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An Anti-Bullying Intervention for Children with Autism Spectrum Disorder

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AN ANTI-BULLYING INTERVENTION FOR CHILDREN WITH AUTISM SPECTRUM DISORDER

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Table of Contents

Abstract……1

Introduction……..2

Autism Spectrum Disorder and Bullying…….3

Bullying Prevention Programs ……..……...6

Video Modeling……..……..9

Current Study……11

Method.……..12

Participants……12

Materials……12

Skill Acquisition Assessment Session (SAAS) Video and Questions.....12

Assertive Responding Video Modeling (VM) and Assessment……..…..13

Parent-Version Bullying Survey for ASD……14

Procedure……...14

Design……..……..14

Baseline……..15

Intervention……16

Figure 1……..17

Dependent Measures……..…..…18

Interobserver Agreement……...……....18

Results……....18

Figure 2……..24

Figure 3……..25

Figure 4……..26

Discussion……..27

Strengths and Limitations……..29

Future Research…….……34

References……..36
Appendix A…….....……..…..41
Appendix B……..…. 43
Appendix C……..…..45
Appendix D……..…. 47
Appendix E……..…..48
Appendix F……...…. 49
Appendix G……51
Appendix H……52

Abstract

The effects of a video modeling intervention, given to six children with ASD, were evaluated through a multiple-baseline and multiple-probe design across children. The research targeted teaching children with ASD to assertively respond to physical bullying, verbal bullying, and social exclusion, as well as telling one's mother. In baseline, the participants demonstrated inconsistent to no skills for responding to the bullying in the vignette movies (SAAS) and the generalization probe skits. During intervention the participants watched a video of a person assertively responding to bullying, and were assessed through VM questions and SAAS. Post-intervention the children participated in generalization probe skits. The researcher and a blind rater scored the participants' responses using a four-point scale. A pre-intervention survey of bullying was also given to the parents to assess their child's victimization. The results showed that video modeling effectively taught all of the participants to assertively respond to bullying and resulted in generalization for 4 of the 6 participants.

An Anti-Bullying Intervention for Children with Autism Spectrum Disorder

Bullying in schools is a significant problem, and has been shown to cause psychological, social, physical, and academic harm to both the victim and bully involved (Cross et al., 2012). Bullying is defined as repeated intentional attacks and malicious behaviors on to a victim(s), and is paired with a power imbalance such that; the bully is physically and/or socially more powerful, and the victim has a difficult time or is incapable of defending him/herself (Cross et al., 2012; Frey et al., 2005; Olweus, 1997; Sherer & Nickerson, 2010). Bullying can come in multiple forms including; physical bullying (e.g. being hit, kicked, and shoved), verbal bullying (e.g. being called names, teased, and threatened), attacks on property (e.g. having ones possessions stolen or damaged), indirect bullying (e.g. spreading rumors or gossiping about the victim), and social exclusion (e.g. excluding or ignoring the victim) (Chen & Schwartz, 2012; Kristensen & Smith, 2003).

Evidence shows that bullying negatively impacts everyone involved and has short-term and long-term negative effects on psychological and physical health. This can cause depression, anxiety, and in extreme cases, suicide (Anderson, 2012; Cross et al. 2012). Hawker and Boulton (2000) performed a meta-analysis of cross-sectional studies from 1978 to 1997 of peer victimization and psychosocial maladjustment. Hawker and Boulton found that victimization is positively correlated with depression, loneliness, social anxiety, and low self-esteem. Additionally, the fear of being bullied can manifest as somatic symptoms. For example, the victim may suffer from headaches, stomachaches, or even heart palpitations. Bullying also affects social, emotional, and academic development as well as adjustment. Furthermore, bullying may additionally cause an increase in aggressive behaviors (Cross et al. 2012; Rowley

et al., 2012; Sherer & Nickerson, 2010; Swearer, Espelage, Vaillancourt, & Hymel, 2010; Vannini et al., 2011).

A review of psychological factors related to victimization showed that victims are more anxious and insecure than their peers and that they feel "stupid, abandoned, shameful, and lonely." The review also showed that victims suffer from more depression and lower self-esteem than their peers (Hansen, Steenberg, Palic, & Elklit, 2012). In addition, another study about bullying stated that victimization is associated with illness, poor academic performance, fear, anxiety, school avoidance, and even dropping out of school (Swearer et al., 2010).

Autism Spectrum Disorder and Bullying

Bullying is a particularly prominent concern among students with disabilities and especially for students with Autism Spectrum Disorder (ASD). Those with ASD, as a group, have the greatest risk to experience bullying during elementary and middle school (Blake, Lund, Zhou, Kwok, & Benz, 2012). A study conducted by the Interactive Autism Network (IAN), which surveyed the parents of 1,167 children with ASD between the ages of 6 to 15, found that 63% of children with ASD had been bullied, and in the past month 39% of children with ASD had been bullied compared to only 12% of their typically-developing siblings (Anderson, 2012). Therefore, children with ASD are bullied more than three times as often as their typically developing peers. These high statistics are congruent with other studies of ASD and bullying, which found 64%-72% of children with ASD have been victims of bullying as reported by victims, teachers, and parents (Chen & Schwartz, 2012). Another study discovered that 75% of the group of children with ASD had been teased, bullied, or excluded, and 40% of those victimized felt rejected due to the experience (Rowley et al., 2012).

Furthermore, children with ASD have been called the "perfect victim," not only because of their emotional instability and inability to stand up for themselves (Zablotsky, Bradshaw, Anderson, & Law, 2013), but mainly because of the characteristics that comprise Autism Spectrum Disorder. The DSM 5 characterizes people with ASD as having persistent deficits in social communication and social interactions, as well as restricted and repetitive behaviors and interests. Due to these deficits, many children with ASD are poor at performing social reciprocity, do not understand nonverbal communication, and have trouble making, sustaining, and understanding relationships (American Psychiatric Association [APA], 2013). Moreover, these characteristics manifest themselves in inflexibility, meltdowns, difficulties in reading social cues, and tendencies toward narrowly focused conversations.

Children with ASD are at higher risk of social isolation due to their literal interpretation of language, and thus difficulty understanding jokes. Also children with ASD self-stimulate to alleviate their anxiety. Children with ASD self-stimulate in a variety of inappropriate ways, including rocking, hitting themselves, repeating words, flapping their hands, etc. (Grandin, 2011). While "stimming" soothes the child it also is socially unacceptable and visibly differentiates the children from their peers. Additionally, children with ASD have maladaptive behaviors, which can be presented through either internalization or externalization. Maladaptive behaviors in the form of internalizing include emotional reactivity, depression, anxiousness, somatic symptoms, withdrawal, obsessions, and compulsions. Externalized maladaptive behaviors consist of aggression, defiance, and inattentiveness (Hartley, Sikora, & McCoy, 2008). These behaviors negatively impact children with ASD's daily lives and cause them to appear aberrant to their peers.

These characteristics of ASD cause children with ASD to be thought of as "different" and even "weird" by their peers, which puts them at an increased risk of victimization (Chen & Schwartz, 2012; Blake et al., 2012; Rowley et al., 2012). Additionally, past research has shown that children with ASD, with less social impairments, experience more bullying than more socially impaired children. This may be because higher functioning children are more able to recognize different forms of bullying since they have a better understanding of social interactions (Rowley et al., 2012). Nonetheless, this illustrates a significant problem that children who are higher functioning and want to make friends, are the very children who are reporting the most isolation and bullying.

Additionally, like children who are typical victims of bullying, children with ASD experience negative psychological and physical symptoms. Zablotsky, Bradshaw, Anderson, and Law, (2013) surveyed 1,221 parents of children with ASD and found that 8.2% of the children with ASD had been physically injured, 69.6% experienced emotional trauma, and 14% were scared for their safety. The results also show that these victims are using poor coping methods to deal with the bullying situations. Specifically, 18.5% of children with ASD were provoked into fighting back and 40.6% were triggered into having an emotional meltdown or outburst (Zablotsky et al., 2013). These responses have been shown to be poor methods of coping. For example, a study focusing on coping with bullying at schools indicated that fighting back, passive behaviors, and helpless behaviors were the least effective strategies (Kanetsuna, Smith, & Morita, 2006). An additional study stated that fighting back was used by victims who were increasingly bullied over time (Smith, Talamelli, Cowie, Naylor, & Chauhan, 2004). Such studies support the view that children with ASD have an apparent deficit in coping skills and in ability to respond to bullying.

Bullying prevention programs

Most of the research on prevention and dealing with bullying are school-based programs, which are generally oriented towards stopping bullying and/or creating more active bystanders to help the victims. The Olweus bullying intervention program is a school-based agenda focused on positive adult involvement and nonphysical, but firm punishment for unacceptable behaviors or violating rules. The study on this program was successful, and their evaluation of 2,500 students over 2.5 years showed a 50% reduction rate in bullying (Olweus, 1997). "Fearnot!" was a computer-based anti-bullying program that was implemented in schools in the UK and Germany and was designed to foster coping skills and bystander empathy. This was achieved through having children play a game on the computer where they view a bullying situation and then they have to help the victim by acting as the victim's "invisible friend," who tells the victim how to cope and handle the bullying. The child is also required to explain why they chose the coping method they suggested to the victim. This was a quasi-experimental, pre/post-test control group design and used student questionnaires to assess the socio-demographic information and peer nominations to measure the bullying involvement of the students. The results of the program were positive in that the students reported more "defenders:" active bystanders that empathized with the victims. However, their results did not discuss if the coping of the original victims improved (Vannini et al., 2011). Another school based intervention was the Steps to Respect Program whose objective was to improve the responsibility of bystanders, teach adults to be more aware and supportive, and reduce the acceptance of bullying and aggression in the student body. Although the student and teacher surveys as well as the playground observations confirmed positive results, they suggested that it may be beneficial to give victims "scripts."

These “scripts” would give instructions on how to self-regulate and act in a composed and assertive way towards the bullying in order to stop it (Frey et al., 2005).

Other studies on bullying prevention examined what the most effective intervention program would entail. For example, a study on a three-year intervention that was a whole-school program, found that the intervention is most successful when the home and school are targeted (Cross et al., 2012). Another study interviewed school psychologists about the best way to stop bullying. This study discovered that school psychologists think the most effective methods are for schools to implement positive behavior support plans, to create an improved area and schedule for less structured activities (e.g. recess and lunch), and to immediately respond to bullying. The psychologists also rated avoiding contact between bullies and victims as the least effective strategy (Sherer, & Nickerson, 2010).

The problem with previous programs implemented in schools is that although they reduce bullying, they do not eliminate it. Thus, children with ASD who are at high risk are still being bullied. Therefore, an intervention program is needed to help victims appropriately respond and cope with persistent bullying. A study of bullying and ASD suggested that children with ASD should be in an environment that is highly staffed and regulated for bullying (Rowley et al., 2012), but this is difficult for public schools to maintain and it is hard for some families to afford institutions with these preferred qualities. Another study of bullying and ASD suggested a behavior intervention for children with ASD that taught social skills, promoted consistent parent check-ins, and a peer buddy system (Chen & Schwartz, 2012). Much like this suggestion a study was done on the S.S.GRIN, which was a social skill program implemented in schools for children with peer problems. The treatment was successful in increasing social acceptance and self-esteem of the children as well as lowering their depression, anxiety, and aggressive behavior

(DeRosier & Marcus, 2005). In addition, Laugenson and Frankel (2009) did a study on outpatient parent-assisted social skills, which along with other social skills targeted teasing and bullying. In their study they had 33 teens with ASD do homework assignments, which the parents helped with, in order to teach a variety of skills. The treatment effectively increased teens' with ASD social etiquette, get-togethers with friends, and quality of friendships. This study did not discuss its effects on bullying. One limit of this study was that it focused on teaching the children avoidant behaviors and to tell an adult, but school psychologists have rated these as the least effective strategies (Sherer, & Nickerson, 2010). Moreover, the problems with the above studies are that it is very difficult to teach children with ASD social skills and can take an extensive amount of time in therapy. Social skills therapy is very important for children with ASD. Unfortunately, while the children are in therapy for social skills, they are still being repeatedly bullied. Therefore a more direct intervention to help these children handle being bullied is necessary.

The research on bullying is limited because it mainly focuses on a general way to decrease bullying, but does not address how to respond to bullying. Also, there is very little research on how to help victims of bullying, and there is even less research on interventions for children with ASD, that target helping these children respond to bullying. The research that does exist on interventions, for victims and children with ASD, is social skills based and does not directly teach how to appropriately respond. Moreover, there is no literature on teaching victims how to assertively respond to bullying. Therefore, an intervention program is needed, to teach children who are frequent victims, specifically children with ASD, to assertively respond to bullying, and since video modeling has been proved successful in past research it seems like an appropriate procedure toward this end.

Video modeling

Imitation is one of the fundamental methods of learning (McCoy & Hermansen, 2007), but imitation in naturally occurring settings can be difficult for children with Autism Spectrum Disorder. Modeling has been used in therapy for children with ASD in order to teach them a variety of skills. Modeling manifests in two forms: vivo modeling, live modeling where an adult or peer acts out the appropriate behaviors and the child observes, or video modeling, where the child watches a video of an adult, peer, or him/herself performing the target behavior (Charlop-Christy, Le, & Freeman, 2000; Delano, 2007; Sancho, Sidener, Reeve & Sidener, 2010).

Video modeling is supported by Bandura's (1969) social learning theory (Delano, 2007), and has been used in the past to effectively teach children with and without ASD. Based on a review of the literature, video modeling is an effective method to teach a variety of skills to children with ASD. Past studies utilizing video modeling therapies have targeted and successfully promoted an acquisition of appropriate behaviors, including social-communicative behaviors, functional living skills, and perspective-taking. Video modeling has also effectively decreased challenging behaviors in children with ASD. Furthermore, in many of the studies reviewed, generalization and maintenance were reported (Delano, 2007). Additionally, Nikopoulos and Keenan (2004) used video modeling to enhance the social initiations and the reciprocal play of children with ASD. In this study the learned skills were maintained at 1- and 3- month follow-ups. Research has additionally shown that video modeling compared to vivo modeling results in quicker acquisition of the targeted task and is successful in generalization (Charlop-Christy et al., 2000).

Studies on video modeling have also successfully taught social skills to children with ASD. While many past studies were unable to teach children with ASD perspective taking Charlop-Christy and Daneshvar's (2003) study successfully taught three children with ASD perspective taking through video modeling, and found generalization. Similarly, Charlop, Dennis, Carpenter, and Greenberg's (2010) study used video modeling to teach children with ASD socially expressive behaviors. Their intervention effectively and rapidly taught appropriate verbal comments, intonation, gestures, and facial expressions without prompting or reinforcers. This study also displayed generalization and response variation, thus illustrating the efficiency of video modeling.

It is theorized that video modeling is very successful with children with ASD because it is intrinsically reinforcing. Charlop-Christy, Le, and Freeman (2000) stated that video modeling may be more stimulating than vivo modeling. Thus, if this therapy is more stimulating the child will be more likely to observe the behavior being targeted, therefore resulting in a more effective method. In addition, Delano (2007) theorized that video modeling might be so effective because children with ASD have deficits in language and social interactions, and video modeling does not require the child with ASD to interact socially, unlike vivo modeling where social interaction occurs between the live model and child. Therefore, video modeling may allow the child to attend more to the material being taught, since they are not being challenged by social interactions.

Additionally, video modeling is an effective therapy for children with ASD since many children with ASD are visual learners. Samson, Mottron, Souliéres, and Zeffiro (2012) did an ALE meta-analysis of visual processing studies of both ASD and non-ASD groups. Their analysis and review revealed that individuals' with ASD visual systems are more engaged during

a range of tasks than non-ASD individuals. This is emphasized by the Wechsler Intelligence Scale where people with ASD show strength during the visio-spatial tasks, including Block Design, the Embedded Figures Task, visual search tasks, and visual discrimination tasks. Also neuroimaging studies show stronger activity in the visual cortex of ASD participants during memory and language tasks (Samson et al., 2012).

Furthermore, video modeling is very useful because it transforms abstract concepts into concrete actions that can be memorized and learned. Bullying can be a very abstract and intangible idea for children with ASD to grasp and understand how to deal with. However, by transforming an anti-bullying intervention into video modeling, it allows the participants to watch and memorize a range of appropriate reactions to bullying. Thus, this converts the conceptual idea of an assertive response into concrete actions that the participant can memorize and enact.

Current Study

Past research on bullying does not address teaching victims to assertively respond to bullying, and very little research has been done to help children with ASD respond to their frequent victimization. Therefore, the present study combines the need for an intervention focusing on appropriate responses to bullying for children with ASD, with previous research supporting video modeling as an effective method of teaching children with ASD. The current study is an anti-bullying intervention for children with ASD that targets giving victims the skills to response to bullying. Specifically this study seeks to teach children with ASD through video modeling how to appropriately cope with bullying situations by assertively responding. The video modeling intervention will address how to assertively respond to physical bullying, verbal

bullying, and social exclusion, as well as teaching children to tell their mother about the bullying. It was hypothesized that children with ASD will learn through video modeling coping skills such that after intervention when approached by a bully they will appropriately and assertively respond to the situation.

Method

Participants

Participants in this study were six children (Alex, Jill, Abby, Jack, Nick, and Justin) attending a weekly after-school behavior therapy program for children with Autism Spectrum Disorder. Two of the children were female and four were male. The children were between 8 and 12 years old, and were diagnosed with ASD by two independent agencies. These children were chosen to participate based on their assessment as high-functioning and because their parents reported at least one bullying incident.

Materials

Skills Acquisition Assessment Session (SAAS) video and questions. Six short videos were created to simulate bullying situations. (See Appendix A for the SAAS scripts.) In each of the three videos a child is bullied in three different ways: exclusion, physical bullying, and verbal bullying. For example, in Video 1, the exclusion situation depicts a child sharing cookies with everyone except one child; the physical bullying situation involves a child being repeatedly tapped; and the verbal bullying scene is a child being called a "shorty pants." Paired with each video was a set of four questions. These questions were created to assess how each child would cope with the bullying situations portrayed in the videos, and specifically if the child would respond assertively (See Appendix B for the SAAS assessment questions). The series of four questions included: three questions concerning what the child would do in each situation and a

fourth question which is always "Would you tell your mother if anything from the movie happened to you?" For example, the first three questions relating to Video 1 include: (1) What would you do if someone shared their cookies with everyone but you? (2) What would you do if someone would not stop tapping you? and (3) What would you do if someone called you shorty pants? In some cases the child had a hard time responding to these questions so we asked what would you *say,* a more direct question, instead of what would you *do,* which appeared to be too broad. This was easier to comprehend for some of the children.

Assertive Responding Video Modeling (VM) and Assessment. Three videos were created for intervention (See Appendix C for the VM scripts). The main purpose of these videos was to teach children with ASD assertive responses to bullying. In each of the three videos a victim is bullied in three different ways: exclusion, physical bullying, and verbal bullying. The victim assertively responds to each bullying situation, and in the last scenario (scenario 4) of the video the victim says to her mother, "Mom, someone was not nice to me today." For example, in Video 1 the exclusion situation depicts a group ignoring the victim by turning away from her when she walks up to join, and the victim assertively responds by saying, "Please let me play." The physical bullying scene involves a bully endlessly poking the victim in the shoulder, so the victim assertively responds by saying, "Please don't do that." Finally, the verbal bullying scenario involves the bully calling the victim a nerd and the victim responding, "Please don't call me names." All three videos were similar, but showed slightly different forms of exclusion, physical bullying, verbal bullying, and assertive responses in order to have multiple exemplars to facilitate concept development and generalization (Stokes & Baer, 1977). The victim/model in these videos spoke clearly and in an exaggerated manner when giving her assertive responses as recommended by previous research (Charlop & Milstein, 1989).

Like SAAS each video was paired with four questions, which made up the Video Modeling (VM) assessment (See Appendix D for the VM assessment questions). The main purpose of the questions was to assess the face validity of the VM at teaching assertive responding. These questions were similar to the SAAS questions; the first three questions were asking what the child would do/say in each situation and a fourth question was "Would you tell your mother if anything from the movie happened to you?"

Parent-Version Bullying Survey for ASD. A shortened version of Chen and Schwartz's (2012) *Bullying Survey for ASD* was used as a pre-intervention parent survey (see Appendix E). The survey determined in what ways and how often their child was being bullied. This survey included 10 questions about their child's victimization and parents were asked to respond using a 4-point Likert scale (0 = never, 1 = once or twice, 2 = three or four times, and 3 = five or more times). Chen and Schwartz (2012) found that the victimization scale of the parent-version survey had an internal consistency of $\alpha = .88$. For the current study, an exploratory question was added to the end of the survey in order to have a more comprehensive understanding of the child's situation and his/her reactions to bullying.

Procedure

Design. A multiple baseline design across children was used to assess the effect of the video modeling intervention and to replicate findings across the six participants. A multiple probe design across children was used to assess generalization. The experiment took place over a nine week period of time during the participants' weekly therapy sessions. During baseline, SAASs and generalization probe skits were conducted to assess the children's pre-intervention responses to bullying. Four to 12 baseline sessions were conducted for each participant. After baseline, the video modeling intervention was presented. Intervention was introduced in a

staggered form across children such that, once Participant 1's data showed an effect was occurring, the following participant, Participant 2, started treatment. During intervention, VM was presented to the participant and, the participant was asked questions to assess for learned assertive responses. Once the participant got at least three of the four questions correct during two consecutive VMs, VM criterion was met and then SAAS was performed. SAAS was conducted to assess if the child had learned to assertively respond to a general sample of bullying situations that were not presented during VM. SAAS criterion was met and the intervention was ended if the participant answered three out of the four SAAS questions correct on two consecutive SAASs. After intervention, one to two generalization probe skits were performed to assess for generalization. Figure 1 outlines the procedure.

Baseline. The participant's response skills were assessed through SAASs and generalization probe skits during baseline. Abby had four baseline sessions, Justin had six, Jack had seven, Nick had nine, Jill had 10, and Alex had 12. Baseline sessions consisted of either a SAAS or a generalization probe skit. For SAAS a participant was taken to the office and instructed that he/she was going to watch a video. The participant was told to, "Pay close attention and then I am going to ask you some questions." The participant was then shown one of the six SAAS videos. Following the video the participant was asked a series of four questions as described above. The participant was given no feedback for correct or incorrect answers. Feedback was only given for paying attention to the video. The sessions were videotaped.

The generalization probe skits took place in a classroom and were videotaped. One participant and familiar undergraduates working at the Claremont Autism Clinic were involved in each skit. Before the skit the child was told that we were going to do a skit. During the skit the adult followed a script and pretend-bullied the pretend victim first through exclusion, then

physical bullying, and then verbal bullying (See Appendix F for the bullying scripts). During each pretend bullying scenario the participant was given about 10 seconds to respond to the bullying. If the child did not say anything during those 10 seconds the experimenter announced next scenario and the next pretend bullying situation began. If the child did start to respond during the 10 seconds we continued with that situation until they were done responding, it was clear they were not going to appropriately respond, or it was clear that they had fully and appropriately responded to the bullying. If the child assertively responded to the bullying the adult stopped bullying the child and appropriately replied to their response. For example, if the child said "Stop poking me," the adult would stop poking them and would reply, "Okay, I will stop poking you." If a child showed any signs of distress during the skit the scenario was immediately ended. After the skit was over we again explained to the participant that it was just a skit and that it was all pretend.

Intervention. After baseline ended the child started intervention. For the video modeling intervention, the participant was taken to the office and instructed that he/she was going to watch a video. The participant was told to, "pay close attention and then I am going to ask you some questions." One of the three intervention videos was shown to the participant and questions were asked. Originally, like SAAS, the questions were asked after the child had watched the whole video. During intervention, we realized the conceptual matching of the correct response to the appropriate type of bullying was very hard for some of the children while they were learning the assertive responses. To fix this problem we decided to ask the questions directly after the matching scenario, such that the child watched Scenario One, where the victim is bullied via exclusion and assertively responds, then the video was stopped and the child was asked, "What would you do/say if someone ignored you?"

VM sessions were continually presented until the participant met VM criterion by assertively responding to at least three out of the four assessment questions on two consecutive VMs. Once VM criterion was met the participant was assessed through two SAASs to see if the participant met SAAS criterion, which was responding assertively to at least three out of the four assessment questions on two consecutive SAASs. If the participant did not meet SAAS criterion, we continued to present two VM sessions back and forth with two SAASs over the nine week period of time until both criterions, VM criterion and then SAAS criterion, were met consecutively. Once the participant met both criterions consecutively, intervention was over, and we conducted one to two post-intervention generalization probe skits as described in baseline.

During intervention the participant was given no feedback for correct or incorrect answers. Feedback was given for paying attention to the video. Also, four of the six participants were prompted to pay attention to what the victim was saying, when it was realized they were not responding to the video modeling.

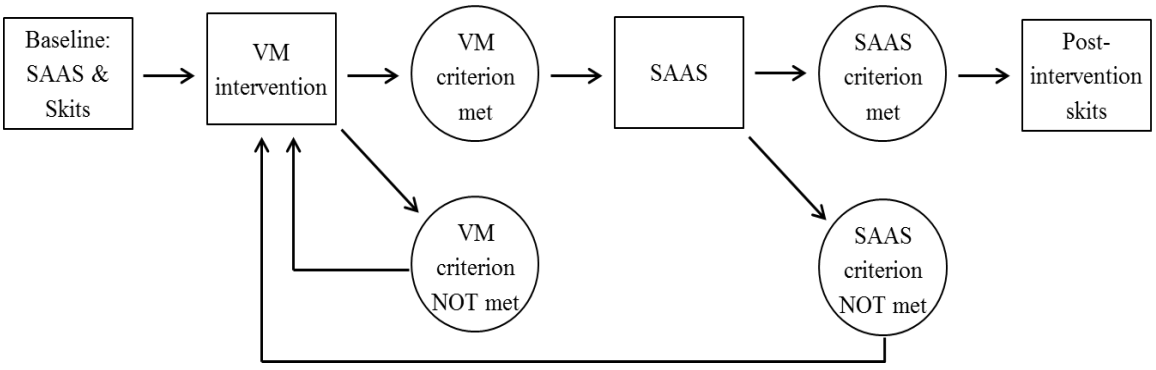

Fig. 1. Procedure

Dependent Measures. SAAS, VM, and the skits were scored on a four-point scale. SAAS, VM questions, and the child's reaction to each bullying situation during the skits were coded as appropriate responses (one point) or inappropriate responses (zero points.) An appropriate response was operationalized as an assertive response, telling an adult when paired with an assertive response, and saying yes when the participant was specifically asked if they would tell their mother. An inappropriate response was operationalized as an aggressive response, a non-response, an avoidance response, telling an adult when not paired with an assertive response, and saying no when the participant was specifically asked if they would tell their mother. (See Appendix G for more details and examples of these operational definitions). The experimenter coded the assessments.

Interobserver agreement. A second rater was given the operational definitions of appropriate and inappropriate responses and in the same manner as the researcher independently coded one-third of the assessment sessions (An example of the coding sheet is provided in Appendix H). The assessment sessions were randomly selected using Excel. Interobserver agreement was calculated by dividing the total number of agreements between the second rater and the experimenter by the total number of agreements and disagreements and then multiplying it by 100. Interobserver reliability averaged across all six children was 97.73% for responses to bullying.

Results

Figure 2 shows the number of appropriate responses each child displayed in each session. During baseline, one of the six children gave no appropriate responses and the other five children inconsistently presented appropriate responses, which were intermingled with inappropriate responses. After the assertive response VM intervention was introduced, all of the children

showed a general trend of increasing appropriate responses and met both criterions. In the course of the intervention the children viewed the assertive responding intervention videos three to 12 times. During the post-treatment generalization skits four of the six children demonstrated all four of the appropriate responses on one of their generalization probes.

Abby had four baseline sessions and six video modeling sessions, two post-intervention SAASs, and one post-intervention generalization probe skit. Three of Abby's baseline sessions were SAAS and one was a generalization probe skit. In all four sessions Abby did not display any appropriate responses. After the video modeling intervention was introduced, Abby met VM criterion after six video modeling sessions, and met SAAS criterion in two SAASs. During the post-generalization probe skit, Abby responded appropriately to all 4 opportunities.

Justin had six baseline sessions, four video modeling sessions, two post-intervention SAASs, and one post-intervention generalization probe skit. Five of Justin's baseline sessions were SAAS and one was a generalization probe skit. Justin displayed various appropriate responses during the baseline SAASs and answered three out of four questions correctly on two different SAASs (nonconsecutively), but his appropriate responses were inconsistent. Additionally, during his pre-intervention generalization probe skit he did not display any appropriate responses and inappropriately responded by pretending to physically harm the pretend bully. After the video modeling intervention was introduced, Justin met VM criterion after four video modeling sessions and met SAAS criterion in two SAASs. During his post-treatment generalization skit, Justin displayed the targeted assertive responses during one of the four opportunities.

Jack had seven baseline sessions, 12 video modeling sessions, seven post-intervention SAASs, and one post-intervention generalization probe skit. Five of Jack's baseline sessions were SAAS and two were generalization probe skits. Jack appropriately responded once during all five SAASs to the fourth question regarding telling his mother, but he did not display any assertive responses during baseline, and did not display any appropriate responses during the baseline generalization probe skits. After the video modeling intervention was introduced, Jack met VM criterion after eight video modeling sessions, but he did not meet SAAS criterion in the following two SAASs, so we continued with VM. Jack met both criterions consecutively after 12 VM sessions and seven SAASs. Jack was prompted during the video modeling. The prompts included, "Who says the right thing in these movies?" and when he got the answers right for the first time he was given a pat on the back and told, "That's right". During the post-treatment generalization skit, Jack displayed the targeted assertive responses during all four opportunities.

Nick had nine baseline sessions, five video modeling sessions, two post-intervention SAASs and one post-intervention generalization probe skit. Six of Nick's baseline sessions were SAAS and three were generalization probe skits. Nick inconsistently displayed some appropriate responses during baseline SAASs and generalization probe skits. After the video modeling intervention was introduced, Nick met VM criterion after five VM sessions and SAAS criterion after two SAASs. Nick was prompted during video modeling that the answers were in the video. During his post-treatment generalization skits, Nick displayed the targeted assertive responses during two of the four opportunities.

Jill had 10 baseline sessions, four video modeling sessions, two post-intervention SAASs, and two post-intervention generalization probe skits. Eight of Jill's baseline sessions were SAAS and two were generalization probe skits. Jill inconsistently displayed some appropriate responses

during baseline SAASs and generalization probe skits. After the video modeling intervention was introduced, Jill met VM criterion after four VM sessions and SAAS criterion after two SAASs. Jill was prompted during video modeling to "Focus on what you learn from the video". During Jill's first post-treatment generalization probe skit, Jill displayed the targeted assertive responses during three of the four opportunities. During Jill's second post-treatment generalization probe skit, Jill displayed the targeted assertive responses during all four of the opportunities.

Alex had 12 baseline sessions, three video modeling sessions, two post-intervention SAASs, and two post-intervention generalization probe skits. Nine of Alex's baseline sessions were SAAS and three were generalization probe skits. Alex inconsistently displayed some appropriate responses during baseline SAASs, and no appropriate responses during baseline generalization probe skits. After the video modeling intervention was introduced, Alex met VM criterion after three VM sessions and SAAS criterion after two SAASs. Alex was prompted during video modeling by asking him, "What did you learn on the video?" During Alex's first post-treatment generalization probe skit, he did not display any appropriate responses, but was silent during the entire skit. During Alex's second generalization probe skit, he appropriately responded during all four of the opportunities.

Figure 3 shows the results from the pre-intervention Parent-Version Bullying Survey for ASD. This figure represents the number of participants who have experienced different forms of bullying during this school year. The survey found that all of the participants had been excluded from groups, and five out of the six participants had been picked on, laughed at, teased, and called names. Four of the six participants had negative things said about them, two of the participants had rumors spread about them, and one participant had been hit or kicked. None of

the parents reported their child being threatened/physically harmed or having property stolen/destroyed.

Figure 4 shows the results of each child from the Parent-Version Bullying Survey for ASD. The figure illustrates the parents report of the number of times this school year (and for Alex in the past month, as specified by his mother), each child was bullied in the following ways; picked on, excluded from, laughed at, hit or kicked, threatened or physically harmed, teased, called names, negative things said about him/her, property stolen/destroyed, and rumors spread. The results confirm that the children are being frequently bullied.

Abby's mother reported that three or four times this year she was excluded from the group and laughed at. Once or twice Abby was picked on, hit or kicked, teased, called names, had negative things said about her, and rumors spread about her. In the open-ended question Abby's mother reported that Abby recently changed schools, but before that the bullying was more frequent.

Justin's mother reported that five or more times this year Justin was picked on, excluded from the group, laughed at, teased, and called names. Also three or four times this year Justin had negative things said about him. In the open-ended question Justin's mother emphasized that he is being teased, but only tells her if she asks him.

Jack's mother reported that three or four times this year Jack was teased, and once or twice Jack was picked on, excluded from the group, laughed at, called names, and had negative things said about him. In the open-ended question Jack's mother stated that in the past when Jack was bullied he would cry on the school bus until she picked him up, and that it was difficult to ask him about it because his only response was that "he was sad."

Nick's mother reported that five or more times this year Nick was teased, and three or four times Nick was picked on, excluded from, laughed at, called names, and had negative things said about him. Also once or twice rumors were spread about Nick. In the open-ended question Nick's mother reported that Nick is being manipulated by a bully. Also at school Nick is poked, tapped, and called names frequently. Furthermore, Nick's mother stated that Nick does not always realize the other children are being mean or excluding him.

Jill's mother reported that once or twice this year Jill was excluded from the group. In the open-ended question Jill's mother stated that there is a bully who will not let her play basketball even though she is on the team.

Alex's mother reported that five or more times in the past month Alex was excluded from the group, and once or twice Alex was picked on, laughed at, teased, and called names. In the open-ended question Alex's mother stated that Alex is called "weird" at school and responds by walking away. At home, after being bullied at school, Alex cries and is mad for a few days to a week.

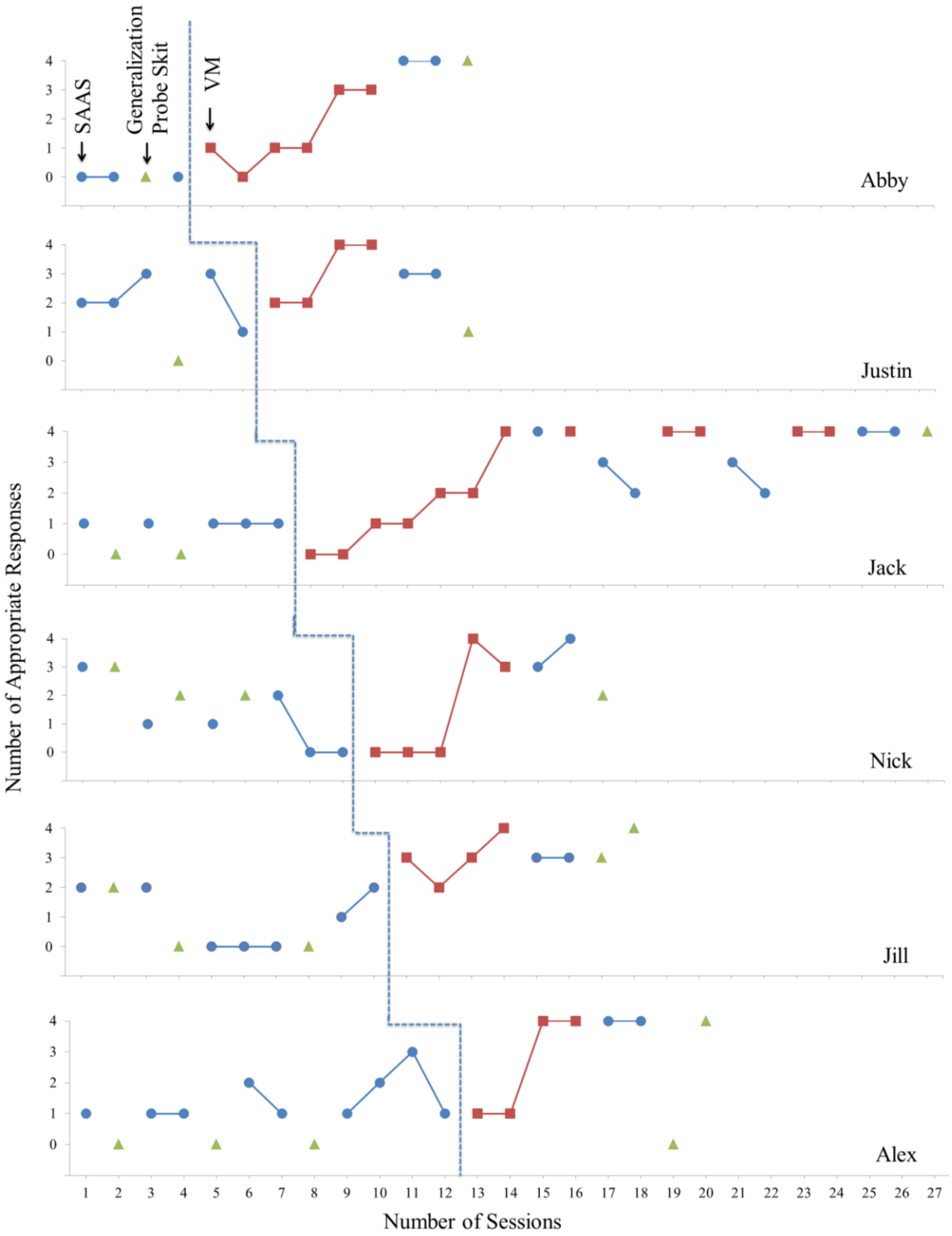

Fig. 2. Multiple-Baseline Across Participants Analysis for Appropriate Response to Bullying Behaviors.

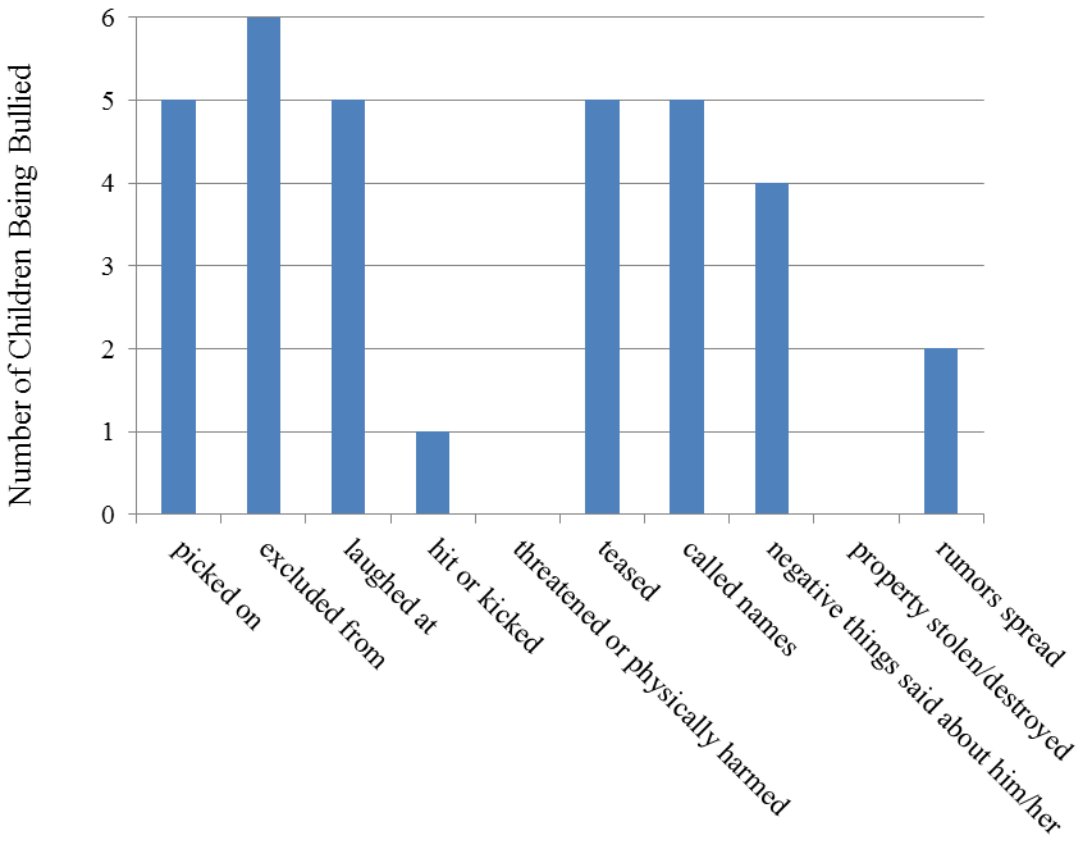

Fig. 3. Results from the Parent-Version Bullying Survey for ASD

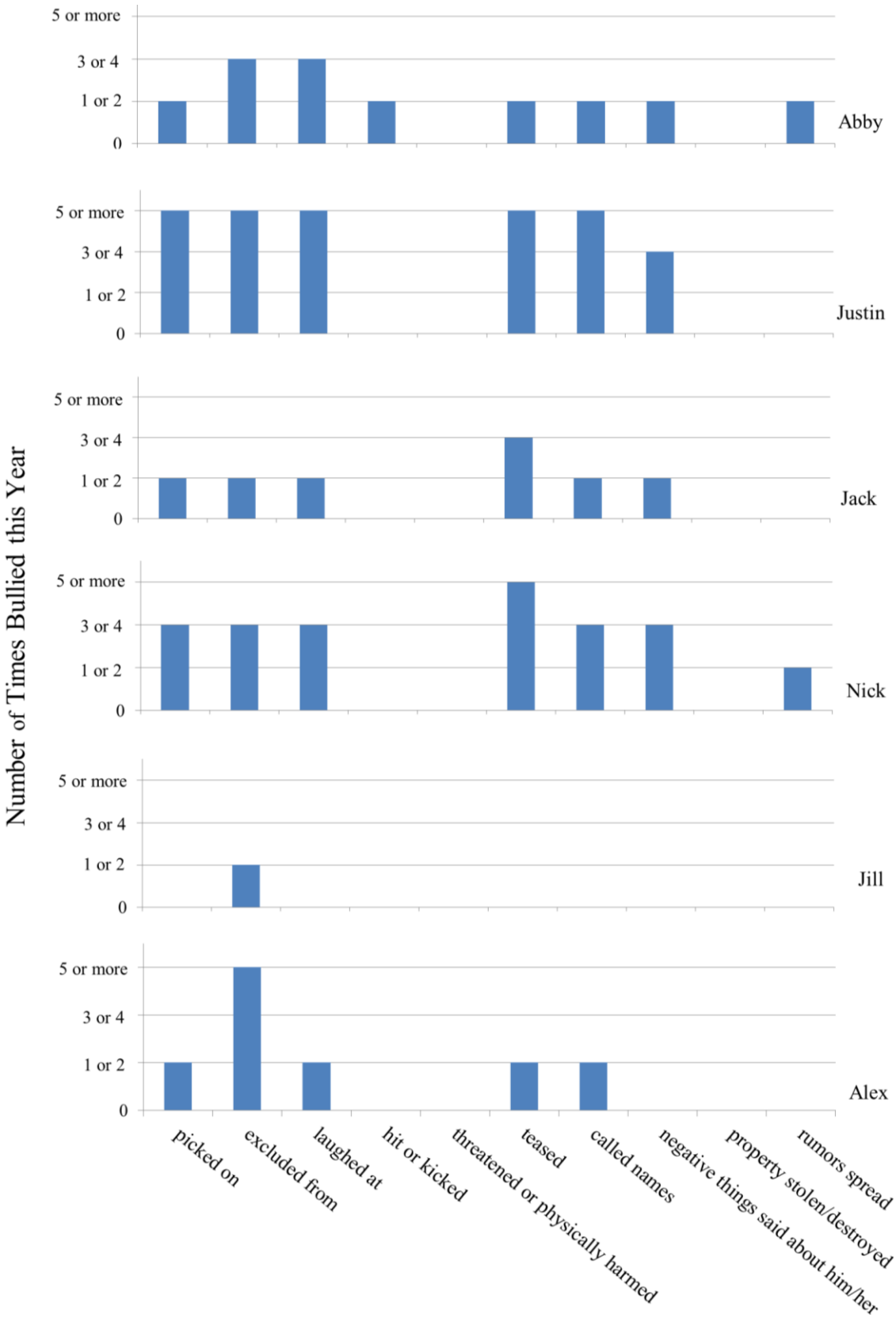

Fig. 4. Results of each child from the Parent-Version Bullying Survey for ASD

Discussion

The results of the present study supported the hypothesis and indicate that video modeling successfully taught six children with ASD to assertively respond to bullying. Specifically, the children successfully learned to assertively respond to physical bullying, verbal bullying, and social exclusion, as well as to tell their mother when they were bullied. All of the children reached VM criterion (at least three of the four questions correct during two consecutive VM sessions) and SAAS criterion (at least three out of the four SAAS questions correct during two consecutive SAASs). Four of the six children displayed rapid acquisition of the targeted skills, with three of the children, Justin, Jill and Alex, reaching VM criterion after four VM sessions and one of the six children, Nick, after five VM sessions. The other two children showed learning curves and met VM criterion after six (Abby) and seven (Jack) VM sessions. All of the children, excluding Jack, reached SAAS criterion promptly with two SAASs. Jack, who had a hard time with the conceptual matching of the appropriate response to the type of bullying, reached SAAS criterion after seven SAASs.

This study contributes to research on bullying by developing an intervention program that gives victims the skills to respond to bullying. Specifically, this study broadens the research by presenting an effective video modeling intervention that teaches children with ASD to assertively respond to bullying. While the majority of past research focuses on generally reducing bullying in schools, this intervention focuses on empowering the victims by giving them the necessary tools to assertively respond. In addition, previously, little research had been done to help children with ASD deal with their high frequency of victimization, and the research that does exist is based in teaching social skills. This study expands on this research through creating a straight

forward intervention that directly addressed the problem that children with ASD do not know how to appropriately respond to bullying.

Furthermore, this study demonstrates the utility of video modeling as a teaching tool for children with ASD. The results from this study further support past research findings that video modeling can successfully teach social skills to children with ASD (e.g. Charlop-Christy & Daneshvar, 2003). This study expands on past work by demonstrating that video modeling can teach children with ASD to assertively respond to bullying. In addition, we go beyond previous research by showing that video modeling can help children with ASD understand more abstract concepts like being assertive and what exclusion looks like.

Video modeling is not only a very effective therapy practice, but also is well liked by the children. In this particular study the children were very willing to watch the videos and would sometimes ask when they would get to watch another. One child, who normally is unwilling to leave a current activity or have a change in the schedule, always happily would come to watch another video upon request. Also, some children continued to ask when they could watch more videos after they had finished the intervention. This shows that video modeling is in itself very reinforcing, and may explain why it has been shown to be so effective. This supports past research that has postulated video modeling is effective due to its reinforcing qualities, promoting the child to attend to the video, and thus imitate the targeted behaviors (Charlop et al., 2010). Furthermore, the quality of being innately reinforcing is incredibly important when working with any child because if the child is not interested in the activity, it is much less likely that they will pay attention and successfully learn the desired skill. Not only is video modeling effective, but it is also a very inexpensive and time efficient therapy practice (Charlop-Christy, Le, & Freeman, 2000).

This study demonstrates the substantial problem ASD children face with bullying, and the need to teach children with ASD how to appropriately respond to this inevitable and unfortunate scenario. The results found via the parent survey aligned with the results of many past studies. All of the children in this study had been bullied at some point this year and many with frequency. This adds to the growing data that illustrates bullying as a significant problem for children with ASD (e.g. Chen & Schwartz, 2012). The survey also adds to the research by demonstrating that the children in this study are most frequently being bullied in the following ways; exclusion, being picked on, laughed at, teased, and called names. Furthermore, the survey's exploratory question demonstrates that similar to past research, the children with ASD use poor coping methods. Prior to the intervention some of the mothers' responses were that their child would get mad for long periods of time or that their child would cry until they picked him/her up. Additionally, one of the mothers reported that her child was being called "weird" for being unable to follow the rules of a game or not keeping up with other kids. This experience parallels past research that emphasizes children with ASD being at high risk for bullying and considered "different" by their peers because of the characteristics of ASD (e.g. Blake et al., 2012).

Strengths and Limitations

One of the primary strengths of this study was that it measured generalization. Generalization probes were conducted during baseline and post-intervention. Generalization can be very difficult for children with ASD and is a very important concept to measure in researching therapy practices (Stokes & Baer, 1977). In the present study all but one child's post-intervention generalization probes improved compared to baseline, and four of the six children appropriately responded during all four opportunities on one of their post-intervention generalization probe

skits. Of the other two children, Justin improved from his baseline generalization probe by one point. Justin's situation was particularly difficult because in baseline he showed violence during the skit, while the other children were more likely to demonstrate non-responses. We hypothesize that an additional intervention would be necessary for Justin in order to teach him that violent responses like hitting the bully are not appropriate. Because of this Justin improved during the exclusion scenario of the generalization probe skit (where he originally gave a non-response), but did not improve during the verbal or physical bullying scenarios, where he used violent gestures in response to the bullying. The second boy, Nick, did not show an improvement from generalization. During the time period that the intervention took place Nick was having a particularly hard time at school with bullying. This influenced Nick's answers throughout the intervention. During baseline Nick was being bullied at school, but with less frequency. Once intervention had started, Nick's school situation had gotten worse and appeared to be affecting his answers to the questions. Nick would answer the assessments by describing what he did at school, but he was reluctant to imitate the videos. As the bullying continued, Nick's answers got more aligned with non-responses. This appeared to be due to the fact that at school he would ignore the bully, causing the bully to temporarily stop, thus reinforcing the non-response behavior. Although this was temporarily working for Nick, the bullying was not lessening at school, which further supported his need for the assertive responding intervention. Although Nick did learn the assertive responses by the end of the intervention and passed both criterions, his difficulties at school definitely affected his data and especially his generalization probe skits.

Another strength was the rigorous set of qualifications necessary for the child to have mastered the targeted skill of appropriate assertive responses. In order for the children to complete intervention they had to meet both VM criterion and then SAAS criterion

consecutively. This method ensures that the children not only assertively respond directly after the modeling was shown, but also during SAASs, which were performed later. Furthermore, each of the six SAAS videos and three video modeling videos used different exemplars from each other for physical bullying, verbal bullying, and exclusion. This method ensured that the child not only knew how to respond to the multiple exemplars presented during VM, but also to the multiple exemplars of bullying shown during the SAASs. This confirmed that the child would be able to appropriately respond to many different types of bullying instead of just the ones in the VM sessions. The multiple exemplars also helped to promote response variation (Stokes & Baer, 1977). All of the six children displayed response variation in some of their answers. For example while the video models three different answers for physical bullying, "Please don't do that", "Ouch, please don't do that, that hurts", and "That's not a nice thing to do," during SAAS Alex responded by saying, "Please don't pull my hair," an appropriate variation of the modeled examples.

The main limitation of this study was that we did not address actual real life bullying situations at school. Although we measured skills acquisition, and found that we successfully taught the participants assertive responses, we did not create actual bullying situations and were unable to assess the children at school to see if they used the assertive responses when they were bullied. While this is a significant limit, we did not create real bullying situations because we wanted to avoid harm or distress to the children. We did conduct generalization probe skits, which simulated bullying situations. The purpose of the skits was to assess with the greatest possible reliability, while still buffering the children from harm, if the children would use the targeted assertive behaviors in bullying scenarios. Therefore, even though there was no direct

observation of how the children responded at school, this study's findings demonstrate an intervention that takes promising steps toward empowering children with ASD.

Another limitation of the study was that we changed the VM methods after we had started intervention with Abby. Originally, we had the child watch the VM video and then we promptly assessed the child via SAAS. We quickly realized this was too complicated for the children at the beginning of their learning process and changed it to where the child watched the VM video and then was asked questions about the situations from the video immediately after the video was over. After starting the intervention with Justin, Jack, and Nick it was further realized that asking the questions at the end of the video was also very difficult in the primary stages of learning how to assertively respond. Therefore, we adjusted the methods such that after each scenario we stopped the video and asked them the corresponding question. This appeared to greatly lessen confusion and help the child in their learning process. Because of the change Jill and Alex were the only children that solely received the new VM method. This may explain why they both met VM criterion so rapidly, while the other children (excluding Justin who too met VM criterion after four VM sessions) needed a few more VM sessions.

An additional limitation was that we continued to perform SAAS, such that we had the children watch the full video and then answer the corresponding questions. This method was very difficult for some of the children and elicited confusion. For example, Jack had a particularly hard time with SAAS and reaching SAAS criterion because of the conceptual matching of the appropriate response to the correct type of bullying. It may have been helpful to modify SAAS so that it was performed like VM, such that after each scenario the appropriate question was asked. Although the SAASs were demanding, after multiples viewings of the video modeling Jack was able to make the connections. Additionally, the multiple viewings allowed

him to learn and understand the more conceptual types of bullying like exclusion, which was emphasized by the end of his intervention when he would pointed out, "that's excluding."

Although the SAASs were very difficult they may also be seen as a strength of the study, since the rigorous SAAS helped show that the child had learned the skill and that it had been taught through video modeling. Also, the multiple viewings of SAAS helped Jack learn these conceptual categories. Therefore, even though the SAAS structure was confusing for Jack, the demanding qualities may have taught him more over the course of the intervention than it would have had we modified it to be more like VM. Moreover, because of the way SAAS is structured it showed that the children had accomplished the conceptual matching and had a firm grasp on how to appropriately respond to bullying.

Furthermore, this study was not a "pure" intervention in the sense that some of the children required prompting. Some of the children had very long baselines, which included no response as to if the child was giving correct or incorrect answers. This caused the children to think what they were saying was correct, since they were not told otherwise. Because of this prompting was necessary for some of the children to spur their learning during intervention. Furthermore, while the long baseline added to this problem it can also be regarded as a strength because the long baselines compared to the rapid learning curves during intervention show that the video modeling was successful in teaching the children.

Finally, a limitation of the study was that the intervention could be viewed as too young for Nick. Most of the modeled responses included "Please don't do that" and "It's not nice to call names." Although these responses were age appropriate for most of the children in this intervention, and also were both assertive and appropriate compared to the children's pre-

intervention responses including, non-responses and crying, the responses were not exactly age appropriate for Nick who is going into middle school. This showed because Nick did not want to imitate the modeled behaviors, which later affected his post-intervention generalization probe skit. In the future it would be useful to develop video modeling with assertive responses for older children, like, "Dude stop that it's annoying."

Future Research

The findings of the present study suggest that video modeling can be used to successfully teach children with ASD to assertively respond to bullying. Since this is only a preliminary study, further research is necessary. In the present study we only assessed if the child had learned the skill. Due to time restraints it was not possible to assess if the skill generalized to school, if this effected the child's bullying situation, or if this helped the child's self-esteem by making him/her more competent in bullying situations. These are all important aspects that should be looked at in future research. For instance, it would be useful if they could follow the children at school in order to really understand the child's situation and see if the child is able to use the learned skills at school within an actual bullying situation. Furthermore, it would be beneficial to continue the study longitudinally and collect data on the type of bullying and how often the children get bullied over time. A longitudinal study would allow us to understand if the assertive response helped decrease the child's victimization. Future research may also want to assess the effect of this intervention on the child's self-esteem. Past research has suggested that being able to respond to bullying situations protects the child from the bullying decreasing their self-esteem (Frisen, Hasselblad, & Holmqvist, 2012). Therefore, a future study may consider assessing the children's self-esteem pre-intervention and post-intervention.

Furthermore, as we discussed above the videos were created for young children, therefore while the general message was necessary for all of our participants to learn, one of our participants, Nick, thought the videos were too young for him. This affected his learning process and desire to attend to the material. Therefore, it would be beneficial for future research to develop an intervention for older children with ASD. This type of video modeling may involve a couple of characteristics. First of all in our video modeling assertive response included “Please don’t push me.” A response for an older child could be, “Dude don’t do that!” It is slight changes in the language like this that could be very useful. Also in our videos we stopped right after the victim appropriately responded. Because of this it appeared that Nick was not convinced that this method would stop the bullying. Thus, it may be useful in future research to show the model in the video obtaining the desired response. In other words, it would be effective to show that the bully stops the bullying once the model responds assertively. Hence, children may be more motivated to learn the targeted skill if they know it works.

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Appendix A

Table 1

SAAS video scripts

		The Situation
SAAS 1	Scenario 1	Four girls are at a table. One girl says, “Hey who wants cookies”. All the girls say, “I do.” The bully proceeds to share her cookies with everyone but the victim.
	Scenario 2	A bully keeps tapping her finger on a victims shoulder.
	Scenario 3	A bully walks past the victim and says, “Hey shorty pants.”
SAAS 2	Scenario 1	A bully walks up to three girls and says “Hi guys, I brought an extra juice”. The bully proceeds to hand the juices out to everyone, but the victim.
	Scenario 2	A bully taunts the victim by continuously kicking her leg.
	Scenario 3	A bully tells the victim, “You’re such a weirdo.”
SAAS 3	Scenario 1	Two girls are lined up to be picked to play basketball. The bully says to one girl, “I want you on my team.” The two girls run off to play, leaving the victim behind.
	Scenario 2	Two girls are chatting when a bully walks up, pushes the victim, and says, “Move.”
	Scenario 3	The victim trips and hurts her knee. Then a bully walks up and says, “Don’t be such a baby.”
SAAS 4	Scenario 1	There are three girls standing with each other. One girl says to another girl, “Let’s play tag.” The two girls run off leaving the victim behind and standing by herself.
	Scenario 2	A bully pulls the hair of the victim.
	Scenario 3	A bully says to the victim, “You’re such a dork.”
SAAS 5	Scenario 1	Two girls are chatting. Another girl walks up and invites one of the girls to go to the lunch bench. They walk away leaving the victim all alone.

	Scenario 2	A bully says to the victim, “Let me sit there” and pushes the victim in the chair.
	Scenario 3	A bully walks up to the victim and says, “Hey dummy.”
SAAS 6	Scenario 1	One girl says to another, “Let’s go to the arcade.” The victim asks, “Can I come”, and the girls ignore her.
	Scenario 2	A bully walks up to the victim and says “Get out of my seat.” The bully then dumps the victim out of the chair.
	Scenario 3	A bully walks up to the victim and says, “Hey nerd.”

Note. Scenario 1 was always an exclusion situation, Scenario 2 was always a physical bullying situation, and Scenario 3 was always a verbal bullying situation.

Appendix B

SAAS Questions

SAAS 1

1. What would you do/say if someone shared their cookies with everyone but you?
2. What would you do/say if someone would not stop tapping you?
3. What would you do/say if someone called you Shorty pants?
4. Would you tell your mother if anything from the movie happened to you?

SAAS 2

1. What would you do/say if someone shared their juice with everyone but you?
2. What would you do/say if someone would not stop kicking you?
3. What would you do/say if someone called you a weirdo?
4. Would you tell your mother if anything from the movie happened to you?

SAAS 3

5. What would you do/say if you were not picked to play basketball?
6. What would you do/say if someone pushed you and said move?
7. What would you do/say if someone told you to not be such a baby?
8. Would you tell your mother if anything from the movie happened to you?

SAAS 4

1. What would you do/say if you were left out of a tag game?
2. What would you do/say if someone pulled your hair?
3. What would you do/say if someone called you a dork?

4. Would you tell your mother if anything from the movie happened to you?

SAAS 5

1. What would you do/say if someone asked your friend to lunch, but not you?
2. What would you do/say if someone said let me sit there and then pushed you?
3. What would you do/say if someone called you a dummy?
4. Would you tell your mother if anything from the movie happened to you?

SAAS 6

1. What would you do/say if someone asked your friend to go to the arcade, but would not let you come?
2. What would you do/say if someone pushed you out of your seat?
3. What would you do/say if someone called you a nerd?
4. Would you tell your mother if anything from the movie happened to you?

Appendix C

Table 2

Video modeling script

		Situation	Victims assertive response
VM 1	Scenario 1	Two girls are playing baseball. When they see the victim walk over they turn their backs on her to exclude her.	"Please, let me play."
	Scenario 2	A bully repeatedly pokes the victim.	"Please, don't do that."
	Scenario 3	The bully says to the victim, "Hey, nerdy, nerdy, nerdy, nerd."	"Please, don't call me names."
	Scenario 4	The victim walks up to her mother and says, "Mom, someone was not nice to me today."	
VM 2	Scenario 1	Two girls are playing ball. When the victim walks up they tell her to go away.	"I can play too."
	Scenario 2	A bully gives the victim a nuggie.	"Ouch, please don't do that, that hurts."
	Scenario 3	Three girls are playing kick ball. The victim misses her roll and the bully says, "Hey loser, why can't you kick the ball."	"Please don't call me names."
	Scenario 4	The victim walks up to her mother and says, "Mom, someone was not nice to me today."	
VM 3	Scenario 1	Two girls are playing cards. When the victim comes over they turn away from her.	"Please include me."

	Scenario 2	A bully trips the victim.	“That’s not a nice thing to do.”
	Scenario 3	A bully says to the victim, “Hey skinny mini.”	“It’s not nice to call names.”
	Scenario 4	The victim walks up to her mother and says, “Mom, someone was not nice to me today.”	

Note. Scenario 1 was always an exclusion situation, Scenario 2 was always a physical bullying situation, Scenario 3 was always a verbal bullying situation, and Scenario 4 was always the victim telling her mother.

Appendix D

VM Questions

VM1

1. What would you do/say if someone ignored you?
2. What would you do/say if someone would not stop poking you?
3. What would you do/say if someone called you a nerd?
4. Would you tell your mother if anything from the movie happened to you?

VM2

1. What would you do/say if someone told you to go away?
2. What would you do/say if someone gave you a nuggie?
3. What would you do/say if someone called you a loser?
4. Would you tell your mother if anything from the movie happened to you?

VM3

1. What would you do/say if someone ignored you?
2. What would you do/say if someone tripped you?
3. What would you do/say if someone called you a mean name?
4. Would you tell your mother if anything from the movie happened to you?

Appendix E

Parent-Version Bullying Survey for ASD

	Never	Once or twice	Three or four times	Five or more times
In this school year, my child has experienced the following:				
1. Being picked on by other children	0	1	2	3
2. Being excluded from groups	0	1	2	3
3. Being laughed at	0	1	2	3
4. Being hit or kicked by other children	0	1	2	3
5. Being threaten with physical harm	0	1	2	3
6. Being teased or made fun of by peers	0	1	2	3
7. Being called names by peers	0	1	2	3
8. Having peers who say negatives things about him or her to other children	0	1	2	3
9. Having personal property destroyed /stolen	0	1	2	3
10. Having rumors spread about him or her	0	1	2	3

Please describe your child's bullying situation below. How is your child being bullied? How does your child react to the bullying?

Note. This survey is adapted from Chen and Schwartz's (2012) *Bullying Survey for ASD.*

Appendix F

Table 3

Generalization Probe Skit Script

		Situation	If the participant assertively responds
Skit 1	Scenario 1	The experimenter says, "Ok kids break into groups." The adults group up at the other end of the room and do not ask the participant to join.	The adults let the participant join their group.
	Scenario 2	An adult pokes the participant.	The adult stops poking the participant and replies appropriately. (e.g. "Ok I will stop poking you.")
	Scenario 3	An adult says to the participant, "Hey baby."	The adult appropriately replies. (e.g. "Okay.")
Skit 2	Scenario 1	The board game Sorry is set up in front of two adults and the participant. The experimenter says "Ok, let's play Sorry." One adult deals players out to the other adult, but not to the participant.	The adult gives the participant players.
	Scenario 2	An adult throws a ball (soft) at the participant.	The adult appropriately replies. (e.g. "Okay I won't do it again.")
	Scenario 3	An adult says to the participant, "Hey dummy."	The adult appropriately replies (e.g. "I am sorry for calling you that.")
Skit 3	Scenario 1	Two adults toss a ball back and forth, but do not toss it to the participant.	The adults toss the ball to the participant.

	Scenario 2	The adult (lightly) pushes the participant.	The adult appropriately replies (e.g. “Okay I will not push you again.”)
	Scenario 3	The adult says to the participant, “Hey nerd.”	The adult appropriately replies (e.g. “I will not call you that again.”)

Note. Scenario 1 was always an exclusion situation, Scenario 2 was always a physical bullying situation, and Scenario 3 was always a verbal bullying situation.

Appendix G

Table 4

Operational definitions of appropriate and inappropriate responses

		Type of response	Example of the response
Appropriate Response (+ 1 point)	For a bullying situation (In response to SAAS & VM questions 1-3)	An assertive response	"Please, don't call me names."
		Telling an adult when paired with an assertive response	"I would tell them to not push me, and then I would tell the teacher what happened."
	Answer to if he/she will tell his/her mother (In response to SAAS & VM question 4)	positive	"Yes, I would tell my mom" or "Mom someone was not nice to me today."
Inappropriate Response (+ 0 points)	For a bullying situation (In response to SAAS & VM questions 1-3)	An aggressive response	"I would push her back."
		A non-response	"I would ignore it."
		An avoidant response	"I would walk away."
		Telling an adult when not paired with an assertive response	"I would tell the teacher."
	Answer to if he/she will tell his/her mother (In response to SAAS & VM question 4)	negative	"No, I would not tell my mom."

Appendix H

Coding Sheet example

Appropriate responses receive one point and inappropriate responses receive zero points. An appropriate response is an assertive response, telling an adult paired with an assertive response, and saying yes when the participant was specifically ask if they would tell their mother (e.g. " Please don't call me that" & " Hey! That's not nice"). An inappropriate response is an aggressive response, a non-response, an avoidant response, telling an adult when not paired with an assertive response, and saying no when the participant was specifically ask if they would tell their mother.

Session:	Name:	
	Points:	What the child said:
Response to exclusion		
Response to physical bullying		
Response to verbal bullying		
Telling mother		
Total points		