

PRESCHOOL TEACHERS' PERCEPTIONS OF NONCOMPLIANCE AND
ANTECEDENT INTERVENTIONS

by

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ABSTRACT

This study examined the impact of a preschool child's gender on preschool teachers' perceptions of potentially problematic behavior. We also evaluated the influence of efficacy data and how it impacted preschool teachers' ratings of acceptability of specific interventions. Thirty-seven preschool teachers in the Middle Tennessee area completed a survey packet in which they read a vignette depicting noncompliant behavior displayed by either a boy or girl and rated the severity of the behavior. Participants then read a description of three potential interventions and completed the Treatment Evaluation Inventory-Short Form to rate the acceptability of each intervention. Results indicated that the participants who received efficacy data rated the warning intervention as less acceptable than those who did not receive this information. Further, results indicated that there were no significant differences in teachers' perceptions of the severity of the behavior in the vignette in regards to the gender of the child.

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CHAPTER I

INTRODUCTION

Noncompliance is a term used to describe behavior in which an individual either actively or passively declines to comply with instructions or a command. An example of passive noncompliance may include ignoring a command, and active noncompliance may include screaming, hitting, biting, and/or running away. Noncompliance is one of the most common behavioral problems among preschool children (Rodriguez, Thompson, & Baynham, 2010). It commonly occurs after a child is asked to transition from a preferred activity to a nonpreferred activity (Wilder, Zonneveld, Harris, Marcus, & Reagan, 2007). In addition, the majority of teachers have rated that compliant behavior is a very important skill needed for kindergarten readiness (Lin, Lawrence, & Gorrell, 2003). That being said, it can be challenging for teachers to intervene when it comes to noncompliant behavior. There are several interventions that have various levels of effectiveness. These interventions range from group interventions to those that are used exclusively with the child who is engaging in noncompliant behavior. It is unknown, however, how teachers are making the decision to use one intervention versus another. The remainder of this literature review focuses on these interventions as well as their efficacy and effectiveness.

Consequence Manipulations

Noncompliance is often difficult to predict and antecedent interventions are not always possible. Therefore, consequent manipulations are often used in response to noncompliant behavior. These procedures are implemented after a behavior has occurred in attempts to either increase or decrease a target behavior in subsequent trials. These

manipulations often come in the form of contingent reinforcement, differential reinforcement of other behaviors (DRO), and response cost. The effects of these manipulations will be investigated further.

Three studies (Wilder, Allison, Nicholson, Abellon, & Saulnier, 2010; Wilder, Myers, Nicholson, Allison, & Fischetti, 2012; Wilder, Myers, Fischetti, et al., 2012) compared the efficacy of select antecedent interventions to the effects of contingent reinforcement on increasing compliant behavior in preschool children. These studies were conducted in several settings including the home (Wilder, Allison, et al., 2010), a private therapy room (Wilder, Myers, Nicholson, et al., 2012), and an empty classroom (Wilder, Allison, et al., 2010; Wilder, Myers, Fischetti, et al., 2012; Wilder, Nicholson, et al., 2010). All of the interventions were conducted by a graduate student or researcher. Preschool participants included a total of 10 boys and one girl (nine neurotypical, one child with autism spectrum disorder [ASD]) who had been reported by teachers to display infrequent or low levels of compliant behavior and/or high levels of noncompliant behavior. Researchers in all three studies administered a preferred edible to the child contingent on compliance during nonpreferred activities, such as requesting the child to give up a preferred toy or to clean-up. Results indicated that the use of contingent reinforcement was most effective in increasing compliance for all participants in which it was offered compared to guided compliance, rationales, and baseline conditions. Zero to low levels of compliance were observed during baseline conditions. High levels of compliance, averaging around 70% and above, were observed during contingent reinforcement conditions. Several participants achieved compliance of 100% consistently

across contingent reinforcement conditions. In addition, low to zero levels of problem behaviors were observed during contingent reinforcement conditions. Conversely, relatively high levels of problem behaviors were observed in several of the other conditions that were implemented.

Two studies (Conyers, Miltenberger, Romaniuk, Koop, & Himle, 2003; Conyers et al., 2004) investigated the use of differential reinforcement of other behavior (DRO) in increasing compliant behavior and/or decreasing disruptive behavior in a total of 35 preschool boys and 12 preschool girls (all neurotypical). In a study by Conyers et al. (2003), children were given stars when they were not engaging in disruptive behavior. The stars were distributed using whole interval recording and momentary time sampling. During sessions utilizing whole interval recording, participants were given a star if they exhibited compliance throughout the duration of the interval they were being observed. During momentary time sampling sessions, children were rewarded with a star if they engaged in compliant behavior at the end of a specific time interval. Sessions were administered by researchers in a classroom-wide intervention to 20 preschool children who were reported as exhibiting high levels of problem behavior. At the end of a session, children were permitted to trade in their stars for either an edible item or tangible item. Results indicated that disruptive behavior occurred, on average, during 64% of the sessions during the first baseline. Disruptive behavior decreased in occurrence when the DRO intervention was introduced using tangible reinforcers using momentary time sampling ($M = 36-41\%$). Disruptive behavior occurred during 38% of the sessions using whole interval recording. The occurrence of disruptive behavior further decreased when

DRO using whole interval recording was paired with edible reinforcers ($M = 22\%$). During the return to baseline condition, disruptive behavior increased in occurrence ($M = 70\%$), and decreased during subsequent sessions of DRO with whole interval recording paired with edible reinforcers ($M = 12\text{-}14\%$). These results indicated that whole interval recording was most effective in reducing disruptive behavior when the children were able to exchange their stars for an edible reinforcer versus a tangible reinforcer. The effectiveness of using DRO with momentary time sampling paired with an edible reinforcer is unknown, however, as this study did not examine those sequence of conditions (Conyers et al., 2003).

Another study by Conyers et al. (2004) compared DRO on a momentary time sampling schedule to a response cost condition in a preschool classroom with 25 children. These interventions were conducted by researchers classroom-wide during normal classroom activities. In the response cost condition, children started each session with a certain number of tokens and consequently lost a token for each disruptive behavior the child exhibited. At the end of the session, if the child had a certain number of tokens, he/she was permitted to trade the tokens in for an edible item. The procedure was implemented in the same way for the momentary DRO condition with the exception that children started with zero tokens and gained a token for the absence of disruptive behavior at the end of an interval. Results showed that the response cost condition was most effective in decreasing disruptive behavior to low levels across time. Disruptive behavior occurred in around 64% of the intervals during baseline and decreased to occurring in 5% of intervals, on average, during the last six sessions when the response

cost condition was in place. In addition, experimenters were able to maintain consistent results while slowly increasing both the time intervals and the amount of tokens needed to obtain an edible reinforcement. Although the DRO condition was conducive in decreasing disruptive behavior, it was to a lesser degree, with disruptive behavior occurring in around 27% of intervals.

Although consequent manipulations can sometimes be successful in increasing compliant behavior and/or decreasing problem behavior, they often are time intensive. Contingent reinforcement works well with an individual child but would be difficult to implement with several children at once. DRO and response cost programs can be implemented to several children at once. However, they involve much concentration on the part of the teacher, and they can be difficult to implement on a certain time schedule when also concentrating on teaching. Consequently, it may be difficult for teachers to continue this program long-term. Therefore, we will be focusing on antecedent interventions such as guided compliance, high-probability command sequencing/behavioral momentum, rationales, teacher presence, and warning/advance notice. Antecedent interventions occur before a behavior and attempt to set the child up for success complying in situations that are known to typically result in noncompliant behavior, such as transitions to nonpreferred activities. These will be discussed in more detail below.

Guided Compliance

Guided compliance is traditionally a 3-step procedure that is used to attempt to increase compliant behavior by repeating instruction, modeling, and physically guiding

the child. In this procedure, the teacher or experimenter repeats the original instruction contingent on noncompliance. If the noncompliance continues, the teacher or experimenter repeats the instruction again while modeling the desired behavior. If the child continues to not comply with instruction, hand over hand physical guidance is used to ensure the child completes the task. Several studies (Cote, Thompson, & McKerchar, 2005; Wilder & Atwell, 2006; Wilder et al., 2007; Wilder, Nicholson, & Allison, 2010; Wilder, Myers, Nicholson, et al., 2012; Wilder, Myers, Fischetti, et al., 2012) have used this method to try to increase compliant behavior in preschool children with varying results.

Two studies (Cote et al., 2005; Wilder, Nicholson, et al., 2010) compared the use of advance notice and physical guidance to increase compliant behavior and decrease problem behavior in five preschool boys and one preschool girl (all neurotypical). Both studies were conducted by an experimenter. However, one was implemented during regular classroom activities, specifically during toileting transitions (Cote et al., 2005), while another took place in a private room during a nonpreferred activity. Advanced notice is used to inform a child that a transition is approaching. It is believed that by warning a child of an activity change, he or she will be more likely to comply with instructions when the transition approaches. Both studies found that guided compliance increased compliant behavior for all participants compared to advance notice and baseline conditions. Results showed an increase in levels of compliance from zero to low levels to moderate to high levels during guided compliance conditions (i.e., compliance occurred during 70 to 100% of trials). However, one child exhibited increased levels of

problem behavior (e.g., kicking, screaming, hitting, crying, etc.) in the guided compliance condition compared to the advance notice condition (Wilder, Nicholson, et al., 2010).

Two studies compared the use of guided compliance, rationales, and contingent access to a reinforcer to assess their effect on increasing compliant behavior in a total of four preschool boys (three neurotypical, one child with ASD) during a nonpreferred activity (Wilder, Allison, et al., 2010; Wilder, Myers, Nicholson, et al., 2012). Both studies were conducted in a private room using a graduate student as the experimenter. Results showed that guided compliance increased compliant behavior for three of the four participants. However, levels of compliance during guided compliance conditions remained variable with three of the four participants reaching 80-100% compliance after several trials. In addition, all four of these children showed increased levels of problem behavior during the guided compliance conditions compared to baseline (Wilder, Allison, et al., 2010; Wilder, Myers, Nicholson, et al., 2012).

Another study by Wilder et al. (2007) used warning, high-probability command (high-p) sequence, and noncontingent reinforcement conditions to measure their effect on increasing compliant behavior in three preschool boys (two neurotypical, one diagnosed with Fragile X syndrome) during both preferred and nonpreferred activities. Sessions were conducted in a private room, using a graduate student as the experimenter. Guided compliance conditions were implemented for two children when none of the above conditions proved effective in increasing compliance. The guided compliance procedure was successful in increasing compliant behavior from zero levels of compliance up to 100% compliance across sessions for both of the participants. However, levels of

problem behavior were not measured in this study. Therefore, it is unknown if problem behavior increased in any specific condition (Wilder et al., 2007).

Similar results were found in a study by Wilder and Atwell (2006) comparing levels of compliance in one female and five male neurotypical preschool children in baseline and guided compliance conditions. Sessions were conducted in either a secluded room in the child's house or in a private room at the preschool. Either the parent or teaching assistant served as the experimenter based on the setting. Moderate to high levels of compliance ($M = 70\%-86\%$) were observed for four of the six participants in the guided compliance condition compared to baseline in which low to zero levels of compliance were observed. For the remaining two participants, guided compliance was unsuccessful in increasing compliant behavior. For one participant, levels of compliance remained at near zero levels during the guided compliance condition. The last participant initially displayed increased levels of compliance, but this was not maintained over time, with compliance decreasing to near zero levels. For these two participants, a DRO condition was implemented in which a coupon was delivered contingent on compliant behavior. The coupons could then be exchanged for a preferred tangible item. The DRO condition was successful in increasing and maintaining high levels of compliance ($M = 95-99\%$). However, levels of problem behavior were not measured across conditions, and it is, therefore, unknown if any of the conditions implemented affected levels of problem behavior (Wilder & Atwell, 2006).

In a final study by Wilder, Myers, Fischetti, et al. (2012), researchers modified the 3-step guided compliance procedure and compared levels of compliance in these

conditions to one another as well as to a differential reinforcement condition in three preschool boys and one preschool girl. Sessions were conducted in a secluded room in which a nonpreferred request was given. A graduate student served as the experimenter in all sessions. One modification included the removal of the modeling step, while the other modification included this change, as well as a decrease in the time between prompts. Results showed that for one of the participants, compliance increased in the 2-step modification condition (range $M = 66.3\%$ - 92%) compared to the 3-step guided compliance condition ($M = 24\%$). Another participant's compliant behavior increased slightly when the 2-step modification was used (range $M = 60\%$ - 88%) compared to when the 3-step guided compliance condition was implemented ($M = 48.8\%$). However, for one participant, none of the guided compliance procedures were successful in maintaining levels of compliance (range $M = 10\%$ - 31.7%). For the remaining participant, the 3-step guided compliance procedure was most successful in increasing compliant behavior ($M = 61.4\%$) relative to the 2-step guided compliance (range $M = 0\%$ - 8.8%). Therefore, differential reinforcement was implemented for both of these participants resulting in high levels of compliance (range $M = 82.2\%$ - 100%). In addition, problem behaviors were also measured throughout this study. One participant displayed problem behaviors most frequently during the initial baseline ($M = 70\%$) and throughout the 3-step guided compliance sessions ($M = 56\%$). A second participant displayed problem behaviors infrequently throughout all baseline and guided compliance conditions. A third participant showed an increase in problem behaviors during 3-step and 2-step guided compliance procedures (range $M = 21.6\%$ - 45%). The final participant infrequently

engaged in problem behaviors, but displayed an increase in problem behaviors during the 2-step guided compliance sessions ($M = 30\%$; Wilder, Myers, Fischetti, et al., 2012).

One reason that guided compliance may be effective in increasing compliant behavior in some children is that it is, in essence, forcing the child to comply. Therefore, it is difficult for the child to *not* comply to the task when someone is physically guiding him/her to complete it. However, this procedure could be considered intrusive, particularly due to the increase in problem behaviors in several preschool participants when this procedure was used (Cote et al., 2005; Wilder, Allison, et al., 2010; Wilder, Myers, Fischetti, et al., 2012; Wilder, Myers, Nicholson, et al., 2012).

High-probability Command Sequence/Behavioral Momentum

The high-probability command sequence (high-p), sometimes referred to as behavioral momentum, is a procedure in which several instructions are given that have a high probability of completion. These high probability requests are administered in succession, and after several consecutive successes, a low probability instruction is administered. It is believed that by using this technique, behavioral momentum will build and the child will be more likely to comply with the low probability demand after previously complying with several high probability tasks.

A study conducted by Austin and Agar (2005) used the high-p sequence during regular class time with four neurotypical preschool boys. Teachers implemented high probability requests until three consecutive requests were followed by compliance. Then, a low probability request was given. Teachers also were asked to praise the child contingent on compliance to the low probability request. Compliance to low probability

requests increased for three of the four participants with mean levels of compliance reaching 85%-94% during intervention sessions. This was a significant increase in compliance to low probability requests in comparison to the levels attained during baseline conditions (range $M = 30\%$ -65%) for the three participants. The high-p intervention was not effective for one participant. This child complied to low probability requests, on average, 34% to 50% of the time during the intervention sessions.

Interestingly, this participant was praised for compliance only 30% to 40% of the time compared to the other three participants who were given praise 75% to 100% of the sessions. In addition, his levels of compliance to high-p requests also were relatively low (range $M = 16\%$ -50%). This highlights the importance of identifying commands that have a high likelihood of success for completion for this intervention to be successful. This also illustrates the importance of praising successes, and that may be an important component of this intervention (Austin & Agar, 2005).

A similar study was conducted by Killu, Sainato, Davis, Ospelt, and Paul (1998) with three preschool boys with developmental delays (one had an additional diagnosis of cerebral palsy and another with an additional diagnosis of ASD), during one-on-one activities in a separate classroom with an experimenter. In addition to levels of compliance, disruptive behavior also was measured. Results indicated that the high-p sequence increased levels of compliance for all participants from moderate levels of compliance observed in baseline conditions to high levels of compliance observed in treatment conditions. Two out of the three participants achieved 100% compliance to low-p requests during treatment and maintenance conditions. High levels of compliance

also were found at 3, 4, 5, and 6 week follow-up. Additionally, disruptive behavior decreased during low probability requests for one participant. The remaining two participants exhibited low levels of disruptive behavior during the intervention phase. At all follow-up sessions, zero problem behaviors were observed (Killu et al., 1998).

The high-p procedure was unsuccessful in increasing compliance for two out of three preschool boys (2 neurotypical and one child diagnosed with Fragile X syndrome) in a study conducted by Wilder et al. (2007). Sessions were implemented in either the child's home or in a private room in the child's preschool. All sessions were conducted by an experimenter. In fact, there were zero levels of compliance in the high-p conditions for these two participants. Alternatively, the high-p procedure was very successful in increasing and maintaining high levels of compliance for the remaining participant, reaching levels of 100% compliance (Wilder et al., 2007).

To conclude, high-p command sequences may be successful in increasing compliance and decreasing problem behavior for some, but not all children (Austin & Agar, 2005; Killu et al., 1998; Wilder et al., 2007). However, this intervention can be very time consuming. A teacher must identify several high-p requests that the child is known to comply with almost every time. In addition, the teacher must make an effort to not repeat the same requests over and over. Repeated use of the same commands runs the risk that the child will start to expect a low-p request, which may impact levels of compliance and problem behaviors.

Rationales

Two studies (Wilder, Allison, et al., 2010; Wilder, Myers, Nicholson, et al., 2012) compared rationales that were presented with a request and rationales that were given contingent on noncompliance to a total of eight preschool boys (7 neurotypical, 1 child with ASD) during a nonpreferred activity. For example, if a child failed to comply with a request to pick up his/her toys, a rationale may be given such as, “You should pick up your toys so that no one will trip on them and get hurt.” Results indicated that rationales had little or no effect on increasing compliant behavior for six of the participants. One participant showed an increase in compliant behavior during the first three sessions, but this behavior was not maintained, with compliance dropping to near zero levels. The remaining participant displayed a marginal increase in compliant behavior during the rationale treatment phases, but levels of compliance remained relatively low ($M = 25\%$). In addition, seven out of the eight participants showed an increase in problem behaviors during the rationale conditions compared to baseline (Wilder, Allison, et al., 2010; Wilder, Myers, Nicholson, et al., 2012).

Teacher Presence

Teacher presence is an antecedent procedure in which the teacher maintains his/her proximity to the target child while initiating an instruction (Stephenson & Hanley, 2010). It is believed that the child will be more likely to comply if the teacher is in close proximity. In addition, teacher presence has been used as a consequence manipulation (Goetz, Holmberg, & LeBlanc, 1975). When used in this situation, the teacher will stand close to the child contingent on compliance to the instruction. There is very little research

evaluating the efficacy of this procedure for preschool children. Many studies have combined teacher presence with other interventions such as praise (Goetz et al., 1975; Stephenson & Hanley, 2010), position, physical contact, eye contact, vocal attention, and play interruption (Stephenson & Hanley, 2010).

In a study by Goetz et al. (1975), researchers compared both contingent and noncontingent teacher presence to a DRO condition for one preschool girl. Sessions were conducted during normal classroom time and were implemented by her teacher. In the contingent teacher presence condition, the teacher came within 3 feet of the child and gave verbal praise contingent on compliant behavior. In the noncontingent teacher presence condition, the teacher would sometimes be present during noncompliant behavior and would occasionally give very general verbal statements contingent on compliance. This condition was designed to mimic the intermittent attention given during typical classroom activities. During the DRO condition, the teacher came within 3 feet of the child and provided verbal statements (e.g., “I can see that you are too tired, so it’s alright if you don’t help”; Goetz et al., 1975, p. 79) contingent on noncompliant behavior. Results indicated that the child displayed the highest levels of compliance ($M = 86\%$) and lowest levels of noncompliant behavior ($M = 14\%$) during the contingent teacher presence condition. High levels of compliance ($M = 74\%$) and low levels of noncompliant behavior ($M = 26\%$) also were observed during the noncontingent teacher presence condition. Finally, the participant displayed the lowest levels of compliance ($M = 43\%$) and highest levels of noncompliance ($M = 58\%$) during the DRO teacher presence condition (Goetz et al., 1975).

A study by Stephenson and Hanley (2010) investigated the intensity of teacher presence/attention and its impact on compliant behavior by investigating the additive value of teacher presence, position, physical contact, eye contact, vocal attention, and play interruption. Each of these variables was added one by one (in the above order) during each subsequent session for four neurotypical preschool children (3 boys, 1 girl). All sessions were implemented by a teacher during free-play in the classroom. Sessions were conducted with pairs of children to help to generalize the presence of peers. During the additive antecedent intervention (AAI), children were given a series of instructions that involved categories, such as gross motor, fine motor, self-help, concept formation, and physical transition instructions. Results showed that one of the participants displayed higher levels of compliance when all six of the variables were implemented. Another child needed only five of these variables to achieve moderate to high levels of compliance. For another participant, levels of compliance remained variable throughout the AAI conditions. The final participant showed no improvement in increasing levels of compliance during AAI conditions compared to those observed during baseline (Stephenson & Hanley, 2010).

In summary, there is little definitive conclusions to be drawn about the effectiveness of teacher presence in increasing compliant behavior among preschool children. The above studies showed only moderate increases in compliant behavior when teacher presence was combined with one or more variables (Stephenson & Hanley, 2010). However, it seems at this time it can be concluded that teacher presence alone does not increase compliant behavior to a great degree without being combined with

other teacher variables. In addition, it seems to be more effective as a reactive procedure (Goetz et al., 1975) than an antecedent procedure (Stephenson & Hanley, 2010).

However, the reactive teacher presence intervention was only conducted with a single participant. Therefore, more studies would need to be conducted to see if that finding generalized to other preschool children.

Warning/Advance Notice

Several studies (Cote et al., 2005; Wilder et al., 2007; Wilder, Nicholson, et al., 2010) have investigated the use of warnings or giving an advanced notice of an approaching transition and their effect on compliance in 8 preschool boys and 1 preschool girl (8 neurotypical, one with Fragile X syndrome). All studies were conducted by an experimenter. One study, however, was implemented during regular classroom activities, specifically during toileting transitions (Cote et al., 2005) while the other two took place in a private room during a nonpreferred activity (Wilder et al., 2007; Wilder, Nicholson, et al., 2010). The results of these studies indicated that a warning or advanced notice had no effect on increasing compliant behavior, with compliance occurring, on average, during 0-14.7% of sessions. Two of these studies also measured problem behaviors. Results showed that four of the six participants showed an increase in problem behaviors during the advance notice condition (Cote et al., 2005; Wilder, Nicholson, et al., 2010).

One study, however, conducted by Zeece and Crase (1982) found conflicting results. Researchers compared the use of a 2-minute warning of transitions to a group who received no warning of a transition. This intervention utilized 40 neurotypical

preschool children (20 boys, 20 girls) as participants. Sessions were implemented by an experimenter and took place in a separate play room that was set up exclusively for the experiment. The intervention was administered to each child individually. Results showed that the children who received a warning responded an average of 3.5 seconds faster to a command compared to those who did not receive a warning. These findings seem promising; however, it should be noted that an operational definition of compliant behavior was not included in this study. In addition, treatment integrity measures were not incorporated. Further, these children were not referred for exhibiting high levels of noncompliant behavior and, therefore may be more compliant in nature. This is unknown, however, as no baseline data were collected (Zeece & Crase, 1982).

To sum up, there is little evidence that using a warning or advance notice is successful in increasing compliant behavior (Cote et al., 2005; Wilder et al., 2007; Wilder, Nicholson, et al., 2010). Further, this intervention tends to actually increase problem behavior for some children compared to other conditions (Cote et al., 2005; Wilder, Nicholson, et al., 2010). This suggests that alerting the child of a transition or to an approaching nonpreferred activity may actually have more of a negative effect than a positive one.

Summary and Methodological Issues with Antecedent Interventions

In summary, of the five antecedent conditions discussed, each showed varying results in increasing compliant behavior and decreasing problem behavior. Guided compliance has shown positive results for increasing compliant behavior for the majority of preschool participants (Cote et al., 2005; Wilder & Atwell, 2006; Wilder et al., 2007;

Wilder, Allison, et al., 2010; Wilder, Nicholson, et al., 2010; Wilder, Myers, Fischetti, et al., 2012; Wilder, Myers, Nicholson, et al., 2012). However, this procedure may or may not increase independently initiated compliant behavior, considering the individual is being guided to comply with hand-over-hand physical guidance. In addition, it may be considered intrusive, evidenced by the increase of problem behavior in children when this intervention was being used (Cote et al., 2005; Wilder, Allison, et al., 2010; Wilder, Myers, Fischetti, et al., 2012; Wilder, Myers, Nicholson, et al., 2012).

High-p sequences have had mixed results in increasing compliant behavior. Some studies have shown that this procedure can successfully increase compliant behavior (Austin & Agar, 2005) as well as decrease problem behavior (Killu et al., 1998). However, one study showed that high-p sequencing was unsuccessful in increasing compliant behavior for two out of the three participants (Wilder et al., 2007). This intervention may not be conducive to increasing compliant behavior if used frequently, because the child may start to expect that a low-p request is approaching.

The use of rationales has consistently shown that they are unsuccessful in increasing compliant behavior (Wilder, Allison, et al., 2010; Wilder, Myers, Nicholson, et al., 2012). Further, studies have shown an increase in problem behaviors when rationales were used in comparison to levels of problem behaviors exhibited during baseline and other antecedent interventions (Wilder, Allison, et al., 2010; Wilder, Myers, Nicholson, et al., 2012).

There is little known about the effects of teacher presence on compliance. Teacher presence has been used as both an antecedent intervention (Stephenson & Hanley, 2010)

and a reactive procedure (Goetz et al., 1975). From these studies, however, it seems that teacher presence alone is not enough to make major increases in compliant behavior among preschool children. It is marginally effective when combined with attention and other teacher antecedent variables for some participants.

The use of warnings or advance notice of a transition has primarily been unsuccessful in increasing compliance (Cote et al., 2005; Wilder et al., 2007; Wilder, Nicholson, et al., 2010). One study found conflicting results when warnings were implemented to 40 preschool students individually, decreasing the response time to a command an average of 3.5 seconds (Zeece & Crase, 1982). However, it is unclear if these children were exhibiting low levels of compliant behavior prior to intervention. It seems that alerting the child of an approaching activity, especially one that may be perceived as negative, may exacerbate problem behavior and decrease the probability of complying with the request with some children (Cote et al., 2005; Wilder, Nicholson, et al., 2010).

Several of these studies were conducted by experimenters in an isolated classroom environment without other children present (Killu et al., 1998; Wilder & Atwell, 2006; Wilder et al., 2007; Wilder, Allison, et al., 2010; Wilder, Nicholson, et al., 2010; Wilder, Myers, Fischetti, et al., 2012; Wilder, Myers, Nicholson, et al., 2012) or in a classroom setting with the intervention being implemented by an experimenter (Conyers et al., 2003, 2004; Cote et al., 2005; Zeece & Crase, 1982). This creates a problem when generalizing these results to real life settings and decreases the likelihood that teachers will use these interventions themselves.

In addition, all of these studies define and measure compliance in different ways. Some studies investigated disruptive or problem behaviors exclusively (Conyers et al., 2003, 2004), both problem and compliant behavior (Killu et al., 1998; Wilder & Atwell, 2006; Wilder, Allison, et al., 2010; Wilder, Nicholson, et al., 2010; Wilder, Myers, Fischetti, et al., 2012; Wilder, Myers, Nicholson, et al., 2012), or compliant behavior only (Austin & Agar, 2005; Cote et al., 2005; Goetz et al., 1975; Stephenson & Hanley, 2010; Wilder et al., 2007). Further, the majority of these studies utilize mainly male participants, making it difficult to know how these interventions generalize to preschool girls.

In conclusion, guided compliance and high-p interventions seem to be the most effective out of the above antecedent interventions in increasing compliant behavior in preschool children (Austin & Agar, 2005; Cote et al., 2005; Killu et al., 1998; Wilder & Atwell, 2006; Wilder et al., 2007; Wilder, Allison, et al., 2010; Wilder, Nicholson, et al., 2010; Wilder, Myers, Fischetti, et al., 2012; Wilder, Myers, Nicholson, et al., 2012). However, the drawbacks of these interventions should be considered. In addition, rationales, warning/advance notice, and teacher presence seem to be less effective in increasing compliant behavior with this population (Goetz et al., 1975; Stephenson & Hanley, 2010; Wilder, Allison, et al., 2010; Wilder, Myers, Nicholson, et al., 2012). Further, several of these methods may increase problem behaviors, making their use counterproductive (Cote et al., 2005; Wilder, Allison, et al., 2010; Wilder, Nicholson, et al., 2010; Wilder, Myers, Fischetti, et al., 2012; Wilder, Myers, Nicholson, et al., 2012).

Sex/Gender Differences

There is insufficient research that specifically investigates gender differences in teacher-rated compliant/noncompliant behavior in preschool children. However, studies about disruptive and externalizing behavior may be indicative of perceptions and reactions to noncompliance, because these are the behaviors that children are engaging in instead of complying. Several studies have found that gender plays a role in how disruptive behavior is manifested. More specifically, preschool girls are more likely to display internalizing behaviors and preschool boys are more likely to exhibit externalizing behaviors (Chen, 2010; Crowther, Bond, & Rolf, 1981; Gray et al., 2012). When investigating teacher perceptions of severity of symptoms among children who were nominated for exhibiting high rates of externalizing behavior, girls were rated as displaying more severe externalizing symptoms compared to boys in grades 1 to 6 (Soles, Bloom, Heath, & Karagiannakis, 2008).

In addition, when children engaged in behaviors that are contrary to typical gender expectations for behavior, teachers reported higher levels of teacher-child conflict, lower perceived control over the situation, and feelings of ineffectiveness when dealing with that particular child (Runions, 2012). Another study found that, although both preschool boys and girls were exhibiting disruptive behaviors, boys were receiving more teacher attention for these behaviors compared to girls (Hagekull & Hammarberg, 2004). This may further indicate that teachers feel inadequate and uncomfortable when dealing with children's behavior that is different from what is generally perceived as "acceptable." However, these results have varied across the literature, with one study

indicating that the gender of the child did not have a statistically significant association with perceived teacher-child conflict (Mantzicopoulos, 2005). Therefore, gender is an important factor to assess when investigating teacher perceptions of noncompliance and how these perceptions may impact any treatment decisions.

Specifically, in the current study, it was predicted that participants would rate the noncompliant behavior as more severe when rating the vignette depicting a preschool girl. Additionally, participants with more experience in child care settings were expected to rate the severity of the noncompliant behavior as less severe than those with less experience. Finally, it was predicted that exposure to efficacy data for the interventions would positively impact acceptability ratings for the high-p command sequence and negatively impact the ratings for the warning intervention.

The purpose of this study was to add to current literature regarding noncompliance in preschool children. Although there are several studies involving the efficacy of numerous interventions that can be used to increase compliant behavior and decrease noncompliant behavior, there is little research regarding teachers' acceptability of these interventions. Knowing how preschool teachers and educators view certain interventions can greatly impact the probability that they will use these interventions, as they will likely be the ones implementing them. In addition, this knowledge can be useful to the field of Applied Behavior Analysis (ABA) as these professionals are often teaching these interventions to teachers and others to implement with a child. Knowing how teachers view the acceptability of these interventions can lead to greater teacher "buy-in" which, in turn, will increase the likelihood that teachers will implement these

interventions with their students. Finally, this study also examined how efficacy data impacted the acceptability ratings of these interventions. It is beneficial to gain insight about how teachers are making decisions as well as what kind of information is most helpful to them when evaluating the potential success of an intervention.

CHAPTER II

METHOD

Participants

The participants included 37 preschool teachers and educational aides recruited from preschool facilities in the middle Tennessee area. Packets were distributed to 7 local preschool facilities; 63 packets were distributed with 37 completed packets returned. Participants consisted of 37 women. The average age of participants was 36 years old ($SD = 12.9$). Most of the participants were Caucasian (76%) and had some college experience (35%). The participants reported anywhere between 1 to 31 years of experience in child care settings ($M = 10.5$ years; $SD = 8.5$) with anywhere from 1 to 24 years of those in a preschool classroom or education setting ($M = 8.0$ years, $SD = 6.7$). Of the participants in the study, 60% had children. Table 1 provides a summary of the demographic data for the full sample.

Measures

Demographic questionnaire. Each participant completed a demographic questionnaire (See Appendix A) that included questions related to the participant's age, gender, and ethnicity. In addition to personal characteristics, the questionnaire included items related to the participant's education level, years of experience in child care and preschool settings, and number and age of his/her own children (if any).

Vignettes. Each packet given to the participants contained a vignette depicting a 4-year-old preschool child exhibiting noncompliant behavior (See Appendix B). Two versions of the vignettes were used, one described the child as a boy, one as a girl. After

Table 1

Demographic Data for the Full Sample

Variable	<i>N</i>	%
Ethnicity		
Caucasian	28	75.7
African American	7	18.9
Asian	0	0
Hispanic	0	0
Other	1	2.7
Choose not to respond	1	2.7
Education		
GED	0	0
High school	5	13.5
Some college	13	35.1
Associate's degree	5	13.5
Bachelor's degree	10	27
Master's degree	3	8.1
Doctorate	0	0
Choose not to respond	1	2.7
Children		
Yes	22	59.5
No	15	40.5

reading the vignette, participants rated the severity of the behavior and the likelihood that they would intervene for the noncompliance (See Appendix C).

Description of interventions. Each packet contained a description of three antecedent interventions that were potentially used for preschool noncompliance: behavioral momentum/high-probability command sequence (high-p), warning/advance notice, and guided compliance. Two versions of the descriptions were distributed. One version contained the description of interventions only, and the other contained the same description of interventions plus empirically-based efficacy data for each intervention (See Appendix D).

Treatment Evaluation Inventory-Short Form, (TEI-SF; Kelley, Heffer, Gresham, & Elliott, 1989). The TEI-SF consists of nine items assessing the acceptability of a given intervention as it relates to children with behavioral problems (See Appendix E). Each of the nine statements are rated on 5-point Likert scale where 1 represents strong disagreement with the statement and 5 represents strong agreement. This is true for all items with the exception of item 6, which is scored in reverse. The total scores for this measure can range from 9 to 45, with higher scores representing a higher acceptability of the intervention. The TEI-SF has shown good internal consistency and validity (Kelley et al., 1989).

Procedure

The participants each received a letter of informed consent with their packets and were asked to remove and keep the letter (See Appendix F). Participants then read and completed the items in their packet, which included: a demographic questionnaire, one

vignette depicting either a boy or girl displaying noncompliance, a severity rating of this behavior, one version of the description of the antecedent interventions, and the TEI-SF for each intervention. The order of the intervention descriptions were randomized to help minimize order effects. Half of the participants received packets in which the vignette depicted a preschool girl, and half received packets in which the vignette depicted a preschool boy. In addition, half of the packets included intervention descriptions only, and half received these same descriptions with the addition of efficacy data about each intervention (balanced by gender). Therefore, there were a total of four versions of the packets that were randomly distributed (i.e., girl, no efficacy data; girl, efficacy data; boy, no efficacy data; boy, efficacy data).

CHAPTER III

RESULTS

Table 2 presents the descriptive statistics for the full sample for severity, likelihood of intervening, and acceptability of each intervention.

It was hypothesized that participants would rate the severity of the noncompliant behavior described in the vignette as more severe when rating the vignette depicting a preschool girl compared to a preschool boy. An independent samples *t*-test, with equal variances not assumed, was conducted to test this hypothesis, indicating no differences in severity ratings between boy child ($M = 3.82$, $SD = 0.66$) and girl child ($M = 4.25$, $SD = 0.83$) ratings, $t(21.04) = 1.52$, $p = .14$. It also was hypothesized that those teachers who reported having more experience in child care settings would rate the severity of the noncompliant behavior as less severe compared to those who reported less experience. A Pearson product correlation was calculated to test this hypothesis, indicating that there was no significant relationship between years of child care experience and ratings of severity of the child's behavior in the vignette, $r(34) = .029$, $p = .87$.

Regarding the presentation of efficacy data for the treatments options, it was hypothesized that the participants who were provided with efficacy data would rate the acceptability of each antecedent intervention differently from those who were not provided with efficacy data. Specifically, it was predicted that the TEI-SF score would be higher for the high-p command sequence (i.e., indicating higher levels of acceptability) and lower (i.e., indicating lower acceptability) for the warning intervention for participants who were provided efficacy data compared to those who were not provided

Table 2

Means and Standard Deviations for Dependent Variables for the Full Sample

<i>Variable</i>	<i>Mean (SD)</i>	<i>N</i>
Severity of child behavior	3.97 (0.75)	35
Likelihood of intervening	4.49 (0.85)	35
Acceptability ratings:		
Warning intervention	36.56 (4.61)	36
High-probability command sequencing	33.56 (5.28)	36
Guided compliance	33.09 (6.71)	35

Note. Severity of child behavior and likelihood of intervening scored on a 5-point Likert scale with higher scores indicating more severe problem behavior and more likely to intervene. Acceptability ratings score from 9 to 45 with higher scores indicating more acceptability.

with this information. Independent samples *t*-tests were conducted to test these hypotheses. There were no differences in the TEI-SF scores for the high probability intervention for those who had efficacy data ($M = 34.5$, $SD = 5.193$) and those who did not ($M = 32.61$, $SD = 5.35$), $t(34) = -1.08$, $p = .29$. However, results from the independent sample *t*-test indicated that there was a significant difference in ratings for the warning intervention, with those who were provided efficacy data rating it as less acceptable ($M = 35.06$, $SD = 4.87$) than those who were not provided efficacy data ($M = 38.06$, $SD = 3.92$), $t(34) = 2.04$, $p = .05$. Table 3 provides descriptive statistics for the three interventions by efficacy data groups.

Although no specific hypotheses were proposed regarding acceptability of interventions and gender of the child, independent sample *t*-tests, with equal variances not assumed, were conducted to determine if the acceptability ratings differed by gender of the child in the vignette. Analysis indicated that there was no significant difference in TEI-SF ratings for the warning intervention when the vignette depicted a boy ($M = 35.59$, $SD = 4.38$) or girl ($M = 38.07$, $SD = 4.71$), $t(26.31) = -1.58$, $p = .13$. In addition, there was no difference in TEI-SF ratings for the high-p sequence when the noncompliant behavior was depicted by a boy ($M = 32.68$, $SD = 4.82$) or by a girl ($M = 34.93$, $SD = 5.86$), $t(23.83) = -1.20$, $p = .24$. There also was no significant difference in the ratings of the guided compliance intervention when the gender depicted in the vignette was boy ($M = 31.38$, $SD = 6.55$) versus girl ($M = 35.64$, $SD = 6.31$), $t(28.76) = 1.93$, $p = .06$. Table 4 provides descriptive statistics for the three interventions by gender of child in the vignette.

Table 3

Treatment Acceptability Ratings for Each Intervention by Efficacy Data Group

Intervention	No efficacy data (<i>n</i> = 18)	Efficacy data (<i>n</i> = 18)
	<u><i>M</i> (<i>SD</i>)</u>	<u><i>M</i> (<i>SD</i>)</u>
Warning	38.06 (3.92)	35.06 (4.87)
High-probability command sequence	32.61 (5.35)	34.50 (5.19)
Guided Compliance	33.24 (6.60)	32.94 (6.99)

Table 4

Treatment Acceptability Ratings for Interventions by Gender of the Child in the Scenario

Intervention	Boy Child (<i>n</i> = 22)	Girl Child (<i>n</i> = 14)
	<u><i>M</i> (<i>SD</i>)</u>	<u><i>M</i> (<i>SD</i>)</u>
Warning	35.59 (4.38)	38.07 (4.71)
High-probability command sequence	32.68 (4.82)	34.93 (5.86)
Guided Compliance	31.38 (6.55)	35.64 (6.31)

CHAPTER IV

DISCUSSION

Studies related to antecedent interventions with preschoolers have suggested that guided compliance has been successful in increasing compliant behavior for the majority of participants, but, for some, may also increase other behaviors such as biting, hitting, and screaming (e.g., Cote et al., 2005; Wilder & Atwell, 2006; Wilder et al., 2007; Wilder, Allison, et al., 2010; Wilder, Nicholson, et al., 2010; Wilder, Myers, Fischetti, et al., 2012; Wilder, Myers, Nicholson, et al., 2012). Studies involving high-p sequences have produced varying results, increasing compliance for some (e.g., Austin & Agar, 2005; Killu et al., 1998), but not others (Wilder et al., 2007). The use of warnings or advance notice has been primarily unsuccessful in increasing compliance (e.g., Cote et al., 2005; Wilder et al., 2007; Wilder, Nicholson, et al., 2010). One study, however, found conflicting results (Zeece & Crase, 1982). The main purpose of the current study was twofold. First, we examined the effect of gender on teacher's ratings of the severity of noncompliant behavior described in a vignette. Second, we examined whether being provided with efficacy data about an intervention affected how preschool teachers rate the acceptability of specific antecedent interventions.

First, it was hypothesized that preschool teachers would rate the severity of the noncompliant behavior presented in the vignette as more severe when the behavior described was being exhibited by a preschool girl compared to a preschool boy. This hypothesis, however, was not supported. The teachers involved in this study rated the noncompliant behavior as equally severe when it was exhibited by either a boy or girl.

The majority of the participants believed that the behavior described was problematic, with 60% agreeing with the statement, “I would consider the behavior described above as problematic,” and 60% of the participants strongly agreed that they would intervene or use some method to decrease the behaviors described. Although there is insufficient research related specifically to teachers’ perceptions related to noncompliant behavior in preschool populations, studies examining teachers’ perceptions of externalizing behavior of school-age children suggest that girls are rated as displaying more severe problem behaviors compared to boys among students who were nominated for displaying high rates of externalizing behaviors in grades 1 to 6 (Soles et al., 2008). However, this research is related to an older age group, and it is possible that the noncompliant behavior described in the current study is more common among both boys and girls who are in preschool. Noncompliant behavior may be less acceptable in older age groups, especially among girls; future research could focus on these specific areas.

Second, it was hypothesized the participants who reported having a greater number of years of experience in child care settings would rate the severity of the noncompliant behavior depicted in the vignette as less severe than those who reported having less experience. It was believed that those with more experience in child care settings would have more exposure to preschool noncompliant behavior, and as a result, would rate the noncompliance as less severe compared to the participants who had less experience in preschool settings. This hypothesis, however, was not supported. It seemed that preschool teachers found the noncompliance to be moderately problematic regardless of the amount of experience they reported having in child care settings.

Third, half of the participants in the study were presented with efficacy data for the three antecedent interventions (i.e., guided compliance, high-p sequencing, and warning) and half were not. It was hypothesized that those presented with efficacy data would rate the acceptability of antecedent interventions differently from those who were not provided with efficacy data, depending on how supportive the efficacy data were for each intervention. Specifically, it was predicted that those exposed to efficacy data would rate the acceptability of the high-p command sequence higher and the warning intervention lower compared to participants without efficacy data. No predictions were made in regards to the acceptability of the guided compliance intervention. Results indicated that there were no differences in ratings for the high-p and guided compliance interventions between the two groups (i.e., those who had efficacy data and those that did not). Results did indicate, however, that the above prediction was supported in regards to the warning intervention. Participants who were provided with efficacy data rated the acceptability of the warning intervention as less acceptable compared to the ratings of the participants who did not receive efficacy data. This is certainly interesting--of the three interventions that were presented, the efficacy data for the warning intervention indicate it is not likely to increase compliant behavior. Participants without this information considered this a more viable intervention for dealing with noncompliance compared to those who were exposed to that information. There were no significant differences in acceptability ratings for the guided compliance and high-p interventions. The information given to the participants about these two interventions indicated that it was effective in increasing compliance for some, but not all, of participants. Further, the teachers were

also informed that the guided compliance intervention may increase problem behaviors such as hitting, screaming, and biting. It seems, then, that when the teachers were given effectiveness data in which the success of that particular intervention were mixed, our data were less likely to change their perceptions and acceptability of that intervention.

Finally, although no specific hypotheses were proposed, the acceptability of the interventions by the gender of the child depicted in the vignette was explored. Results indicated that there were no significant differences in ratings for the warning, high-p, or guided compliance interventions related to the gender of the child in the vignette. This indicated that the gender of the child had little or no effect on how the participants perceived the effectiveness and acceptability of these interventions.

Limitations and Future Directions

This study is not without limitations. First, the total number of participants was small. A smaller study population makes it more difficult to find statistically significant results, and makes the results more difficult to generalize. Second, of the packets that were returned, 22 depicted a boy in the vignette, and only 13 depicted a girl. This discrepancy makes it more difficult to find true differences between teachers' responses to noncompliance in boys and girls. It is possible that these results may have been different if the gender of the child depicted in the vignette was more equally reflected.

Another limitation of this study was that this information was delivered in a survey format. Although this is an effective way of collecting information from several participants simultaneously, it is ultimately unknown who actually filled out the survey packet. In addition, although the use of vignettes to research children's behavior is a

common method, participants' responses may have been different in a real life setting and situation versus one that was fictitious. Hence, more research needs to be conducted in the area of preschool teachers' perceptions involving noncompliance in both real and fictitious scenarios.

There is little known research to date that explicitly involves teachers' perceptions and acceptability of antecedent interventions among preschool populations. This seems an important area of study, considering these interventions are commonly used with preschool children in applied settings. It would be interesting to gain insight as to whether preschool teachers are knowledgeable of these interventions, how much they are utilized in their classroom, and their perceptions of their effectiveness. Further, there is a plethora of research involving externalizing behavior and the effect of children's gender. Although noncompliance can be viewed as an externalizing behavior (e.g., saying "no," throwing an object), it also can be manifested more internally (e.g., ignoring, walking away). There seems to be little research that explores all facets of noncompliance, focusing more on the externalizing behaviors. As noncompliance is a seemingly common behavior of the preschool years, it would be interesting to investigate any gender differences in the presentation of the behavior as well as how teachers perceive the noncompliance and how it may affect their intervention decisions.

In conclusion, this study suggested that giving teachers efficacy data about an intervention may affect their treatment decisions and perceptions about the acceptability of that intervention. However, it seems that the participants in this study were more likely to change their preferential perception about an intervention when given data related to

the ineffectiveness of a particular treatment, compared to data suggesting the effectiveness was more mixed (i.e., the intervention was successful for some, but not all participants). This is an important finding that warrants further research. Knowing what kind of information is most influential to teachers when making treatment decisions, can aide in teacher training as well as consultation. In the field of Applied Behavior Analysis (ABA), behavior analysts often consult and train teachers to implement behavioral plans they have written. Therefore, knowing the type of information that is most helpful to teachers when they are determining if an intervention is likely to be effective, will help tremendously with teacher “buy-in” and the overall implementation of the intervention.

Further, the results of this study suggested that the gender of the child exhibiting noncompliance may not affect how problematic the behavior is viewed. This is inconsistent with past research that evaluated teachers’ perceptions of noncompliant behavior in grades 1 to 6 (Soles et al., 2008). It may be that noncompliant behavior is more commonly exhibited by both boys and girls who are preschool aged, and is, therefore, viewed as equally problematic. Yet, it seems that, at some age, the noncompliant behavior may be less acceptable for girls compared to boys. This, however, warrants further investigation.

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APPENDICES

APPENDIX A

Demographic Questionnaire

Please answer the questions below to the best of your ability.

What is your gender? Male Female I choose not to respond

What is your age? _____

I identify myself most as...

- Caucasian
- African American
- Asian
- Hispanic
- Other
- I choose not to respond.

What is the highest level of education you have obtained?

- GED
- High school
- Some college
- Associate's Degree
- Bachelor's Degree
- Master's Degree
- Doctorate
- I choose not to respond

How many years of experience do you have in child care settings? _____

How many of these are in a preschool classroom/education setting? _____

Do you have any children? Yes No I choose not to respond

If yes, what are their ages? (check all that apply):

- newborn or toddler
- preschool age
- elementary school age
- I choose not to respond.
- middle school age
- high school age
- beyond high school age

APPENDIX B

Vignettes

Male Version

William is a 4-year-old boy who is enrolled in a preschool program. Recently, some of his teachers and aides have had issues with William's behavior throughout the school day. According to teacher report, when asked to move from one activity to another William will often scream, "No!" and continue engaging in the previous activity. Other times, William simply ignores the teachers' repeated requests. Teachers report that these behaviors occur several times a day. In addition, his teachers report that after repeating a command several times, William will often become upset and frequently yells and throws whatever object he is holding across the room. Although the object is not aimed at any individual, teachers have expressed their concerns about this behavior, reporting that it occurs 3-4 times per week. However, there are also times that William complies willingly with the teachers' requests. Teachers have noticed that these behaviors happen more often when transitioning from free play activities to more structured ones. They are concerned that if he keeps exhibiting these types of behaviors, he will not be prepared for Kindergarten classes.

Female Version

Mary is a 4-year-old girl who is enrolled in a preschool program. Recently, some of her teachers and aides have had issues with Mary's behavior throughout the school day. According to teacher report, when asked to move from one activity to another Mary will often scream, "No!" and continue engaging in the previous activity. Other times, Mary simply ignores the teachers' repeated requests. Teachers report that these behaviors occur several times a day. In addition, her teachers report that after repeating a command several times, Mary will often become upset and frequently yells and throws whatever object she is holding across the room. Although the object is not aimed at any individual, teachers have expressed their concerns about this behavior, reporting that it occurs 3-4 times per week. However, there are also times that Mary complies willingly with the teachers' requests. Teachers have noticed that these behaviors happen more often when transitioning from free play activities to more structured ones. They are concerned that if she keeps exhibiting these types of behaviors, she will not be prepared for Kindergarten classes.

APPENDIX C

Severity Rating Scale

Severity Rating Scale

I would consider the behavior described above as problematic.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

I would intervene or use some methods to decrease the behavior described above.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

APPENDIX D

Description of Interventions

Behavioral Momentum/High-probability Command Sequence

High-probability sequencing, sometimes referred to as behavioral momentum, is a procedure in which several commands are given that have a high probability (high-p) of completion. These high-p requests are administered in succession with reward for compliance. After several consecutive successes, a low-probability (low-p) instruction then is administered. It is believed that by using this technique, behavioral momentum will build and the child will be more likely to comply with the low-p demand after previously complying with several high-p tasks that were reinforced. For example the teacher might say, “Clap your hands.” “Jump up and down.” “Touch your nose.”, and would praise compliance with each. Then, the teacher would issue a low-p command, for example: “Wash your hands.” *Studies measuring the effectiveness of this procedure showed that using the high-p command sequence increased levels of compliance in seven of the ten participants studied. Rates of compliance were increased from occurring around 30-40% of trials to around 90-100%.*

Advance Notice/Warning

This procedure involves warning the child that a transition is approaching. For example, “In one minute, play time will be over, and everyone will come to the carpet for circle time.” By warning the child that a transition is approaching, it is thought that the child will be more aware of the schedule and more likely to comply with the request to stop one activity and start another. *Studies have shown mixed results that using a warning or advance notice is successful in decreasing noncompliant behavior. Among nine children who are referred for exhibiting high rates of noncompliant behavior, advance notice resulted in low (i.e. compliance occurring an average less than 20% of the time) to zero levels of compliance for all nine participants. Further, for six of these children, problem behaviors were also measured. These studies indicated variable rates of problem behavior occurring when advance notice was used (i.e. occurring from during 30-100% of trials) for four of these participants. However, one study found that this method was successful in marginally decreasing response time to a command by an average of 3.5 seconds using 40 preschool children.*

Guided Compliance

Guided compliance is a 3-step procedure that is used to increase compliant behavior when the first instruction was not met with compliance by (1) repeating the instruction, (2) modeling the behavior, and (3) physically guiding the child to comply with the instruction. In this procedure, the teacher repeats the original instruction if the child does not comply the first time. If noncompliance continues, the teacher repeats the instruction while modeling the desired behavior (e.g. picking up toys). If the child is still noncompliant, hand over hand physical guidance is used to ensure the child completes the task (e.g., holding the child's arms and guiding them to pick up the toys). *Studies have shown that guided compliance is effective in increasing compliant behavior from near zero levels up to 70-100% compliance across sessions for 19 out of the 22 preschool children this procedure was used among seven studies. However, seven of these children displayed an increase in problem behaviors such as hitting, screaming, and biting when this procedure was being used indicating that for some children, this procedure may seem intrusive.*

APPENDIX E

Treatment Evaluation Inventory-Short Form

1. I find this treatment to be an acceptable way of dealing with the child's problem behavior.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

2. I would be willing to use this procedure if I had to change the child's problem behavior.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

3. I believe that it would be acceptable to use this treatment without children's consent.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

4. I like the procedures used in this treatment.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

5. I believe this treatment is likely to be effective.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

6. I believe the child will experience discomfort during the treatment.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

7. I believe this treatment is likely to result in permanent improvement.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

8. I believe it would be acceptable to use this treatment with individuals who cannot choose treatments for themselves.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

9. Overall, I have a positive reaction to this treatment.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

APPENDIX F

Letter of Informed Consent

Project Title: Preschool Teachers' Perceptions of Noncompliance and Antecedent Interventions

Purpose of the Project: You are being asked to participate in this study so we can evaluate the acceptability of various interventions as well as teachers' perceptions of problem behaviors among preschool children.

Procedures: You will be asked to read a vignette about a preschool child exhibiting problem behaviors. You will then be asked to rate the severity of the behaviors and the likelihood that you would intervene with those behaviors. Next, you will be asked to read a short description of interventions and rate each of those interventions. Finally, you will be asked to fill out a short demographic survey. It will take approximately 15-20 minutes to complete the entire packet.

Risks/Benefits: There are no foreseeable risks, discomforts, or inconvenience of this study beyond the time it takes to complete the packet. There are no costs or compensation for participating in this study, however your participation is greatly appreciated and you may learn something about the efficacy of some intervention techniques. If you choose to withdraw your participation from this study, there will be no negative consequences to you.

Confidentiality: All information for this study will be completed anonymously (that is, no names or identifying information should be included in the packets).

Principal Investigator/Contact Information: If you should have any questions about this research study or possible injury, please contact **Katie Bravender** at kmb6r@mtmail.mtsu.edu or my Faculty Advisor, **Dr. Ujcich Ward** at Kimberly.Ward@mtsu.edu or (615)898-2188.

Your participation in this research is voluntary, and refusal to participate or withdrawing from participation at any time during the project will involve no penalty or loss of benefits to which you might otherwise be entitled. All efforts, within reason, will be made to keep the personal information in your research record private but total privacy cannot be promised, for example, your information may be shared with the MTSU Institutional Review Board. In the event of questions or difficulties of any kind during or following participation, you may contact the Principal investigator as indicated above. For additional information about giving consent or your rights as a participant in this study, please feel free to contact the MTSU Office of Compliance at (615)494-8918.

By keeping this letter, I am indicating that I have read this informed consent document. I understand each part of the document, all my questions have been answered (by contacting the investigators listed below, and I freely and voluntarily choose to participate in this study.

APPENDIX G

Institutional Review Board Letter of Approval

IRB
INSTITUTIONAL REVIEW BOARD
 Office of Research Compliance,
 010A Sam Ingram Building,
 2269 Middle Tennessee Blvd
 Murfreesboro, TN 37129



IRBN007 – EXEMPTION DETERMINATION NOTICE

Monday, May 16, 2016

Investigator(s): Kathryn Bravender, and Kimberly Ujcich Ward
 Investigator(s) Email(s): kmb6r@mtmail.mtsu.edu
 Department: Psychology

Study Title: *Preschool Teachers' Perceptions of Noncompliance and Antecedent Interventions*
 Protocol ID: 16-1276

Dear Investigator(s),

The above identified research proposal has been reviewed by the MTSU Institutional Review Board (IRB) through the **EXEMPT** review mechanism under 45 CFR 46.101(b)(2) within the research category (2) *Educational Tests*. A summary of the IRB action and other particulars in regard to this protocol application is tabulated as shown below:

IRB Action	EXEMPT from further IRB review***	
Date of expiration	NOT APPLICABLE	
Sample Size	Approximately 75	
Participant Pool	Preschool teachers, aides, and assistants who are 18 years old and older	
Mandatory Requirements	Currently employed in a preschool, day care, or early intervention setting	
Additional Restrictions	No restrictions of gender, ethnicity, socioeconomic status, or sexual orientation	
Comments	N/A	
Amendments	Date	Post-Approval Amendments
	N/A	N/A

***This exemption determination only allows above defined protocol from further IRB review such as continuing review. However, the following post-approval requirements still apply:

- Addition/removal of subject population should not be implemented without IRB approval
- Change in investigators must be notified and approved
- Modifications to procedures must be clearly articulated in an addendum request and the proposed changes must not be incorporated without an approval
- Be advised that the proposed change must comply within the requirements for exemption
- Changes to the research location must be approved – appropriate permission letter(s) from external institutions must accompany the addendum request form
- Changes to funding source must be notified via email (irb_submissions@mtsu.edu)

IRBN007

Version 1.2

Revision Date 03.08.2016

- The exemption does not expire as long as the protocol is in good standing
- Project completion must be reported via email (irb_submissions@mtsu.edu)
- Research-related injuries to the participants and other events must be reported within 48 hours of such events to compliance@mtsu.edu

The current MTSU IRB policies allow the investigators to make the following types of changes to this protocol without the need to report to the Office of Compliance, as long as the proposed changes do not result in the cancellation of the protocols eligibility for exemption:

- Editorial and minor administrative revisions to the consent form or other study documents
- Increasing/decreasing the participant size

The investigator(s) indicated in this notification should read and abide by all applicable post-approval conditions imposed with this approval. Refer to the post-approval guidelines posted in the MTSU IRB's website. Any unanticipated harms to participants or adverse events must be reported to the Office of Compliance at (615) 494-8918 within 48 hours of the incident.

All of the research-related records, which include signed consent forms, current & past investigator information, training certificates, survey instruments and other documents related to the study, must be retained by the PI or the faculty advisor (if the PI is a student) at the secure location mentioned in the protocol application. The data storage must be maintained for at least three (3) years after study completion. Subsequently, the researcher may destroy the data in a manner that maintains confidentiality and anonymity. IRB reserves the right to modify, change or cancel the terms of this letter without prior notice. Be advised that IRB also reserves the right to inspect or audit your records if needed.

Sincerely,

Institutional Review Board
Middle Tennessee State University

Quick Links:

[Click here](#) for a detailed list of the post-approval responsibilities.
More information on exmpt procedures can be found [here](#).