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EXPLORING THE INFLUENCE OF RELATIONAL FRAME THEORY ON THE TREATMENT ACCEPTABILITY OF NONCONTINGENT REINFORCEMENT

AMANDA R. ROHAN

132 Pages

Noncontingent reinforcement (NCR), delivered on a fixed-time schedule, is a behavioral and evidence-based intervention recommended by school psychologists that may be underutilized due to resistance to behaviorally-orientated strategies, which often conflict with the child-centered training philosophies of teachers (Bear, 2013). Due to training rooted different learning philosophies, the language and verbal repertoires amongst these professionals may not always be consistent, presenting a barrier to effective communication. Relational Frame Theory (RFT) holds that the core of human language and cognition is the ability to learn to relate terms and ideas and has been effectively used to alleviate communication barriers by expanding on current verbal networks (Hayes, 2004).

The purpose of the present study was to utilize a mixed-methods design to explore the influence of language and teacher behavior management style on the treatment acceptability of NCR. Specifically, the study assessed whether the type of language used to describe an intervention or a participant's general approach to behavioral intervention would influence treatment acceptability ratings as measured by way of the Intervention Rating Profile-15 (IRP-15). Participants in the current study included 108 current public school teachers who completed an online survey.

Results demonstrated a significant main effect of language on treatment acceptability ratings. Interventions described using teacher-derived language and a combination of teacher-derived language and behavioral language were both favored over interventions described in strictly behavioral terms. Overall, participants also demonstrated a significant preference for their own interventions. Interestingly, behavior management style had no effect on treatment acceptability ratings.

These results suggest that aspects of RFT can be employed as an effective consultation technique when suggesting an intervention by using a combination of behavioral language and common teacher terminology. Implications of these findings are discussed as they relate to current behavioral consultation practices and future graduate training in school psychology.

KEYWORDS: behavioral consultation, relational frame theory, treatment acceptability, noncontingent reinforcement

EXPLORING THE INFLUENCE OF RELATIONAL FRAME THEORY ON THE
TREATMENT ACCEPTABILITY OF NONCONTINGENT REINFORCEMENT

AMANDA R. ROHAN

A Dissertation Submitted in Partial
Fulfillment of the Requirements
for the Degree of

DOCTOR OF PHILOSOPHY

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TREATMENT ACCEPTABILITY OF NONCONTINGENT REINFORCEMENT

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CHAPTER I: INTRODUCTION

Background to the Study

Teachers and school administrators are under increasing pressure to promote a positive school climate and use positive discipline strategies. Federal education laws, such as the Every Student Succeeds Act (ESSA; U.S. Department of Education, 2015), represent significant opportunities to improve school and individual student outcomes. Specifically, schools are required to focus on supporting student mental and behavioral health; improving school climate and safety; informing meaningful assessment and accountability systems; and effectively coordinating services across systems and within schools through tiered service delivery (National Association of School Psychologists, NASP, 2017). Additionally, recent changes in classroom demographics have resulted from the inclusion of students with academic, social-emotional, and behavioral difficulties in general education classrooms. Such changes have not only resulted from the Individuals with Disabilities Education Improvement Act of 2004 (IDEA), Section 504 of the Rehabilitation Act of 1973 (U.S. Department of Education, 2004, 1974), and tiered service delivery; but also the increasing racial, cultural, and linguistic diversity of the student population in the United States. Together, these shifts have initiated new educational expectations and unfamiliar behavior norms (Canter, 2011).

Further, ESSA (2015) requires consultation with specialized instructional support personnel (SISP) for such school improvement efforts. Due to their specific expertise in mental health, learning, and behavior assessment and intervention, as well as consultation and collaboration, school psychologists are considered SISP (NASP, 2017). Moreover, individual states are placing an increasing focus on the use of positive discipline strategies. For example, the Illinois Public Act 099-0456 (2015), known as Senate Bill 100, notably amends the Illinois

School Code regarding student discipline measures, presenting an opportunity for school psychologists to collaborate and consult with teachers and administrators regarding positive discipline and effective behavior management strategies, which includes the use of rewards or praise. Additionally, behavior management strategies, such as Positive Behavioral Interventions and Supports (PBIS), can be used to prevent the occurrence of problematic behaviors (Sugai & Horner, 2009). Due to an increasing focus on accountability within the educational system, the need for effective and evidence-based behavioral interventions is critical. In particular, evidence-based behavioral interventions that are efficient and easy to implement are needed.

Noncontingent reinforcement (NCR) is an evidence-based intervention that is efficient and easy to implement. NCR is effective in reducing students' motivation to engage in problematic behaviors, including aggression, general disruption, and self-injurious behaviors (SIB) (Wallace & Weil, 2005; Carr et al., 2000). NCR has also been shown to be easily implemented within school settings. NCR involves delivering preferred reinforcing stimuli, such as rewards or praise, on a fixed-time schedule, independent of an individual's challenging behavior (Rathvon, 2008). NCR is most effective when used in conjunction with other behavior management strategies that promote adaptive behaviors (Marcus & Vollmer, 1996). In the current study, we sought to increase teacher treatment acceptability of NCR, in the form of praise, as a simple and effective antecedent manipulation to decrease the frequency of a problematic behavior that often occurs in these settings: the attention-seeking behaviors of a student.

Although the efficacy of rewards and praise on increasing the frequency of desired behaviors and decreasing the frequency of problematic behaviors has been consistently demonstrated by research, teacher resistance to and treatment infidelity in the use of systematic

rewards and praise are commonly referenced in the behavioral consultation literature (Bear, 2013). Several reasons for these issues have been identified, including conflicts with teacher philosophies, training, and educational goals as well as teacher understanding of the limits of frequent praise and rewards (Bear, 2013). Many educators receive training in child-centered approaches, which often conflict with principles of applied behavior analysis, a teacher-centered approach that many school psychologists are trained in (Dunlap, Sailor, Horner, & Sugai; 2009; Sugai & Horner, 2009).

The training teachers receive and their subsequent teaching experiences are individual and contextual factors that both contribute to the development of their beliefs and orientations to classroom management. Classroom management has been used in the research literature as an umbrella term referring to the strategies teachers use to monitor activities occurring within the classroom setting, particularly regarding student behavior, interactions, and learning (Evertson & Weistein, 2006; Good & Brophy, 2000). These strategies are indicative of a teacher's disciplinary, communication, and instructional styles. These styles then result in the teacher's decisions and efforts to attain educational goals (Martin & Sass, 2010). Teacher beliefs and their perceptions regarding student behaviors and classroom management can in turn influence their own behaviors, which subsequently influence student learning and development in a cyclic process (Fang, 1999; Martin & Sass, 2010).

One component of classroom management that has emerged from the study of this construct is behavior management orientation, also referred to as behavior management style. Several instruments have been developed to assess teacher orientations to classroom and behavior management. One such measure includes the Behavior and Instructional Management Scale (BIMS; Martin & Sass, 2010). The BIMS assesses teachers' classroom management

orientation according to three philosophical orientations to discipline. These orientations include the relationship-listening philosophy, the confronting-contracting philosophy, and the rules and consequences philosophy; they also compose a continuum of styles. These orientations are also referred to as non-interventionist, interactionalist, and interventionist, respectively (Hoy & Weinstein, 2006).

Given the development of efficient, reliable, and valid instruments that can be used to measure teacher orientations to classroom and behavior management, these constructs might present an important point of focus for school psychologists. In particular, consultation services provided by school psychologists might be more effective if they had a better understanding of the content of teacher training philosophies and orientations to classroom management that many educators hold, and how these orientations might influence treatment acceptability of behavioral interventions during consultation.

One of the most critical components of successful behavioral consultation is the selection and subsequently effective implementation of a treatment that results in socially acceptable behaviors (Elliott, 1988). Furthermore, treatment acceptability has been shown to influence the selection of behavioral treatments. Kazdin (1981) defined treatment acceptability as judgements by others of whether selected treatment procedures are “appropriate, fair, and reasonable for the problem or client” (p. 493). The effect of multiple factors on ratings of treatment acceptability have been explored. In particular, the use of behavioral language in labeling or describing interventions and their respective rationales have been analyzed within the treatment acceptability literature. Overall, findings related to the use of behavioral language are mixed. Findings do, however, indicate that using behavioral language might be more influential under certain conditions. Additionally, matching the rationales of teachers and consultees appears to

increase ratings of treatment acceptability (Conoley, Conoley, Ivey, & Scheel, 1991). It therefore seems likely that the language used to describe interventions during consultation by school psychologists may have an impact on their perceived acceptability. Thus, continuing to explore the influence of language on treatment acceptability using novel methods is valuable. One such method includes the use of Relational Frame Theory (RFT) as a theoretical framework. RFT has been recently employed to study the influence of language on leadership and attitudes in the workplace (Stewart, Barnes-Holmes, Barnes-Holmes, Bond, & Hayes, 2006).

In general, RFT focuses on how humans learn language through interactions with their environment. In particular, the theory holds that ‘relating’ and creating links is essential to the development of human language and higher cognition (Stewart, Barnes-Holmes, Barnes-Holmes, Bond, & Hayes, 2006). RFT is largely based on a philosophical approach known as functional contextualism, which highlights the importance of predicting and influencing psychological events, including thoughts, feelings, and behaviors, by attending to variables that can be manipulated in the context in which these psychological events occur (Fox, 2006). According to RFT, the core of human language and cognition is the ability to learn to relate terms and ideas. For example, learning that Stimulus A is related to Stimulus B and that Stimulus B is related to Stimulus C would further lead to the relation that Stimulus A is also related to Stimulus C (Reese, 1968; Hayes, 2004). In RFT, this pattern is labeled as a frame of coordination (Stewart et al., 2006).

Empirical studies on RFT have demonstrated that established relational networks are very difficult to break, even with direct training (Wilson & Hayes, 1996). Thus, expanding on current verbal networks is considered easier than creating new verbal networks, particularly when new networks directly conflict with current networks and beliefs. Regarding the current study, since

teachers most often receive training based in child-centered philosophies, their established verbal networks and beliefs are likely also based in these philosophies. As school psychologists are trained in different philosophies, their own established networks and beliefs possibly conflict with those of the teachers with whom they work. Thus, the training teachers receive and their own established teaching philosophies or classroom management orientations may limit any changes a school psychologist attempts to promote regarding the selection of behavioral interventions, as these changes possibly conflict with teachers' established verbal networks, and vice versa.

Statement of the Problem

Because teachers and school psychologists are often trained according to different philosophies, their language and verbal repertoires may not always be consistent, yet they are still expected to effectively collaborate to best meet the needs of students. As a brief example, when referring to completed student work assignments, a teacher may often use the term "artifact" while a school psychologist may use the term "permanent product." These different existing terminologies may then cause confusion amongst professionals, perhaps impeding a consultant's relationship with his or her consultee. This communication roadblock can thereby potentially negatively impact student development in an indirect manner.

Furthermore, many school psychologists have been trained to utilize the behavioral consultation model with teachers (Bergan & Kratochwill, 1990). This model includes four steps of case conceptualization: problem identification; problem analysis; plan implementation; and plan evaluation. Another model of consultation is consultee-centered consultation. Knotek and colleagues (2008) describe several key features of consultee-centered consultation, including an equal relationship between the consultant and consultee and an emphasis on collaboration and

utilizing the knowledge of the consultee to develop a treatment plan. While the behavioral consultation model has received much attention, Erchul (2011) noted that the consultee-centered consultation model better fits within the response to intervention (RtI) framework of tiered service delivery that many states are implementing. Rosenfield (1991) also noted that behavioral consultants need to attend to important relationship factors within consultation, such as communication and sharing responsibility for treatments, to decrease perceived reluctance to accepting and adhering to behavioral treatments recommended by consultants. Thus, it is worth exploring strategies to help school psychologists increase effective collaboration during consultation.

In particular, consultants should be able to describe interventions from multiple viewpoints and orientations in an effort to accommodate various perspectives of diverse consultees. One possible strategy includes using the language of consultees in an effort to explain interventions from their point of view to increase the treatment acceptability of recommended interventions. While many studies have explored the perspectives of pre-service and current teachers on behavioral treatment acceptability, virtually no large-scale studies have explored the treatment acceptability of NCR, particularly by employing a mixed-methods research design and incorporating measures of classroom management orientation. Furthermore, no studies have applied RFT to behavioral consultation in school settings.

Purpose of the Study

The purpose of the current study was to attempt to use RFT to increase the treatment acceptability of NCR, a behaviorally-oriented treatment. In this study, the researchers first identified how teachers would manage an analog, attention-seeking behavior problem in a general education classroom. The researchers then used the language employed by teachers to

build a common relational network via a frame of coordination. This study explored the possibility that being able to describe an intervention by using a combination of behavioral language and common teacher professional terminology, thereby employing a frame of coordination, is an effective consultation technique for school psychologists. Pre-service and current general education and special education teachers were recruited to participate in this study.

Research Questions

1. What are the orientations of interventions that pre-service and current teachers initially develop to address an attention-mediated problem behavior in the classroom?
2. To what extent do pre-service and current teachers rate NCR as an acceptable intervention?
3. Does the type of language used to describe an intervention influence treatment acceptability ratings?
4. Does intervention orientation influence treatment acceptability ratings?
5. Is there an interaction between the type of language used to describe an intervention and intervention orientation on treatment acceptability ratings?
6. Does the type of language used to describe an intervention influence the acceptability of NCR relative to a teacher's personal initial preference for an intervention?
7. Does treatment orientation influence the acceptability of NCR relative to a teacher's initial personal preference for an intervention?
8. Does a teacher's behavior management style have a moderating effect on treatment acceptability?

Significance of the Study

As previously mentioned, teachers and school administrators are under increasing pressure to promote a positive school climate and use positive discipline strategies (NASP, 2017). Moreover, one of the biggest roles and functions of a school psychologist is to consult and collaborate with other education professionals to best meet the needs of all students (NASP, 2017).

The results of this study are discussed as they relate to implications for graduate training in school psychology, in addition to current consultation practices. It was considered possible that a more effective approach to consultation, or an entirely new approach altogether, could be identified. Results of data analyses support this concept. For example, the findings from this study might be used to generate recommendations on how school psychologists might attempt to bridge communication gaps with teachers and engage in more effective consultation practices by identifying common relational networks and language regarding behavioral interventions, consistent with RFT. Identifying and utilizing more effective strategies would ultimately provide school psychologists with techniques to successfully promote the use of praise and rewards and foster successful communication with other education professionals. In turn, school psychologists will be better able to provide teachers with more effective and efficient support to meet the needs of challenging students, therefore improving overall student outcomes.

CHAPTER II: REVIEW OF RELATED LITERATURE

Treatment Acceptability

One of the most critical components of successful behavioral consultation is the selection and subsequently effective implementation of a treatment that results in socially acceptable behaviors (Elliott, 1988). Treatment acceptability has been shown to influence the selection of behavioral treatments. Kazdin (1981) defined treatment acceptability as judgements by others of whether selected treatment procedures are “appropriate, fair, and reasonable for the problem or client” (p. 493). This study will focus on specific issues related to treatment acceptability.

Measuring Treatment Acceptability

Multiple measures have been developed to assess treatment acceptability. The two most frequently used measures are the Treatment Evaluation Inventory (TEI; Kazdin, 1980) and the Intervention Rating Profile (IRP; Witt & Elliott, 1985). The TEI is considered the first treatment acceptability measure used in clinical settings while the IRP was designed to evaluate educational interventions (Carter, 2007). Both the TEI and IRP have several modified versions, such as the TEI-Short Form (TEI-SF; Kelley, Heffer, Gresham, & Elliott; 1989) and the IRP-15 (Martens, Witt, Elliott, & Darveaus, 1985).

The Intervention Rating Profile (IRP; Witt & Elliott, 1985) was developed in an effort to extend research on treatment acceptability to educational treatments, particularly to make researchers and practitioners more aware of interventions viewed as acceptable by teachers (Carter, 2007). The original IRP consisted of 20 statements regarding treatment acceptability and utilized a 6-point Likert scale, with item responses ranging from “strongly disagree” to “strongly agree” (Witt & Elliott, 1985). Total scores are derived by summing all items. This results in

scores ranging from 20 to 120, with higher scores indicating greater treatment acceptability. The reported internal consistency of the IRP was .89 (Witt & Elliott, 1985; Carter, 2007).

Subsequently, the IRP-15 was developed to shorten the original IRP measure while also increasing item loading on a single factor (Martens et al., 1985; Carter 2007). The IRP-15 is still currently used to measure acceptability of educational interventions. Items on the IRP-15 continue to be rated according to 6-point Likert scale, with total scores derived by summing all items. Possible scores range from 15 to 90, again with higher scores indicating greater acceptability. The internal consistency of the IRP-15 is reported to be .98 (Martens, Witt, Elliott, & Darveaus, 1985; Carter, 2007). Research on the IRP and IRP-15 has demonstrated it is a reliable and valid measure that is sensitive to the presence of several factors that influence teachers' perceptions of treatment acceptability (Witt et al., 1984; Witt & Martens, 1983).

Other instruments used to assess treatment acceptability in school settings include the Children's Intervention Rating Profile (CIRP; Witt & Elliott, 1985), which assesses the perceptions of children; the Behavior Intervention Rating Scale (BIRS; Brock & Elliott, 1987), which adds nine items to the IRP-15; and the Abbreviated Acceptability Rating Profile (AARP; Tarnowski & Simonian, 1992), which modifies the IRP-15 by removing seven items. Finn and Sladeczek (2001) critiqued and compared nine treatment acceptability measures, which included the TEI, TEI-SF, IRP, IRP-15, CIRP, BIRS, and AARP. Their evaluation indicated that no measure was more comprehensive than another. All of these measures assess a unitary factor, supporting their validity, and have high reliability ratings (Carter, 2007). Although many methods for assessing treatment acceptability have been developed, this study is focused on addressing the construct as it relates to teachers. The IRP-15 seems to be the most widely used instrument and therefore this study incorporated this measure.

Factors Influencing Treatment Acceptability

Decades of research has indicated that there are multiple variables that can influence treatment acceptability (Miltenberger, 1990). These variables include those related to the psychologist or consultant; those related to teacher preferences and beliefs (McKee, 1984; Witt, Moe, et al. 1984; Witt & Robbins, 1985; Singh & Katz, 1985; Epstein, Matson, Repp, & Helsel, 1986; Clark & Elliott, 1987; Tingstrom, 1989); treatment approaches (Kazdin, 1980a, 1980b; Witt, Elliott, and Martens, 1984; Elliott et al., 1984; Witt & Robbins, 1985; Martens, Peterson, Witt & Cirone, 1986); time, cost, and side effects (Witt & Martens, 1983; Witt, Martens, & Elliott 1984; Witt, Elliott, & Martens, 1984; Elliott, Witt, et al., 1984); problem severity (Kazdin 1980a; Elliott, Witt, et al., 1984; Tingstrom, 1990); reported effectiveness (Kazdin, 1981; Clark & Elliott, 1987; Von Brock & Elliott, 1987); and the preferences of children (Reimers, Wacker, & Koepple 1987; Elliott, 1988). In general, interventions that are least restrictive, time-efficient, have fewer side effects, and are least disruptive to other students are perceived as more acceptable (Miltenberger, 1990). Moreover, when treatments are consistent with teacher training philosophies or orientations; are presented with appropriate rationales for use; are deemed necessary; and have a reported history of effectiveness, they are also considered more acceptable (Carter, 2007).

Language and rationale. Two variables that have been focused on in the research literature on treatment acceptability include language used to either label or describe interventions and the intervention's accompanying rationale. Woolfolk, Woolfolk, and Wilson (1977) first attempted to explore the influence of language on treatment acceptability in a series of studies with undergraduate and graduate students in education. Participants were shown a videotape of a teacher using reinforcement methods, describing them as either "behavior

modification” or “humanistic education” depending on the experimental condition. In both conditions, the videotapes were identical; only the accompanying label and rationales were different. Participants then completed a two-part questionnaire in which they rated the teaching strategy according to a Likert scale for eleven items before completing fifteen semantic differential items regarding their perceptions of the teaching quality in the videotape. Results of this study indicated that participants rated both the teacher and the method in the videotape more favorably when both were labeled and described as humanistic education as opposed to behavior modification.

In a follow up study, Woolfolk and Woolfolk (1979) assessed whether the behavior modification label could be influenced by emphasizing the efficacy of such methods or the metaphorical language of conditioning. Participants in this study included 43 undergraduate pre-service teachers and 29 graduate students who had previously taught in public schools. Participants first read a written description of the techniques which were also labeled before watching a videotape of a teacher using behavior modification techniques. Participants then completed the same two-part questionnaire used by Woolfolk and colleagues (1977). The four conditions in this study included labeling and describing the techniques as humanistic education; as behavior modification; as behavior modification with evidence of its efficacy; and as behavior modification with an emphasis on applying the nature of conditioning to human beings. The results of this study replicated those of Woolfolk and colleagues (1977) in that the same intervention was rated as more acceptable if it was described with “humanistic education” terminology as opposed to behavior modification. However, the influence of describing the efficacy of behavior modification and applying conditioning to human beings appeared to have differential effects for pre-service teachers in comparison to graduate students. Specifically,

undergraduates rated the techniques described by applying conditioning to human beings almost as favorably as humanistic education. The opposite effect was found with graduate students, indicating that “soft-selling” behavior modification might fail to improve treatment acceptability for the those who are more educated in this area (Woolfolk & Woolfolk, 1979, p. 577). Taken together, both studies provided support for the negative evaluation of behavior modification by undergraduate and graduate students, most likely due to the image of humanity that is evokes, with the authors suggesting “humanizing” the language of behavior modification to increase acceptability (Woolfolk, Woolfolk, & Wilson, 1977; Woolfolk & Woolfolk, 1979).

Kazdin and Cole (1981) sought to examine the influence of label, content, and behavioral language on undergraduates’ ratings of treatment acceptability of behavior modification in classroom settings in a series of three experiments. Effects of a behavior modification label was compared to a humanistic education label or a new teaching method. Content of the treatments were also described as behavioral, humanistic, or neutrally. Behavior modification language was also used and compared to using ordinary language. The different terminologies used in the experiments were typically associated with the orientation of the interventions (i.e., behavior modification or humanistic education). Concepts and terms central to these orientations (e.g., conditioning, shaping, self-awareness, reflective listening) were used in the different descriptions. Similar to the previous studies (Woolfolk, Woolfolk, & Wilson, 1977; Woolfolk & Woolfolk, 1979), Kazdin and Cole found that more negative evaluations of behavior modification were associated with content of the teaching method, rather than language or labels. In this experiment, content was held constant in all conditions, with behavioral language surfacing as a significant factor. Consistent with Woolfolk and colleagues (1977), the results of the study by Kazdin and Cole (1981) added to the evidence that interventions described in

behavioral terms are perceived as less acceptable than those labeled as humanistic; merely labeling treatments as behavior modification did not have a significant effect on treatment acceptability. However, manipulating the use of technical behavioral language resulted in an effect on treatment acceptability such that behavioral treatments were perceived more positively when they were presented in behavioral language than in nontechnical language in the third experiment.

While the previous studies have made use of undergraduate students as participants, Witt, Moe, Gutkin, and Andrews (1984) sought to assess the perceptions of experienced teachers regarding the acceptability of a common classroom intervention: staying in at recess. In this study, 112 in-service teachers were presented with a two-part written case description. The first part contained information about a student with either mild or severe behavior problems. The second part described an intervention used to manage the previously described behavior problem using either behavioral, humanistic, or pragmatic descriptions and rationales. In the behavioral condition, the intervention was described as the contingent application of punishment (staying inside from recess and working on an alternative task) for the purpose of controlling the student's behavior. In the humanistic condition, the intervention rationale was to help the student better understand and express his feelings through an alternative task. Finally, in the pragmatic condition, the intervention was described as a "logical consequence" for the student's behavior (p. 364). In general, all descriptions were rated positively however, results indicated that the same intervention was rated as more acceptable if it was described in pragmatic over humanistic or behavioral terms, implying that acceptability might be a function of both rationale and language. On the other hand, Hall and Didier (1987) found that student teachers rated interventions for two different behavior problems described with humanistic language as more

acceptable than those described with behavioral or pragmatic language, which the pragmatic language condition rated as the least acceptable. While the results of this study differ from those of the study conducted by Witt and colleagues (1984), the former study used experienced teachers while the latter used student teachers.

Some studies have found that the use of behavioral language might increase treatment acceptability for certain individuals and under certain conditions. For example, Hyatt, Tingstrom, and Edwards (1991) sought to further assess the influence of technical language on treatment acceptability overall, as well as whether certain groups are more influenced than others. Participants included 67 general education and special education teachers enrolled in graduate courses and 70 undergraduate students enrolled in an introductory psychology course. Undergraduate students were also grouped according to whether they were freshman and sophomores or juniors and seniors. The participants read one of two descriptions of a student's behavior problem and intervention (time-out), one written using technical terms and one without technical terms, before rating treatment acceptability using the TEI. Results indicated that teachers rated the intervention as more acceptable in the behavioral language condition than the non-behavioral language condition, while there were differences between undergraduate students. There were also no differences between upperclassmen and underclassmen. These findings indicate that the use of behavioral language can facilitate treatment acceptability under certain conditions, such as for a reductive, punishment-based intervention, which are inconsistent with previous findings (Hall & Didier, 1987; Witt et al., 1984; Woolfolk et al., 1977).

Rhoades and Kratochwill (1992) also found that behavioral language may positively influence teacher perceptions of classroom interventions. They conducted a study in which 60 general education teachers were assigned to one of four conditions in which they watched a

video of a teacher consulting with a school psychologist. They examined the effects of behavioral language (with or without) and consultee involvement (with or without teacher involvement). Teachers then rated treatment acceptability using the IRP-15. Examples of technical behavioral terms included “reinforcement,” “contingencies,” “extinguish,” and “shaping.” Examples of nontechnical terms include “praise,” “rewards,” “stop,” “change.” Results supported an interaction of behavioral language and consultee involvement such that the low involvement, nontechnical condition was the least acceptable. There were no differences in ratings of acceptability for the behavioral language and non-behavioral language conditions. Overall, teachers responded positively to the use of technical language in the description of interventions when the school psychologist took a directive role instead and teacher involvement was low. Thus, it appears that teacher involvement might mediate the influence of language.

The previously mentioned studies have demonstrated that teachers can be influenced by the content of interventions, their presentation, labels, underlying rationales, and the words used to describe them. These studies have also used both videotaped and written modalities. Thus, Hyatt and Tingstrom (1993) attempted to further extend the literature by comparing written and videotaped descriptions of consultation interactions between a teacher and a school psychologist while also analyzing the effect of behavioral language on treatment acceptability of a reinforcement-based intervention (DRI; differential reinforcement of incompatible behaviors) and a punishment-based intervention (time-out). Participants included 94 general and special education elementary teachers. Both videotaped and written vignettes involved a school psychologist describing one of two interventions, with or without behavioral language. Participants then rated treatment acceptability using the TEI. Results indicated that time-out was rated as more acceptable when described using behavioral language, but it was still less

acceptable than DRI, across all conditions. There were no differences between conditions for DRI regarding written or videotaped modality or the use of technical terms. While not statistically significant, the authors note that there was a trend toward higher ratings of treatment acceptability with the written modality. Similar to several previously described studies (Hall & Didier, 1987; Witt et al., 1984; Woolfolk et al., 1977), the use of behavioral language appears to influence treatment acceptability under certain conditions, such as with negative, punishment-based interventions. Hyatt and Tingstrom (1993) also provided additional evidence that positive, reinforcement-based interventions tend to be more acceptable than reductive interventions (Elliott et al., 1984; Kazdin, 1980a, 1981; Witt & Martens, 1983).

Conoley, Conoley, Ivey, and Scheel (1991) explored the possibility that matching intervention rationale to consultee beliefs can increase treatment acceptability. Participants in this study included 37 elementary and secondary teachers enrolled in a graduate developmental psychology course. Each participant read three vignettes describing a student's behavior problems, and wrote their beliefs about these problems (e.g., causes of the problems, their teaching strengths, and their theory of change). One week later, each participant received the same case description but also the description of a standard intervention and a unique rationale that was based on the participant's beliefs that were previously identified. All participants received the same case and intervention description and three rationale conditions: matched rationale, mismatched rationale, and no rationale. Participants then rated the treatment acceptability of the intervention using the IRP-15. Results suggested that treatment acceptability was higher in the matching rationale conditions than in mismatched or no rationale conditions. Thus, these results provide support for the Rosenfield's (1991) suggestion that consultants should be able to describe interventions from multiple viewpoints in an effort to accommodate

various rationales of diverse consultees. Additionally, a consultant's modification of their language to match a teachers' beliefs is an important tool for consultation success regarding treatment acceptability.

The majority of studies conducted to examine the influence of behavioral language and rationale on treatment acceptability were conducted over two decades ago, demonstrating a lull in research on this topic. Within the past few years, however, there appears to be a refreshed interest in this area. In particular, there have been two studies that have added to the research literature on the influence of behavioral language on treatment acceptability (Heuser, 2012; Shemanksi, 2016).

Heuser (2012) sought to analyze the influence of terminology (i.e., behavioral terms versus constructivist terms) on overall treatment acceptability of an academic intervention, willingness to implement the intervention, and its effects on teachers' judgments of outcome data. A secondary purpose of this study was to examine the influence of teacher orientation style (Direct Instruction versus a combination of Direct Instruction and constructivism). 75 current elementary teachers read written vignettes that varied according to terminology (behavioral and constructivist) and success as indicated by outcome data (successful or unsuccessful). The behavioral language used in the vignettes was developed after consultation with educational psychology faculty members who provided insight as to whether the behavioral terms were related to constructivist terms. Participants completed the IRP as well as a modified teacher orientation rating scale. Results indicated that language had no significant effect on treatment acceptability. Teacher orientation style had a main effect on treatment acceptability such that teachers who reported a Direct Instruction orientation had higher ratings of treatment acceptability, regardless of language used in the vignettes.

Shemanski (2016) explored the influence of behavioral language (i.e., jargon) and classroom type (general education; special education; or specials) on treatment acceptability of DRI. In this study, 101 current kindergarten through sixth grade teachers read vignettes describing DRI in behavioral language and non-behavioral language. Vignettes were modeled after those used by Hall and Didier (1987). Participants then completed an acceptability measure. Results indicated there were no significant effects of language or type of classroom on ratings of treatment acceptability.

Ultimately, research has indicated that treatment labels and how an intervention is described in terms of language can both influence acceptability (Kazdin & Cole, 1981; Witt et al., 1984; Woolfolk et al., 1977; Woolfolk & Woolfolk, 1979). However, findings concerning the use of behavioral language and its influence on treatment acceptability are mixed. For example, under some conditions, such as describing negative, punishment-based interventions, the heavy use of behavioral language increases acceptability (Hyatt et al., 1991; Kazdin & Cole, 1981; Rhoades & Kratochwill, 1992; Hyatt & Tingstrom, 1993) whereas there does not seem to be an effect when describing reinforcement-based interventions.

While research in this area has had a hiatus, the two most recent studies that have examined the influence of behavioral language on treatment acceptability have not found significant effects (Heuser, 2012; Shemanski, 2016). However, the studies have focused on a very limited number of intervention types that have primarily been consequence based (e.g., differential reinforcement, punishment, positive reinforcement). Research should be expanded to include an examination of the influence of behavioral language on antecedent based interventions such as noncontingent reinforcement. Noncontingent reinforcement (NCR), also called fixed-time reinforcement, is an antecedent manipulation that is reinforcement-based. NCR

involves delivering preferred stimuli on a fixed-time schedule, independent of an individual's behavior (Rathvon, 2008). Additionally, with the exception of the study conducted by Conoley and colleagues (1991), no studies have used teacher-derived language as part of their experimental procedures. Teacher-driven language could potentially be a very important component to the acceptability of interventions given results of research exploring Relational Frame Theory (RFT). Thus, the current study sought to explore the influence of behavioral language on the treatment acceptability of NCR by using an RFT framework that is developed by gathering teacher-derived language through a pilot study (Rohan & Cates, 2017).

Classroom Management and Behavior Management Style

Classroom management has been used in the research literature as an umbrella term referring to the strategies teachers use to monitor activities occurring within the classroom setting, particularly regarding student behavior, interactions, and learning (Evertson & Weistein, 2006; Good & Brophy, 2000). These strategies are indicative of a teacher's disciplinary, communication, and instructional styles, which result in the teacher's decisions and efforts to attain educational goals (Martin & Sass, 2010). Teacher beliefs and their perceptions regarding student behaviors and classroom management can in turn influence their behaviors, which subsequently influence student learning and development (Fang, 1999; Martin & Sass, 2010). One component of classroom management that has emerged from the study of this construct is behavior management orientation, also referred to as behavior management style.

Teacher beliefs and orientations are particularly important to consider due to recent changes in classroom demographics, resulting from the inclusion of students with academic, social-emotional, and behavioral difficulties in general education classrooms due to The Individuals with Disabilities Education Improvement Act of 2004 (IDEA 2004) and Section 504

of the Rehabilitation Act of 1973 (U.S. Department of Education, 2004, 1974). Additionally, the increasing racial, cultural, and linguistic diversity of the student population in the United States has initiated new educational expectations and unfamiliar behavior norms (Canter, 2011). Thus, exploring teacher attitudes and beliefs regarding classroom management continues to be an important construct to examine. In the current study, we sought to explore behavior management style, a more specific and narrower component of classroom management, as it relates to the treatment acceptability of a behavioral intervention, NCR.

Measuring Orientations to Management

Multiple measures have been developed to assess teacher beliefs and perceptions as they relate to classroom management. Some of the most frequently discussed measures in the research literature include the Beliefs about Discipline Inventory (BDI; Glickman & Tamashiro, 1980), the Attitudes and Beliefs on Classroom Control (ABCC; Martin, Yin, & Baldwin, 1998), and the Behavior and Instructional Management Scale (BIMS; Martin & Sass, 2010). All three measures assess teachers' classroom management orientation according to three philosophical orientations to discipline. These orientations include the relationship-listening philosophy, the confronting-contracting philosophy, and the rules and consequences philosophy. These orientations are also referred to as non-interventionist, interactionalist, and interventionist, respectively (Hoy & Weinstein, 2006).

Non-interventionist (relationship-listening) philosophy. The main theory underpinning this philosophy is humanism, which holds that a child is inherently good. Thus, problematic classroom behaviors are perceived as indicators that the student is struggling to balance their individual needs with those of the class and curriculum at large. Students who are engaging in problematic behaviors are therefore viewed as needing compassion and empathy from adults,

without the adults needing to intervene (Wolfgang, 2001). Within this child-centered philosophy, the role of adults and teachers is to provide support to students as they negotiate meeting their needs in relation to the needs of others and the classroom (Hoy & Weinstein, 2006). This philosophy is regarded as the least controlling philosophy. Examples of theories that are consistent with this philosophy include the Freedom to Learn theory (Rogers, 1969; Rogers & Freiberg, 1994) and Teacher Effectiveness Training theory (Gordon, 1974).

Interactionalist (confronting-contracting) philosophy. Similar to the relationship-listening philosophy, the confronting-contracting philosophy views problematic behaviors as a depiction of the student's struggle to manage their individual needs with those of the environment. However, teachers who endorse this philosophy understand the influence of external factors on the student and therefore take a socializing role in the student's life (Hoy & Weinstein, 2006). Thus, this philosophy is viewed as in the middle of the control continuum of the three theories. The teacher's role is to therefore interact with the student to collaboratively develop shared goals and standards. Examples of theories that are consistent with the confronting-contracting philosophy are social learning theories, such as Cooperative Discipline (Albert, 1990) and Choice Theory (Glasser, 1997).

Interventionist (rules-consequences) philosophy. The final philosophy is the confronting-contracting philosophy, which regards the development of a child's appropriate behavior as a result of the child learning from consequences, such as reinforcement and punishment. Teachers ascribing to this teacher-centered philosophy choose what behaviors are desirable and undesirable within their classroom and subsequently teach, monitor, and provide consequences for these behaviors in the form of reinforcement or punishment (Hoy & Weinstein, 2006; Wolfgang, 2001). Teachers with this philosophy view problematic behavior as a product

of a problematic system of consequences. Theories that are consistent with this philosophy include Applied Behavior Analysis (Skinner, 1953) and Assertive Discipline (Canter & Canter, 2001). The interventionist philosophy is regarded as the most controlling.

One of first measures used to assess classroom management orientation is the Beliefs about Discipline Inventory (BDI; Glickman & Tamashiro, 1980; 1986). The BDI is a self-administered and self-scored instrument that was developed to assess which of the three philosophical orientations to discipline (i.e., non-interventionist, interactionist, and interventionist) most strongly govern a teacher's beliefs and actions (Hoy & Weinstein, 2006). The BDI consists of three separate parts: a section containing 4 prediction items, a section containing 12 forced choice items, and a self-scoring and interpretation section. The forced-choice items require a teacher to choose between two responses that describe a thought or technique of one philosophical orientation when pitted against another. Scores are derived by comparing responses to prediction items with results of the forced-choice questions. A score is derived for each orientation, and these scores are ranked. The philosophical orientation with the highest score represents the orientation that dominates a teacher's beliefs about discipline (Glickman & Tamashiro, 1980).

Very little research is available regarding the BDI in terms of assessing its psychometric properties (Hoy & Weinstein, 2006). Glickman and Tamashiro (1980) suggested that the inventory has good face validity, a conclusion they came to after field testing the BDI with 61 pre-service teachers and 63 in-service teachers. The authors reported that results from this field testing indicated good item discrimination, as responses for each item ranged from 29 percent to 71 percent. The original BDI was also appraised for its theoretical consistency by teachers, curriculum specialists, and faculty members in education.

Bailey and Johnson (2000) explored the philosophies of pre-service teachers by using the BDI as a main measure. Participants in this study consisted of 64 elementary education majors and 35 secondary education majors. Each participant completed the BDI at two separate times: once during their pre-student teacher meeting and a second time during their post-student teacher meeting. Results indicated that there was a significant increase in interventionist scale scores between pre- and post-testing. There was also a significant decrease in interactionalist scale scores. While there was an increase in interventionist scale scores, this increase was not significant. These results indicate that elementary and secondary student teachers became more interventionist (i.e., controlling) and less interactionalist throughout the course of their student teaching experience.

Martin and colleagues (1998) developed a framework for teacher beliefs regarding management based on the philosophical concepts developed by Glickman and Tamashiro (1980). The Attitudes and Beliefs on Classroom Control (ABCC; Martin, Yin, & Baldwin, 1998) was developed based on the BDI. The ABCC, however, assesses teacher beliefs regarding three components of classroom management: instructional management (IM), people management (PM), and behavior management (BM). The psychometric properties of the ABCC were assessed after 282 certified teachers in three public school districts completed the 48-item measure. Martin, Yin, and Baldwin (1998) reported that the internal consistency coefficients were .82, .69, and .69 for the IM, PM, and BM component subscales, respectively.

Each component of the ABCC is assessed using a different scale, which is scored on a continuum that is based on the philosophies embedded within the BDI (Martin, Shoho, & Yin, 2003). The continuum ranges from most controlling (interventionist, rule-consequences philosophy) to least controlling (non-interventionist, relationship-listening philosophy), with the

interactionalist (confronting-contracting) philosophy in the middle of the continuum of control (Hoy & Weinstein, 2006).

Martin and Yin (1997) conducted a study in which they examined the differences in attitudes and beliefs on classroom control between male and female teachers. Participants included 282 teachers. The participants completed the ABCC as well as the 16 Personality Factor Questionnaire. Results indicated that male teachers endorsed a more interventionist orientation on both the instructional management and behavior management scales than female teachers, indicating a more controlling approach to management for male participants. The results also suggest that the interventionist orientation is related to several personality characteristics; the interventionist orientation was negatively correlated with openness to change and abstractedness, which one can consider consistent with more controlling approaches. Additionally, higher interventionist scores were positively correlated with rule consciousness and perfectionism.

Similarly, Martin and Yin (1999) also conducted a study in which they examined the differences in attitudes and beliefs on classroom control between rural and urban teachers. Participants in this study included 145 rural and urban high school teachers. Results indicated that rural teachers more often endorsed an interventionist orientation and therefore more controlling beliefs about instructional management while urban teachers more often endorsed an interventionist orientation regarding their beliefs about managing people.

Taken together, the results of these studies indicate that the philosophical orientation of classroom management that is predominant for a teacher can be influenced by multiple factors. In particular, Martin and Yin (1997, 1999) note that beliefs about classroom management are complex, as they are likely influenced by both individual and contextual factors. Examples of these factors include gender (Martin & Yin, 1997), geographic location (Martin & Yin, 1999),

and level of experience (Bailey & Johnson, 2000). Although these factors are not directly related to the research questions of the current study, participants will provide this demographic information that can be explored in future analyses as they relate to classroom management orientation and the treatment acceptability of NCR.

A common criticism of the BDI and ABCC is that they both present psychometric concerns, such as the high interfactor correlation of the ABCC (Martin, Yin, & Baldwin, 1998; Martin & Sass, 2010). Additionally, there is little research regarding the psychometric qualities of the BDI (Hoy & Weinstein, 2006). The Behavior and Instructional Management Scale (BIMS; Martin & Sass, 2010) was therefore developed to create a more refined and psychometrically sound measure to assess teacher perceptions of their approaches to behavior management and instructional management according to a continuum of control (Wolfgang & Glickman, 1986). Similar to the ABCC, the continuum of control on the BIMS ranges from the least directive and controlling approach (i.e., a non-interventionist) to the most controlling (i.e., interventionist), with the interactionist approach in the middle of the continuum. The BIMS defines classroom management style as a construct that includes two independent constructs: behavior management (BM) and instructional management (IM). BM includes pre-planned efforts to prevent aberrant behavior in the classroom as well as the teacher's responses to them when they do occur (Martin & Sass, 2010). Thus, the measure assesses a teacher's style regarding both antecedent and consequential behavior management. IM describes a teacher's instructional aims and teaching methodologies.

The BIMS consists of 24 items, with 12 items composing each subscale. Each item is rating according to a 6-point Likert scale, with responses ranging from "Strongly Agree" to "Strongly Disagree." Several items on the BIMS are reverse-scored. Each subscale is scored by

averaging responses across all items of the particular subscale. Endorsement of an item reflects the teacher's degree of control asserted over his or her students. Higher subscale scores are indicative of a more controlling (i.e., interventionist) classroom management style while lower subscale scores indicate a less controlling approach to classroom management. Martin and Sass (2010) assessed the psychometric properties of the BIMS, including reliability and validity, in a series of three studies. The participants in these studies were 550 certified teachers employed by three school districts in the southwestern United States. Results of these studies indicated that the BIMS has adequate psychometric properties, with a good internal consistency of .77 for both the BM and IM factors. The BIMS is therefore not only an efficient measure with sufficient psychometric properties, it also breaks down the larger construct of classroom management into two separate IM and BM factors.

As previously mentioned, the BIMS also assesses a teacher's style regarding both antecedent and consequential behavior management within the BM subscale. Thus, the current study sought to incorporate this measure to assess behavior management style as it relates to the treatment acceptability of NCR, an antecedent behavioral intervention. More specifically, behavior management orientation was analyzed for its possible moderating effects on treatment acceptability ratings of NCR.

Noncontingent Reinforcement

Iwata, Vollmer, Zarcone, & Rodgers (1993) described three general classes of function-based behavioral interventions: modifying establishing operations, extinction, and behavioral replacement procedures. Modifying establishing operations (EOs) involves utilizing antecedent manipulations intended to weaken the potency of reinforcement for a problematic behavior or strengthen the potency of reinforcement for an alternative behavior. Behavioral extinction is

achieved by withholding the reinforcing stimulus that maintains a problematic behavior. Finally, behavioral replacement procedures involve differentially reinforcing alternative behaviors by providing an aberrant behavior's reinforcement contingent upon engaging in the alternative behavior while suppressing the aberrant behavior (i.e., differential reinforcement). Initially, these three classes were intended to serve as the categories that participant responses to open-ended questions would be analyzed and coded according to, with punishment added as a category. However, based on the results of systematic analytical coding and the raw data collected in the current study, an alternative four intervention orientation categories were developed that better captured the responses provided by participants than those proposed by Iwata and colleagues (1993). These categories are further discussed in the results and discussion sections.

While extinction often has an impact on the effects of noncontingent reinforcement (NCR), it is frequently categorized as an EO manipulation (Iwata et al., 1993). NCR is an evidence-based intervention that is effective in reducing an individual's motivation to engage in aberrant behaviors (Carr et al., 2000). NCR, sometimes also called fixed-time reinforcement, involves delivering reinforcement on a fixed-time schedule independent of an individual's behavior (Rathvon, 2008). Ideally, functional analyses are used to determine the maintaining function of aberrant behaviors so the NCR stimulus serves the same function. NCR is effective across all behavioral functions (i.e., attention; tangible; escape/avoidance; and automatic) and in reducing many problematic behaviors, including aggression, disruption, inappropriate verbalization, and self-injurious behaviors (SIB) (Wallace & Weil, 2005; Carr et al., 2000).

Historically, NCR was first used with animals, such as pigeons and rats. Alleman and Zeiler (1974) conducted a study in which they discovered that using response-independent reinforcement consistently produced reductions in behavioral responding in pigeons when

compared to response-dependent reinforcement. This finding led to NCR being used as an experimental control condition as an alternative to extinction procedures. General reduction in behavioral responding due to NCR has been consistently demonstrated (Calef et al., 1989; Dickinson & Charnock, 1985; Edwards, Peek, & Wolfe, 1970; Halliday & Boakes, 1971; Job, 1988; and Oakes, Rosenblum, & Fox, 1982).

NCR has also been used frequently as a control-condition in studies with humans. For example, Hart, Reynolds, Baer, Brawley, and Harris (1968) conducted one of the first demonstrations using NCR with humans by comparing the effects of contingent and noncontingent adult social reinforcement on the cooperative play behaviors of a 5-year old girl in a single-subject design. Results indicated that rates of cooperative play increased only in the contingency condition, suggesting the contingency was an effective intervention compared to NCR. Noteworthy is the fact that Hart and colleagues (1968) were seeking to increase appropriate and desirable behaviors, not suppress aberrant behaviors.

Horner (1980) conducted a study using NCR as a control condition to evaluate the effects of differential reinforcement, in conjunction with environmental enrichment, on adaptive and inappropriate behaviors. Participants in this study included five individuals with an intellectual disability. The NCR procedure involved maintaining an environmental enrichment procedure while providing social reinforcement that was independent of the participants' adaptive and inappropriate behaviors. The results suggested that a differential reinforcement procedure that included a contingency between the response and reinforcement was effective in reducing rates of inappropriate behavior and in increasing rates of adaptive behaviors. More recently, Iwata, Dorsey, Slifer, Bauman, and Richman (1994) conducted a meta-analysis of studies using NCR as a control condition in experimental functional analyses of SIB. The authors determined that in

approximately 80% of the studies reviewed, NCR was effective in reducing rates of SIB when used as a control or play condition.

In addition to being used as a control condition, evidence also supports NCR as an effective treatment. For example, Boe (1977) conducted a study in which food was delivered as noncontingent reinforcement to a group of women with intellectual disabilities engaging in high rates of aggressive behaviors. Results indicated that noncontingent delivery of food reduced rates of aggressive behaviors emitted by the participants. Similarly, Thelen (1979) conducted a study in which noncontingent attention was effectively used to reduce rates of aggressive tantrums in a small group of children.

Kahng, Iwata, DeLeon, and Worsdell (1997) compared the effectiveness of NCR and functional communication training on rates of escape-based SIB. Results suggested that NCR reduced rates of SIB to similar rates as functional communication training. Vollmer and colleagues (1998) compared the effects of an extinction treatment procedure and NCR procedure on rates of SIB in three individuals with developmental disabilities. Results indicated that NCR was more effective than extinction in reducing rates of SIB. Moreover, the authors noted that NCR may be more beneficial when extinction-induced phenomena, such sudden increases in SIB (i.e., extinction bursts) are problematic.

Interestingly, Fischer, Iwata, and Mazaleski (1997) conducted a study in which they evaluated the use of arbitrary reinforcement (i.e., stimuli that did not maintain specific target behaviors when presented contingently) during NCR procedures aimed at reducing rates of SIB in two participants. Results indicated that arbitrary reinforcement reduced rates of problematic behaviors, competing with maintaining reinforcement. This finding is important to consider because, although there is significant individual variation in reinforcement preferences across

individuals, NCR is possibly effective even when maintaining reinforcement cannot be identified; such as when problematic behaviors are maintained by automatic reinforcement.

In sum, these studies support the efficacy of NCR procedures in reducing rates of aberrant behaviors, including SIB and aggression. Additionally, these results of these studies demonstrate that NCR can be used effectively in conjunction with other behavior management strategies, such as differential reinforcement. This is important because the results of many studies on the treatment acceptability of behavioral treatments within school settings have demonstrated that differential reinforcement is a commonly used treatment that is rated as acceptable by teachers (Hyatt & Tingstrom, 1993; Elliott et al., 1984; Kazdin 1980a, 1981; Witt & Martens, 1983). One of the main purposes of the current study was to assess the treatment acceptability of NCR, which has not received as much attention in the research literature.

Rates of Reinforcement

One important consideration in the implementation of NCR procedures is the rate at which reinforcement is delivered. Hagopian, Fisher, and Legacy (1994) demonstrated the effectiveness of using NCR to reduce rates of problematic behavior while also noting that the effectiveness of the procedure might depend on the density of the initial schedule of reinforcement. In their study, the authors initially followed a dense schedule of reinforcement (i.e., fixed-time intervals of 10-seconds) before systematically fading to a fixed-time interval of 5 minutes. This finding replicates the findings of an experiment by Lachter, Cole, and Schoenfeld (1971) in which the authors assessed the impact of dense and lean schedules of reinforcement on rates of responding in pigeons. Results indicated that while both schedules of reinforcement were effective in reducing rates of behavior, dense schedules had a greater impact. More recently, however, Lalli, Casey, and Kates (1997) effectively implemented NCR as a treatment to reduce

aberrant behaviors with leaner initial schedules of reinforcement (e.g., fixed-time intervals of 90- and 120-seconds). Even after rapid fading procedures were implemented, NCR was still an effective treatment. Schedules of reinforcement are important to consider when using NCR as a treatment for problematic behaviors because insufficient delivery of reinforcement may result in ineffective implementation (Roscoe, Iwata, & Rand, 2003). When implementing behavioral treatments in school settings, considering rates of reinforcement is important due to its effect on treatment efficacy, which in turn influences ratings of treatment acceptability (Kazdine, 1981; Clark & Elliott, 1987; Tingstrom, 1989). In the current study, participants first read a written vignette in which a problematic behavior was described as occurring at a specific rate. We therefore sought to explore teacher ratings of treatment acceptability of NCR on a fixed-time interval, described in the second vignette.

Noncontingent Reinforcement in Schools

As previously described, there has been a vast amount of empirical support for the use of NCR to treat aberrant behaviors in clinical samples in controlled settings (e.g., individuals developmental or intellectual disabilities). There has also been more recent research conducted on the use of NCR in educational settings. NCR is a simple and effective behavioral intervention that can be used to decrease rates of problematic behaviors in students (Holden, 2005). NCR is useful when there are logistical difficulties in the school setting, such as limited time or high student-to-teacher ratios, because it is easy to implement and effective (Luiselli, 2008). Positive effects of NCR on reducing aberrant behaviors have also been demonstrated to maintain for up to one year after implementation (Lindberg, Iwata, Roscoe, Worsdell, & Hanley, 2003). Finally, research has indicated that NCR can be an effective intervention for a variety of problematic behaviors maintained by various types of reinforcement, including positive and negative social

reinforcement and automatic reinforcement (Wallace & Weil, 2005).

Rasmussen and O'Neill (2006) conducted a study in which they assessed the effectiveness of noncontingent teacher attention on reducing the verbally disruptive behaviors of three students in a day-treatment classroom. A functional assessment was conducted, indicating that social attention was maintaining the disruptive behaviors. Teacher attention was provided, noncontingently, according to fixed-time intervals that ranged from 10- to 20-seconds. An extinction procedure was also used, with teachers delaying reinforcement for 10-seconds if a student engaged in the target behavior just prior to the delivery of NCR. Results indicated that the NCR procedure significantly reduced the rate of verbal disruptions for all three students. Schedules of reinforcement were then systematically thinned, ranging from 60- to 90-seconds between participants. The positive effects on target behaviors were maintained, even when the procedure was thinned.

Similarly, Tomlin and Reed (2012) utilized fixed-time intervals of noncontingent teacher attention in a multiple baseline design across four participants. Intervals ranged from 26-seconds to 63-seconds across participants. The authors noted that many disruptive behaviors are maintained by social consequence, such as attention. The noncontingent teacher attention provided during this study included verbal praise and physical pats on students' arms. Disruptive behaviors were also put on extinction and ignored. Results suggested that all students decreased in rates of disruptive behaviors. Taken together, these studies provide support for the successful and practical implementation of NCR, according to fixed-time schedules, in special education classroom settings.

NCR procedures have also been demonstrated to be effective in general education settings (Banda & Sokolosky, 2012; Andreasen, 2015; Austin & Soeda, 2008). Banda and

Sokolosky (2012) assessed the impact of NCR on talk-out behaviors of a student with ADHD in a general education classroom. A functional assessment indicated that the student's talk-out behaviors were maintained by teacher attention; thus, noncontingent teacher attention, in the form of brief verbal interactions with the student, was provided on a fixed-time interval of 20-seconds for 5-minute intervals. The teacher was prompted to provide attention by using small vibrating device that cued her to deliver reinforcement. Results of this study indicate that not only did the rate of the student's talking out behavior decrease, but the student's academic engagement time also increased. These behaviors were also maintained throughout the first year of the intervention, as school records indicated the student remained in the general education classroom for most of the day. Furthermore, results of this study suggested that NCR, provided in the form of noncontingent teacher attention, was not only perceived as acceptable by the teacher but also easy to implement. In current study, we sought to assess the treatment acceptability of noncontingent teacher verbal praise, replicating the results of Sokolosky (2012).

Andreasen (2015) conducted a study in which four middle school general education teachers were trained to use functional behavior assessments and NCR during a 4-hour training. Teachers completed a post-training questionnaire and engaged in a role play to demonstrate their understanding of these procedures before implementing them in their general education classrooms with individual students with disruptive behaviors. Results suggest that the use of NCR reduced rates of disruptive behaviors for all four students.

Austin and Soeda (2008) reported results of their study in which noncontingent teacher attention was used on a teacher-selected 4-minute fixed-time schedule with two typically-developing third grade students. These students were engaging in various off-task behaviors, including talking out, getting out of their seats, and inappropriately drawing or coloring during

an academic task. A brief functional analysis was conducted using only attention and escape conditions; results indicated the students were most often off-task during the attention conditions, although off-task behaviors were also observed during the escape conditions. Findings of this study implied that there were immediate reductions in problematic behaviors in the two students following the implementation of the NCR procedure. It is interesting to note that this noncontingent teacher attention procedure was effective in reducing not only off-task behaviors, maintained by teacher and peer attention, but also those maintained by escape. Additionally, rates of reinforcement were arbitrarily set by teachers, as opposed to being based on student rates of engaging in problematic behaviors. While these arbitrary rates resulted in enough reinforcement to be an effective behavioral treatment, these results may not generalize to all treatments in school settings. Further, many research studies have provided support for the importance of adequate rates of reinforcement (Roscoe, Iwata, & Rand, 2003).

The research literature on using NCR in general education classrooms ultimately provides additional support for its successful and practical implementation in these settings, as well as teacher acceptability. It is important to note that since NCR is viewed as an antecedent manipulation to reduce aberrant behaviors, the procedure typically does not cause an increase in appropriate alternative, behaviors. Thus, NCR is often used in conjunction with additional behavior management strategies that promote positive skills, such as differential reinforcement (Marcus & Vollmer, 1996; Rathvon, 2008; Horner, 1980). Drawbacks to NCR described within the research literature include concerns regarding extinction bursts and incidental reinforcement (Vollmer, Ringdahl, Roane, & Marcus, 1997). NCR may also alter establishing operations that result in not only suppression of problem behaviors but also interference with acquiring adaptive and appropriate behaviors (Goh, Iwata, & DeLeon, 2000). NCR is therefore recommended as

one part of a complex learning environment, not a stand-alone intervention (Vollmer & Sloman, 2005). For example, Marcus and Vollmer (1996) conducted a study in which three children with intellectual disabilities engaging in problematic behaviors (e.g., aggression, SIB, and tantrums) were treated using differential reinforcement of alternative behaviors (e.g., appropriate verbalizations) in combination with NCR. Functional analyses indicated that these behaviors were maintained by tangible reinforcement. Results of this study suggest that this combination of interventions resulted in an increase in desired verbalizations and a decrease in problematic behaviors.

Similar results were also found by Fritz, Iwata, Hammond, and Bloom (2013) when they combined NCR with differential reinforcement of alternative behaviors. Results of this study indicated that the combination of these two procedures was effective in reducing aberrant behaviors and that NCR can be gradually thinned to a point where appropriate behavior maintains under differential reinforcement contingencies only. In the current study, we proposed implementing an NCR procedure (noncontingent teacher verbal praise) to decrease attention-mediated behaviors of a single student within a general classroom setting. In this context, the intervention would be not be implemented as a stand-alone intervention but rather as part of a complex learning environment, as recommended by Vollmer and Sloman (2005).

Ultimately, the research literature suggests that NCR should be implemented with careful attention to impacts on behavior and include later treatment alteration (Vollmer, Ringdahl, Roane, & Marcus, 1997). The literature also supports, however, that NCR can be an easy and effective intervention implemented within school settings to decrease students' motivation to engage in problematic behaviors. Research has indicated that NCR can also be effective when used with typically developing children as well as those with intellectual or developmental

disabilities (Rasmussen & O'Neill, 2006; Tomlin & Reed, 2012; Banda & Sokolosky, 2012; Andreasen, 2015; Autsin & Seoda, 2008). With the increased emphasis on positive discipline strategies and accountability within the school system, the use of an easy and effective behavioral treatment, such as NCR, might be beneficial (NASP, 2017). While NCR can be effective on its own, it has also been shown to be more effective when used in conjunction with other behavior management strategies that promote adaptive behaviors (Marcus & Vollmer, 1996). In the current study, we aimed to assess the treatment acceptability of an NCR procedure (noncontingent teacher verbal praise) within a general education classroom as a simple and effective antecedent manipulation to decrease the frequency of a common problematic behavior in school settings (i.e., attention-seeking behaviors).

Relational Frame Theory

Behavior analysis is commonly criticized on the assumption that its basic principles, identified in primarily nonhuman organisms, cannot account for the complexity of language and cognitions in humans. Relational Frame Theory (RFT; Hayes, Barnes-Holmes, & Roche, 2001) attempts to explain such complex behaviors by explaining how the development of derived relational responding repertoires in humans consequently results in the development of their language and cognition. RFT is largely based on a philosophical approach known as functional contextualism, which highlights the importance of predicting and influencing psychological events, which include thoughts, feelings, and behaviors, by attending to manipulable variables in the context in which these psychological events occur, such as the physical setting or one's education (Fox, 2006).

The foundation of RFT is the phenomenon of stimulus equivalence (Sidman, 1986). Stimulus equivalence refers to the ability to train an individual to learn that different stimuli can

hold the same meaning, also referred to as stimulus relations. For example, an individual can be trained to learn that stimulus A_1 is the same as stimulus B_1 by receiving feedback after pairing these items together. After multiple training sessions, the individual therefore learns to choose B_1 over another stimulus (C_1) when instructed to select the option that is equivalent to A_1 . Stimulus equivalence can continue to be expanded on by adding additional stimuli (e.g., $A_2, B_2, C_2; A_3, B_3, C_3$) and receiving performance feedback. Nonarbitrary stimulus relations are those defined by formal properties of related events. For example, if one object looks the same as another or bigger than another, a wide variety of animals would be able to learn that relation and subsequently use it with new objects that are formally related in some way (Reese, 1968; Hayes, 2004).

Relational Responding

The phenomenon of stimulus equivalence resulted in the identification of relational responding, a critical principle of RFT that refers to discriminating relationships between stimuli. This then results in the ability to gather more information, by discriminating between stimuli in sets, than one would gather from each stimulus alone in the set (Blackledge, 2003). According to traditional behavioral principles, stimuli can become related through respondent conditioning, operant conditioning, and stimulus generalization. These principles require the experiences of direct contingencies within one's learning history in order to form these relations. According to RFT, however, these direct contingencies are not required to form relations (Hayes et al., 2001).

Derived Relational Responding

In RFT, relational responding that occurs in the absence of direct contingency experiences is referred to as derived relational responding (DRR; Hayes et al., 2001). DRR involves the formulation of relations between stimuli, even though some stimuli may not have

been directly trained and reinforced (Blackledge, 2003). Sidman (1971, 1994) demonstrated derived relations between written words, spoken words, and pictures, therefore demonstrating that DRR can be used to model symbolic relations in naturally-occurring human language. For example, one can be taught to form simple associations between written nonsense words, spoken nonsense words, and pictures (Sidman, 1971). Additionally, humans can be taught to relate actual words (Stewart et al., 2006). RFT ultimately focuses on how humans learn language through interactions with their environment, holding that the core of human language and cognition is the ability to learn to relate events under arbitrary contextual (i.e., social) control (Hayes, 2004).

Two specific types of DRR include mutual entailment and combinatorial entailment. The most basic type of DRR is mutual entailment, which eludes to a derived bidirectionality of stimulus relations of stimuli within the same class. (Dymond et al., 2010). That is, after learning that stimulus A is related to stimulus B, one can infer that stimulus B is also related to stimulus A within that same context. For example, learning that the letter C in the alphabet comes before the letter M means that the letter M comes after the letter C in the alphabet. Combinatorial entailment, an accepted term for transitivity, refers to deriving two or more relations between at least three different stimuli. For example, after learning that stimulus A is related to stimulus B and stimulus B is related to stimulus C, one can derive that stimulus A and stimulus C are related in some way (Dymond et al., 2010). Similar to the previous example, learning that the letter C in the alphabet comes before the letter M and the letter P comes after M means that the letter C comes before the letter P in the alphabet.

Another type of relation is coordination, which means that two stimuli are either the same or very close the being the same (Blackledge, 2003). For example, learning that the written word

“dog” is the same as a picture of a dog as well as an actual dog. Further, this coordinating frame allows each of these various “dog” stimuli to result in the psychological presentation of the concept a dog. This further leads to the concept of the transformation of stimulus function, which Dymond and colleagues (2010) define as “when the psychological functions of stimuli in a derived relation are transformed based on the nature of the relations and psychological functions of other members of that function” (p. 98). For example, learning that stimulus A, which has been paired with a shock, is larger than stimulus B, means that when stimulus B is presented, it will elicit reduced arousal because it is less than stimulus A (Dougher, Hamilton, Fink, & Harrington, 2007). The establishment of mutual entailment, combinatorial entailment, and transformation of stimulus functions among related stimuli results in a relational frame, which is considered the basis of language and cognition in RFT (Hayes, 2004).

There are multiple ways in which stimuli can be related, referred to as families of relational frames (Hayes, Gifford, Wilson, Barnes-Holmes, & Healy, 2001). Examples of these families include distinction; comparison; temporal relations; spatial relations; conditionality and causality; and interactions among relational frames, with a frame of coordination considered the most basic type of relational responding (Hayes et al., 2001). Thus, the focus of the current study was to test the effects of employing a frame of coordination technique on teacher acceptability ratings of NCR.

Applications of RFT

RFT has been applied to many areas within psychology, language, and cognition as a theoretical explanation. Examples include general psychological development (Barnes-Holmes, Barnes-Holmes, Roche, Healy, Lyddy, Cullinan, & Hayes, 2001); education (Barnes-Holmes, Barnes-Holmes, & Cullinan, 2001); and religion, spirituality, and transcendence (Barnes-

Holmes, Hayes, & Gregg, 2001). Wilson, Hayes, Gregg, and Zettle (2001) have used the principles of RFT to both explain and treat symptoms of psychopathology (Bach & Hayes, 2002). RFT can add to many forms of behavior psychotherapies, such as Acceptance and Commitment Therapy (ACT; Hayes et al., 1999), Dialectal Behavior Therapy (DBT; Linehan, 1993), and Integrative Couples Therapy (ICT; Christensen, Jacobson, & Babcock, 1995). Further, RFT has also been explored as a theoretical explanation of terrorism as well as an approach to reduce prejudice and racism (Dixon, Dymond, Rehfeldt, Roche, & Zlomke, 2003). Industrial-Organizational (I/O) psychologists have also explored the application of RFT to concepts such as teamwork, leadership, and attitudes in the workplace (Stewart, Barnes-Holmes, Barnes-Holmes, Bond, & Hayes, 2006).

For the purpose of the current study, perhaps the most salient empirical study regarding the application of RFT was conducted by Clayton (1995). As outlined in RFT, the transformation of stimulus functions can be used as a persuasive technique by altering the functions of established verbal relations through rhetoric, instead of attempting to extinguish these relations (Roche, Barnes-Holmes, & Barnes-Holmes, 2001). Clayton (1995) conducted a study on rhetoric based on RFT. The author detected common beliefs of workers in a human service organization about their work environment by gathering pre-test data. The data indicated that current workers endorsed their work environment as “chaotic.” The Executive Director of this organization then gave a scripted speech to the workers in an attempt to persuade the workers to have more desirable beliefs about their work environment. There were two versions of the scripted speech. In the first version, the director instructed his workers on desirable attributes (e.g., being instructed to view the workplace as “caring”). In the second version, desirable attributes were still instructed, however they were also related to the undesirable and negative attributes

currently held by the workers (e.g., stating that although the work place “chaotic,” this allows workers to be “creative” in meeting client needs). Results indicated that the attitudes of the workers regarding their workplace changed more for the better when positive, desired organization attributes were connected and related to their current negative attributes, therefore transforming their function. These results provide empirical support for the notion that expanding on current verbal networks is easier than creating new verbal networks, particularly when new networks directly conflict with existing networks (Clayton, 1995; Wilson & Hayes, 1996).

In the current study, we proposed to replicate and extend the findings of Clayton (1995) to behavioral consultation in schools by using a frame of coordination to increase treatment acceptability ratings of NCR in an analog consultation experience. Since elaborate relational networks are rarely extinguished but rather further elaborated, we intended to cognitively fuse and relate NCR to a commonly described teacher-derived intervention in a pilot study (Rohan & Cates, 2017) to increase the treatment acceptability of NCR (Wilson & Hayes, 1996).

Purpose of the Study

Based on the reviewed literature, there have been inconsistent findings regarding the influence of behavioral language on teacher ratings of treatment acceptability of behavioral interventions, with the two most recent studies having found no significant effects (Heuser, 2012; Hyatt & Tingstrom, 1993; Hyatt, Tongsrom & Edwards, 1991; Kazdin & Cole, 1981; Rhoades & Kratochwill, 1992; Shemanski 2016; Witt, Moe, et al., 1984; Woolfolk & Woolfolk, 1979; Woolfolk et al., 1977). However, these studies have focused on a very limited number of intervention types that have primarily been consequence-based (e.g., differential reinforcement, punishment, positive reinforcement). With an increased emphasis on accountability and a need

for efficient and effective positive discipline techniques (NASP, 2017), research should therefore be expanded to include an examination of the influence of behavioral language on antecedent-based interventions such as noncontingent reinforcement. Noncontingent reinforcement (NCR), also called fixed-time reinforcement, is an antecedent manipulation that is reinforcement-based. NCR involves delivering reinforcement on a fixed-time schedule independent, of an individual's behavior (Rathvon, 2008). Additionally, with the exception of the study conducted by Conoley and colleagues (1991), none of the reviewed studies have used explicitly teacher-derived language as part of their experimental procedures. Teacher-driven language could potentially be a very important component to the acceptability of interventions given results of research exploring Relational Frame Theory (RFT; Hayes et al., 2001). According to RFT, the transformation of stimulus functions can be used as a persuasive technique by altering the functions of established verbal relations through rhetoric instead of attempting to extinguish these relations, as demonstrated by Clayton (1995). Thus, the current study projected to explore the influence of behavioral language on the treatment acceptability of NCR by using a frame of coordination that relates NCR to a teacher-derived intervention identified in a pilot study (Rohan & Cates, 2017).

Research Questions and Hypotheses

1. What are the initial intervention orientations of pre-service and current teachers when presented with an attention-mediated problem behavior in the classroom?
 - a. Hypothesis: Previous studies have indicated that teachers are familiar with behavioral interventions such as differential reinforcement and token economies, both consequence-based interventions (Hyatt et al., 1991; Kazdin & Cole, 1981; Rhoades & Kratochwill, 1992; Hyatt & Tingstrom, 1993). We therefore

hypothesized that most participants would develop positive, consequence-based interventions.

2. To what extent do pre-service and current teachers rate NCR as an acceptable intervention?
 - a. Hypothesis: We hypothesized that most participants would rate NCR in the form of noncontingent praise as generally acceptable, as it is a positive intervention. This hypothesis is consistent with previous results on treatment acceptability of positive interventions (Carter, 2007).
3. Does the type of language used to describe an intervention influence treatment acceptability ratings?
 - a. Hypothesis: Similar to the results of Clayton (1995), we hypothesized that participants would rate NCR as more acceptable when it is explained consistent with RFT such that existing verbal repertoires are further elaborated on.
4. Does intervention orientation influence treatment acceptability ratings?
 - a. Hypothesis: We hypothesized that participants who developed positive-based interventions will rate NCR as more acceptable than those who do not develop positive-based interventions because NCR will be consistent with their existing verbal repertoires (Clayton, 1995).
5. Is there an interaction between the type of language used to describe an intervention and intervention orientation on treatment acceptability ratings?
 - a. Hypothesis: We hypothesized that there would be an interaction between the type of language and intervention orientation. Specifically, we expected participants who endorsed a positive intervention orientation in the RFT language condition to

provide higher treatment acceptability ratings of NCR because both the language and intervention orientation would be more consistent with their existing verbal repertoires (Clayton, 1995).

6. Does the type of language used to describe an intervention influence the acceptability of NCR relative to a teacher's personal initial preference for an intervention?
 - a. Hypothesis: We hypothesized that participants in the RFT language condition would be more likely to choose NCR over their own intervention than participants in the other conditions because NCR would be coordinately framed with a teacher-derived intervention (Stewart et al., 2006; Conoley et al. 1991).
7. Does treatment orientation influence the acceptability of NCR relative to a teacher's personal initial preference for an intervention?
 - a. Hypothesis: We hypothesized that participants in with positive intervention orientations would be more likely to choose NCR over their own intervention than participants with other orientations because NCR is a positively oriented intervention (Hyatt et al., 1991; Kazdin & Cole, 1981; Rhoades & Kratochwill, 1992; Hyatt & Tingstrom, 1993).
8. Does behavior management style have a moderating effect on treatment acceptability of NCR?
 - a. Hypothesis: We hypothesized that participants with an interactionalist (Glickman & Tamashiro, 1980) behavior management style, as measured by the BIMS (Martin & Sass, 2010) would rate NCR as more acceptable because this style is most consistent with the theoretical background of this behavioral intervention.

CHAPTER III: RESEARCH DESIGN AND METHODOLOGY

Method

Participants

The current study used a mixed-methods design. The participants of this study included 108 current Pre-K through 12th grade school teachers of both genders. Both general education teachers and special education teachers participated in this study. G*Power was used to run an a priori power analysis to determine the required sample size for a large effect size in the current study (Faul, Erdfelder, Buchner, & Lange, 2009). Results of this power analysis indicated that the total necessary sample size needed to determine a large effect was 91 participants. This sample size was also sufficient for looking at potential moderating effects of behavior management style. Per feedback from the current study's committee, a minimum of 100 participants were required for the study to be completed.

Recruitment. After obtaining full IRB approval, potential participants were identified in multiple ways. Site permission from school districts and the University's College of Education Department Chair were documented prior to recruitment (see Appendices A and B). The University's College of Education was then contacted and asked to send a generic email (see Appendix D) with a survey link to all pre-service teachers (i.e., undergraduate education majors). Recruitment flyers were also posted in the College of Education on the campus of a medium-sized public university in the Midwest (see Appendix C). Although pre-service teachers were initially recruited as potential participants in the current study, there were no participants who identified as pre-service teachers who fully completed the study.

Additionally, current Pre-K through 12th grade educators from rural, suburban, and urban school districts were contacted electronically as potential participants with the same generic

email (see Appendix D). This included sending generic emails to obtain site permission from superintendents and principals prior to emailing teachers with invitations to complete the study. States and school districts were randomly selected, with participants recruited from a total of 7 states. Participants read an informed consent document and provided consent prior to beginning the study (Appendix E). Once a minimum of 100 participants fully completed the survey, the electronic survey system was closed.

Participants who completed the study were provided with a \$10 electronic Amazon gift card, sent to an email address of their preference. To avoid coercion, all participants were also given the option to enter a raffle to obtain one of two \$25 electronic Amazon gift cards (Appendix O). Funding for the current study was provided through the Graduate School's Dissertation Completion Grant, awarded to the author. Full IRB approval was obtained for this study and the distribution of gift cards entailed following the University's systematic research incentive procedure. Thus, gift card distribution was overseen by the Research and Sponsored Programs Office.

Measures

Demographic questionnaire. Demographic information was gathered from all participants. Participants provided these data by answering a questionnaire as part of the online survey (Appendix F).

Vignettes. Each participant read two vignettes. The first vignette described a single student's behavioral problem within a general education classroom and contained other relevant contextual information (see Appendix G). This vignette was very similar to the vignette used in the pilot study (Rohan & Cates, 2017). In the current study, participants were randomly assigned to one of three experimental conditions in which they read one of three written vignettes

(Appendix K). This second vignette described the teacher's consultation with a school psychologist and the school psychologist's intervention recommendation, NCR in the form of teacher verbal praise, as described by Sokolosy (2012). Experimental vignettes varied based on the terminology used within them to describe NCR (i.e., behavioral language or a combination of both behavioral language and teacher-derived language, consistent with RFT). A third experimental vignette was presented with a teacher-derived intervention, described with teacher-derived language, based on results from the qualitative pilot study (Rohan & Cates, 2017).

Intervention questions. Participants answered three open-ended questions in which they identified their own intervention for the student's problem behavior, provided a rationale, and information regarding how they informed their decision (Appendix H). Participants also responded to a Likert-scale question pertaining to their level of confidence regarding the efficacy their chosen intervention (Appendix I). After reading the two vignettes and completing the IRP-15, the participants answered one forced-choice question in which they choose between the intervention they developed or the intervention suggested by the school psychologist (see Appendix M).

Acceptability. The Intervention Rating Profile (IRP; Witt & Elliott, 1985) was developed to extend research on treatment acceptability to educational treatments, particularly to make researchers and practitioners more aware of interventions viewed as acceptable by teachers (Carter, 2007). The original IRP consisted of 20 statements regarding treatment acceptability and utilized a 6-point Likert scale, with item responses ranging from "strongly disagree" to "strongly agree" (Witt & Elliott, 1985). Witt and Elliott (1985) reported the internal consistency of the IRP as .89.

Subsequently, the Intervention Rating Profile for Teachers (IRP-15; Martens, Witt, Elliott, & Darveaus, 1985) was developed to shorten the original IRP measure while also increasing item loading on a single factor measuring general acceptability (Martens et al., 1985; Carter 2007). The IRP-15 is still used to measure acceptability of educational interventions, but consists of 15 items. Items on the IRP-15 continue to be rated according to 6-point Likert scale. Martens and colleagues (1985) reported the internal consistency of the IRP-15 as .98. Research on the both the IRP and IRP-15 has demonstrated they are reliable and valid measures that are sensitive to the presence of several factors that influence teachers' perceptions of treatment acceptability (Witt et al., 1984; Witt & Martens, 1983; Martens et al., 1985). On the IRP-15, total scores are derived by summing all items. Scores can range from 15 to 90, with higher scores indicating greater acceptability of an intervention. Permission to use the IRP-15 in this study was secured from the first author of the measure. The IRP-15 was used in this study to measure treatment acceptability (Appendix L).

Behavior management style. The Behavior and Instructional Management Scale (BIMS; Martin & Sass, 2010) was developed to measure teacher perceptions of their approaches to behavior management and instructional management according to a continuum of control (Wolfgang & Glickman, 1986). This continuum ranges from the least directive and controlling approach (i.e., a non-interventionist) to the most controlling (i.e., interventionist), with interactionalists in the middle of the continuum. The BIMS defines classroom management style as a construct that includes two independent constructs: behavior management (BM) and instructional management (IM). BM includes pre-planned efforts to prevent aberrant behavior in the classroom as well as the teacher's responses to them when they do occur (Martin & Sass,

2010). Thus, the measure assesses a teacher's style regarding both antecedent and consequential behavior management. IM describes a teacher's instructional aims and teaching methodologies.

The BIMS consists of 24 items, with 12 items composing each subscale. Each item is rating according to a 6-point Likert scale, with responses ranging from "Strongly Agree" to "Strongly Disagree." Several items on the BIMS are reverse-scored. Each subscale is scored by averaging responses across all items of the particular subscale. Endorsement of an item reflects the teacher's degree of control asserted over his or her students. Higher subscale scores are indicative of a more controlling (i.e., interventionist) classroom management style while lower subscale scores indicate a less controlling approach to classroom management. Martin and Sass (2010) reported good internal consistency of .77 for both the BM and IM factors. Permission to use the BIMS in this study was secured from the first author of the measure and the publishing journal. The BIMS was used in the current study to objectively assess the behavior and instructional management style of participants (Appendix J).

Procedure

Data were collected online using Qualtrics, Illinois State University's online survey platform. Using the same procedures as the pilot study, participants were contacted via email with a link to participate in the study. All participants who provided informed consent completed a demographic questionnaire before reading a brief written vignette describing a student's problematic behavior in the classroom. Participants then responded to three open-ended questions in which they identified an intervention, described their rationale for its use, and what informed their intervention choice before rating their level of confidence in their intervention via a Likert scale question. The vignette and open-ended questions were the same as those used in

the qualitative pilot study (Rohan & Cates, 2017). Participants then completed the BIMS to assess their behavior management style.

Participants then read a second vignette which described the teacher's consultation with a school psychologist. In two of the three vignettes, the school psychologist suggested a positive, antecedent-based intervention, NCR, in the form of teacher verbal praise. Participants were randomly assigned to one of three language conditions: a vignette that used behavioral language to describe NCR; a vignette that used a combination of behavioral and teacher-derived language relating behavioral language and teacher language (consistent with the concept of a frame of coordination within RFT) to describe NCR; or a vignette that presented the teacher-derived intervention from the pilot study.

After reading the second vignette, participants completed the IRP-15 and rated the acceptability of the school psychologist's intervention. The participants then answered a single forced-choice question in which they chose between their original intervention or the school psychologist's intervention. Upon completion of all measures, participants were thanked for their participation and offered the opportunity to enter their email address to receive a \$10 electronic Amazon gift card for completing the survey, Participants were also offered an opportunity to enter a raffle to win one of two \$25 electronic Amazon gift cards. The author of this study was awarded a Dissertation Completion Grant through the Graduate School at Illinois State University. In the proposal for this grant, funds for compensation were outlined in the proposed budget and approved.

Research Design

The proposed study employed a mixed methods design. For quantitative analyses, a 3x4 between-subjects factorial design was utilized. All data were gathered online. Demographic data

were collected prior to participants reading two vignettes and answering subsequent questionnaires. Treatment acceptability was measured using the IRP-15. Behavior management style was measured using the BIMS.

Independent variables. There were three independent variables in the current study. The first independent variable was the type of language used in the consultation vignette to describe an intervention (i.e., use of behavioral language to describe NCR; use of a pre-identified teacher intervention described in teacher-derived language; a combination of both behavioral language and teacher language that is consistent with coordination framing within RFT to describe NCR).

The second independent variable was the orientation of the intervention developed by the participant. The categories of this variable were initially intended to be based on the three general classes of function-based behavioral interventions as described by Iwata, Vollmer, Zarcone, and Roger (1993). These classes include modifying establishing operations, extinction, and behavioral replacement procedures. Punishment was also intended to be a category of this variable. Based on the results of systematic analytical coding and the raw data collected in the current study, an alternative four intervention orientation categories were developed that better represented the responses provided by participants than those proposed by Iwata and colleagues (1993). The final variable was the behavior management style of the participant, as measured by the BIMS, which was analyzed as an intact variable.

Dependent variables. There were two dependent variables in the current study. As measured by the IRP-15, treatment acceptability of the school psychologist-recommended intervention (NCR) was the first dependent variable assessed. Additionally, participant preferences for their intervention or the school psychologist's intervention were measured by the

forced-choice question. Behavior management style of the participant was also assessed using the BIMS. Participants' BIMS scores will be collected and reported as descriptive data.

Data Analysis

Demographic data were analyzed and reported in frequencies. Similar to the pilot study, analytical coding was used to examine qualitative data and subsequently group data into four intervention orientation categories (Merriam, 2009). These categories represented the behavior management style of each participant. Analytical coding differs from descriptive coding in that the former results from interpretation and reflection on meaning (Richards, 2005). Thus, although these categories were initially proposed to be based on the classes of interventions participants independently generated (i.e., establishing operations, extinction, behavioral replacement procedures, and punishment) and behavioral principles, alternative categories were developed that better fit the data provided by participants.

Qualitative data. Responses to open-ended questions provided by participants were read individually to construct broad categories and identify themes before data were interpreted (Merriam, 2009). Raw data were read and individual codes were highlighted in each response, based on the specific interventions described by the participant. Individual codes were then analyzed and grouped together based on overall themes and general approaches to intervention. These themes were then used to develop more broad categories of intervention orientations and behavior management styles. The author repeated this coding and grouping process, using constant comparative coding, until four orientation categories were identified and consistently applied. A coding manual was then created and applied to the raw data. The manual was reviewed by a committee member with expertise in qualitative analyses to ensure the reliability and validity of the author's interpretation of the data and procedures. The coding manual that

was deductively created based on the raw data gathered for the purpose of this study and used in the coding process can be found in Appendix P.

After the coding manual was reviewed and finalized, raw data was provided to a second coder, who then applied the codes to again ensure reliability and validity of the author's interpretation of the data. Out of 108 opportunities for interrater reliability, there were 23 discrepancies, resulting in an initial interrater reliability of 79%. Both coders discussed each individual discrepancy, utilizing the coding manual. Coders came to an agreement regarding the final code for each initial discrepancy, with the final interrater reliability falling at 100%. The four intervention orientation categories were converted into a categorical independent variable, which was then subsequently used in quantitative analyses.

Quantitative data. To analyze the influence of language and behavior management style (BMS) on treatment acceptability, a 3x4 factorial analysis of covariance (ANCOVA) was conducted to assess the possible main effects and interaction effects of both the type of language used to describe an intervention and the style of the participant's behavioral intervention, with behavioral management style as a covariate. A hierarchical linear regression analysis was conducted to assess the possible moderating effects of behavior management style on treatment acceptability. Chi-square goodness-of-fit and independence tests were used to analyze the influence of language and intervention orientation on ratings of treatment acceptability of NCR relative to each participants' own intervention.

CHAPTER IV: RESULTS

The present mixed-methods study included 108 participants employed as public school teachers in the United States from urban, rural, and suburban school districts. Among those who submitted age data ($N = 104$), participant ages ranged from 24 to 69 years ($M = 38.49$, $SD = 10.93$). A total of 100 participants submitted data regarding the number of years they have been teachers, ranging from those in their first year to those who had 48 years of experience ($M = 12.08$, $SD = 9.43$). For full demographic information of participants, please see Table 1.

Table 1
Participant Demographics

Item	Response	N	%
Gender	Male	16	14.8%
	Female	88	81.5%
	Would Rather Not Disclose	1	0.9%
Race/Ethnicity	Non-Hispanic/White African American/Black	89	82.4%
	Hispanic or Latino	8	7.4%
	Multiracial	1	1.0%
	Other	5	4.8%
		2	1.9%
State	Illinois	25	23.1%
	Florida	60	55.6%
	Connecticut	7	6.5%
	Nevada	8	7.4%
	Maine	3	2.8%
	Ohio	1	0.9%
	Georgia	2	1.9%
Type of District	Urban	22	20.4%
	Rural	31	28.7%
	Suburban	49	45.4%
Teaching Certification	General Education	68	63%
	Special Education	12	11.1%
	Both	23	22.3%
Community College Transfer	Yes	38	35.2%
	No	64	59.3%

(Table Continues)

Table 1, Continued

Item	Response	N	%
Teaching Experience	0-5 Years	30	27.8%
	6-10 Years	22	20.4%
	11-15 Years	22	20.4%
	16-20 Years	8	7.4%
	21-25 Years	9	8.3%
	26-30 Years	4	3.7%
	31-35 Years	1	0.9%
	36-40 Years	2	1.9%
	45-50 Years	1	0.9%
Grade Level	Early Childhood	6	5.6%
	Elementary	43	39.8%
	Middle School	26	24.1%
	High School	22	20.4%
	Multiple Levels	6	5.6%
Subject	Core Curriculum	71	65.7%
	Special Education (SPED)	13	12%
	Specials	10	9.3%
	Combined Core and SPED	3	2.8%
	Administration	1	0.9%
Highest Degree Earned	Associates	1	0.9%
	Bachelors	42	38.9%
	Masters	60	55.6%
	Educational Specialist	1	0.9%
	Doctorate	1	0.9%
Course in Behavior Medication	Yes	55	50.9%
	No	50	46.3%

Qualitative Analyses

Research Question 1

Systematic analytical coding was used to explore the hypothesis that most participants would develop positive, consequence-based interventions. Initially, BMS categories were intended to include the three general classes of function-based behavioral interventions as described by Iwata, Vollmer, Zarcone, and Roger (1993). These classes include modifying

establishing operations, extinction, and behavioral replacement procedures. Punishment was also intended to be a fourth category. Based on the results of systematic analytical coding and the raw data collected in the current study, an alternative four intervention orientation categories were developed that better captured the responses provided by participants than those proposed by Iwata and colleagues (1993). Specifically, the responses provided by participants did not fit into each category identified by Iwata and colleagues (1993) in equal frequencies; alternative categories were therefore identified to avoid skewed distributions of responses that would influence subsequent quantitative analyses used to answer Research Questions 4, 5, and 7.

Specifically, upon analysis of the raw data gathered by way of open-ended questions embedded within the survey questionnaire, the following four themes emerged regarding intervention styles: passive interventions; collaborative orientations; interventions utilizing contingencies focusing on appropriate behaviors; and interventions utilizing contingencies focusing on problem behaviors. These themes related to the objective measure of behavior management style used in the current study (BIMS; Martin & Sass, 2010) and helped guide the interpretation of these data to develop conclusions. These themes were used to develop intervention orientation categories that were subsequently quantitatively analyzed as a categorical independent variable.

Deduced from raw data, the intervention styles ultimately suggested a similar continuum of control as reflected within the BIMS. Many themes of the philosophies constituting the BIMS continuum therefore emerged in the current study. These philosophies include the relationship-listening philosophy (non-interventionist), the confronting-contracting philosophy (interactionalist), and the rules and consequences philosophy (interventionist).

The intervention categories identified in the current study ranged in overall level of control and intensity of intervention, with passive and collaborative interventions reflecting more of an interactionist approach and contingency-based interventions reflecting more of an interventionist approach (Hoy & Weinstein, 2006). This range of interventions also reflects the Response to Intervention framework of tiered service delivery, which involves delivering interventions to students at increasing levels of intensity (Erchul, 2011). Additionally, passive and collaborative interventions reflected similar approaches to intervention that Iwata and colleagues (1993) described as intended to modify establishing operations through antecedent manipulations. However, passive interventions differed from collaborative interventions in that passive interventions involved little to no interaction between the student and teacher. Collaborative interventions, on the other hand, involved an interaction between the student and teacher and also often referenced relationship variables.

Furthermore, many of the interventions included in the contingency-based intervention categories included the use of extinction and behavioral replacement, as identified by Iwata and colleagues (1993), but not all responses. Contingency-based interventions differed in level of intervention severity, as well as whether the intervention used punitive practices and focused on problematic behaviors or instead focused on positive approaches to behavior management and adaptive behaviors. Thus, although the classes identified by Iwata and colleagues (1993) did not best describe the overall themes identified in the data and were not identified in each participant response, many aspects of these classes were embedded within the four intervention categories that were ultimately more broadly identified. These aspects are identified and further explored below. The four categories were more broad in nature, each participant response was identified as clearly fitting into a category.

Passive interventions. Passive interventions emerged as the most commonly used category of interventions across participants, with 33 participants describing an intervention reflecting this orientation. Interventions within this category were defined as the least direct and focused on preventing problem behaviors from occurring in the first place; thus, these interventions were antecedent-based. Such interventions may have focused on altering the classroom environment or giving the student noncontingent breaks. These interventions may have also focused on better meeting the academic needs of the student by altering instruction and/or working to increase academic engagement. These interventions were student-centered and generally did not involve higher levels of adult or administrative involvement; problem-solving occurred directly with the student.

“I would try changing his seat. I would use proximity during instruction or class work time. I would find more ways to involve him on the lesson such as having him pass out materials, keep score in a game, be a time keeper, or be the one who checks students work as they finish. Logan sounds bright and active. He needs to be more actively engaged in the lesson.”

“I would have Logan screened for hearing and then seat him closer to me for independent work so he could speak less loudly while voicing his displeasure. I might have him screened for the gifted education program if he easily completes his classwork as he could be bored. To reduce disruptive behavior while still meeting the student's need to voice his feelings. I would first have his hearing screened to see if he is wanting the teacher to hear, or if due to a hearing deficit, he is speaking more loudly than he intended.”

Collaborative interventions. Collaborative interventions were more direct and focused on directly responding to and preventing problem behaviors from occurring by collaborating with the student. Such interventions confronted problem behaviors and focused on eliciting the student's input and help to decrease the problem behaviors, working to find solutions that satisfied both the teacher and the student (Hoy & Weinstein, 2006)). Collaborative interventions implied that students were allowed to make mistakes and the interventions likely did not involve behavioral contingencies; they fostered the development of the student's skills and independence. Collaborative interventions were fluid and student-centered, highlighting the critical nature of the social relationship between the teacher and student and utilizing humanistic terminology. The interventions may have involved other adults, but the primary focus of the intervention was to problem-solve between the teacher and student, preserving a positive relationship. 24 participants described an intervention reflecting this orientation.

"I would initially have a one-to-one conversation with Logan, stating how his behavior makes me feel and inquiring if he knows why he is exhibiting these behaviors. This interaction will preserve Logan's dignity and will give him the opportunity to self-correct."

"I would set aside a time to communicate with Logan and his parents. At the parent conference, I will discuss his behavior and give him and his parents the opportunity to respond. I will discuss future consequences. I will also discuss future rewards. Students have to feel like the teacher cares about them. By calling a conference, everyone is able to discuss their concerns and then find a solution that works best for the student. This should be a way to build a relationship with the student."

Contingency interventions: focus on appropriate behavior. Contingency-Appropriate interventions involved directly working with the student in a systemic, consequence-based manner; they were teacher-centered and highly structured. The interventions were positive and focused on increasing appropriate, adaptive behaviors by providing students with reinforcements or rewards that were contingent on the student engaging in appropriate behaviors. The interventions also reflected a higher level of adult involvement, perhaps by consulting with other professionals or parents. The interventions may have involved gaining student input, but they reflected a higher degree of overall teacher control, adult authority, and overall intensity of intervention. Although this intervention orientation was hypothesized to be the most commonly cited intervention, this orientation was the second most-frequently employed approach, with 29 participants describing an intervention reflecting this orientation.

“I would have a private, 1:1 meeting with Logan and develop a behavior contract. Within the contract, I would outline a positive reinforcement system where Logan can earn a motivating item/activity throughout the day by earning smaller 'tokens'. The contract would include the expected behaviors Logan needs to demonstrate in order to earn the tokens and how many he needs to exchange for a variety of larger reinforcements. Based on this narrative, it appears that the function of Logan's behavior is to gain individual attention from both the classroom teacher and peers. Logan does not care if the attention is positive or negative, but he does seem to prefer that it is individualized (not general praise/attention/redirection given to the group). As a result, I would want to increase the amount of individual positive attention given to Logan to attempt to reduce the frequency of his disruptions.”

“Provide him with as much positive feedback as possible when he is on-task and then praising peers for the positive things they do when he is off-task or for ignoring his behaviors. He is capable of doing work and apparently loves the attention from peers, positive or negative.”

Contingency interventions: focus on problem behavior. Contingency-Problem interventions involved directly working with the student in a systemic, consequence-based manner. Similar to Contingency-Appropriate interventions, they were teacher-centered and highly structured. The interventions were more punitive in nature and language. The interventions focused almost exclusively on decreasing inappropriate, problematic behaviors, likely through punishment, discipline, or withholding rewards. If positive interventions or rewards were referenced, they were contingent on the student not engaging in a problem behavior or engaging in problem behaviors significantly less frequently. The interventions also reflected the highest level of adult involvement, often involving consultation with other professionals or parents and/or referring the student to administration or special education teams. The interventions did not involve gaining student input, and they reflected the highest degree of teacher control and authority. This was the least commonly used category across participants, with 22 participants describing an intervention reflecting this orientation.

“I give my students about 3 chances to correct their behavior. The first is a warning, the next is lunch detention, and then after that is Saturday detention. I would also call home if the behavior did not subside. Also, if I did see Logan doing SOMETHING good, I would definitely compliment him so it would encourage him to do well. I do this with every student I have depending on how often their behavior is bad.”

“Seat change or isolation from the rest of the students. Use teacher proximity to always be near him and able to stop any off task behavior. To try to give other students the opportunity to learn and be successful without being distracted by their peers. Logan might complete his work every day, but that may not be true of every other student that he is distracting.”

Ultimately, these results supported the hypothesis that most participants would develop positive interventions (N = 86). Of the four intervention orientation categories that were identified, 53 participants developed positive, consequence-based interventions that were identified as Collaborative or Contingency Interventions that focused on appropriate behaviors. 33 participants developed positive, antecedent-based interventions that were identified as Passive. 22 participants developed interventions that were identified as Contingency Interventions that focused on problem behaviors. Thus, although the majority of participants developed positive interventions, the hypothesis that most participants would develop positive, consequence-based interventions was not supported. Overall, the types of interventions identified by participants supported previous research that has indicated that many teachers are familiar with behavioral interventions such as differential reinforcement and token economies (Hyatt et al., 1991; Kazdin & Cole, 1981; Rhoades & Kratochwill, 1992; Hyatt & Tingstrom, 1993).

Foundations of interventions. Upon analysis of the raw data gathered by way of an open-ended question pertaining to what informed the participants’ choices of intervention, several themes emerged. Participants identified the following themes: established knowledge (e.g., previous trainings, experience, and district protocol); peer consultation (e.g., seeking mentoring and advice from colleagues); and overall values and beliefs.

Quantitative Analyses

To ensure that results of quantitative analyses would not be skewed, two chi-square goodness-of-fit tests were performed to ensure that the observed frequencies of participants in the categories for each independent variable did not depart significantly from expected frequencies.

A chi-square goodness-of-fit test was performed to determine whether participants were randomly assigned to language conditions with equal frequencies. 36 participants were randomly assigned to the RFT language condition, 30 participants were randomly assigned to the behavioral language condition, and 42 participants were randomly assigned to the teacher language condition. These frequencies did not depart significantly from the theoretically expected frequencies (i.e., 36 in each language condition), $\chi^2 (2, N = 108) = 2.00, p = 0.37$.

A chi-square goodness-of-fit test was performed to determine if the observed frequencies of participants in each of the four intervention orientation categories, identified first through systematic analytical coding, departed significantly from the expected frequencies. 33 participants identified passive interventions and 24 identified collaborative interventions. 29 participants identified interventions with contingencies focused on appropriate behavior while 22 participants identified interventions with contingencies focused on problem behavior. These frequencies did not depart significantly from the theoretically expected frequencies (i.e., 27 in each intervention category), $\chi^2 (3, N = 108) = 2.74, p = 0.43$.

Research Question 2

The hypothesis that most participants would rate NCR as generally acceptable, as it is a positive intervention, was explored using a reporting of means. Between the 108 participants who provided IRP-15 ratings of NCR, treatment acceptability ratings ranged from 20 to 90 ($M =$

65.57, $SD = 15.81$). As the highest score that can be derived from IRP-15 ratings is a 90, the average rating of 65.57 indicates that, overall, participants found the intervention generally acceptable. Therefore, the hypothesis that most participants would rate NCR in the form of NCP as generally acceptable, as it is a positive intervention, was supported. This hypothesis was based on the results of previous research on treatment acceptability of positive interventions (Carter, 2007; Miltenberger, 1990).

Average BIMS scores. Between the 108 participants who provided BIMS ratings, scores ranged from 78 to 141 ($M = 102.16$, $SD = 10.00$), with the highest score that can be derived from BIMS ratings being a 144.

Level of confidence in intervention. Of the 108 participants who rated their level of confidence regarding the intervention they initially developed on a 5-point Likert scale, ratings ranged from 2 to 5 ($M = 3.86$, $SD = 0.77$).

Perceived gender of psychologist. Of the 108 participants who provided data on their perceptions of the gender of the school psychologist in the vignette, most reported that they did not think about gender when reading the vignettes ($N = 63$). 8 participants reported perceiving the psychologist as a male and 37 participants reported perceiving the psychologist as a female.

Research Question 3

The present study employed a 3x4 factorial design and utilized a two-way analysis of covariance (ANCOVA) to assess the influence of language and intervention orientation on treatment acceptability ratings of NCR, as measured by the IRP-15. Behavior management style, as measured by the BIMS, was held as a covariate. Table 2 provides the cell sizes, means, and standard deviations of the between-subjects analysis of the IRP-15 ratings.

Exploring the hypothesis that language would have an effect on treatment acceptability ratings, an examination of means revealed a significant main effect of language ($F [2, 108] = 12.32, p = .000, \eta p^2 = .193$) on the IRP-15 ratings of treatment acceptability. This effect size was small.

The significant main effect of language of IRP-15 ratings was decomposed by conducting a simple effects test using Bonferroni adjustments for language conditions. Participants in the RFT language condition provided higher IRP-15 ratings ($M = 68.19, SD = 12.41$), compared to the participant's in the behavioral language condition ($M = 54.60, SD = 17.39$), reflecting a difference that was statistically significant $p = 0.001$. Participants in the teacher language condition provided higher IRP-15 ratings ($M = 71.17, SD = 13.43$), compared to the participant's in the behavioral language condition ($M = 54.60, SD = 17.39$), again reflecting a difference that was statistically significant $p = 0.000$. Participants in the teacher language condition provided higher IRP-15 ratings ($M = 71.17, SD = 13.43$), compared to the participant's in the RFT language condition ($M = 68.19, SD = 12.41$), reflecting a difference that was not statistically significant $p = 1.00$.

Ultimately, there was a significant difference between language conditions that reflected an overall preference for interventions described using teacher-derived language or a combination of language (RFT) as opposed to interventions described using behavioral language. There was a statistically significant relationship between NCR ratings and RFT-consistent language, such that existing verbal repertoires are further elaborated on ($F [2, 108] = 12.32, p = .000$). These results replicate the findings of Clayton (1995).

Research Question 4

Exploring the hypothesis that intervention orientations would have an effect on treatment acceptability ratings, an examination of means revealed no significant main effect for intervention orientation. There was no statistically significant relationship between participants who developed positive-based interventions and higher acceptability ratings of NCR ($F [3, 108] = 0.20, p = .89$).

Research Question 5

An examination of means revealed no significant interaction effect between the type of language used to describe an intervention and intervention orientation on treatment acceptability ratings ($F [6, 108] = 0.78, p = 0.58$).

Table 2
Descriptive Statistics of IRP-15 Ratings

Language Condition	Intervention Orientation	Mean	SD	N
RFT	Passive	66.71	13.21	7
	Collaborative	65.86	13.73	7
	Contingency-Appropriate	69.86	14.02	14
	Contingency-Problem	68.63	8.94	8
	Total			36
Teacher	Passive	66.88	11.86	17
	Collaborative	80.00	9.22	9
	Contingency-Appropriate	73.67	7.81	6
	Contingency-Problem	69.00	18.43	10
	Total			42
Behavioral	Passive	56.44	23.09	9
	Collaborative	50.13	15.14	8
	Contingency-Appropriate	55.67	15.48	9
	Contingency-Problem	57.00	15.98	4
	Total			30
	Total			108

Research Question 6

Multiple chi-square analyses were performed to explore hypotheses related the effect of language and intervention orientation on the treatment acceptability of NCR relative to participants' own interventions. To determine if the observed frequencies of participants choosing their own intervention, relative to the hypothetical school psychologist's intervention, departed significantly from the expected frequencies, a chi-square goodness-of-fit test was performed. 71 participants ultimately chose their own intervention while 37 participants chose the school psychologist's intervention. These frequencies reflect a significant difference from the theoretically expected frequencies (i.e., 54 in each category), $\chi^2(1, N=108) = 10.70, p = 0.001$. Largely, participants preferred their own interventions over the school psychologist's intervention. Cohen's effect size value ($d = 0.09$) suggests a small effect size.

To further explore the finding that participants largely preferred their own interventions, a chi-square test of independence was performed to examine the relation between language condition and ultimate intervention preference. As can be seen by the frequencies cross tabulated in Table 3, the relation between these variables was not significant, $\chi^2(2, N=108) = 4.14, p = 0.13$. The observed frequencies did not exhibit a significant association between language and intervention preference. The hypothesis that participants in the RFT language condition would be more likely to choose NCR over their own intervention than participants in the other conditions was therefore not supported (Stewart et al., 2006; Conoley et al. 1991).

Table 3
Language Condition by Intervention Preference

Language Condition	Intervention Preference		Total
	Own	School Psychologist's	
RFT	23 (63.9%)	13 (36.1%)	36 (33.3%)
Teacher	24 (57.1%)	18 (42.9%)	42 (38.9%)
Behavioral	24 (80%)	6 (20%)	30 (27.8%)
Total	71 (65.7%)	37 (34.3%)	108 (100%)

Research Question 7

Similarly, a chi-square test of independence was performed to examine the relation between intervention orientation and ultimate intervention preference. As can be seen by the frequencies cross tabulated in Table 4, the relation between these variables was not significant, $\chi^2(3, N=108) = 0.25, p = 0.97$. The observed frequencies did not exhibit a significant association between orientation and intervention preference, providing no support for the hypothesis that participants in with positive intervention orientations would be more likely to choose NCR over their own intervention than participants with other orientations.

Table 4
Intervention Orientation by Intervention Preference

Orientation	Intervention Preference		Total
	Own	School Psychologist's	
Passive	21 (63.6%)	12 (36.4%)	33 (30.5%)
Collaborative	16 (66.6%)	8 (33.4%)	24 (22.2%)
Contingency-Appropriate	20 (68.9%)	9 (31.1%)	29 (26.9%)
Contingency-Problem	14 (63.6%)	8 (36.4%)	22 (20.4%)
Total	71 (65.7%)	37 (34.3%)	108 (100%)

Overall, participants were more likely to choose their own intervention when presented with the option of choosing between their initial intervention and the intervention of the school psychologist presented in the vignettes. The type of language used in the vignette and the orientation of the participants' interventions did not significantly influence this preference.

Research Question 8

As there was a significant main effect of language on IRP-15 ratings, a hierarchical linear regression analysis was used to explore the hypothesis related to whether behavior management style, as measured by the BIMS, moderated the treatment acceptability ratings of participant's between language conditions. The results of the regression indicated that behavior management style did not have a significant moderating effect on IRP-15 ratings ($R^2 = 0.03, F(3, 106) = 1.19$,

$p = 0.32$). The hypothesis that participants with an interactionist (Wolfgang & Glickman, 1986) behavior management style, as measured by the BIMS (Martin & Sass, 2010), would rate NCR as more acceptable was therefore not supported.

CHAPTER V: DISCUSSION

Conclusions

As previously mentioned, teachers and school administrators are under increasing pressure to promote a positive school climate and use positive discipline strategies (NASP, 2017). Moreover, one of the biggest roles and functions of a school psychologist is to consult and collaborate with other education professionals to best meet the needs of all students (NASP, 2017). Therefore, the purpose of the current study was to attempt to use RFT to increase the treatment acceptability of NCR, a behaviorally-oriented treatment. While previous studies have explored the influence of language on treatment acceptability ratings, the current study expanded on previous research in multiple ways. Similar to Heuser (2012), two of the vignettes in this study were created that differed in terms of the language used to describe the same intervention (NCR). While Heuser (2012) utilized key terms from behavioral and constructivist theories to describe academic interventions, the author consulted with educational psychology researchers to assess the validity on these terms. In the current study, the terminology used in experimental vignettes was derived directly from current educators in a qualitative pilot study (Rohan & Cates, 2017).

The current study utilized a mixed-methods research design to first conduct a qualitative pilot study to identify and gather common and popular terminology used by current educators to address a mild classroom behavior problem. Similar to Clayton (1995), language from the pilot study was then used to develop the RFT and teacher-derived vignettes. Thus, the language employed by teachers was used to build a common relational network in the RFT condition via a frame of coordination, cognitively fusing and relating NCR to a commonly described teacher-derived intervention to increase the treatment acceptability of NCR (Wilson & Hayes, 1996).

Results supported a statistically significant effect of the influence of RFT on treatment acceptability ratings, replicating the results of Clayton (1995).

More specifically, there was a significant difference between language conditions that reflected an overall preference for interventions described using teacher-derived language and a combination of language (RFT), as opposed to interventions described using behavioral language. These findings support the hypothesis that participants would rate NCR as more acceptable when it was explained consistent with RFT, such that existing verbal repertoires are further elaborated on. There were statistically significant differences between IRP-15 ratings such that teacher-derived language and RFT language were both more preferred than behavioral language. Teacher-derived language was slightly more preferred than RFT language, but this difference was not statistically significant. This finding depicts a very significant difference only between acceptability ratings of the same intervention when described with RFT terminology compared to solely behavioral language. The statistically insignificant difference between the RFT and teacher-derived conditions further supports the notion that cognitively fusing preferred and non-preferred terms is enough to increase treatment acceptability. Additionally, overall IRP-15 ratings suggest NCR is a generally acceptable intervention amongst teachers.

These results replicate the findings of previous research highlighting that the language used to describe interventions influences treatment acceptability (Clayton, 1995; Woolfolk et al., 1977; Kazdin and Cole, 1981; Conoley et al., 1991). Thus, the possibility that being able to describe an intervention by using a combination of behavioral language and common teacher professional terminology, thereby employing a frame of coordination, is an effective consultation technique for school psychologists was largely confirmed. This may be due to the previous

findings that interventions described in behavioral terms are perceived as less acceptable than those labeled as humanistic (Woolfolk et al., 1977; Kazdin and Cole, 1981).

For example, results of previous studies have suggested that “humanizing” the language of behavior modification might increase treatment acceptability (Woolfolk, Woolfolk, & Wilson, 1977; Woolfolk & Woolfolk, 1979). The manipulation of language used in the RFT vignette in the current study, which resulted in higher IRP-15 ratings, demonstrates the effectiveness of such a strategy. Additionally, the teacher-derived language condition had the highest overall IRP-15 ratings, suggesting overall preference for language grounded in humanistic theory, although insignificant when compared to RFT. These results also illustrate the point made by Wilson and Hayes (1996) that expanding on current verbal networks is easier than establishing new networks. Specifically, by relating terms and ideas (Reese, 1968; Hayes, 2004) and matching language and rationales (Conoley, Conoley, Ivey, & Scheel, 1991).

The average IRP-15 rating of NCR provided by participants indicates that the intervention was perceived as generally acceptable. However, participants demonstrated an overall preference for their own interventions when asked to choose between their intervention or the school psychologist’s intervention at a statistically significant level, regardless of intervention orientation. Furthermore, participants continued to prefer their own intervention over the school psychologist’s intervention regardless of language, which also had a statistically significant effect on treatment acceptability ratings.

These results indicate that teachers may be more likely to continue to prefer their own interventions when presented with an alternative intervention. As teachers are more likely to continue to prefer their own choice of interventions, it appears important for school psychologists to listen to their consultees to “anchor” and build off of their initial interventions

while using consultee language, rather than recommending new interventions altogether. This will likely increase the probability of consultees accepting the intervention suggestions proposed by school psychologists. This result further reflects the influence of RFT, which was shown to be an effective approach to consultation within the context of the current study.

Qualitative analyses of open-ended responses pertaining to proposed interventions and accompanying rationales resulted in the identification of four distinctly separate intervention orientation categories: Passive; Collaborative; Contingency-Appropriate; and Contingency-Problem. These categories differed from those identified in the pilot study conducted by Rohan and Cates (2017) in that the categories more exhaustively reflected humanistic orientations and behavioral orientations. These four categories ultimately depicted a continuum of control and severity of intervention, mirroring the ideology behind the Behavior and Instructional Management Scale (BIMS; Martin & Sass, 2010; Wolfgang & Glickman, 1986) as well as the Response to Intervention framework behind school-based service delivery (Erchul, 2011). The majority of participants developed positive interventions that mostly involved consequence-based approaches to student behaviors. Many participants referenced the use of praise that was contingent on appropriate behaviors, but there were no participants who referenced NCR as a potential intervention on its own. Many participants also highlighted the importance of the relationship between a student and teacher.

Additionally, although Bear (2013) referenced teacher resistance to and treatment infidelity in the use of systematic rewards and praise in the behavioral consultation literature, results of the current study suggest NCR in the form of teacher praise was considered generally acceptable amongst participants. Many participants also developed interventions in which praise and rewards were utilized. Thus, reported teacher resistance to the use of rewards and praise may

reflect resistance to the terminology used to recommend or describe them, rather than resistance to the interventions themselves. Perhaps linking the use of praise and rewards to building a relationship with a student would increase the acceptability of the former amongst teachers.

Interestingly, intervention orientations reflecting behavior management style did not have a significant effect on IRP-15 ratings when analyzed as an independent variable in the current study. Exploratory quantitative analyses were performed, collapsing the four categories into two broader categories identified as humanistic (Passive, Collaborative) and behavioral (Contingencies). Intervention orientation continued to not have an influence over the treatment acceptability ratings of NCR. Overall, behavior management style did not have a significant influence of IRP-15 ratings, which highlights the point that treatment acceptability is perhaps not as much influenced by the type of intervention itself but rather the language used to describe the intervention. This result provides additional support for the impression that the language used during consultation is particularly salient, regardless of the intervention orientations of consultees.

One category that emerged from the qualitative analyses was the Passive intervention category. Responses that denoted this orientation often involved references to academic factors. For example, referencing the student's potential giftedness and need for enriched curriculum in the form of increased academic challenge was an unexpected response that occurred frequently amongst participants in the Passive category. While this theme was rather unexpected, it provides further evidence supporting the notion that teacher beliefs and their perceptions regarding student behaviors and classroom management influence their choices of interventions, which subsequently influence student learning and development in a cyclic process (Fang, 1999; Martin & Sass, 2010). Considering how teachers interpret the behaviors of students, and the

reasons behind these behaviors, is an important factor in effective consultation and considering the use of language in consultation.

Qualitative analyses of open-ended responses to the question pertaining to what informed the interventions proposed by participants resulted in several themes. Participants identified the following themes: established knowledge, peer consultation, and overall values and beliefs. These perceptions continue to highlight the importance of school psychologists understanding the frame of reference of the teachers with whom they work, as research has shown that the training teachers receive and their own established teaching philosophies may limit any changes a school psychologist attempts to promote regarding the selection of behavioral interventions (Wilson and Hayes, 2006).

Implications

Based on the aforementioned results, the importance of understanding the interventions and language teachers prefer to use and referencing this language to describe suggested interventions while expanding upon them may ultimately be the most effective consultation strategy to be employed. As discussed by Rosenfield (1991), describing interventions from multiple viewpoints and accommodating the various perspectives of diverse consultees leads to successful consultation; the results of this study support this conclusion.

Additionally, while the behavioral model of consultation has received the most attention in the training of school psychologists, Erchul (2011) notes that the consultee-centered consultation (CCC) model better fits within the Response to Intervention framework of tiered service delivery. Participants in the current study identified their own knowledge and seeking advice from colleagues as common explanations as factors that most commonly informed their intervention choices. As such, working on building and maintaining equal colleague

relationships with teachers is essential to successful consultation, and these principles reflect CCC (Knotek et al., 2008). As opposed to coming into consultation as top-down experts in problem identification rooted in behavioral theory, school psychologists should rather consider coming alongside consultees and working with their initial ideas, especially considering that results of the current study indicate consultees are likely to continue to largely prefer their own interventions.

The results of this study therefore likely have implications for graduate training in school psychology, in addition to current consultation practices. It is possible that a more effective approach to consultation, or an entirely new approach altogether, has been identified. For example, the findings from this study may be used to generate recommendations on how school psychologists might attempt to bridge communication gaps with teachers and engage in more effective consultation practices by identifying common relational networks and language regarding behavioral interventions, consistent with RFT. Previous literature has demonstrated the importance of considering relationship factors within behavioral consultation, such as communication and sharing responsibility for treatments, to decrease perceived reluctance to accepting and adhering to behavioral treatments recommended by consultants (Rosenfield, 1991). The results of the current study provide further support for this consideration.

Further, taking an approach to consultation that establishes, maintains, and builds upon the relationship between the school psychologist and consultee will likely be a critical consideration (Rosenfield, 1991). Using the language of consultees not only reflects an RFT approach to consultation, but it conveys listening and support on behalf of the consultant, reflecting the very humanistic principles that teachers identify as core components of their teaching philosophies.

Limitations and Future Research

The current study had several limitations. For starters, the sample of participants in the current study was not representative of the general population, particularly in that the majority of participants identified as White females with Masters degrees. As a result, these results may only generalize to teachers identifying with the same demographics. Martin and Yin (1997, 1999) noted that beliefs about classroom management are complex, as they are likely influenced by both individual and contextual factors, such as gender or geographical location. Cultural factors should also be explored as they relate to language and treatment acceptability of behavioral interventions. Future studies should therefore explore the influence of language and intervention orientation on the treatment acceptability of NCR with a more diverse sample of participants to address these shortcomings.

In the current study, the vignette depicting the behavior problem referenced a 4th grade male, performing at similar level as his peers, engaging in attention-seeking behaviors. While language had a statistically significant influence on treatment acceptability, future research should explore these variables as they relate to students of various age groups, levels of academic performance and achievement, and different perceived genders. Doing so would suggest generalizability of results.

Furthermore, the intended function of behavior in the vignette used in the current study was attention; future studies should explore the influence of language on the treatment acceptability of interventions addressing various functions of student behavior. Additionally, in the current study, the aberrant behaviors described in the vignette may be considered to have occurred at a high frequency but lower intensity. Exploring the influence of language as it relates

to differing severity levels problematic behaviors, such as physical aggression, should therefore be explored.

While language had a significant influence on the treatment acceptability of NCR in the current study, future studies should explore the influence of language on the treatment acceptability of various interventions. For example, as increasing academic challenge as an intervention emerged as a significant theme in the current study, future studies might perhaps explore the influence of language on the treatment acceptability of academic interventions, as Heuser (2012) did. Additionally, some studies have demonstrated that the use of behavioral language can facilitate treatment acceptability under certain conditions, such as for a reductive, punishment-based intervention (Hall & Didier, 1987; Witt et al., 1984; Woolfolk et al., 1977). Future studies may want to further assess the acceptability of restrictive interventions when analyzing the influence of language in a systematic approach, as the current study employed.

As with all qualitative research, interpretations of data may be influenced by the researcher's perceptions. Future researchers may therefore seek to replicate the qualitative findings of the current study or identify alternative categories of intervention orientations reflecting behavior management styles through qualitative analyses. If alternative intervention orientation categories are indeed identified, researchers should consider using these categories to subsequently quantitatively explore their influence on treatment acceptability ratings, as the current study sought to do.

As the results of the current study support the significant influence of RFT on treatment acceptability ratings of NCR, future research should focus on systematically identifying and manipulating variables that relate to RFT. For example, considering whether the amount of words used in an explanation has an influence on treatment acceptability or interacts with the

type of language used. Researchers are encouraged to continue to explore such additional variables that may lead to the discovery of variables that may mediate or moderate the influence of language.

Rosenfield (1991) noted that behavioral consultants need to attend to important relationship factors within consultation, such as communication and sharing responsibility for treatments, to decrease perceived reluctance to accepting and adhering to behavioral treatments recommended by consultants. As the results of the current study relate, in theory, to CCC and therefore relationship variables, future research may consider studying and piecing apart these types of variables to manipulate their effect on language and treatment acceptability. Such research will continue to be particularly important given the emphasis on tiered service delivery within the Response to Intervention framework and continued need for school psychologists to engage in effective collaboration and consultation (Erchul, 2011).

Ultimately, the continued identification of effective consultation strategies will provide school psychologists with additional techniques to foster successful communication with other education professionals in consultation relationships. In turn, school psychologists will be better able to provide teachers with more effective and efficient support to meet the needs of challenging students, therefore improving overall student outcomes in an increasingly diverse student population.

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APPENDIX A: EMAIL REQUESTS FOR SITE PERMISSION

Date
Department Chair
[Email address]
RE: Permission to Conduct Research Study

Dear Dr. [Department Chair],

I am writing to request your permission to conduct a research study within the [Department.] I am a current doctoral student enrolled in the School Psychology program here at Illinois State University and am in the process of completing my dissertation. The study is entitled, "Exploring the Influence of Relational Frame Theory on the Treatment Acceptability of Noncontingent Reinforcement." This study is being conducted under the direction of Dr. Gary Cates in the Department of Psychology here at Illinois State University

I am requesting your permission to recruit approximately 90-100 pre-service Pre-K-12 teachers from the [Department] to confidentially complete an online survey regarding behavior management in classroom settings. The study entails reading two brief vignettes, one regarding a behavior problem and one regarding a recommended intervention, and answering subsequent questions about their perceptions of behavioral interventions. All data will be collected online. Interested students, who volunteer to participate, will provide informed consent within the online survey prior to participating.

If approval is granted, student participants will complete the online survey at a site and location of their convenience and preference. The survey process should take no longer than 30 minutes. The first 100 participants to complete the survey will receive a \$10 Amazon gift card. Participants will also be given the opportunity to provide their email to enter into a raffle to receive a \$25 electronic Amazon gift card. The survey results will be pooled for this dissertation project and the results of this study will remain confidential. Should this study be published, only pooled results will be documented. No costs will be incurred by either the [Department]. The University Institutional Review Board (IRB) has approved this survey.

Your approval to conduct this study would be greatly appreciated. I will gladly answer any questions or concerns that you may have regarding this study. You may contact me at my email address (arohan@ilstu.edu) or telephone, (772) 708-6826.

If you agree to grant permission for me to recruit Pre-K-12 pre-service teachers, please complete the form attached to this email to provide formal documentation of your consent and permission for me to conduct this study within the [Department]. You can either scan and email the document back to me or let me know when you would like me to pick up a hard copy. I can also provide you with any additional information you would like to have for your records, such as a copy of an approved IRB.

Thank you for considering this request,
Amanda Rohan
Doctoral Candidate
School Psychology Program
Illinois State University

Date
[School] Principal
Email address
RE: Permission to Conduct Research Study

Dear [Principal],

I am writing to request your permission to conduct a research study within [School]. I am a current doctoral student enrolled in the School Psychology program here at Illinois State University and am in the process of completing my dissertation. The study is entitled, "Exploring the Influence of Relational Frame Theory on the Treatment Acceptability of Noncontingent Reinforcement." This study is being conducted under the direction of Dr. Gary Cates in the Department of Psychology at Illinois State University

I am requesting your permission to recruit approximately 90-100 pre-service Pre-K-12 teachers from [School] to confidentially complete an online survey regarding behavior management in classroom settings. The study entails reading two brief vignettes, one regarding a behavior problem and one regarding a recommended intervention, and answering subsequent questions about their perceptions of behavioral interventions. All data will be collected online. Interested teachers, who volunteer to participate, will provide informed consent within the online survey prior to participating.

If approval is granted, teacher participants will complete the online survey at a site and location of their convenience and preference. The survey process should take no longer than 30 minutes. The first 100 participants to complete the survey will receive a \$10 Amazon gift card. Participants will also be given the opportunity to provide their email to enter into a raffle to receive a \$25 electronic Amazon gift card. The survey results will be pooled for this dissertation project and the results of this study will remain confidential. Should this study be published, only pooled results will be documented. No costs will be incurred by either [School] or the individual participants. The University Institutional Review Board (IRB) has approved this survey.

Your approval to conduct this study would be greatly appreciated. I will gladly answer any questions or concerns that you may have regarding this study. You may contact me at my email address (arohan@ilstu.edu) or telephone, (772) 708-6826.

If you agree to grant permission for me to recruit current [grade] teachers, please complete the form attached to this email to provide formal documentation [School]. You can either scan and email the document back to me or let me know when you would like me to pick up a hard copy. I can also provide you with any additional information you would like to have for your records, such as a copy of an approved IRB.

Thank you for considering this request,

Amanda Rohan
Doctoral Candidate
School Psychology Program
Illinois State University

APPENDIX B: DEPARTMENT CHAIR/PRINCIPAL PERMISSION FORM FOR RESEARCH

Study Details

- **Title:** Exploring the Influence of Relational Frame Theory on the Treatment Acceptability of Noncontingent Reinforcement
- **Graduate Student Researcher:** Amanda Rohan
- **Faculty Advisor:** Gary L. Cates
- **Institution:** Illinois State University

Agreement (to be completed by Department Chair)

I, _____ [Department Chair] of _____ [department], understand:

- the study and what is required of the students in my department,
- the privacy and confidentiality of any student will be protected,
- I have the right to allow or reject this research study to take place in my department,
- I have the right to terminate the research study at any time,
- I have the right to review all research documents at any time during the study.

By signing below, I grant permission to the researcher to conduct the above-named research in my department.

Signature of Department Chair

Date

Study Details

- **Title:** Exploring the Influence of Relational Frame Theory on the Treatment Acceptability of Noncontingent Reinforcement
- **Graduate Student Researcher:** Amanda Rohan
- **Faculty Advisor:** Gary L. Cates
- **Institution:** Illinois State University

Agreement (to be completed by Principal)

I, _____ [Principal] of _____ [School], understand:

- the study and what is required of the currently employed teachers my school,
- the privacy and confidentiality of any teacher will be protected,
- I have the right to allow or reject this research study to take place in my school,
- I have the right to terminate the research study at any time,
- I have the right to review all research documents at any time during the study.

By signing below, I grant permission to the researcher to conduct the above-named research in my school.

Research Study

Illinois State University
Department of Psychology

Study regarding educator perceptions of behavior management practices.

Who is eligible?

- All pre-service Pre-K-12 teachers
- Current Pre-K-12 teachers

What will you be asked to do?

- Take no more than 30 minutes to answer a demographic questionnaire, read two vignettes regarding behavior management, and answer subsequent questions about behavior management.

Compensation

- The first 100 participants to complete the survey will receive a \$10 Amazon gift card.
- You may provide your email address to enter a raffle to receive a \$25 electronic Amazon gift card.

If you have any questions or are interested in participating, please contact:

Amanda Rohan: arohan@ilstu.edu

RESEARCH STUDY: Educator Behavioral Intervention Recommendations Phone: 772-708-6826 Email: arohan@ilstu.edu
RESEARCH STUDY: Educator Behavioral Intervention Recommendations Phone: 772-708-6826 Email: arohan@ilstu.edu
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RESEARCH STUDY: Educator Behavioral Intervention Recommendations Phone: 772-708-6826 Email: arohan@ilstu.edu

APPENDIX D: EMAIL INVITATION TO POTENTIAL PARTICIPANTS

From:
To:
Subject: Research Survey about Behavior Management

Dear Student,

You are being invited to participate in an online survey regarding behavior management practices. The first 100 participants to complete the survey will receive a \$10 Amazon gift card. You may also provide your email to enter into a raffle to receive a \$25 electronic Amazon gift card. The survey is brief and will only take approximately 30 minutes to complete.

If interested, please click the link below to go to the survey Web site or copy and paste the link into your Internet browser.

Survey link: https://illinoisstate.az1.qualtrics.com/jfe/form/SV_bJdqZp1M9P0iUL3

Your participation in the survey is completely voluntary and all responses will be kept confidential. No personally identifiable information will be associated with your responses to any reports of these data. The Institutional Review Board (IRB) has approved this survey. If you have any comments or questions, please feel free to contact me at arohan@ilstu.edu or 772-708-6826 or the Research Ethics & Compliance Office at Illinois State University, in Normal, Illinois, USA at (309) 438- 2529.

Thank you very much for considering this request,

Amanda Rohan
Doctoral Candidate
School Psychology Program
Illinois State University

From:
To:
Subject: Research Survey about Behavior Management

Dear Teacher,

You are being invited to participate in an online survey regarding behavior management practices. The first 100 participants to complete the survey will receive a \$10 Amazon gift card. You may also provide your email to enter into a raffle to receive a \$25 electronic Amazon gift card. The survey is brief and will only take approximately 30 minutes to complete.

If interested, please click the link below to go to the survey Web site or copy and paste the link into your Internet browser.

Survey link:

https://illinoisstate.az1.qualtrics.com/jfe/form/SV_bJdqZp1M9P0iUL3

Your participation in the survey is completely voluntary and all responses will be kept confidential. No personally identifiable information will be associated with your responses to any reports of these data. The Institutional Review Board (IRB) has approved this survey. If you have any comments or questions, please feel free to contact me at arohan@ilstu.edu or 772-708-6826 or the Research Ethics & Compliance Office at Illinois State University, in Normal, Illinois, USA at (309) 438- 2529.

Thank you very much for considering this request,

Amanda Rohan
Doctoral Candidate
School Psychology Program
Illinois State University

APPENDIX E: INFORMED CONSENT

Dear Participant,

My name is Amanda Rohan, a graduate student in the School Psychology doctoral program at Illinois State University. I am conducting a research study to explore educator perceptions of behavior management. Additionally, this research will examine the language used by educators to refer to different behavior management strategies. The findings of this study will be used to inform current school consultation practices. This study is being conducted under the direction of Dr. Gary Cates in the Department of Psychology at Illinois State University and has been reviewed and approved by Illinois State University's Institutional Review Board.

Participation in this study will involve answering a demographic questionnaire, reading two brief vignettes, and answering subsequent questions. The survey should take no longer than 30 minutes and you may skip questions you do not wish to answer. Participation in this study is confidential and no identifying information will be gathered other than the demographic information you provide. Data gathered by way of the survey will be disposed of 3 years after they are analyzed, aggregated into results with no identifiable information, and written into a research report. This research report will be presented at research conferences to current education professionals. The researchers will also attempt to publish this report. Foreseeable risks include loss of confidentiality or experiencing slight discomfort due to finding survey questions difficult to answer. A benefit of this study includes the opportunity to share your perspective regarding behavior management in the classroom.

The first 100 participants to complete the survey and reach the end of the study will receive a \$10 Amazon gift card. Additionally, you will have the opportunity to provide your email address to enter a raffle to receive a \$25 electronic Amazon gift card, regardless of survey completion. Your participation in the study is completely voluntary; refusal to participate involves no penalty or loss of benefits. If you do choose to participate, you have the right to withdraw at any time, without penalty or loss of benefits. If you do choose to withdraw from the study, you may still provide your email address to enter the \$25 gift card raffle.

The IRS may consider these payments to be taxable compensation. Recipients of a research participant incentive payment may want to consult with their personal tax advisor for advice regarding the participant's situation. Any participant also has the opportunity to participate in the study without accepting the research incentive payment.

If you have any questions regarding this study, please feel free to contact me at arohan@ilstu.edu or my research advisor, Dr. Gary Cates at glcates@ilstu.edu or (309) 438-3123. You may also contact the Research Ethics & Compliance Office at Illinois State University at (309) 438-2529 for questions about research participants' rights and/or a research related injury or adverse effects. By clicking the Next button below, you are providing your consent to participate in this study. If you do not wish to participate, you may simply close your browser window.

Thank you for considering this invitation.

Amanda Rohan
Doctoral Candidate
School Psychology Program
Illinois State University

APPENDIX F: DEMOGRAPHIC QUESTIONNAIRES

Demographic Questionnaire for Pre-Service Teachers

Question	Response
1. I am currently a pre-service teacher	Yes
	No
2. In what undergraduate program are you currently enrolled?	
3. Age	
4. Gender	Male
	Female
	Other
	I would rather not disclose
5. Year in Program	1
	2
	3
	4
	5
	More than 5
6. Most wishing to teach what level?	Early Childhood
	Elementary
	Middle School
	High School
7. Highest Degree Earned?	None
	Associates
	Bachelors
	Masters
	Education Specialist
	Doctorate
8. Did you transfer from a community college?	Yes
	No
9. Type of teaching certification you are pursuing	General Education
	Special Education
10. Have you ever taken a course exclusively focused on behavior management?	Yes
	No
11. Race/Ethnicity	Non-Hispanic/White
	African American or Black
	Hispanic or Latino
	Asian or Asian-American
	Native American or Alaska Native
	Pacific Islander
	Other

Demographic Questionnaire for Current Teachers

Question	Response
1. I am currently a(n)	Active Teacher
	Retired Teacher
2. In which state do you teach?	
3. Age	
4. Gender	Male
	Female
	Other
	I would rather not disclose
5. For how many years have you been a teacher?	
6. If retired, how long were you a teacher?	
7. If retired and working in a different field, what job title do you currently hold?	
8. What level do you currently or did you teach?	Early Childhood
	Elementary
	Middle School
	High School
	Multiple levels
9. Highest Degree Earned?	None
	Associates
	Bachelors
	Masters
	Education Specialist
	Doctorate
10. Did you transfer from a community college?	Yes
	No
11. Type of teaching certification do/did you hold?	General Education
	Special Education
	Both
12. Have you ever taken a course exclusively focused on behavior management?	Yes
	No
13. Race/Ethnicity	Non-Hispanic/White
	African American or Black
	Hispanic or Latino
	Asian or Asian-American
	Native American or Alaska Native
	Pacific Islander
	Other
14. What type of district do you currently teach in (if retired, which type of district did you teach in most)?	Urban
	Rural
	Suburban

APPENDIX G: BEHAVIOR PROBLEM VIGNETTE

Logan is a 9-year-old 4th grade general education student. Since the beginning of the school year, Logan has been observed to be frequently disruptive in the classroom. His disruptive behaviors occur almost always during teacher directed instruction or independent seat work, regardless of the academic subject. He sometimes makes inappropriate jokes about classwork to his peers, who typically laugh in response. Most often, Logan makes comments about classwork either directly towards his teacher or loudly to his peers so his teacher can hear him. These comments are usually complaints about not wanting to work or being bored. Almost always, the teacher redirects Logan to get back to work or ignores his behavior. The teacher reports that Logan is still engaging in high rates of these disruptive behaviors, about once every 5 minutes or 12 times an hour, on average. Logan's disruptive behaviors therefore happen often enough that they take up a significant amount of the teacher's time and often disrupt his classmates' learning. Despite these disruptive behaviors, Logan still completes his classwork, either at school or at home. His performance on his classwork is similar to the performance of his peers.

APPENDIX H: OPEN-ENDED QUESTIONS

1. Please describe an intervention or behavior management strategy you would use to address Logan's behavior.
2. What is your rationale for using this intervention or behavior management strategy?
3. What informed your intervention choice?

APPENDIX I: LIKERT SCALE QUESTION

How confident are you in the intervention you chose?

1	2	3	4	5
Not confident at all	Somewhat confident	Neutral	Confident	Very confident

APPENDIX J: BEHAVIOR AND INSTRUCTIONAL MANAGEMENT SCALE (BIMS)

For each statement below, please mark the response that best describes what you do in the classroom. There are no right or wrong answers, so **please respond as honestly as possible**.

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1. I nearly always intervene when students talk at inappropriate times during class.						
2. I use whole class instruction to ensure a structured classroom.						
3. I strongly limit student chatter in the classroom.						
4. I nearly always use collaborative learning to explore questions in the classroom.						
5. I reward students for good behavior in the classroom.						
6. I engage students in active discussion about issues related to real world applications.						
7. If a student talks to a neighbor, I will move the student away from other students.						
8. I establish a teaching daily routine in my classroom and stick to it.						
9. I use input from students to create classroom rules.						
10. I nearly always use group work in my classroom.						
11. I allow students to get out of their seat without permission.						
12. I use student input when creating student projects.						
13. I am strict when it comes to student compliance in my classroom.						
14. I nearly always use inquiry-based learning in the classroom.						
15. I firmly redirect students back to the topic when they get off task.						
16. I direct the students' transition from one learning activity to another.						
17. I insist that students in my classroom follow the rules at all times.						
18. I nearly always adjust instruction in response to individual student needs.						
19. I closely monitor off task behavior during class.						
20. I nearly always use direct instruction when I teach.						
21. I strictly enforce classroom rules to control student behavior.						
22. I do not deviate from my pre-planned learning activities.						
23. If a student's behavior is defiant, I will demand that they comply with my classroom rules.						
24. I nearly always use a teaching approach that encouraged interaction among students.						

Adapted from: Martin, N. K., & Sass, D. A. (2010). Construct validation of the behavior and instructional management scale. *Teaching and Teacher Education*, 26(5), 1124-1135.

APPENDIX K: EXPERIMENTAL VIGNETTES

Vignette 1: Behavioral Jargon

After a brief consultation, the school psychologist in the building makes the following suggestion to Logan's teacher:

“It appears that Logan is engaging in attention-seeking behaviors in the classroom. One way to decrease Logan's high rate of disruptive behavior is to provide him with noncontingent reinforcement, often called NCR. NCR is an easy and effective evidence-based intervention that has been shown to reduce students' motivation to engage in problematic behaviors. NCR involves delivering reinforcement, such as praise, on a fixed-time schedule, even if a problematic behavior occurs. You should try providing Logan with higher rates of verbal praise during class, regardless of his disruptive behavior. You can start with a 5-minute reinforcement schedule. So, every 5 minutes, you should provide Logan with some type of verbal praise, even if he is engaging in disruptive behavior. Since NCR is most effective when used in conjunction with other behavior management strategies, you can also continue to use the classroom management strategies you are already using because they encourage adaptive and appropriate behavior.”

Experimental Vignette 2: Teacher-Derived Intervention

After a brief consultation, the school psychologist in the building makes the following suggestion to Logan's teacher:

“It appears that Logan is not engaged in his work or classroom activities. Logan may also have needs that are not being met, such as getting attention. You might start by pulling Logan to the side and briefly talking to him about his disruptive behavior. One way to decrease Logan's high rate of disruptive behavior is to provide him with more positive reinforcement, such as stickers, free time, or a job in the classroom. These rewards can help keep him on track, accountable, and motivate him to engage in more positive behaviors. You might try providing Logan with these rewards more often during class to keep him engaged. Since rewards are most effective when used in conjunction with other behavior management strategies, you can also continue to use the classroom management strategies you are already using because they encourage adaptive and appropriate behavior. Giving Logan more rewards might also make him feel more valued and respected by you as his teacher, making your relationship stronger.

Experimental Vignette 3: RFT Language

After a brief consultation, the school psychologist in the building makes the following suggestion to Logan's teacher:

“It appears that Logan is engaging in attention-seeking behaviors and is not engaged in his work or classroom activities. Logan may also have needs that are not being met, such as getting attention. You might start by pulling Logan aside and briefly talking to him about his attention-seeking behavior. One way to decrease Logan's high rate of disruptive and attention-seeking behavior is to provide him with noncontingent reinforcement, often called NCR. NCR is an easy and effective evidence-based intervention that is a form of positive reinforcement. It can keep kids on track, accountable, and motivate them to engage in more positive behaviors. NCR involves delivering reinforcement, such as praise or rewards on a fixed-time schedule, even if a problematic behavior occurs. Because his behavior appears attention-seeking, you might try providing Logan with praise on a 5-minute reinforcement schedule. So, every 5 minutes, you should provide Logan with some type of verbal praise as the reward, even if he is engaging in disruptive behavior. Since NCR is most effective when used in conjunction with other behavior management strategies, you can also continue to use the classroom management strategies you are already using, such as moving his seat or giving him more challenging work, because they encourage adaptive and appropriate behavior. Giving Logan more praise as a reward might also make him feel more valued and respected by you as his teacher, making your relationship stronger.”

APPENDIX L: INTERVENTION RATING PROFILE-15 (IRP-15)

The purpose of this questionnaire is to obtain information that will aid in the selection of classroom interventions. These interventions will be used by teachers of children with behavior problems. Please select the response which best describes your agreement or disagreement with each statement regarding **the school psychologist's intervention suggestion**.

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1. This would be an acceptable intervention for the child's problem behavior.						
2. Most teachers would find this intervention appropriate for behavior problems in addition to the one described.						
3. This intervention should prove effective in changing in the child's problem behavior.						
4. I would suggest the use of this intervention to other teachers.						
5. The child's behavior problem is severe enough to warrant use of this intervention.						
6. Most teachers would find this intervention suitable for the behavior problem described.						
7. I would be willing to use this intervention in the classroom setting.						
8. This intervention would not result in negative side effects for the student.						
9. This intervention would be appropriate for a variety of children.						
10. This intervention is consistent with those I have used in classroom settings.						
11. The intervention was a fair way to handle the child's problem behavior.						
12. This intervention is reasonable for the behavior problem described.						
13. I like the procedures used in this intervention.						
14. This intervention was a good way to handle this child's behavior problem.						
15. Overall, this intervention would be beneficial for the child.						

Adapted from: Martens, B.K., Witt, J.C., Elliott, S.N., & Darveaux, D.X. (1985). Teacher judgments concerning the acceptability of school-based interventions. *Professional Psychology: Research and Practice*, 16, 191-198.

APPENDIX M: FORCED-CHOICE QUESTION

Which intervention would you ultimately decide to use? Please choose one.

1. Your intervention
2. The school psychologist's intervention

APPENDIX N: GENDER PERCEPTION QUESTION

1.What gender did you envision the school psychologist?	Male
	Female
	I did not think about gender

APPENDIX O: ELECTRONIC GIFT CARD INCENTIVE AND RAFFLE ENTRY

Thank you for your participation in this study. If you have completed the survey and reached the end of the study, please enter your email address if you would like to receive a \$10 electronic Amazon gift card for your participation. If you choose, you may also provide your email on the next page to enter into the raffle to receive a \$25 gift card. [Response box]

Thank you for your participation in this study. Please enter your email address if you would like to enter a raffle to receive a \$25 electronic Amazon gift card for your participation. [Response box]

APPENDIX P: CODING MANUAL



<i>Humanistic/Interactionalist Approaches</i>		<i>Behavioral/Interventionist Approaches</i>	
LEVEL 1	LEVEL 1	LEVEL 1	LEVEL 1
Passive Interventions	Collaborative Interventions	Appropriate Behavior Contingencies	Problem Behavior Contingencies
Definition	Definition	Definition	Definition
<p><i>Interventions are the least direct and focus on preventing problem behaviors from occurring in the first place; thus, they are antecedent-based. The interventions might focus on altering the classroom environment or giving the student breaks. These interventions might also focus on better meeting the academic needs of the student by altering instruction and/or working</i></p>	<p><i>Interventions are more direct and focus on directly responding to and preventing problem behaviors from occurring by collaborating with the student. Interventions confront problem behaviors and focus on eliciting the student's input and help to decrease the problem behaviors, working to find solutions that satisfy both the teacher and the student. Students are allowed to make mistakes and the interventions likely do not involve behavioral contingencies; they foster the development of the student's skills and independence. Interventions are fluid and student-centered, highlighting the critical nature of the social relationship between the teacher and student. Interventions may involve other adults, but the primary focus of the intervention is to problem-solve between the teacher and student, preserving a positive relationship.</i></p>	<p><i>Interventions involve directly working with the student in a systemic, consequence-based manner; they are teacher-centered and highly structured. The interventions are positive and focus on increasing appropriate, adaptive behaviors by providing reinforcements or rewards that are contingent on the student engaging in appropriate behaviors. The interventions also reflect a higher level of adult involvement, perhaps by consulting with other professionals or parents. The interventions might</i></p>	<p><i>Interventions involve directly working with the student in a systemic, consequence-based manner; they are teacher-centered and highly structured. The interventions are more punitive and focus on decreasing inappropriate, problematic behaviors, likely through punishment, discipline, or withholding rewards. If positive interventions or rewards are referenced, they are contingent on the student not engaging in a problem behavior or engaging in problem behaviors less frequently. The interventions also reflect a high level of adult involvement, consulting with other</i></p>

<p><i>to increase academic engagement. The interventions are student-centered and generally do not involve higher levels of adult or administrative involvement; problem-solving occurs directly with the student.</i></p>		<p><i>involve gaining student input, but they reflect a higher degree of overall teacher control.</i></p>	<p><i>professionals or parents and/or referring the student to administration or special education teams. The interventions do not involve gaining student input, and they reflect the highest degree of teacher control.</i></p>
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NOTE: If a response includes multiple interventions listed in a specified order, please code based on the first intervention listed in the order. If the response includes multiple interventions that are NOT listed in a specified order, please code based on the overall level of teacher control and student involvement presented (see continuum visual and definitions at the beginning of the manual; coding examples are included at the top of the manual).

<p>LEVEL 2</p> <p>Differentiating or Changing Academic Instruction</p> <ul style="list-style-type: none"> Using group work, partner work, or buddies Using enrichment activities or giving supplemental work Giving the student a class job during academic lesson to increase engagement 	<p>LEVEL 2</p> <p>Personal Conferences and Collaboration with Student</p> <ul style="list-style-type: none"> Personal conference to reinforce expectations while obtaining student input; reinforcing expectations with visuals Personal conference with student to collaborate and develop behavior plan/contract/goal/rewards/solutions Gaining student input on rating of their behavior <p>Building Relationship and Communication</p> <ul style="list-style-type: none"> Build relationship or rapport with student Making the student feel cared for; the student is seeking out relationships Enlist student help or input regarding the plan/intervention 	<p>LEVEL 2</p> <p>Structured and Systemic Interventions that Use Reinforcement/Rewards</p> <ul style="list-style-type: none"> Emphasis on positive reinforcement/rewards and appropriate behaviors Reference to preference assessments- asking the student what they want as a reward Use of a behavior intervention plan (BIP) that focuses on adaptive behavior Reward systems 	<p>LEVEL 2</p> <p>Structured and Systemic Interventions that Reference Punishment or Disciplinary Actions</p> <ul style="list-style-type: none"> Reference to any type of punishment (e.g., loss of privileges; rewards; class job) Office Discipline Referrals Embarrassment and using student as example to class Warnings to avoid consequences/punishment Use of response cost (losing points, tokens, or privileges) Contact with administration and parents to manage problem behaviors
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<ul style="list-style-type: none"> • Providing attention to the student during instruction • Providing additional academic support • Having the student give special presentations or complete additional tasks • Differentiate instruction so student values the work more 	<ul style="list-style-type: none"> • Communication of feelings • Provide encouragement • Explicit reference to student's control or choice/freedom • Use of special communication (e.g., paddles) • Student ownership; put in charge of their education • Class job for responsibility/leadership/positive attention/reward; can be contracted for • Build trust; self-confidence • Show student you care/student feels heard and cared for • Explicit reference to relationship/social variables (e.g., respect, dignity) 	<ul style="list-style-type: none"> • Reward system in which the target behavior is adaptive, appropriate behaviors (e.g., work completion, raising their hand) • Use of incentives • Use of verbal praise or positive attention • Rewards and reflection • Use of positive rewards • Reference to point systems • Use of behavior charts, sticker charts, point sheets • Use of token economies (students earn tokens and turn them in for a reward) • Reference to positive behavior intervention and supports or positive behavior supports (PBIS/PBS) • Behavior modification or behavioral contingencies • Behavior form or general behavior contract 	<ul style="list-style-type: none"> • Completion of a behavior form • Seat change as punishment • Use of punitive language (e.g., labeling "bad" behavior or giving a "warning;" using "consequences") • Discussion of future consequences (e.g., threats) • Reinforcement is only available in the complete absence of disruptive behaviors • Reference to student accountability
<p>Preventing Behaviors by Altering the Environment, Giving Breaks, or Fidgets</p> <ul style="list-style-type: none"> • Using teacher proximity • Changing the student's seat • Altering the environment for the student to voice feelings about work • Encouraging the student to use alternative behaviors (e.g., movement or sensory breaks; general breaks; fidgets) • No other adults or 	<p>Respecting the Student and Developing their Independence</p> <ul style="list-style-type: none"> • Build responsibility and accountability • Highlighting student strengths and attributes • Assess and consider outside factors affecting the student • Preserving student dignity • Showing support and conveying respect; showing patience • Promote duty/sense of purpose • Student develops self-correction or self-monitoring skills • Building student buy-in • Reference to student control or freedom • Statements about student's lack of focus as potential reason for behaviors • Preventing distractions in the classroom that affect the student 	<p>Behavior Shaping</p> <ul style="list-style-type: none"> • Monitoring behavior change and providing student with reinforcements • Referencing lengthening time on-task (not disruptive) and building behavior habits • Goal setting • Student may still show problem behavior; 	<p>Intervention Focuses on Problem Behavior</p> <ul style="list-style-type: none"> • Use of rewards but the target behavior (focus) is the problem behavior • Focus on reducing the problem behavior (e.g., sticker charts; differential reinforcement of lower rates of behavior) • Rewards only provided in absence of problem behavior • Seat change for isolation as a punishment • Explicit reference to using teacher proximity to reduce behavior and increase control • Reference to class disruption • Reinforce expectations and emphasize consequences • Systemic focus on reduction of problem behavior • Use of behavior intervention plan
	<p>Teacher and Student Control</p> <ul style="list-style-type: none"> • Lower level of teacher control; limited involvement of additional adults • Student is part of the problem-solving process 		

<p>personnel involved</p> <p>Referencing Student Giftedness and/or Academic Engagement</p> <ul style="list-style-type: none"> • Referring the student to be assessed for giftedness • Providing academic-based rewards (e.g., science projects or centers) • Increasing academic challenge • Using enrichment activities • Increasing active engagement • Mentions the student might be bored • Ruling out other issues (e.g., academic difficulties; medical issues; hearing/vision issues) • Personal conference with student to gather academic input 		<p>intervention still gives the student a chance to make a mistake</p> <ul style="list-style-type: none"> • Differing levels of reinforcements/rewards (e.g., small to large) • Positive behavior feedback and incentives • Reinforcement of expectations (no student input) • Planned ignoring of inappropriate behavior (extinction) used as part of reinforcement system <p>Positive Alternatives for Gaining Attention</p> <ul style="list-style-type: none"> • Modeling appropriate behaviors for the student • Redirection or behavioral feedback given to student • Alternative, functional communication as replacement behavior • Personal conference with the student for behavior feedback OR to give them individual attention • Vicarious reinforcement of peers (praising peers for appropriate behaviors) <p>Involvement of Additional Adults</p> <ul style="list-style-type: none"> • Consultation with problem-solving team or reference to multi-tiered systems of support (MTSS) 	<p>(BIP), particularly one that focuses on problem behavior</p> <ul style="list-style-type: none"> • Focus on reduction of disruptions • Self-monitoring or logging of problem behavior • Behavior signals for inappropriate behavior <p>Involvement of Additional Adults</p> <ul style="list-style-type: none"> • Referral to or consultation with higher-level administration or special education teams (e.g., MTSS; BCBA) • Seeking functional behavior analyses (FBA) and behavior intervention plans (BIP) • Consulting with counselor or BCBA • Meeting with parents to discuss and problem-solve inappropriate behavior <p>Teacher and Student Control</p> <ul style="list-style-type: none"> • High level of teacher control; student is not part of the problem-solving process and does not have input • There is virtually no “wobble room” for the student, as it relates to the behavioral contingencies
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		<ul style="list-style-type: none"> • Parent contact for their input and collaboration • Check-In/Check-Out (CICO) system; checking in with an adult or administrator <p>Teacher and Student Control</p> <ul style="list-style-type: none"> • Higher level of teacher control; student is generally not part of the problem-solving process 	
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Coding Examples for Category 1: Passive Interventions

Coding Explanation	Intervention	Rationale
The intervention focuses on preventing behaviors from occurring by changing the student's seat and using teacher proximity. It also focuses on increasing student engagement in the lesson, specifically by giving him a specialized task. The rationale explicitly states that the student needs to be more actively engaged.	<i>I would try changing his seat. I would use proximity during instruction or class work time. I would find more ways to involve him on the lesson such as having him pass out materials, keep score in a game, be a time keeper, or be the one who checks students work as they finish.</i>	<i>Logan sounds bright and active. He needs to be more actively engaged in the lesson.</i>
The intervention involves providing verbal praise for appropriate behaviors but also largely focuses on providing the student with more of an academic challenge to increase his academic engagement. Enrichment activities are used as incentives for appropriate behaviors.	<i>First I would try to focus on the times he was engaged and give lots of positive praise for those times. Second, he is probably bored and might be a high academic student who doesn't not feel challenged in school and uses acting out as a way to get more attention, I would recommend a research project for him and let him choose the subject. If this works and grabs his attention I would then have this as an incentive for finishing work and not disrupting others then he can pick a new research project to complete.</i>	<i>Mostly if students can do the work independently, but disrupt others during instruction, they usually do not feel challenged and need a way to get attention. Students like to find out new things and if given the freedom to choose what they want to work on they are then more engaged.</i>
The intervention entails using additional teacher attention to reward work completion while also giving the student more challenging work to increase its value and maintain his interest. The student is also given a leadership role in the classroom. The rationale for the intervention focuses on the need for increased academic challenge.	<i>I would spend some 1:1 time with Logan and give him some positive reinforcement regarding his completion of work. I would give him a bit more challenging work to see if he is bored or does not find purpose/interest in the work. I would also offer him some responsibility in the classroom. He may be a leader given the opportunity.</i>	<i>It appears Logan is conscientious of his work and knows he can still act out but complete his work; if not at school, at home. I can eliminate the fact he is not acting out to hide his lack of understanding. He is capable of doing the work. He may need to be challenged more in the classroom. He seems to lose his focus easily and wants to engage with others.</i>

<p>The teacher considers outside factors and eliminates the possibility that there is another variable causing the behavior (hearing difficulties), while also altering the student's environment with a seat change. The intervention also discusses a screening for giftedness because the student might be bored.</p>	<p><i>I would have Logan screened for hearing and then seat him closer to me for independent work so he could speak less loudly while voicing his displeasure. I might have him screened for the gifted education program if he easily completes his classwork as he could be bored.</i></p>	<p><i>To reduce disruptive behavior while still meeting the student's need to voice his feelings. I would first have his hearing screened to see if he is wanting the teacher to hear, or if due to a hearing deficit, he is speaking more loudly than he intended.</i></p>
<p>The bulk of this intervention focuses on increasing academic engagement by making assignments more challenging and giving the student a special spot where he can work without distractions (similar to a seat change). A fidget and supplemental work are also cited as options. Although a behavior contract is mentioned, the overall intervention and rationale targets increasing engagement in the classroom.</p>	<p><i>He might be bored - maybe give him something more challenging in the curriculum to see if that is the issue. Give him more of a leadership role in the classroom where he can lead or pass out papers or do something positive to help the teacher. Give him a study corral to avoid distractions from the class. Make a behavior contract where if he decreases the outbursts, he will get a tangible reward quickly. Give him a stress ball or have supplemental work or an outlet that he can work on independently if he finishes his work.</i></p>	<p><i>To keep Logan engaged in the classroom, learn the curriculum, and not gain negative attention from the teacher and peers.</i></p>

Coding Examples for Category 2: Collaborative Interventions

Coding Explanation	Intervention	Rationale
<p>This response reflects the full spectrum of interventions, going so far as to discuss punishment and using the student as example to the class and sending him to the principal. However, the teacher lists a specific order of interventions that he or she would first attempt before turning to punishment and discipline. Further, the teacher explicitly states in the rationale that the preference is to problem-solve directly with the student before escalating the level of intervention intensity.</p>	<p><i>Hopefully I have not allowed this to go on for very long! First, I would have a long talk with Logan and try to find out why he feels the need for so much drama. We would discuss what the rules are and why they are in place. I would also contact his parents and make them aware of his behavior. If this did not improve behavior I would then ask for a parent conference. To encourage positive behaviors I would make a point to praise and reward the students who are on task and not disrupting. If he continues to disrupt, I would send him to the office to talk with the principal. While he was there I would have a talk with the rest of the class about their behavior in relation to his. I would remind them why we are here and how disruption can waste our learning time. If we are not able to finish the work in a satisfactory amount of time it can cut out some of our free/fun time.</i></p>	<p><i>I feel that I should first try to solve the problem just between the student and I. Sometimes this is all that is necessary. If the unwanted behavior continues I would escalate the number of people to involve. I feel the parents are the first who should know because they know their child better than anyone and we are a team.</i></p>
<p>While the intervention of a “first-then” signifies a behavioral contingency, the overall emphasis of the intervention is to emphasize that the student is in charge of his learning, instill “ownership” over his education, and assist him in developing his independence.</p>	<p><i>In this situation, it may be beneficial to implement a “first then” system. First complete activity then the student can have a break or incentive. Remind the student that he is in charge of his learning and that he must be focused to earn the “then” incentive. For example, complete independent seat work then the student can choose to read a book, complete an iReady lesson on the computer or go to a break spot. The teacher could also use a behavior tracking sheet with the student to self-evaluate expectations (responsibility, respect, working with others, etc.)</i></p>	<p><i>Using an “if then” strategy can give the student ownership of his own education while the behavior tracking tool keeps the student accountable for their behavior and how it affects those around him.</i></p>

<p>The intervention is a personal conference with the student to communicate the teacher's feelings about the behavior; this highlights the relationship between the student and teacher. The rationale also discusses preserving the student's dignity and fostering independence by self-correcting his behavior. This is a student-centered intervention.</p>	<p><i>I would initially have a one-to-one conversation with Logan, stating how his behavior makes me feel and inquiring if he knows why he is exhibiting these behaviors.</i></p>	<p><i>This interaction will preserve Logan's dignity and will give him the opportunity to self-correct.</i></p>
<p>The student-centered intervention involves a private conference with Logan to voice his thoughts. The intervention involves contacting parents and involving them to collaboratively develop a solution, with the student involved. While advice is sought from the school counselor and rewards for positive behavior are discussed, the rationale emphasizes the student's role in the problem-solving process.</p>	<p><i>I would do the following: speak privately to Logan and contact his parent/guardian. Together, we would come up with a plan to reward him for positive behavior. I would also seek advice from the school counselor.</i></p>	<p><i>I would want to give Logan the chance to explain why he is acting out and allow him to be part of how this problem could be solved.</i></p>
<p>The intervention involves a behavioral contingency, however, the student is part of the entire process of developing this plan. The student's "ownership" of the plan is part of the rationale, and the teacher describes wanting to set the student up for success. The rationale also includes an explicit reference to the student's control. The intervention also describes a two-way conversation with the student in which the teacher conveys support for the student and sets up reasonable expectations by letting the student know he can make mistakes.</p>	<p><i>I would set up an incentive behavior plan with Logan. I would explain that I have noticed he has been struggling with staying on-task and not disrupting others. Then, I would ask him what he wants to work for, giving him some reasonable choices. I would explain that I want to set up a plan so that he can see himself succeed. In the beginning, I would reward him every 5 minutes of appropriate (which he and I would have defined) behavior. After a few weeks of general success, I would change the time to every 10 minutes. All of this would have been discussed in the beginning. I would also point out that if he "messes up" one time slot, it does not mean the rest of the time is "messed up."</i></p>	<p><i>My rationale is that he would help me identify the parameters of the plan so that he has ownership. I also want him to succeed, so that is why I would start with such small time increments. Lengthening these time increments, when appropriate, will lead to Logan being able to see the control he has and hopefully for the behaviors to become more habitual.</i></p>

<p>The intervention focuses on meeting with the student and his parents for a conference; the student plays a role in the conference. Rewards and consequences are discussed, but the rationale for this intervention highlights the importance of the student needing to feel cared about and have an opportunity to voice his concerns. The intervention is more direct and involved but continues to be student-centered and emphasizes the relationship between the student and teacher.</p>	<p><i>I would set aside a time to communicate with Logan and his parents. At the parent conference, I will discuss his behavior and give him and his parents the opportunity to respond. I will discuss future consequences. I will also discuss future rewards.</i></p>	<p><i>Students have to feel like the teacher cares about them. By calling a conference, everyone is able to discuss their concerns and then find a solution that works best for the student. This should be a way to build a relationship with the student.</i></p>
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Coding Examples for Category 3: Appropriate Behavior Contingencies

Coding Explanation	Intervention	Rationale
<p>A personal conference is held in which a behavior contract is developed, reflecting a behavioral contingency system. The contingency system focuses on increasing and rewarding adaptive behaviors. A token economy is used as part of the intervention. Disruptive behavior is discussed in the rationale, but the intervention itself involves a contingency plan for appropriate behaviors.</p>	<p><i>I would have a private, 1:1 meeting with Logan and develop a behavior contract. Within the contract, I would outline a positive reinforcement system where Logan can earn a motivating item/activity throughout the day by earning smaller 'tokens'. The contract would include the expected behaviors Logan needs to demonstrate in order to earn the tokens and how many he needs to exchange for a variety of larger reinforcements.</i></p>	<p><i>Based on this narrative, it appears that the function of Logan's behavior is to gain individual attention from both the classroom teacher and peers. Logan does not care if the attention is positive or negative, but he does seem to prefer that it is individualized (not general praise/attention/redirection given to the group). As a result, I would want to increase the amount of individual positive attention given to Logan to attempt to reduce the frequency of his disruptions.</i></p>
<p>The intervention is positive and involves the use of verbal praise for appropriate behavior (consequence-based), while also using planned ignoring/extinction. Vicarious reinforcement is also used, with the teacher praising other students for appropriate behaviors. The teacher also discusses passive approaches (e.g., seat changes and differentiating instruction) and outside factors (stress in the home), but the bulk of the intervention is focused on behavioral contingencies for appropriate behaviors. The level of adult involvement is also higher, with the teacher mentioning parent involvement and consultation with a BCBA for an FBA.</p>	<p><i>I would first focus on positive reinforcement and begin to acknowledge/praise when on task, being cooperative and engaging in appropriate behavior. Continue to use planned ignoring, while praising his peers for the appropriate behavior. I would also teach directly and model the expected behavior. Changing the student's seat may remove him from peers that may be reinforcing his behaviors with attention. Teaching the student functional communication will be important. For example, rather than making complaints of being bored, the student can learn to ask for a break. It may also be helpful to implement a contingency plan. The student can work towards being a peer/teacher helper, as it appears the student could benefit from more challenging academic</i></p>	<p><i>These interventions are proven and have been used successfully with students in the school where I teach. The student may also be dealing with stress in the home and the positive approach will also support the student emotionally.</i></p>

	<p><i>tasks. This would also give the student the responsibility of being a positive role model. This reward would be contingent upon working quietly for x amount of time. Communicating with parents and also seeking support from the BCBA will also be imperative. The BCBA could conduct an FBA to determine the specific function of the behavior and identify motivating reinforcement.</i></p>	
<p>The intervention involves tracking the problem behavior with a visual for the student; however, the teacher explicitly discusses and emphasizes setting the student up for success by allowing the problem behavior to continue and acknowledging that behavior change takes time (behavior shaping). The student's input is also obtained regarding the reward he is working for. Furthermore, the rationale explicitly highlights the preference for rewards over punishment.</p>	<p><i>I try a reward system first since redirection is not working...the behavior is continuing and consistent. Logan needs to see that he has achieved a goal. The goal will be no outbursts. I might have 4 sticks that I pull one each time he outbursts. If he has a stick left he receives a reward. This way he has a chance. Given he outbursts 12 times per hour, he needs more chances to be successful. Possibly begin with more sticks and then reduce the number. His reward needs to be something he enjoys. I would discuss this privately with Logan and agree with him on a suitable reward. Give this two or more weeks to be successful. It will take time to change his behavior.</i></p>	<p><i>Rewards work better than punishments when a student is seeking attention. He is seeking attention from his peers. The redirection does not work it only gives him attention. I may need to ignore Logan and only pull sticks until he does not see attention for his outbursts.</i></p>
<p>The intervention involves a parent conference in which the teacher is planning to find out what is driving the student's problem behavior. The student is not involved in this process.</p>	<p><i>I would ask Logan's parent or guardian in for a parent conference to find out if there is a problem that he has or is having</i></p>	<p><i>I want to find out if there is a reason behind his behavior</i></p>
<p>The intervention involves providing the student with verbal praise for appropriate behaviors, as well as using vicarious reinforcement by</p>	<p><i>Provide him with as much positive feedback as possible when he is on task and then praising peers for the positive things they do when he is off</i></p>	<p><i>He is capable of doing work and apparently loves the attention from peers positive or negative.</i></p>

<p>praising his peers for their appropriate behaviors. Punishment is not used or mentioned; the intervention is all positive-based.</p>	<p><i>task or for ignoring his behaviors</i></p>	
<p>The intervention cited is Check-In/Check-Out (CICO) with a trusted teacher, reflecting a higher level of teacher involvement and control. The intervention also involves consulting with the MTSS team for data-based decision making. The student is involved in regards to giving ideas for incentives, but the bulk of the response involves structured approaches to behavior management (e.g., MTSS, CICO, and PBIS).</p>	<p><i>Logan would benefit from a Check in Check out system. This can be via a trusted teacher other than his classroom teacher. In addition after data has been gathered a team meeting with the MTSS team would help. Finally positive behavior incentives can be introduced with ideas gathered from the student.</i></p>	<p><i>It follows the PBIS model. In addition when working as a team, more positive results are likely to occur.</i></p>

Coding Examples for Category 4: Problem Behavior Contingencies

Coding Explanation	Intervention	Rationale
<p>The intervention and rationale reflect a high level of teacher/adult control, with parents being contacted as the first choice. The student's seat is also changed, but the rationale indicates that this is to isolate the student as a response to his problem behavior (punishment). Problem behaviors are also charted and documented to communicate with parents. Although rewards and incentives are mentioned in the rationale, the student is not involved in the development of this procedure and the bulk of the intervention focuses on reducing the problem behaviors. This is a teacher-centered intervention.</p>	<p><i>There are several that I would try. Parent contact would be my first choice. Then I would use preferential seating and a behavior chart/daily log.</i></p>	<p><i>Using these strategies firstly informs parents of what is going on in the classroom. Second, the preferred seating would be in the back of the room so that he is not the center of attention when he exhibits his behaviors. Third, a daily log would be for documentation of the behaviors, communication with parents, and I would attach an incentive/reward to the student for meeting a certain percentage of the day with acceptable behaviors.</i></p>
<p>Preventing behaviors is the focus of this intervention (seat change and teacher proximity), however, the intervention explicitly states that the seat change is for isolation and proximity is for teacher control of the behavior. The intervention is teacher-centered and focused on stopping the problem behavior. The rationale also implies that Logan is a distraction in the classroom.</p>	<p><i>Seat change or isolation from the rest of the students. Use teacher proximity to always be near him and able to stop any off task behavior.</i></p>	<p><i>To try to give other students the opportunity to learn and be successful without being distracted by their peers. Logan might complete his work every day but that may not be true of every other student that he is distracting</i></p>
<p>The intervention involves referring the student to special education for a potential behavior intervention plan (BIP), reflecting a high level of adult involvement and a contingency plan. Behavioral language ("carrot and stick") is used. The student can earn a reward, but he needs to self-</p>	<p><i>I would recommend referring this student to the S.I.T. for a meeting with staff and parents for a possible B.I.P. A management strategy I would try to begin with would be to offer a carrot and stick. Have the student self-monitor his behavior and for every 15 min period of no disruptive</i></p>	<p><i>From the limited information provided, this seems to be attention seeking behavior.</i></p>

<p>monitor his own behavior and engage in absolutely no problem behaviors. He also loses points for disruptive behaviors (response cost), reflecting a punishment procedure. This is a teacher-centered intervention that reflects a high degree of teacher control. The student is involved, but only to monitor his own behavior.</p>	<p><i>behavior offer a reward (extra computer time, recess time, snack treat, treasure box, etc.) But for every disruptive behavior he would lose an award point.</i></p>	
<p>The intervention focuses on reducing the problem behavior and giving the student a visual to see how disruptive his behavior is. Rewards are used, but contingent on lowering rates of problem behaviors. The student is not involved in this teacher-centered intervention.</p>	<p><i>I would use a star chart and every time he blurts out, I would give him a sticker. The. I would work on reducing the number of stickers each day.</i></p>	<p><i>The sticker chart is a visual which allows the student to see how many times a day he blurts out loud. He will not the lower the number out blurts the greater the prize. Incentives can be something small such a token or big such as 10 minutes of computer time.</i></p>
<p>The student is given three chances to avoid punishment that is given in the form of detentions. Giving the student compliments for appropriate behaviors is mentioned, but the bulk of the intervention focuses on punishment. Punitive language is also used in both the intervention and rationale (e.g., “warning” and “bad” behavior).</p>	<p><i>I give my students about 3 chances to correct their behavior. The first is a warning, the next is lunch detention and then after that is Saturday detention. I would also call home if the behavior did not subside. Also, if I did see Logan doing SOMETHING good, I would definitely compliment him so it would encourage him to do well.</i></p>	<p><i>I do this with every student I have depending on how often their behavior is bad.</i></p>