been the focus of study in current psychological research as well. "The concept is generally defined in terms of clusters of behavior that are deemed to facilitate productivity and alleviate stress" (Lay & Schouwenburg, 1993, p. 648). Macan, Shahani, Dipboye, and Phillips (1990) conceptualized time management in terms of setting goals and priorities, the use of mechanics (like making lists), and the perceived control of time. In their study, Macan et al. investigated the correlation between time management and college students' academic performance and stress. It was found that perceived control of time was positively associated with job (academic) satisfaction and grade-point average, and negatively related to job-induced tension and work overload (i.e., the perception of too much to do in too little time). Britton and Tessor (1991) also reported a positive relation between time management and grade point average in a similar study.

Some investigations of time management have attempted to link attributional or trait characteristics with individuals' perception of time constraints and management of time (Lay & Schouwenburg, 1993; McAuley, Poag, Gleason, & Wraith, 1990; McGraw,
Bergen, & Schumm, 1993). Lay and Schouwenburg conducted a study with 60 university students. The results of a personality questionnaire were compared to a dilatory behavior scale for non-task-related behavior. It was found that trait procrastinators obtained lower scores on time management subscales. It was reasoned that it was lack of time management skills that caused trait procrastinators to exhibit higher levels of dilatory behavior than nonprocrastinators. In addition, trait procrastination was positively related to dejection at the outset of a course prior to making study and work plans, and positively related to agitation experienced during the last week of class. The time management subscale, Perceived Control of Time, was negatively related to agitation indicating that a low perceived control of time associated with trait procrastinators appeared to mediate their higher agitation levels.

McAuley et al. (1990), in considering that the U.S. Public Health Service has identified exercise and physical fitness as one of 15 behavioral interventions likely to reduce morbidity and mortality, were interested in understanding the problems of sustaining adherence to exercise regimens. The study sought first to detail raw (attributional) categories identified as being primary reasons for discontinuing a program of physical activity; and secondly to determine whether such causal dimensions were related to the affective responses associated with “dropping out.” An attributional model of emotion and achievement was applied to exercise behavior. It was found that the causes of attrition identified by respondents were predominantly internal, unstable, and under their personal control (i.e., casual ascriptions were considered to be under the control of the individual and amendable to change). Specifically, the investigation of
attrition from exercise programs revealed that the most frequently cited reasons for attrition/lack of program adherence in sedentary middle-aged adults were lack of motivation (26%) and time management (25%) which were accompanied by feelings of guilt, shame, and displeasure. These results suggested to the authors that adherence to an exercise program could be facilitated by not only attending to the time element in developing the program, but also by making the activity enjoyable and providing accurate and frequent feedback regarding progress (program effectiveness) which would lead to feelings of competence, pride, and pleasure.

McGraw et al. (1993), in a study which explored home-schooling in Kansas, also found a relation between reported internal state and time management. From interviews with families who home-schooled their children, it was found that parental responsibilities appeared to be divided along traditional gender-role assignments (fathers were responsible for at least one subject, e.g., science, religion, or physical education). In addition, all mothers reported that time management and household organization was the most stressful challenge. Some form of support (e.g., equitable division of responsibilities or support groups) was cited as a critical necessity in dealing effectively with the stress. However, no empirical data were presented to yield evidence that “support” would result in effective management of time or reduce stress.

Other studies have been interested in specific behaviors related to managing time, such as how people plan and use time and the effects of managing or mismanaging time in order to meet goals. Several investigators (Ajzen, 1991; Kuhl, 1985; Lay & Burns, 1991) have examined individuals' intentions or plans, viewing intentions as the
forerunner to action. Ajzen (1991), in his theory of planned behavior, proposed that a person’s perceptions of behavioral control were a predictor of behavior in situations not completely under the person’s control such as an employment setting. It was suggested that when behavioral intentions are held constant, perceptions of behavioral control account for much of the variance in actual behavior. Extending this area of research, Lay and Burns (1991) sought to provide an assessment of discrepancies between intended and actual behavior and found that dilatory behavior (mismanagement of time) largely accounted for intention-behavior discrepancies.

An alternative explanation for the differences in planning actions and outcome was offered by Garling (1994). In his study, Garling proposed that efforts in planning to perform a task could be conceived of as choices between sequences of actions, and that time constraints is a relevant factor in determining which choices are made in steps that lead to task completion; that is, time influences the decision-making process in planning efforts to complete a task. The study was designed to allow participants to choose when and where to perform a number of common errands in a fictitious environment. Findings suggested that whether mandatory or optional, participants more often chose to minimize time rather than efforts, but would sacrifice time minimization when waiting time was involved.

Josephs and Hahn (1995) also explored the relationship between time and effort in studying bias and accuracy in time estimates of task duration. They report the existence of “...a sophisticated, decision-analysis-based planning technology...to predict with precision the amount of time necessary to complete a project...” (p. 202); but suggest that
the predictive validity of any given decision model technique is susceptible to multiple and various errors, mistakes, and biases because they all are based on assumptions about the estimates for each subtask within the overall task structure. The focus of the study, then, was on inaccuracies resulting from simple information processing biases, not task complexities. It was proposed that when required to estimate task duration of a simple task, that a "tradeoff" between accuracy and effort would occur. Furthermore, it was hypothesized that the tradeoff would result in the tendency to employ strategies which utilize the most salient and computationally simplest feature. Several experiments were conducted which required participants to estimate the amount of time needed to complete various academic type tasks. Results of the study indicated that, indeed, participants demonstrated a marked tendency to trade accuracy in favor of minimizing cognitive effort in their selection of planning strategies, which resulted in a significant underestimation of time required to complete the task. Additionally, it was shown that participants appeared to base their estimates on physical features of the task that required the least computational effort to process. Based on these findings, it was suggested that the difference between drastic underestimations and precise accuracy may simply require a minimal increase in effort.

*Time Management Training*

Research in the area of time management has also involved investigations of the effects of time management training (Macan, 1994; Orpen, 1993). Orpen studied the effects of time management training on employees at a manufacturing company. Approximately half of the participants attended a three-day time management training
program and half did not. Both groups maintained diaries over a two-week period after the training program. A comparison between the groups revealed that self-ratings of participants' management of time as well as ratings of diary entries by three supervisors were significantly higher for the trained group. Although Orpen contends that these findings suggest that time management training can improve employees' ability to manage their time at work, it should be considered that actual work performance and activity were not examined.

Macan (1994), however, did investigate the effect of time management training on time management behaviors, perceived control of time, stress responses, job satisfaction, and job performance. Results of the study were contradictory to Orpen's (1993) findings. Prior to testing the effect of time management training, Macan first developed a process model to provide a framework of investigation. Macan's model was based on literature provided by Lakein (1991) and Macan et al. (1990). Lakein described time management in terms of typical behaviors used by individuals to manage time: (a) setting goals and priorities, (b) planning, scheduling, and making lists, and (c) organizing workspace and determining approach. Macan et al. Found three time management factors consistent with Lakein's description: (a) setting goals and priorities, (b) the mechanics of time management (e.g., making lists), and (c) a preference for organization. Macan's process model (1994) proposed that time management training would lead to an increased frequency in each of these three time management factors. In addition, Macan proposed that engaging more frequently in the three time management factors should lead to a greater perception of control over time. "By setting goals, scheduling, and organizing,
one gains a sense of mastery over how one allocates one’s time; that is, the perception that one has control over one’s time.” (p. 384).

Macan included the concept of perceived control of time in the process model in order to extend and test the work of Ajzen (1991). According to Ajzen, a person’s perception of behavioral control is the best indicator of the person’s behavior in situations that are not completely under their control, such as an employment setting. Macan’s process model proposed that this perception of control over time leads to fewer job-induced and somatic tensions, greater job satisfaction, and better job performance.

The Time Management Behavior Scale (TMB; Macan, et al., 1990) was used to test the model and assess relationships between time management training, time management behaviors, perceived control of time, and the outcomes associated with perceived control of time. Data were collected from questionnaires distributed among employees at a public social service agency and a department of corrections system. In order to avoid calling attention to time management issues, instructions on the cover sheet informed respondents that the study was interested in examining opinions about work activities and potential needs for future training programs. Respondents to the survey who chose to volunteer to participate in the organization’s seminars received a half day of training based on Lakein (1991) that included (a) setting goals, (b) prioritizing, (c) making lists, (d) scheduling and planning, (e) organizing desk and papers, (f) dealing with procrastination, and (g) dealing with interruptions. The time management behaviors were taught using a variety of methods including lecture, discussion, film, time to make lists and set goals, and role play.
The time management behavior items on the assessment instrument were used to assess the extent to which time management activities were used, not the individual’s evaluation of the effectiveness or appropriateness of such behaviors. Other items on the scale were used to measure perceived control over time. Two subscales of the Anxiety Stress questionnaire (House & Rizzo, 1972) were used to measure job-induced tension and somatic tension: the Job-Induced Tension Scale, which measured perceptions of pressures and frustrations related to work, and the Somatic Tension Scale, which assessed possible outcomes of stress in terms of physical symptoms such as headaches, insomnia, etc. Job satisfaction was measured using the General Job Satisfaction scale from the Job Diagnostic Survey (Hackman & Oldham, 1975). Measures of job performance were obtained in different ways for each organization. The participants’ immediate supervisors in the social service agency completed a performance measure specifically designed for the study. Performance measures on participants at the corrections system were obtained by reviewing employee records of their most recent performance ratings made by their immediate supervisor. Performance was analyzed across the two organizations along five common dimensions: quality, productivity, cooperation, dependability, and overall performance. Finally, a number of preexisting differences between participants were examined to lessen biased estimates of treatment effects characteristic of quasi-experimental designs.

Several findings of the study were reported by Macan (1994). It was found that the proposed process model of time management provided a good fit to the employee sample data. Results related to the effect of time management training indicated that although
time management behaviors appeared somewhat effective, time management training had little influence on whether respondents engaged in these behaviors. It was suggested that most variation in time management behaviors must have existed before training. Additionally, it was found that engaging in time management behaviors appears to have beneficial effects (i.e., fewer job-induced and somatic tension and greater job satisfaction) if participants perceive greater control over their time, but simply engaging in time management behaviors does not necessarily lead to perceived control over time. An explanation for this was offered in terms of the type of information individuals receive from engaging in these behaviors--the consequences of behavioral feedback.

It may be that making lists, for example, provide people with objective feedback concerning their progress on projects or duties. When a person does not complete the projects listed, the perception of having little control over how time is spent may result. Thus, simply making lists more frequently may not be beneficial for everyone” (p. 389).

Finally, a major finding of the study was that the relationship between perceived control over time and job performance was not significant. Overall findings suggest that time management training may reduce job-related tensions and increase job satisfaction but does not effect job performance.

An obvious limitation of this study is the self-selection of those participants responding to the questionnaire, and from that pool of respondents, self-selection of participants to participate in training. Another limitation of the study is related to job performance measures. Specifically, job performance measures were obtained from
supervisors' ratings. Perhaps a more data-based assessment of the performance dimensions would provide quantitative data that could be examined. Also related to the job performance measure, was that the job performance ratings were restricted to the higher end of the scale which would reduce the instrument's sensitivity in detecting increases or improvement. The sample used may also be seen as potentially limiting the findings. Future research may need to investigate variables such as job types and types of organization on perceived control over time. The author suggests investigating attributional characteristics of the participants.

While the effectiveness of time management training may be debatable, the generally accepted importance of time management issues is evident through the plethora of published materials devoted to the topic. Often very significant decisions are made on the basis of whether individuals are able to demonstrate management of time. For example, specifically as it relates to teachers, the North Carolina Teacher performance Appraisal Instrument (TPAI), designed to measure the teaching performance of beginning teachers in North Carolina, relies on ratings in five areas including management of instructional time. Training courses, seminars, and web-sites are devoted to teaching time-management techniques. Mamchak and Mamchak (1993) offer ten chapters dedicated to providing teachers with time-saving tips and techniques, with reproducible charts, forms, checklists, and various other time-saving devices, to assist teachers with time management. With all of this, the literature offers very little in the way of assessing the affects of time management training with teachers.
Notably, Maher (1983) investigated the effects of time-management training on teacher instructional behavior. Impetus for this study was driven by increasing concerns of special education supervisors and special education teachers about loss of actual instructional time due to competing mandates. “These professional have indicated that recent federal legislation (i.e., PL 94-142), coupled with larger class sizes, have demanded that they devote increased attention to paper-work, documentation of pupil progress, and planning for individualization of instruction.” Given these job responsibilities, less time seems available during class periods for teachers to engage in academic instruction.

In this study (Maher, 1983), a multiple baseline across schools design was used to evaluate effects of a time management program on percent of instructional time manifested by special education resource teachers. Participants were nine junior high special education resource teachers. The order in which the schools and the three teachers at each school were provided training was randomly determined prior to study. Teachers did not differ significantly in terms of degree of education and experience as resource instructors. The dependent variable of interest included teachers’ instructional behavior and noninstructional behavior which were operationally defined. Data was collected from direct observation using a 10-second interval scoring procedure during three 50 minute class periods. Inter-rater agreement of independent observers was high for baseline condition (96%) and for sessions following training (97%). Observations were collected during pre-training (baseline) and post-training during five months of the school year.
The time management training program developed by the author was provided to three teachers in each school and were conducted in three, three-hour sessions over three consecutive weeks. The teachers were instructed in a three phase instruction time management approach. Training method included brief lecturettes, simulation exercises focusing on time management problems, role playing, performance feedback, and discussion. Following training, teachers were encouraged to use the time management techniques that had been taught and to meet as a social support group monthly with supervisor to discuss specific concerns.

Results of the study found that each group of teachers, as well as each individual teacher, increased the amount of time devoted to academic instruction, only after the time management training program, and increases were maintained over time for the duration of the investigation. All teachers were interviewed following training and all reported satisfaction with the format, content, and activities of the training program. Additionally, all teachers reported that use of the time management approach was practical. Teachers did not indicate resistance to participate in time management training. The most effective aspect of the time management approach was reported by seven teachers to be monthly support meetings, and six noted setting priorities as critical. Limitations related to this study are related to self-selection of participants, and possible reactivity.

Hall and Hursch (1982) provided time management training to four post-secondary faculty and staff members at a local university, and achieved similar results in increasing the amount of productive work time. Training in this case was provided through the distribution of a time management training manual (with forms, charts, and graphs for
setting priorities and goals, scheduling, and self-monitoring) and stimulus props such as beeping clocks and log-ins for building site and scheduled meetings. The major effect following training was an increase in high-priority time. The difference in the average time spent each day on high-priority tasks for each individual was: 28 minutes increased to 2 hours and 19 minutes; 6 minutes increased to 2 hours and 38 minutes; 17 minutes increased to 2 hours and 24 minutes; and 24 minutes increased to 1 hour and 32 minutes. Additional findings were that self-ratings of productivity and satisfaction also increased.

The Macan process model (1994) seems to lend itself well as a useful mechanism for exploring the effects of time management training with teachers. Macan’s study found that after training, individuals who set goals and prioritized and had a preference for organization perceived themselves to have greater control over their time; and in turn, a perception of control over time was related to job satisfaction and reduced stress tensions. It follows then, that job satisfaction and reduced stress tensions gained from perceived control of time (through time management training), might logically translate into teachers’ feeling more in control, satisfied, and more willing to accept typically less preferred job requirements. In other words, the effect of time management training (related to such desirable outcomes as perceived control of time, job satisfaction, and reduced stress) could also positively impact teachers’ typical rejection of tasks demanding high amounts of time. The present study investigates the effect of time management training on teachers’ judgements of intervention acceptability in situations requiring high time-involvement.
Summary and Suggestions for Future Research

Several authors have proposed that perceptions of treatment acceptability by persons responsible for directly providing intervention may influence the integrity of treatment implementation, which may ultimately influence treatment effectiveness (Kazdin & Wilson, 1978; Witt & Elliott, 1985). From this line of reasoning has grown a large body of research aimed at identifying variables influencing the acceptability of interventions. Witt and Martens' study (1983) was instrumental in extending Kazdin's (1980a, 1980b, 1981) findings into the area of classroom behavioral interventions, in addition to establishing some of the characteristics that teachers view as important in judging the acceptability of interventions.

Investigations of teachers' judgments of intervention acceptability have yielded several notable results. Studies including both preservice and experienced teachers have found treatment acceptability to be a multifactored construct which varies as a function of given parameters within the study. A consistent finding from treatment comparison research has been higher ratings of acceptability for strategies that reinforce appropriate behavior rather than punish inappropriate behavior. Variables other than type of treatment have been shown to influence acceptability ratings, such as type and severity of problem (Elliott et al., 1984; Frentz & Kelly, 1986; Martens et al., 1985), status of rater (Witt & Robbins, 1985), theoretical orientation of intervention and manner of presentation (Witt et al., 1984), student disability (Epstein et al., 1986), teacher experience and teacher education (Tingstrom, 1989). Investigations of the amount of time involved in implementing interventions have generally shown an interaction
between time involvement and problem severity (Elliott et al., 1984; Von Brock & Elliott, 1987; Witt, Elliott, & Martens, 1984; Witt & Martens, 1983; Witt, Martens, & Elliott, 1984). A persistent finding is that less time-consuming interventions used with mild problem behaviors are more acceptable than more time-consuming interventions with severe problems. Acceptability ratings can also be influenced by presenting information concerning the intervention’s effectiveness (Tingstrom, 1990; Von Brock & Elliott, 1987).

Despite the accumulated evidence of characteristics influencing intervention acceptability, most researchers in this area recognize that the measurement of acceptability may be problematic. Typically, investigation has been through analog methodology. Results are obtained from individuals’ ratings on a written scale. Considering that people’s attitudes and behaviors are not always congruent, it cannot be determined from this methodology whether teachers would choose the specific treatment in actual practice (Kutsick et al., 1991). In fact, in a study conducted by Sterling-Turner and Watson (2002), no significant relationship was found between pre-treatment acceptability ratings and treatment integrity (i.e., measures of an internal state [acceptability] are not predictive of overt behavior [treatment implementation]). Considering the lack of correspondence between acceptability and integrity, researchers may consider concentrating efforts on finding means to increase treatment integrity through the use of direct training (Sterling-Turner, Watson, Wildmon, Watkins, & Little, 2001).
The need for additional research is evident and problems associated with the analog studies should not override investigators’ decision to pursue further research in this area. In fact, analog research provides a valid means of developing instrumentation to be used in naturalistic studies (Von Brock & Elliott, 1987). Careful consideration should also be given to designing and implementing research strategies that do not rely solely on written descriptions of situations requiring intervention or written report to evaluate teachers’ probability of utilizing effective classroom management. Rather, research strategies in the area of acceptability of interventions should focus more on real-life situations and aspects or attributes of the environment and/or consultee that may be contributing to alternative explanations. Results of previous research emphasize the particular dimensions that might be critical to examine using such a methodology.

Purpose of Present Study

The purpose of the present study was to extend research in the area of intervention acceptability by examining the effects of time management training on acceptability ratings of a behavioral intervention when time involvement was the salient factor in case descriptions. Although contradictory findings are reported in the literature of the effects of time management training on job performance (Macan, 1994; Orpen, 1993), it has been shown consistently that time management training positively affects job satisfaction and reduces job-related stress, while lack of time and perceived control over time increases stress or anxiety and feelings of guilt or low positive affect (Lay & Schouwenburg, 1993; Macan, 1994; Macan et al., 1990; McAuley et al., 1990; McGraw et al., 1993), which may in turn affect teachers’ ratings of acceptability. Coincidentally,
studies in time management have suggested, similar to findings evidenced in acceptability studies, that feedback and information related to progress or program effectiveness may significantly affect the results (Macan, 1994; McAuley et al., 1990).

The present study was not concerned with examining teachers' job performance or actual use of time management skills, but rather how working directly with the teacher might influence the consultant's ability to manipulate variables previously judged unacceptable. In other words, when all conditions of an intervention are judged acceptable except time involvement, can the provision of direct services to the teacher (time management training) increase acceptance of an unfavorable condition. More precisely, the present study will examine the effects of conducting a time-management training program on teachers' acceptability ratings of a reinforcement-based intervention of both high and low time-involvement when used with a mild problem behavior.

Research Questions

The present study was driven by the following research questions and associated hypotheses:

1. What is the effect of teachers' participation in a time management training program on acceptability ratings of a reinforcement-based intervention used with a mild problem behavior under high time-involvement conditions?

   *Hypothesis 1:* Teachers' participation in the time management training program will significantly increase acceptability ratings of high time-involvement interventions.

   *Hypothesis 2:* The acceptability ratings of a high time-involvement intervention by teachers who participated in the time management training program will be significantly
greater than the ratings of a high time-involvement intervention by teachers who did not participate in the time management training program.

2. Does the order in which the intervention is presented (high time involvement vs. low time involvement) influence acceptability ratings?

3. Does teachers' participation in a time management training program differentially affect subscale measures of acceptability ratings (i.e., Acceptability, Time, and Effectiveness) of a reinforcement-based intervention used with a mild problem under high time involved conditions?
Participants

Participants consisted of 99 regular education elementary school teachers (46 females, 3 males in the Experimental Group; 48 females, 2 males in the Control Group) who ranged in age from 23 to 63 years ($M = 38.29$) and were employed by a large, urban public school system in southern Louisiana. Approximately 96% of participants were Caucasian and 2% were African-American with the remaining percentage being Hispanic or Asian. The highest educational level completed by participants ranged from undergraduate student (1%), to bachelors (64%), to masters (21%), to masters +30 (12%), to doctorate (1%). The majority of participants possessed specialized certification (early childhood 49%, early childhood with secondary 22%, special education 15%, and multiple certification 6%). One participant was certified in an academic area, and only 5 participants were noncertified teachers. Most teachers (56%) reported having taken at least 2 or 3 college courses in the implementation of behavioral interventions and had had limited (38%) to frequent (37%) additional training in the use of behavioral interventions. Very few (3%) reported having extensive training. Participants’ self-report on the knowledge and use of a specific reinforcement-based treatment (i.e., contingent praise to a student engaging in appropriate instructional behavior as an intervention to decrease daydreaming) revealed that more than half considered themselves somewhat knowledgeable of contingent praise as a behavioral intervention, and almost one third reported being very knowledgeable. Almost half also reported routine use of contingent...
praise to decrease daydreaming within the classroom. Time management training experience was reported by more than half of the participants to be limited, but use of time management techniques within the classroom was reported to be occasional to routine by the majority.

All participants volunteered to participate in scheduled training sessions to address job-related time-management issues. Participants were informed of the nature and purpose of the study, their rights as participants, and specific instructions for the task. Participants provided consent at the time of oral presentation (see Appendix A). Participants did not receive remunerative compensation for participation, but were encouraged by a superintendent’s request to attend scheduled sessions.

*Materials*

*Demographics and Written Instructions.* Specific demographic information was requested of the teachers (see Appendix B). A brief rating scale was also included to provide information related to teachers’ preexisting experience with the type of intervention described in the study and with time management issues. Specific instructions were included (see Appendix B) for completing required tasks as well as directions for attendance.

*Acceptability Measures.* Measures of the dependent variable consisted of teachers’ acceptability ratings to be obtained from the Behavior Intervention Rating Scale (BIRS) (Elliott & Treuting, 1991; Von Brock & Elliott, 1987) (see Appendix C). The BIRS is a 24-item, 6-point Likert-type instrument designed to measure teachers’ perceptions of treatment acceptability and treatment effectiveness. Items were summed to form a total...
acceptability score. Potential total scores range from 44 to 144. The BIRS consists of a revision and extension of the Intervention Rating profile (IRP-15) (Martens et al., 1985). The IRP-15 is a 15-item single-factor scale that has been demonstrated to assess treatment acceptability. The IRP-15's reported reliability measured as Cronbach’s alpha is .98.

The BIRS was developed by adding nine new items to the 15 IRP items (Von Brock & Elliott, 1987). The items were generated from the treatment effectiveness literature and covered the dimensions of (a) rate of behavior change, (b) level of behavior change, (c) maintenance of behavior change, (d) generalization to other behaviors and settings, and (e) peer comparisons. The IRP-15 items were used to operationalize the construct of treatment acceptability; the nine new items operationalized the construct of treatment effectiveness and were labeled the Effectiveness Rating Profile (ERP).

Analysis of the BIRS yielded a three-factor scale (Elliott & Treuting, 1991; Von Brock & Elliott, 1987). The three factors and coefficient alpha for each scale are: Acceptability, .97 (items 1-15); Effectiveness, .92 (items 17, 18, 20, 21, 22, 23, 24); and Time of Effectiveness, .87 (items 16 & 19). The total BIRS yielded an alpha of .97. Elliott and Treuting reported that the strength of the factor structure of the BIRS and the reliability of the subscales resulting from each factor suggests that the BIRS provided meaningful differentiation of treatment effectiveness and treatment acceptability. The BIRS appears to have good content and construct validity and to be a useful instrument for assessing teachers’ perception of treatment acceptability and treatment effectiveness.

Time Management Knowledge Test. A time management knowledge test was administered as a pre- and post-training measure (see Appendix D). The test was first
administered to all participants approximately one week prior to time management training. On the day of training, experimental group participants were allowed a brief recess while control group participants completed the test a second time for repeated measure. The experimental group participants completed the post-test following time management training. The experimenter designed the Time Management Knowledge test to reflect information that was presented in the Time Management Training session. Key elements of effective time management were pulled directly from lecture and materials presented during the Time Management Training session. For a total of 10 possible points, the participant was asked to list five common techniques for managing time, answer three true/false questions, and describe the first two actions an efficient time manager might take in a given situation. A scoring rubric served as a guide for consistent scoring across all participants (see Appendix E).

Case Descriptions. Written scenarios of cases for evaluation described a problem behavior, an intervention, and information related to intervention effectiveness (see Appendix E). Specific descriptions included a short paragraph describing the problem behavior, a paragraph describing the intervention used to effect a change in the behavior; a short paragraph with an estimate of the amount of time required to implement the intervention; and a paragraph describing the effectiveness of the intervention for the behavior described. The problem behaviors, intervention, and effectiveness information were modeled after previous acceptability studies (Elliott et al., 1984; Tingstrom, 1990; Von Brock & Elliott, 1987; Witt, Elliott, & Martens, 1984; Witt & Martens, 1983).
Written scenarios in all cases consisted of a description of a general education elementary school student exhibiting a mild problem behavior (daydreaming) (Elliott et al., 1984; Witt, Elliott, & Martens, 1984) for which a simple reinforcement-based intervention had been designed (Elliott et al., 1984) and a general statement as to the effectiveness of the intervention (Tingstrom, 1990; Von Brock & Elliott, 1987). The intervention was functionally described and varied only along the dimension of time-involvement: either requiring low amounts of teacher time (30 minutes or less per day) or high amounts of teacher time (two hours of preparation/start-up and approximately one hour each day to maintain) (Witt et al., 1983; Witt et al., 1984).

*Time Management Training Program.* The time management training program (see Appendix F) was modeled after Macan’s (1990; 1994) proposed process model of time management and training program (based on Lakein, 1991). Analysis of the process model indicates it yields a valid construct of time management. Factor analysis of the Time Management Behavior scale used to test Macan’s process model indicated that all factors met the acceptable lower bound of .80 congruence coefficients. Further, the hypothesized model of time management was tested using LISRE7 (Joreskog & Sorbom, 1989). Input for the program consisted of a 9 x 9 covariance matrix, and because each measure was treated as a single indicator of its construct, the procedure was in essence a path analysis. A variety of goodness-of-fit indexes were computed to evaluate the overall fit of the path model, comparing the fit of time management process model to the fit of a baseline null model. Results of this analysis indicated a quite acceptable fit.
Whereas much of the popular time management literature is based on untested assumptions (e.g., Mackenzie, 1990), methodologies employed by Macan represent one of few studies which provides empirical examination of the model and the relationship of various factors.

Participants received training in the areas of (a) setting goals, (b) prioritizing, (c) making lists, (d) scheduling and planning, (e) organizing desk and papers, (f) dealing with procrastination, and (g) dealing with interruptions. The time management behaviors were taught using a variety of methods, including lecture, discussion, film, time to make lists and set goals, and role play. Macan’s (1994) time management training was conducted in one half-day session. This same time frame for training was generally followed.

Variables and Research Design

The independent variables of interest were (a) implementation time (descriptions of time requirements necessary to implement a behavioral intervention: low time involvement vs. high time involvement); (b) time management training (training vs. no training); (c) order effects of presentation (low time involved intervention presented first vs. high time involved intervention presented first); and (d) trials (pre-training vs. post-training). Approximately half of the participants were randomly assigned to the experimental group and half to the control group. Approximately a week before time-management training, all participants read descriptions of both the high time involved intervention and the low time involved intervention, with the order of presentation counter-balanced within each group; both experimental group and control group participants completed pre-training measures. Just prior to time-management training,
repeated measures were obtained from the control group participants. All participants then received time management training. Repeated measures were obtained from experimental group participants immediately following training.

The dependent variables consisted of measures of intervention acceptability, including subscale measures. Acceptability ratings were obtained from the BIRS. Scores on the three subscales of the BIRS (i.e., Acceptability, Effectiveness, and Time of Effectiveness) also served as dependent variables.

Procedure

General education elementary school teachers employed by a large, urban southern Louisiana school system were recruited as volunteers for participation in the study. The participants were informed of the nature and purpose of the study, their rights as participants (see Appendix A), and given specific instructions for completing required tasks (including directions for training attendance) (see Appendix B). Attendance was encouraged by superintendent’s special request. In addition, each participant provided demographic data in order to describe the sample and to serve as potential for post hoc analyses.

Packets distributed to participants included written case scenarios, the BIRS, and Time Management Knowledge Test. Approximately 20 minutes were required for teachers to read and complete forms.

Treatment. Time-management practices and techniques were presented by scheduling a 4 hour training session during time regularly scheduled for staff development. Prior to the start of any training, all teachers were presented with time-
management knowledge tests, case scenarios and the BIRS. Both groups were then scheduled to receive time management training. The experimental group was not presented with post-measures until following training. Repeated measures were also obtained from the control group prior to start of the time-management training.

Data Analysis

A four factor, 2 (Implementation Time, i.e., low time-involvement vs. high time involvement) X 2 (Treatment, i.e., experimental vs. control) X 2 (Order, i.e., low time involvement first vs. high time involvement first) X 2 (Trials, i.e., pre-training vs. post-training) mixed design analysis of variance (ANOVA) was conducted on the BIRS. Multivariate analysis of variance (MANOVA) was conducted on the three BIRS subscales. A series of one-way ANOVA’s were conducted on various demographic characteristics of the sample (experimental group vs. control group) to ensure equivalence across experimental and control groups. Analyses included gender, ethnicity, highest earned degree, areas of certification, grade currently teaching, subject currently teaching, frequency of additional behavior management training, knowledge of contingent praise for appropriate behavior as intervention to decrease daydreaming, actual use of contingent praise for appropriate behavior as intervention to decrease daydreaming, time-management training received, and use of time-management techniques.
CHAPTER III

RESULTS

The demographic characteristics of the sample \((N = 99)\) are presented in Table 1. Statistical analyses revealed that the demographic characteristics of the sample were equivalent across experimental and control groups. Means and standard deviations of the Total BIRS ratings for Implementation Time (i.e., low time-involvement vs. high time-involvement), Order (i.e., low time-involved presented first vs. high time-involved presented first), Treatment (i.e., experimental vs. control), and Trials (i.e., pre-training vs. post-training) are presented in Table 2. Results of Pillai's Trace from ANOVA revealed that the main effect for Implementation Time \(\left[ F(1, 76) = 14.18, p < .001 \right]\) was statistically significant. Acceptability ratings were significantly higher for low time-involvement interventions than for high time-involvement interventions. No significant differences were evident for Treatment, Order, or Trials, nor was there a significant interaction between any of the variables.

Means and standard deviations of Acceptability Subscale ratings of the BIRS are presented in Table 3. Results of Pillai's Trace from MANOVA revealed a significant main effect for Implementation Time \(\left[ F(1, 76) = 20.68, p < .001 \right]\). Acceptability ratings were significantly higher for low time-involvement interventions than for high time-involvement interventions. No significant differences were found for Treatment, Order, or Trials, nor was there a significant interaction between any of the variables.

Means and standard deviations for ratings on the Effectiveness Subscale of the BIRS are presented in Table 4. Teachers did not differentially rate effectiveness...
Table 1

Demographic Characteristics of Sample

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Table 1 (continued)

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<td>7</td>
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<td>Special Education</td>
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Frequency of Acquiring Additional Behavior Management Training

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<th>Experimental Percentage</th>
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<td>None</td>
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<td>11</td>
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<tr>
<td>Limited</td>
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<tr>
<td>Frequent</td>
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Knowledge of Contingent Praise as Intervention to Decrease Daydreaming

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<td>Somewhat</td>
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<td>30</td>
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Use of Contingent Praise as Intervention to Decrease Daydreaming

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<th>Experimental Percentage</th>
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<tr>
<td>Routinely</td>
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<td>Occasionally</td>
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<td>Rarely</td>
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<td>4.9</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Not at all</td>
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<td>2.4</td>
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Time Management Training Received

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<th>Experimental Percentage</th>
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Use of Time Management Techniques

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Table 2

Means and Standard Deviations of Total BIRS Scores

LOW IMPLEMENTATION TIME

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<th>Pretest</th>
<th>Post-test</th>
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<td>H 1st</td>
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<tr>
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<td>n=19</td>
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<td>108.8</td>
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<td>(18.1)</td>
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<td>n=19</td>
<td>n=22</td>
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<tr>
<td>102.7</td>
<td>101.7</td>
<td>102.0</td>
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<td>(20.6)</td>
<td>(21.4)</td>
<td>(20.8)</td>
</tr>
<tr>
<td>Total</td>
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<tr>
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<td>105.6</td>
<td>104.6</td>
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<tr>
<td>(19.4)</td>
<td>(18.5)</td>
<td>(18.8)</td>
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HIGH IMPLEMENTATION TIME

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>Pretest</th>
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<tr>
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<td>(20.2)</td>
<td>(20.5)</td>
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Note. L 1st = Low time-involvement intervention presented first, H 1st = High time-involvement intervention presented first. Possible range of scores is 24-144.
Table 3

Means and Standard Deviations of Acceptability Subscale Scores of BIRS

LOW IMPLEMENTATION TIME

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<td>(18.3) (18.1) (18.1)</td>
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<td>n=19 n=22 n=41</td>
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<td></td>
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<td>Total</td>
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<td>n=39 n=41 n=80</td>
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<td></td>
<td>(10.7) (12.7) (12)</td>
<td>(14.3) (15.4) (14.8)</td>
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HIGH IMPLEMENTATION TIME

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<tr>
<td></td>
<td>(16.7) (13.6) (15.1)</td>
<td>(16.8) (20.1) (18.2)</td>
</tr>
<tr>
<td>Control</td>
<td>n=19 n=22 n=41</td>
<td>n=19 n=22 n=41</td>
</tr>
<tr>
<td></td>
<td>(17.7) (11.4) (14.7)</td>
<td>(13.3) (15.0) (14.3)</td>
</tr>
<tr>
<td>Total</td>
<td>n=39 n=41 n=80</td>
<td>n=39 n=41 n=80</td>
</tr>
<tr>
<td></td>
<td>(17.0) (12.7) (14.9)</td>
<td>(15.0) (17.4) (16.2)</td>
</tr>
</tbody>
</table>

Note. L 1st = Low time-involvement intervention presented first, H 1st = High time-involvement intervention presented first. Possible range of scores is 24-144.
### Table 4

**Means and Standard Deviations of Effectiveness Subscale Scores of BIRS**

#### LOW IMPLEMENTATION TIME

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>Pretest</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$L \ 1^{st}$</td>
<td>$H \ 1^{st}$</td>
</tr>
<tr>
<td>Experimental</td>
<td>n=20</td>
<td>n=18</td>
</tr>
<tr>
<td></td>
<td>28.8</td>
<td>28.3</td>
</tr>
<tr>
<td></td>
<td>(5.4)</td>
<td>(6.4)</td>
</tr>
<tr>
<td>Control</td>
<td>n=19</td>
<td>n=22</td>
</tr>
<tr>
<td></td>
<td>27.9</td>
<td>27.7</td>
</tr>
<tr>
<td></td>
<td>(5.2)</td>
<td>(6.6)</td>
</tr>
<tr>
<td>Total</td>
<td>n=39</td>
<td>n=40</td>
</tr>
<tr>
<td></td>
<td>28.3</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>(5.2)</td>
<td>(6.5)</td>
</tr>
</tbody>
</table>

#### HIGH IMPLEMENTATION TIME

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>Pretest</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$L \ 1^{st}$</td>
<td>$H \ 1^{st}$</td>
</tr>
<tr>
<td>Experimental</td>
<td>n=20</td>
<td>n=18</td>
</tr>
<tr>
<td></td>
<td>28.6</td>
<td>26.3</td>
</tr>
<tr>
<td></td>
<td>(5.4)</td>
<td>(5.2)</td>
</tr>
<tr>
<td>Control</td>
<td>n=19</td>
<td>n=22</td>
</tr>
<tr>
<td></td>
<td>26.7</td>
<td>28.3</td>
</tr>
<tr>
<td></td>
<td>(6.6)</td>
<td>(5)</td>
</tr>
<tr>
<td>Total</td>
<td>n=39</td>
<td>n=40</td>
</tr>
<tr>
<td></td>
<td>27.7</td>
<td>27.4</td>
</tr>
<tr>
<td></td>
<td>(6.0)</td>
<td>(5.1)</td>
</tr>
</tbody>
</table>

*Note.* $L \ 1^{st} = \text{Low time-involvement intervention presented first}, \  H \ 1^{st} = \text{High time-involvement intervention presented first}. \ P\ ossible range of scores is 24-144.
for any of the independent variables (i.e., Implementation Time, Treatment, Order, and Trials), nor were there any significant interactions.

Means and standard deviations for ratings on the Time Subscale of the BIRS are presented in Table 5. There were no significant main effects for any of the variables. However, the interaction of Implementation Time x Treatment x Order was significant \( [F(1,75) = 5.2, \ p < .026] \). Ratings on the Time Subscale of Implementation Time (low time-involvement vs. high time-involvement) were most affected depending on Group and Order. When the experimental group was presented with high time-involvement descriptions first, their ratings of low time-involvement were greater than all other comparative ratings (See Figure 1).

Means and standard deviations for the Time Management Test scores are presented in Table 6. Results of Pillai’s Trace from MANOVA revealed a significant main effect for Trials \( [F(1,66) = 26.75, \ p < .001] \). Time Management Test scores were significantly higher for post-training tests than for pre-training tests. No significant difference was evident for Treatment, Order, or Implementation Time, nor was there a significant interaction between any of the variables.
Table 5

Means and Standard Deviations of Time Subscale Scores of BIRS

LOW IMPLEMENTATION TIME

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>Pretest</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>L 1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>H 1&lt;sup&gt;st&lt;/sup&gt;</td>
</tr>
<tr>
<td>Experimental</td>
<td>n=20</td>
<td>n=18</td>
</tr>
<tr>
<td></td>
<td>8.3</td>
<td>8.8</td>
</tr>
<tr>
<td></td>
<td>(1.7)</td>
<td>(1.7)</td>
</tr>
<tr>
<td>Control</td>
<td>n=19</td>
<td>n=22</td>
</tr>
<tr>
<td></td>
<td>8.4</td>
<td>8.2</td>
</tr>
<tr>
<td></td>
<td>(1.9)</td>
<td>(2.1)</td>
</tr>
<tr>
<td>Total</td>
<td>n=39</td>
<td>n=40</td>
</tr>
<tr>
<td></td>
<td>8.3</td>
<td>8.5</td>
</tr>
<tr>
<td></td>
<td>(1.7)</td>
<td>(2.0)</td>
</tr>
</tbody>
</table>

HIGH IMPLEMENTATION TIME

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>Pretest</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>L 1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>H 1&lt;sup&gt;st&lt;/sup&gt;</td>
</tr>
<tr>
<td>Experimental</td>
<td>n=20</td>
<td>n=18</td>
</tr>
<tr>
<td></td>
<td>8.3</td>
<td>7.8</td>
</tr>
<tr>
<td></td>
<td>(1.8)</td>
<td>(1.9)</td>
</tr>
<tr>
<td>Control</td>
<td>n=19</td>
<td>n=22</td>
</tr>
<tr>
<td></td>
<td>7.9</td>
<td>8.0</td>
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<tr>
<td></td>
<td>(2.2)</td>
<td>(2.1)</td>
</tr>
<tr>
<td>Total</td>
<td>n=39</td>
<td>n=40</td>
</tr>
<tr>
<td></td>
<td>8.1</td>
<td>7.9</td>
</tr>
<tr>
<td></td>
<td>(2.0)</td>
<td>(2.0)</td>
</tr>
</tbody>
</table>

Note. L 1<sup>st</sup> = Low time-involvement intervention presented first, H 1<sup>st</sup> = High time-involvement intervention presented first. Possible range of scores is 24-144.
Figure 1. Interaction of Implementation Time by Treatment by Order for Time Subscale of BIRS

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Table 6

*Means and Standard Deviations of Time Management Test Scores*

**LOW IMPLEMENTATION TIME**

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>Pretest</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>L 1st</td>
<td>H 1st</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>n=17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.41</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.58)</td>
</tr>
<tr>
<td>Control</td>
<td>n=18</td>
<td>n=21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.95</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.55)</td>
</tr>
<tr>
<td>Total</td>
<td>n=35</td>
<td>n=35</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.56)</td>
</tr>
</tbody>
</table>

|                 | L 1st   | H 1st     | Total   |
|                 | Experimental | n=17     | n=14     | n=31     |
|                 |          | 4.41     | 4.50     | 4.45     |
|                 |          | (1.58)   | (.76)    | (1.26)   |
| Control         | n=18     | n=21     | n=39     |
|                 |          | 3.95     | 4.52     | 4.26     |
|                 |          | (1.55)   | (1.50)   | (1.53)   |
| Total           | n=35     | n=35     | n=70     |
|                 |          | 4.17     | 4.516    | 4.341    |
|                 |          | (1.56)   | (1.25)   | (1.41)   |

**HIGH IMPLEMENTATION TIME**

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>Pretest</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>L 1st</td>
<td>H 1st</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>n=17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.41</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.58)</td>
</tr>
<tr>
<td>Control</td>
<td>n=18</td>
<td>n=21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.95</td>
</tr>
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<td>4.17</td>
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<tr>
<td></td>
<td></td>
<td>(1.56)</td>
</tr>
</tbody>
</table>

*Note.* L 1st = Low time-involvement intervention presented first.  
H 1st = High time-involvement intervention presented first.
CHAPTER IV
DISCUSSION

The present study examined the effects of time management training on teachers’ acceptability of behavioral interventions. Of particular interest was teachers’ acceptability ratings of behavioral interventions requiring high-time involvement. In order to achieve as much experimental control as possible, written scenarios used for evaluation presented case descriptions in which all factors shown historically to be acceptable (i.e. reinforcement-based, mild problem behavior, low time-involvement, described as developed collaboratively with effectiveness information provided) were held constant, except time-involvement (Elliott et al., 1984; Elliott, Witt & Kratchowill, 1991; Frentz & Kelly, 1986; Kazdin et al., 1981; Kutsick et al., 1991; Tingstrom, 1989, 1990; Witt, Elliott & Martens, 1984; Witt & Martens, 1983; Witt, Martens & Elliott, 1984; Witt & Robbins, 1985; Von Brock & Elliott, 1987). In general, the results of the present study support previous research reporting higher acceptability ratings associated with low time-involved interventions. The results of the study are discussed relative to the proposed research questions.

Research Question 1

Research Question 1 dealt with the effect of teachers’ participation in a time management training program on total acceptability ratings. Hypothesis 1 predicted that teachers’ participation in the time management program would significantly increase total acceptability ratings of high time-involved interventions. This hypothesis was not supported. The current results evidenced significantly higher ratings for low time-
involvement interventions than for high time-involvement, independent of any other variable (i.e. Treatment, Order, Trials) or interaction effect. These findings may suggest that teachers prefer low time-involved interventions despite having received training in the use of techniques that might assist them in implementing high time-involved interventions.

Although the preference for low time-involved interventions is consistent with previous findings (Elliott et al., 1991; Elliott et al., 1984; Witt & Martens, 1983), it was expected that specific instruction would significantly influence acceptability of the variable on which instruction was focused (i.e. time). When Von Brock and Elliott (1987) provided teachers with information regarding effectiveness of classroom interventions, effectiveness information was found to influence acceptability ratings. Similarly, in a later study by Tingstrom (1989), providing lectures focused on general learning principles and specific behavioral interventions significantly increased experimental participants' post-lecture acceptability ratings of the behavioral interventions. And from the time management literature, studies involving time management with teachers have shown that teachers, following training, increased the amount of time in which they were actively engaged in instructional time or high priority tasks (Maher, 1983; Hall & Hursch, 1982). It seems reasonable then, that provided instruction related to a factor in intervention implementation would increase acceptability of that particular factor; and that specific instruction or training in time management would increase acceptability along the time factor.
One possible explanation for the unexpected outcome in the present study is the difference in delivery of instruction or training. Tingstrom (1989) provided periodic training sessions over time, as opposed to the current study's one inservice/workshop-type session. Maher (1983) arranged for teachers to meet monthly with supervisor following training and found from interviews that the majority of teachers felt this was the most effective component of the training program. Hall and Hurst (1982) required participants following training to turn in weekly self-evaluations of effectiveness and satisfaction. It may be that focused instruction over a period of time not only allows teachers increased time to absorb and process information, but also provides increased opportunities for study, review, and discussion. Teachers may view the process of ongoing instruction more favorably in terms of practical use of acquired knowledge, and thus be more accepting following instructional lectures. In addition, periodic monitoring of some type appears to be beneficial in acquiring and maintaining skills related to training and satisfaction with using techniques learned in training.

It is plausible that the statistically significant difference found in the current study for low versus high time-involvement, despite training, does not equal a clinically meaningful difference. The notable limitations related to analog methodology call into question the generalizability of findings to more naturalistic settings. The inability to make meaningful comparisons between descriptive scenarios and Likert-scale ratings to actual events and behavioral responses renders the current findings relatively useless in terms of predictably controlling "real life" outcomes.
Hypothesis 2 predicted that the high time-involved acceptability ratings of teachers who participated in the time management training program would be significantly greater than teachers who did not participate in the time management training. Again, results of the investigation failed to support this hypothesis. Instead, teachers, regardless of training, judged low time-involved interventions more acceptable than high time-involved interventions. In addition to the difference in the delivery of training, other factors may have influenced teachers’ reduced acceptance of high time-involved interventions. For example, Witt et al. (1984) found that not only did time involvement affect acceptability ratings, but also that time interacted significantly with problem severity and treatment type, suggesting that teachers are more willing to accept higher time involvement to change problem behavior that is considered severe. Teachers in current study did not rate a high time involved intervention to use with a mild problem as acceptable, even though they received training in time efficient methods and were provided information regarding the effectiveness of doing so. Perhaps it is more plausible that trained teachers’ failure to rate high time-involved interventions significantly higher than non-trained teachers is because problem severity influences acceptability to a greater degree than does focused instruction or training on the time variable. In other words, teachers using reinforcement-based behavioral interventions described as developed collaboratively for a mild problem behavior do not perceive the problem to be serious enough to warrant increased time involvement despite reported effectiveness of using high time-involved interventions and acquired techniques for doing so. This is inconsistent with findings by Kutsick et al. (1991) who did not find treatment recommendations more acceptable when made in
reference to a severe problem versus a mild problem. The authors of that study postulated that teachers assumed that the mild condition was actually serious because it was referred to a school psychologist for collaborative consultation. This does not appear to be the case with teachers in current study.

Additionally, a possible confounding variable should be considered when interpreting the findings of the present study. Anecdotal information from some teachers was obtained from inservice evaluation forms and informal discussion following termination of the study. Several comments were made regarding the negative impact of behavioral interventions which focus increased amounts of time and attention on one specific child. Some teachers suggested that excessive attention (positive or negative) from the teacher was punitive. These teachers felt that any such attention would draw ridicule from peers, embarrassing the child and damaging self-esteem. Others insisted that the increased time involved in providing attention to the child’s appropriate behavior would only serve to increase frequency of problem behavior occurrence and intensify problem severity. It was speculated by these teachers, that with the attention for appropriate behaviors, the child would come to demand even more by forcing the teacher to deal with extreme behaviors. No formal data were collected to investigate each teacher’s interpretation of case descriptions, but implications are that acceptability of high time-involved interventions and effectiveness may be affected by teachers’ view of time-involvement as having both reinforcing and punitive features, such as the “hybrid” intervention described in McPhail’s study (1988), and similarly suggests greater emphasis
on the positive vs. negative aspect of the procedures rather than the time involved for implementation.

Research Question 2

Research question 2 concerned a methodological issue relevant to analog acceptability research. The effect of order of presentation (high time involvement presented first vs. low time-involvement presented first) on acceptability ratings was examined. Total BIRS ratings and Acceptability Subscale ratings (see Tables 2 and 3) revealed a main effect for Implementation Time with no significant differences evident for Order, Treatment, or Trials, nor were there significant interactions between any of the variables. However, analysis of the Time Subscale ratings revealed a significant interaction of Implementation Time x Treatment x Order. When the experimental group was presented with high time-involvement first, their ratings of low time-involvement were greater than all other comparative ratings.

It is difficult to specify why the highest ratings were obtained for low time involvement when high time-involved scenarios were presented first for the experimental group only. However, it appears that training, after all, does influence acceptability, although not as predicted. It was expected that the group receiving time management training would be more accepting of high time-involved interventions. It may be that the difference in order of presentation is not meaningful. It is possible that training in time management made participants feel more competent to manage time, and therefore less accepting of scenarios demanding high time-involvement. Numerous acceptability studies have attempted to control for order effects, but few provided assessment for the
effect of order. Findings among those that did (Hyatt & Tingstrom, 1993; Kazdin, 1980a, 1980b, 1981; Kazdin, French, & Sherick, 1981) are inconsistent due to the differences in variables studied. However, some similarity may be inferred. Hyatt and Tingstrom (1993) investigated order effects of the repeated measure, intervention type. Results of that study also indicated that order effects may influence acceptability ratings. It was found that mean ratings of two intervention types (reinforcement-based and punishment-based) were lower when reinforcement-based intervention was presented first than when the punishment-based intervention was presented first. Thus, it was postulated that teacher's acceptability of a reinforcement-based intervention may be best achieved in a consultation situation by presenting a punishment-based intervention first. Or conversely, acceptance of a punishment-based intervention by presenting it in isolation may increase its acceptance. Future research may assess the effect of order in a consultation situation.

These findings might be extended to the current study's relationship between order and time involvement in that acceptability scores may be increased by presenting high time-involved scenario first. High time-involved scenarios have typically been judged as less acceptable than low time-involved. However, potential implications for the school psychologist in his/her role as a consultant are dubious. As there is little evidence to suggest that acceptability ratings of ordered presentation promote treatment integrity, there appears to be no practical application for the significance of order effects in the natural consultation environment.

Research Question 3
Research question 3 investigated the effects of teachers’ participation in time management training on subscale measures of acceptability ratings of a reinforcement-based intervention used with a mild problem under high and low time-involved conditions. When considering the magnitude of difference between the two conditions of time-involvement in this study (one half-hour versus one hour), the impact of time requirements is clearly of great importance to teachers. Findings that are consistent throughout the current study are teachers’ preference for a low time-involved intervention with a mild behavior problem. As previously discussed, a main effect of Implementation Time was found for Total BIRS ratings and for Acceptability Subscale ratings. Surprisingly, analyses revealed no significant main effects for ratings on the Effectiveness Subscale or the Time Subscale. Rather, the interaction of Implementation Time (i.e. low vs. high time-involvement) x Treatment (i.e. control vs. experimental) x Order (i.e. high time-involved presented first vs. low time-involved presented first) was significant and revealed that trained teachers rated low time-involved interventions as acceptable when the high-time intervention was presented first. Again, it is difficult to compare current findings to results of previous studies due to the differences in specific variables assessed. Although Acceptability, Effectiveness, and Time subscales are correlated (Von Brock & Elliott, 1987), it seems that time to effectiveness is less salient when trained teachers are presented with less desirable conditions of time involvement first. One plausible explanation for the interaction is that teachers who have received some form of training, whether via inservice/workshop, educational lectures, or simply provided with effectiveness information, have a better understanding of learning principles and time.
requirements of specific interventions for expected outcomes. That is, increased judgements of acceptability are obtained when first confronted with conditions perceived as extreme or inappropriate for the circumstances. In other words, teachers who have acquired knowledge of time required to effectiveness are much more accepting of an already acceptable condition (i.e., low time-involvement with mild problem) when first faced with an extreme alternative (i.e., high time-involved with mild problem). In general, this is in keeping with findings of previous acceptability research.

Other Findings

Although not of specific relevance to this study, an informal time management knowledge test was administered as a pre- and post-training measure. Time management knowledge test scores were not expected to be significantly different between the experimental group and control group at pre-training only. Demographic data indicated that there was no significant difference between the groups. A difference was expected, however, between the groups on post-training measures because only the experimental group received time management training. Such was not the case. Results indicated that there was a significant increase in time management knowledge from pre- to post-training among both the experimental group and the control group. There is no known reason for the occurrence of such unexpected findings. It is that possible because both the experimental and control groups increased in knowledge (pre- versus post-training), that both groups were affected by some unknown factor. A possible explanation may be that during the week between pre-test and post-test, participants reviewed and/or researched the content of information to be presented at training session.
The unexpected findings may be related to problems and limitations inherent in the test itself. Several limitations associated with the Knowledge Test used in this study are apparent. First, there is no reliability or psychometric data for the Knowledge Test. The test was constructed by the investigator of this study based on the information presented in the Time Management Training session. Without such data, the obvious challenge is interpretation of results and drawing reasonably sound conclusions from findings.

Considering that only the impact of time management training was the focus of the current study, not the acquisition of time management knowledge, the test was designed as a quick, rough estimate of the experimental groups's attention to information presented during the study. And while the test may have served to provide a simple estimate of participants time management knowledge, the usefulness of this is also limited by the absence of inter-rater reliability measures for scoring the test. Scoring was highly subjective for at least two of the questions on the test.

It should be considered that the significant increases seen in knowledge test scores may be essentially nonmeaningful due to only a slight magnitude of change from pre-test to post-test (see Table 6). In addition, differences may have been present on treatment (experimental versus control) for the time management test but were not large enough to reach statistical significance. Sample size may have affected the results. Some participants in the experimental group refused to complete the post-test which statistically increased variability.

Problems with the knowledge test also make it difficult to compare outcomes with other studies. The author considered using a test of time management skills, the Time
Management Behavior Scale (TMB) developed by Macan, et al. (1990). Use of this instrument, which does have reliability data, was rejected. Items on the TBM were used to assess the extent to which time management activities were used and the perceived control over time, and did not provide a measure of time management knowledge. Future research may find the TMB useful in single case designs with teachers actually implementing time-involved interventions in class.

Limitations of the Present Study

Limitations of the present study include those that plague other studies of acceptability, primarily the limitations related to the analog nature of the methodology. In this study, the BIRS was used to obtain measures of teachers’ acceptability ratings. The BIRS is a Likert-type instrument designed to measure teachers’ perceptions of treatment acceptability and treatment effectiveness (Elliott & Treuting, 1991; Von Brock & Elliott, 1987). It is probable that the measures obtained for acceptability in this study do not actually measure teachers’ preference for and use of an intervention in the class, but rather simply provides a rank comparison of written scenarios under various conditions. Investigations that obtain results based on participants’ Likert scale ratings give rise to questions of generalizability of findings to more naturalistic settings. What a person reports they would do or what they believe when asked to imagine themselves in a situation may be very different from how they would actually respond in that actual situation, especially when forced choices are required for descriptions which provide limited information. Lack of generalizability calls into question the ecological validity of findings. Results obtained from analog methodology may not be valid if they cannot be
compared to measures which might be obtained under naturalistic circumstances. Hyatt and Tingstrom (1993) attempted to address this issue of the ecological validity of the analog format through the use of video-taped presentations of interventions, but whether this mode of presentation serves as a valid substitute remains unknown. The present study attempted to address this issue by arranging a natural climate for the provision of time-management training, but ecological validity is called into question by the continued use of analog format to obtain data.

Related to problems associated with analog research, is the use of scenarios. Limitations of the present study may involve the descriptive characteristics of the written scenarios. The scenarios used were designed in attempt to hold all factors except time-involvement constant in order to assess time-involvement alone. Other factors described in the scenarios (i.e. problem severity, type intervention, method of developing the intervention, and effectiveness information) were described along the dimensions that have been found to be highly acceptable (Elliott et al., 1984; Tingstrom, 1990; Von Brock and Elliott, 1987; Witt, Elliott & Martens, 1984; Witt & Martens, 1983). This is problematic to this study in that the mild behavior problem described in each scenario limits the variability in ratings. Also, because the problem behavior described (daydreaming) was modeled after cases in previous studies categorized as mild (Elliott et al., 1984; Witt, Elliott & Martens, 1984), it was presumed that daydreaming represented a mild behavior problem for this study. However, the participants for this study were not asked if the described problem was perceived as a problem for them. It is quite possible that daydreaming was not perceived as a problem at all.
A major limitation of this study involves the exploratory nature of this investigation. Because there is no outstanding studies that directly link time management training with acceptability of behavioral interventions, assumptions or rational lines of logic were necessary to examine the congruency of findings between each diverse body of literature. For example, the rationale for this study is that because time-involvement is a critical factor in ratings of acceptability, then training in techniques to address time requirements should result in increased ratings. Additionally, it was assumed that because there is evidence that time management behaviors lead to increases in job satisfaction and reduced stress as related to perceived control of time (Macan, 1994); then providing opportunity through training to gain perceived control of time would effect similar increases such that more satisfied, less stressed teachers would be more willing to accept increased demands on time. Although these assumptions were felt to be reasonable, methodological precautions could have been utilized to examine the accuracy of hypothesized assumptions. To better determine the effects of training on judgements of acceptability, pre- and post-training measures of perceived control of time, job satisfaction, and stress tensions could have been included in the study, as well as reliable measures of time management knowledge, use, and effectiveness.

In general, the results of studies employing analog methodology are limited by generalizability to specific procedures and methods applied. The lack of generalizability in this study was evident in the difficulty comparing specific outcomes within a controlled large group setting to outcomes that may be obtained with individual teachers in the classroom. Additional data collected in applied settings, such as actual use of time
management skills and the effects on treatment integrity and effectiveness may be useful in exploring the utility of these results.

The usefulness of analog methodology has been well documented, as has been its limitations. The systematic control and manipulation of variables afforded by the analog format are often impossible to achieve in naturalistic or field studies. Findings obtained from analog studies have served to provide an extensive database of information related to the delivery of behavioral intervention services, and have provided stimulus for extending research to relevant variables of interest. Most importantly, the repeated recognition of limitations of usefulness has driven researchers to seek and explore alternative procedures and methodologies that would allow for opportunities to assess naturalistic measures of acceptability. Although exactly how such research could be conducted remains problematic, several attempts have been made. Some researchers have attempted to validate analog acceptability studies by demonstrating correspondence between analog acceptability ratings and ratings obtained under naturalistic conditions (Reimers et al., 1992). More recently, a number of authors have begun to explore the nature of acceptability as it pertains to the consultative process. Sheridan and colleagues (Cowan & Sheridan, 2003; Sheridan & Steck, 1995) have developed a model of consultation that includes studies providing for multi-source, multi-setting measurements. Studies that consider all of the possible influences affecting consultation and outcomes seems to be a positive move in leading researchers close to understanding variables related to the treatment-acceptability-integrity-outcome relationship.
Increased focus of recent literature has been placed on the interactive nature of this relationship as it affects desired outcomes. Along with renewed interest, alternative methodologies have emerged to explore the relationship between treatment acceptability, integrity, and outcome. Sterling-Turner et al. (2002) used a single case design (multiple baseline) to assess the effects of consultee training methods (direct vs. indirect) on both treatment integrity and treatment outcome. Direct training led to higher treatment integrity, and higher treatment integrity led to successful outcomes. Similarly, Noell, Witt, Gilbertson, Ranier, and Freeland (1997) evaluated the effects of performance feedback on treatment integrity with teachers implementing a reinforcement based academic intervention. All teachers exhibited substantial increases in treatment integrity when performance feedback was provided. Single-case methodology yields findings on only a few participants at a time. However, with replications and extensions of these studies we can begin to synthesize findings from studies conducted in naturalistic settings with actual consultants, consultees, and clients.
APPENDIX A

ORAL PRESENTATION

The interest of this study is to assess teachers’ perceptions of strategies used to deal with children exhibiting problem behaviors in the classroom. The instructions on the front of the forms are self-explanatory. Briefly, on the first page of your packet you are asked to complete demographic information and read the instructions that follow. Next you will find descriptions of a child’s behavior problem and of a strategy to deal with the problem. After reading each strategy you are asked to rate the strategy using the scales at the back of your packet. There are no right or wrong answers. DO NOT put your name on any of the forms.

There are no risks involved to you in this study and you have the right to withdraw from the study at any time without penalty. The entire procedure will take about 20 minutes. Please read all of the directions and respond to all questions. It is hoped that your participation will provide knowledge of factors affecting acceptability of classroom treatment strategies.

Do you have any questions? Thank You.

Signature of Person Obtaining The Consent on Behalf of the Institution

Signature of Auditor-Witness

Date: ______________
APPENDIX B

DIRECTIONS

Before proceeding, please complete the requested information listed below. This information will only be used to describe the characteristics of the subjects used in the study. Please do not put your name on any of the forms.

Gender: ___  Age: ___  Race ___  Highest Degree Earned:________________________

Years Experience Including Present Year: ___  Area(s) of Certification:____________

Grade Currently Teaching: ___  Subject(s):____________________________________

Estimate the number of college courses you have taken that deal with behavioral interventions in the classroom: __________

Estimate the frequency at which you acquire additional behavior management training (e.g., inservices, seminars, workshops, etc.):

(1) None or Rare (about every 3+ yrs.)  (2) Limited (about every 2-3 yrs.)
(3) Frequent (at least yearly)  (4) Extensive (about every 3-6 mos.)

Rate your knowledge and use of contingent praise to a student engaging in appropriate instructional behavior as an intervention to decrease daydreaming:

Knowledge of  Use of
(1) Very Knowledgeable (1) Use Routinely
(2) Somewhat Knowledgeable (2) Use Occasionally
(3) Only Just Familiar With (3) Use Rarely
(4) Not At All Knowledgeable (4) Do Not Use At All

Rate your experience with time management training and use of time management techniques.

Experience with  Use of
(1) No Time Management Training (1) Use Routinely
(2) Limited Training (2) Use Occasionally
(3) Frequent Training (3) Use Rarely
(4) Extensive Training (4) Do Not Use At All
The following pages contain a case description of an elementary student named Dartanyon who exhibits a problem behavior. Following the problem description is a behavioral intervention strategy for the described problem. After you have read the description of the student’s problem and planned treatment, you will be asked to evaluate the treatment by completing a 24-item rating scale. Consider each item carefully and answer sincerely and honestly. Do not consult with others. Please indicate a rating for each item. There are no correct or incorrect answers. And, again, do not put your name on any forms.

Directions for Attending Inservice

Voluntary participation in this study involves attending a 4-hour inservice-type training session. Refreshments and finger foods will be served for your enjoyment. A fixed schedule has been arranged at a time and location designated by your superintendent. Your attendance to the scheduled session is critical.
## APPENDIX C

Behavior Intervention Rating Scale (BIRS)

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Slightly Disagree</th>
<th>Slightly Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>This would be an acceptable intervention for the children’s problem behavior.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2.</td>
<td>Most teachers would find this intervention appropriate for behavior problems in addition to the one described.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3.</td>
<td>The intervention should prove effective in changing the child’s problem behavior.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4.</td>
<td>I would suggest the use of this intervention to other teachers.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5.</td>
<td>The child’s behavior problem is severe enough to warrant use of this intervention.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6.</td>
<td>Most teachers would find this intervention suitable for the behavior problem described.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7.</td>
<td>I would be willing to use this intervention in the classroom setting.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8.</td>
<td>The intervention would <em>not</em> result in negative side effects for the child.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9.</td>
<td>The intervention would be appropriate for a variety of children.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10.</td>
<td>The intervention is consistent with those I have used in classroom settings.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11.</td>
<td>The intervention is a fair way to handle the child’s problem behavior.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12.</td>
<td>The intervention is reasonable for the behavior problem described.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13.</td>
<td>I like the procedures used in the intervention.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14.</td>
<td>The intervention is a good way to handle this child’s behavior problem.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15.</td>
<td>Overall, the intervention would be beneficial for the child.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
### Behavior Intervention Rating Scale (BIRS)

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Slightly Agree</th>
<th>Slightly Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. The intervention would quickly improve the child’s behavior.</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>17. The intervention would produce a lasting improvement in the child’s behavior.</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>18. The intervention would improve the child’s behavior to the point that it would not noticeably deviate from other classmate’s behavior.</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>19. Soon after using the intervention, the teacher would notice a positive change in the problem behavior.</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>20. The child’s behavior will remain at an improved level even after the intervention is discontinued.</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>21. Using the intervention should not only improve the child’s behavior in the classroom, but also in other settings (e.g., other classrooms, home).</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>22. When comparing this child with a well-behaved peer before and after use of the intervention, the child’s and the peer’s behavior would be more alike after using the intervention.</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>23. The intervention should produce enough improvement in the child’s behavior so the behavior no longer is a problem.</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>24. Other behaviors related to the problem behavior also are likely to be improved by intervention.</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: The BIRS was developed by Von Brock and Elliott (1987).
APPENDIX D

TIME MANAGEMENT KNOWLEDGE TEST

1. List five common practices or techniques for managing time.

2. You are taking a course at night school. You’ve just been assigned a project that is due in two weeks. You have family coming to visit next week to meet your daughter’s husband-to-be. The wedding is next month. As an efficient time manager, what is the first thing you would do?

   What is the second thing you would do to effectively manage time?

3. According to time management experts, the following statements are true or false.
   T  F “There is method in madness.” A cluttered desk, papers strewn, etc., actually saves time by not slowing momentum in order to file or put away.
   T  F A day-planner is a useful tool.
   T  F Procrastination serves to pressure people into managing quickly; rather it serves to “fine-tune” time management skills.
APPENDIX E

SCORING GUIDELINES FOR KNOWLEDGE TEST

Use of the following guidelines served to promote consistency across all Knowledge Test measures obtained.

**Question 1:** List 5 common practices or techniques for managing time.

Practices or techniques were judged to be correct if the participant listed either a specific technique discussed in training session (as outlined in agenda), or an example was provided of the technique being practiced.

- **Techniques Discussed**
  - Setting goals and priorities
  - Setting goals
  - Prioritizing
  - Dealing with interruptions
- **Mechanics**
  - Making lists
  - Scheduling
  - Progress checks
  - Use of calendars, phone books, daily planner and other office organizers
- **Preference for organizing**
  - Habit of organizing
  - Dealing with procrastination
  - Organizing desk and paperwork, and other preferred activities of organizing

- **Samples of Practice**
  - Get up in the morning and list things to do.
  - Carry your PDR and refer to it often.
  - Hit the “reject” button on your cell when you are in the middle of something.
  - I’m an organizing freak...I keep chore cards in a recipe box. Each day my children have to pull a card and perform the 3 chores listed.

**Question 2:** Given hypothetical scenario, what is the first thing you do? What is the second thing you do to effectively manage time?

As above, judgements are made on the basis of information presented in training. Any correct technique or sample was judged to be correct, regardless of priority given, if steps for dealing with situation addressed means of accomplishing all three tasks presented in the scenario.

- **Samples of Incorrect Responses**
  - Quit school and prepare for visit and wedding.
  - Run away to my room, fall apart, scream and cry, then tell my daughter to elope.
  - Zero in on project and hibernate until the visit is over. By then, I’ll be finished with project and can help plan for the wedding.

**Question 3:** Three true/false statements. 

Total number of correct responses is the participants score on the Knowledge Test.
APPENDIX F

Case Description (1)

Dartanyon is an 8-year old third grader whose teacher is concerned about his frequent daydreaming. Dartanyon spends about a quarter of his class time staring into space. Because of this, Dartanyon frequently turns in incomplete assignments and his grades have been affected.

Dartanyon’s teacher met with the school psychologist to discuss the teacher’s concerns. Together they agreed on a way to manage the problem behavior. In order to decrease Dartanyon’s habit of staring into space, the intervention was designed to increase appropriate instructional behaviors. The plan is to reward Dartanyon for engaging in such behaviors as attending to teacher instruction, participating in class discussion, attending to assigned tasks, following along while others read, etc. Praise was identified prior to treatment as a meaningful reward. Dartanyon seems to really enjoy the positive attention from adults.

The teacher will continue as usual to provide prompts or cues as necessary when Dartanyon is observed daydreaming during instructional time. Also, the teacher will spend about two-three minutes with Dartanyon, acknowledging and giving verbal praise, at the end of each 30 minute interval that he has not stared into space for an extended period during instruction time. The teacher will spend a total of about 30 minutes or less each day implementing the intervention and maintaining records of behavioral progress.
Several well-known experts in the field of behavior management have examined this technique and documented highly-effective results. A 70% reduction in problem behavior is expected. In addition, teachers in this parish who have utilized the intervention report that it has been effective for them in dealing with a similar problem. The teacher will spend **30 minutes or less each day** to achieve reduction.
Case Description (2)

Dartanyon is an 8-year-old third grader whose teacher is concerned about his frequent daydreaming. Dartanyon spends about a quarter of his classtime staring into space. Because of this, Dartanyon frequently turns in incomplete assignments and his grades have been affected.

Dartanyon’s teacher met with the school psychologist to discuss the teacher’s concerns. Together they agreed on a way to manage the problem behavior. In order to decrease Dartanyon’s habit of staring into space, the intervention was designed to increase appropriate instructional behaviors. The plan is to reward Dartanyon for engaging in such behaviors as attending to teacher instruction, participating in class discussion, attending assigned tasks, following along while other read, etc. Praise was identified prior to treatment as a meaningful reward. Dartanyon seems to really enjoy the positive attention from adults.

Prior to implementation, the psychologist and teacher will meet to discuss/confirm the procedure. Dartanyon will be informed that when he tries to concentrate on the lessons in class, his teacher will make a special effort to recognize his hard work. **Initial start-up time for the intervention will be about two hours.** The planned intervention calls for the teacher to continue as usual to provide prompts or cues as necessary when Dartanyon is observed daydreaming during instructional time. Also, the teacher will spend about **two-three minutes** with Dartanyon, acknowledging and giving verbal praise, at the end of **each 15-minute interval** that he has stared into space for an extended period during
instructional time. The teacher will spend a total of about one hour each day implementing the intervention and maintaining records of behavioral progress.

Several well-known experts in the field of behavior management have examined this technique and documented highly-effective results. A 70% reduction in problem behavior is expected. In addition, teachers in this parish who have utilized the intervention report that it has been effective for them in dealing with a similar problem. The teacher will spend about one hour each day to achieve reduction.
APPENDIX G

TIME MANAGEMENT TRAINING PROGRAM

Agenda

I. Introduction

Time Management Knowledge Test

Discuss Participant’s Goals and Expected Outcomes of Training

Discuss Macan’s (1994) Outcomes Linked to Perceived Control Over Time.

II. Setting Goals and Priorities

Setting Goals

Prioritizing

Dealing with Interruptions

III. Mechanics

Making Lists

Scheduling

Progress Checks

How to Use Calendars, Phone Books, Daily Planners, and Other Office Organizers

IV. Preference for Organizing

The Habit of Organizing

Dealing with Procrastination

Organizing Desk and Paperwork and Other Preferred Activities of Organizers
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