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Evaluating Treatment Acceptability, Treatment Integrity, and Cultural Modifications of a Bullying Prevention Intervention

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ACCEPTANCE

This dissertation, EVALUATING TREATMENT ACCEPTABILITY, TREATMENT INTEGRITY, AND CULTURAL MODIFICATIONS OF A BULLYING PREVENTION INTERVENTION, by LILLIE B. HUDDLESTON, was prepared under the direction of the candidate's Dissertation Advisory Committee. It is accepted by the committee members in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the College of Education, Georgia State University.

The Dissertation Advisory Committee and the student's Department Chair, as representatives of the faculty, certify that this dissertation has met all standards of excellence and scholarship as determined by the faculty. The Dean of the College of Education concurs.

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ABSTRACT

EVALUATING TREATMENT ACCEPTABILITY, TREATMENT INTEGRITY, AND CULTURAL MODIFICATIONS OF A BULLYING PREVENTION INTERVENTION

by

Lillie B. Huddleston

Treatment acceptability and treatment integrity are essential constructs to consider when designing, implementing, and evaluating school-based interventions. Existing literature has described treatment acceptability and treatment integrity as separate constructs rather than investigating their interrelationships. Also, models of treatment acceptability and treatment integrity have not systematically included the perspectives of multiple stakeholders, have not addressed multiple time points in the intervention process, and have not emphasized multiple methods of data collection. This paper reviewed extant literature related to current definitions and models of treatment acceptability and treatment integrity and presented a comprehensive integrated model of these constructs that addressed the aforementioned gaps in the intervention literature.

A mixed methods study exploring student, facilitator, and observer perceptions of treatment acceptability and treatment integrity of an eight-week bullying prevention intervention was conducted. The study investigated the role of cultural modifications (i.e., context-based procedural or curriculum changes employed to enhance the treatment acceptability or integrity of the intervention). Qualitative data were analyzed with an inductive-deductive approach (Nastasi et al., 2004). Deductive coding was used to illustrate components of treatment acceptability, treatment integrity, and cultural modifications salient to this research and an inductive approach was used to identify emerging themes. Consensus coding was conducted with greater than 90% interrater

agreement. Quantitative data were analyzed using descriptive statistics. Qualitative and quantitative analyses revealed positive findings with respect to treatment acceptability and treatment integrity. Facilitator competence, behavior management, student engagement, and time management emerged as qualitative themes related to treatment integrity. Qualitative data suggested a positive relationship between student and facilitator perceptions of treatment acceptability. Qualitative findings revealed modifications to the curriculum content and delivery based on cultural factors (e.g., gender and age) to enhance treatment acceptability. Implications for school-based bullying research and applied practice were described. The results suggested that the use of mixed methods enhanced the comprehensiveness, depth, and quality of data regarding stakeholder perceptions of treatment integrity and treatment acceptability.

EVALUATING TREATMENT ACCEPTABILITY, TREATMENT INTEGRITY, AND CULTURAL MODIFICATIONS OF A BULLYING PREVENTION INTERVENTION

by

Lillie Huddleston

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

EVALUATING ACCEPTABILITY AND INTEGRITY IN APPLIED SETTINGS: TOWARD A COMPREHENSIVE CULTURE-SPECIFIC MODEL

One of the central goals of researchers and practitioners within the fields of psychology and education has been to provide efficacious treatments or interventions to address social, psychological, academic, and behavioral difficulties. Recent educational policies and guidelines such as Response to Intervention (RTI) have underscored the need to identify and select interventions with evidence of effectiveness for a given problem (Sanetti & Kratochwill, 2009; Sanetti, Gritter, & Dobey, 2011; Schulte, Easton, & Parker, 2009). Authors have hypothesized that a higher degree of treatment acceptability leads to improved treatment integrity and higher levels of efficacy (Lane, Bocian, MacMillan, & Gresham, 2004; Perepletchikova & Kazdin, 2005; Witt & Elliott, 1985). Yet few studies have included a comprehensive evaluation of both constructs while exploring the relationships between them. Further, existing models have provided limited theoretical support for considering multiple viewpoints and collecting data at multiple time points throughout the intervention using multiple data collection methods. Models promoting the modification of intervention design, content, or procedures to address cultural or contextual variables over the course of the intervention while maintaining the essential components with a goal of enhancing treatment acceptability and treatment integrity also have been limited.

The purpose of this paper was to propose a comprehensive model of evaluating treatment acceptability and treatment integrity that illustrated connections between the constructs and highlighted the potential contribution of cultural modifications (i.e.,

documented adaptations to the intervention based on contextual/cultural variables). The model highlighted the need to include the perspectives of multiple stakeholders obtained through multiple methods before, during, and after intervention implementation. The proposed model was informed by a review of relevant literature related to treatment acceptability and treatment integrity. A comprehensive conceptual framework is presented and applications for school-based intervention and research are discussed.

Treatment Acceptability and Treatment Integrity

Background information related to treatment acceptability and treatment integrity were reviewed to examine the ways in which the constructs have been explored in research and practice. Predominate treatment acceptability and treatment integrity definitions and models have been presented and gaps in the literature are highlighted below.

Treatment Acceptability Definitions

The construct of treatment acceptability, developed from the work of Wolf (1978) and Kazdin (1981), was defined as the degree to which stakeholders found the intervention to be fair, reasonable, appropriate, and consistent with expectations of treatment. Kazdin's (1980) definition of treatment acceptability focused on the appropriateness of the intervention of the target problem as well as the degree to which the intervention met the client's expectations regarding the nature of treatment. Kazdin put forth three main reasons for incorporating an assessment of acceptability. He indicated that numerous treatment alternatives are available to address a specific referral concern and all treatments may not be equally acceptable to consumers. Kazdin underscored the importance of considering treatment acceptability in order to prevent

legal and ethical problems related to infringement upon client's rights. Kazdin (1980) indicated that an examination of acceptability could provide information regarding the specific elements of the treatment that contributed to the client's overall reaction to the treatment.

Wolf (1978) defined social validity, a term often used interchangeably with treatment acceptability, as the level of relevance or value ascribed to an intervention by consumers of the treatment. In order to determine the level of social validity, Wolf (1978) suggested that researchers consider the social significance of goals, procedures, and post-intervention results. Further, Wolf highlighted the importance of viewing consumers as the best judge of their needs related to treatment or intervention. In addition to the potential benefits for consumers, Wolf (1978) explicated some of the ways in which social validity could be beneficial to researchers. He reported that an evaluation of social validity could be used to determine appropriate goals for treatment and could facilitate the understanding of study findings (Wolf, 1978). Although the aforementioned definitions provided insight into the nature of the construct of treatment acceptability; more investigation was recommended to determine the most relevant elements and considerations necessary to obtain high levels of treatment acceptability (Kazdin, 1980).

Treatment Acceptability Models

Several conceptual models have contributed to the treatment acceptability literature (Lennox & Miltenberger, 1990; Reimers, Wacker, & Koeppl, 1987, Witt & Elliott, 1985, Wolf, 1978). Witt and Elliott (1985) developed one of the first models of treatment acceptability related to school-based interventions. Their conceptual framework highlighted the reciprocal relationships among *treatment acceptability*, *treatment use*,

treatment integrity, and *treatment effectiveness*. The authors proposed that treatments viewed as acceptable were more likely to be implemented with integrity. They indicated that if the treatment was implemented with high integrity, there was greater opportunity for behavioral change and treatment outcomes consistent with consumer expectations were more likely to be viewed as acceptable (Witt & Elliott, 1985). While Witt and Elliott (1985) highlighted the interconnectivity of the constructs; few published studies have included an investigation of these reciprocal relationships in practice.

Reimers, Wacker, and Koeppl (1987) extended Witt and Elliott's model of treatment acceptability by focusing on the degree to which the proposed intervention was understood by the consultant. They indicated that consultants could not provide an accurate assessment of treatment acceptability without first understanding what the treatment entailed. The authors suggested that poorly understood treatments would yield lower levels of compliance and effectiveness and further education of those implementing treatment would be required before treatment implementation. Consistent with the work of Witt and Elliott (1985), Reimers and colleagues (1987) acknowledged the potential reciprocal relationship between perceived treatment acceptability and the level and nature of the consultee's (e.g., parents, teachers, mental health provider) implementation efforts. The authors outlined the potential benefits associated with high levels of treatment acceptability including greater efficacy and maintenance of treatment effects. They also suggested that intervention modifications could play an important role with regards to increasing treatment acceptability when desired outcomes were not achieved (Reimers et al., 1987). One of the strengths of this model was the focus on providing information to the individuals responsible for treatment implementation to

promote a thorough understanding of the treatment prior to the evaluation of treatment acceptability. However, limited recommendations were presented for incorporating the viewpoint of consumers before treatment selection or during intervention implementation.

12-factor model of treatment acceptability. Lennox and Miltenberger (1990) suggested that it is important to consider multiple factors related to treatment acceptability to substantiate the decision to select a particular treatment. The authors identified twelve factors relevant to behavioral interventions that fit within four categories: *efficacy considerations*; *secondary effects*; *legal and social implications*; and *practical considerations*. The categories were presented in a sequential order (i.e., from greatest to least importance) designed to inform the users' decision-making process with respect to determining the acceptability of a particular treatment (Table 1).

Table 1. *Lennox and Miltenberger's Model of Treatment Acceptability*

Efficacy Considerations	
	Motivational Variables
	Treatment Effectiveness
Secondary Effects	
	Side Effects
	Abuse Potential
Legal and Social Implications	
	Treatment Restrictiveness/Intrusiveness
	Treatment Precedence
	Social Acceptability
	Regulatory Factors
Practical Considerations	
	Staff Competence
	Staff Cooperation
	Treatment Efficiency
	Cost Effectiveness

The first category in evaluating treatment acceptability as outlined by Lennox and Miltenberger included an assessment of data related to *treatment effectiveness*. This included a literature review of efficacious behavioral treatments and a motivational analysis (i.e., determining antecedent and consequences associated with the target behavior). The goal of the motivational analysis was to determine what factors increased the likelihood of the problem behavior and to understand what factors served to maintain the behavior of concern. A variety of assessment techniques (e.g., direct observation, experimental procedures, analogue techniques) were provided. The authors suggested that a motivational analysis could aid in the selection of the most efficacious treatment for the target problem. The second category, *secondary effects*, included a consideration of potential unintended outcomes (i.e., side effects and abuse potential). The third category was a consideration of *social and legal implications* wherein the authors emphasized the importance of reviewing regulatory factors such as local, state, and federal laws pertaining to the treatment of the target population as well as the positions of relevant professional organizations. The fourth category, *practical considerations*, was focused on the feasibility of implementation related to the staff's competence and level of cooperation and compliance with the intervention procedures. The authors suggested several methods of obtaining staff input (e.g., multidisciplinary intervention teams, surveys). Cost effectiveness and treatment efficiency were also addressed. Practical considerations, though described as desirable, were not required for a treatment to be deemed acceptability if prior categories described in the model were determined to be addressed sufficiently.

Although Lennox and Miltenberger's (1990) model of treatment acceptability included several important factors for consideration; potential growth areas were identified. First, the authors' focus on efficacy could limit the pool of promising treatments that have not yet been proven through rigorous efficacy procedures. Second, based on the model, all treatment acceptability considerations were taken into account a priori without a focus on continued monitoring or evaluation of treatment acceptability over the course of the intervention. Third, Lennox and Miltenberger's model was hierarchal in nature, which suggested that the model relies heavily on the perspectives of those designing the intervention with less consideration of those implementing and receiving the proposed treatment (Lennox and Miltenberger, 1990).

Distributive model of treatment acceptability. Carter (2008) proposed a Distributive Model of Treatment Acceptability which suggested that overall treatment acceptability was distributed among factors related to society, consultants, and consumers of interventions. *Societal acceptability* referred to the influence of both legal and procedural guidelines put forth by governmental agencies (e.g., Individuals with Disabilities Act) and ethical guidelines of professional organizations (e.g., American Psychological Association, National Education Association). *Consultant acceptability* referred to the influence of the consultant's training and affiliation with professional organizations on their perceptions of treatment acceptability. *Consumer acceptability* referred to the judgments of laypersons, or those who are not directly involved with the development or implementation of the treatment. Carter (2008) identified gender, socioeconomic status, geographic location, and martial distress as factors with the potential to influence consumer acceptability.

The author delineated several advantages for utilizing the Distributive Model of Treatment Acceptability (Carter, 2008). Carter (2008) suggested that examining treatment acceptability along these lines could help to explain the variability in treatment acceptability data (i.e., the same treatment may be viewed as acceptable by researchers and unacceptable by participants) and identify trends within the three influential groups (i.e., society, consultants, consumers). A strength of the Distributive Model was the consideration of characteristics associated with those receiving treatment (e.g., SES, race, gender, region) and contextual variables However, similar to Lennox and Miltenberger's (1990) model, the consideration of factors related to treatment acceptability within the Distributive Model were taken into account prior to intervention development or implementation and the need for on-going monitoring of treatment acceptability was not stressed.

Application of Treatment Acceptability

Limited information regarding treatment acceptability has been reported in the literature related to school-based interventions. The following examples were reviewed to provide insight into methods and procedures that have been used to date. Quantitative studies utilizing two well-known treatment acceptability instruments were reviewed along with two school-based examples of treatment acceptability evaluation. Strengths and weaknesses of the studies were described.

Kazdin (1980) employed analogue methods in a study of the use of time out and reinforcement to reduce undesirable child behaviors. Analogue methods were defined as use of hypothetical scenarios to present content and contextual information regarding a proposed treatment modality. Participants (i.e., undergraduate students) provided

quantitative ratings utilizing the *Treatment Evaluation Inventory* (TEI) and the *Semantic Differential* after hearing case studies detailing negative child behaviors and possible interventions (e.g., withdrawal of attention, time out in isolation, reinforcement of incompatible behavior). The TEI was used to assess the degree of appropriateness of the intervention for the target population, the level of acceptability, and the degree to which the participant would be willing to implement the treatment. The *Semantic Differential* assessed other characteristics that had the potential to influence decision-making regarding treatment selection (e.g., potency, activity level – active/passive). Based on the results of the study, Kazdin concluded that the acceptability of alternative treatments could be ascertained and specific intervention procedures could be altered to improve acceptability through the use of analogue techniques (Kazdin, 1980). Analogue methods also have been used to determine the preferred treatment method for curtailing inappropriate behaviors related to Attention Deficit Hyperactivity Disorder (ADHD) (Girio & Owens, 2008). Researchers utilized the Intervention Rating Profile – 10 (IRP – 10), a 10-item Likert-type scale designed to assess teachers' level of perceived acceptability related to six ADHD treatments (i.e., daily report card, time-out, self-reinforcement, peer tutoring, social skills, medication). Although the study provided valuable information regarding promising and evidence-based interventions, qualitative data indicating why one treatment was preferred over the other choices were not evident. While the study provided an example of treatment acceptability assessment, little is known about the ways in which findings from analogue studies generalize to naturalistic settings.

Mendelson et al. (2010) examined the treatment acceptability of a 12-week school-based mindfulness intervention designed to reduce stress response and improve psychosocial functioning in 4th and 5th grade students. Participants received four 45-minute sessions per week of instruction in yoga, breathing, and guided meditation techniques. Treatment acceptability data were obtained through conducting one teacher and three student focus group interviews at the conclusion of the study. The treatment acceptability results for students were positive and teacher results were mixed (Mendelson et al., 2010). One of the strengths of this study was the inclusion of teacher and student perceptions of treatment acceptability. Focus groups were conducted at the conclusion of the study and as a result limited treatment acceptability data were available to make modifications over the course of the intervention related to the treatment content or the process of intervention implementation. The study could be strengthened by the inclusion of an assessment of treatment acceptability over the course of the intervention.

Mauriello and colleagues (2006) conducted a single-session pilot study to examine the treatment acceptability of *Health In Motion*, a school-based intervention for preventing adolescent obesity. They utilized a mixed methods approach to data collection and included several steps to make the intervention culturally relevant and feasible within the school setting. Prior to piloting the intervention, student focus groups and interviews were conducted to evaluate the transtheoretical model employed in the intervention and the components of the treatment (i.e., use of computer-based program, school setting). The transtheoretical model employed process-oriented constructs believed to be central to the process of change, which included *stage of change*, *decisional balance*, *self-efficacy*, and *processes of change* (see Mauriello et al., 2006 for a detailed description of the

model). Each of the four variables was addressed through the intervention procedures. Pre-intervention, interviews were conducted with key informants including school-based personnel and experts in the field. The information gathered was used to make changes in the intervention content, methods, and procedures with a goal of increasing treatment acceptability. Based on the results of an acceptability questionnaire administered after students previewed study materials, the authors determined that the Health In Motion program was acceptable and feasible to be carried out in a school-based setting (Mauriello et al., 2006). This intervention utilized multiple methods and multiple informants to evaluate treatment acceptability. While the results of the pilot study were promising and demonstrated a method of evaluating treatment acceptability that was efficient and easily generalizable to real-life settings, all of the procedures took place prior to the implementation of the treatment. Ongoing monitoring of treatment acceptability over the course of the intervention is needed to determine whether or not the invention was viewed as more or less acceptable over the course of intervention implementation.

Treatment Integrity Definition

Treatment integrity has been defined as the degree to which an intervention or treatment was carried out as designed (Gresham & Gansle, 1993; McIntyre et al., 2007). This definition, as employed within the behavioral intervention literature, focused on strict implementation of intervention procedures to help determine the degree to which the treatment influenced study results (Gresham & Gansle, 1993; Gresham et al., 1993). Early researchers addressing treatment integrity focused primarily on *adherence*, which is the ratio of treatment components observed to the number of treatment components

outlined for implementation (Schulte et al., 2009). While these definitions outlined an important aspect of integrity (i.e., the degree to which the intervention was implemented as planned), modifications to the intervention content or procedures were not encouraged.

Treatment Integrity Models

Several researchers and theorists have outlined important components related to the treatment integrity (Schulte et al., 2009; Yeaton & Sechrest, 1981). Yeaton and Sechrest (1981) identified three critical dimensions relevant to the evaluation of psychological treatments or interventions: strength, integrity, and effectiveness. *Treatment strength* referred to the assessment of the researchers or clinicians regarding the likelihood that the treatment will have the desired outcome. Yeaton and Sechrest (1981) described *treatment integrity* as the degree to which the treatment was implemented as intended. They indicated that it is important to note the ease of intervention implementation and to have a documented plan for assessing treatment integrity, particularly in the case of complex treatments that are implemented by multiple individuals. The third evaluation component, *effectiveness of treatment* referred to the treatment effect obtained through quantitative procedures such as normalization (i.e., the target problem has been returned to the amount typically observed within the population), or through utilizing defined standards of success for a given problem or concern. The authors also highlighted the importance of social validation, a term often used interchangeably with treatment acceptability, as important to consider when considering the effectiveness of a potential treatment. While they identified the previously described procedures of evaluating treatment effectiveness (i.e., normalization, consulting outcome standards) as mechanisms of social validation, they also acknowledged the usefulness of

assessments by relevant judges to determine the social validity of a proposed intervention. Yeaton and Sechrest (1981) indicated that a variety of treatments have evidence of efficacy; however, the level of change could be too much or too little for the target of the intervention. The authors indicated that the judgment of relevant experts was important to determine the best choice among efficacious treatments.

The authors emphasized the fact that treatment strength, treatment integrity, and treatment effectiveness change over the course of treatment and interact in a variety of ways that are challenging to assess (Yeaton & Sechrest, 1981). The authors provided important information regarding the documentation of treatment integrity; however, they focused solely on the use of quantitative methods to assess treatment integrity, which may limit the amount of information about how the program was implemented. Data regarding the process of implementing the treatment, which was less evident in Yeaton and Sechrest's (1981) model, could provide information that might be helpful for developing future iterations of the interventions. These data could allow researchers and future users of the intervention to review modifications to the treatment and evaluate their relationship to the overall treatment integrity.

Researchers have theorized about the role of treatment integrity in therapeutic interventions (Perepletchikova & Kazdin, 2005; Waltz, Addis, Koerner, & Jacobson, 1993). Waltz and colleagues (1993) stressed the need for an evaluation of *adherence and competence*, two components of treatment integrity, when evaluating the therapy protocols. Adherence was defined as the extent to which the therapist implemented treatment components as outlined in the manual or treatment plan and avoided adding other elements that were not consistent with the design or theoretical orientation (Waltz

et al., 1993). Competence referred to the skill level of the therapist to address the presenting problem and address issues related to the target of the intervention (e.g., problem severity, environmental factors, stage in treatment). Waltz et al. (1993) presented several suggestions for performing adherence and competence checks (i.e., questionnaires, checklists, ratings of session videotapes). The authors recommended that integrity checks be completed by trained raters that were not directly affiliated with those providing the intervention to reduce bias. They further outlined ways in which adherence and competence could be documented at different time points across the intervention (Waltz et al., 1993). While the procedures described could contribute to the evaluation of manualized treatments, the recommendation of independent trained raters could be less feasible for school-based personnel or less applicable to group interventions. Further, the emphasis on strict adherence to manualized treatment restricted the ways in which the therapist could modify the intervention content, procedures, and delivery to be more responsive to the target population.

Perepletchikova and Kazdin (2009) also addressed treatment integrity related to therapeutic interventions. They suggested that when the desired treatment outcome is not achieved, treatment integrity data could assist with the interpretation of the results. Perepletchikova et al. (2009) identified three aspects of treatment integrity including *therapist treatment adherence*, *therapist competence*, and *treatment differentiation*. Treatment adherence referred to the degree to which the treatment elements were implemented. Treatment differentiation referred to the degree to which the therapist implemented prescribed treatment elements and refrained from implementing non-prescribed elements. Therapist competence referred to the level of the therapist's skills

and professional judgment with regard to how the treatment was implemented (e.g., sensitivity, timing; Perepletchikova et al., 2009). The authors emphasized the need for the strict implementation of treatment components and quantitative data collection detailing the degree to which treatment components were implemented. Similar to the procedures outlined by Waltz et al., (1993), Perepletchikova and colleagues (2009) recommended direct integrity assessment measures (i.e., observations and videotapes rated by independent evaluators). They also acknowledged benefits associated with indirect integrity assessment (i.e., therapist self-report) such as immediate feedback regarding treatment integrity. The authors suggested that without strict implementation and quantitative data collection, study validity could be compromised and results could be difficult to interpret, replicate, and generalize (Perepletchikova et al., 2009). The previously described conceptualizations of treatment integrity related to therapeutic interventions examined the skill, training, and knowledge of the therapist (Perepletchikova & Kazdin, 2005; Waltz et al., 1993). However, both focused solely on quantitative data collection, which could limit the amount of information regarding how treatment elements were implemented and why specific choices regarding the treatment process or content were made.

As noted in the description of definitions and conceptualizations of treatment integrity, the construct has been assessed using a hierarchal model that focused primarily on adherence (Schulte et al., 2009). In other words, treatment integrity data were collected in a manner prescribed by the researcher to determine the degree to which individual components of the intervention were carried out as designed. Authors have indicated that a focus on adherence is important yet inadequate as a sole measure of

complex interventions with multiple components involving multiple consultants/service providers because best practice suggests that interventions should be assessed, by multiple raters, using multiple methods (DuPaul, 2009; Nastasi, Moore, & Varjas, 2004; Power, et al., 2005).

Multidimensional models of treatment integrity. Current trends related to treatment integrity have moved away from an evaluation of treatment integrity centered on adherence towards a multidimensional approach (Power et al., 2005; Sanetti et al., 2011). Dane and Schneider (1998) suggested that researchers include an investigation of five dimensions including adherence as well as an assessment of exposure, quality of delivery, participant responsiveness, and program differentiation. *Exposure* or dosage referred to the amount of treatment received. *Adherence* referred to the number of treatment components implemented as rated by an outside observer or the service provider following intervention sessions. *Quality of delivery* was the term used to describe the qualitative assessment of the intervention and included aspects related to interventionist competence and level of enthusiasm. *Participant responsiveness* referred to the level of engagement of the intervention participants and *program differentiation* was defined as the ways in which the target treatment differed from other treatments and maintained its unique characteristics (Dane & Schneider, 1998).

Power et al. (2005) reviewed treatment integrity dimensions put forth by Dane and Schneider for monitoring intervention integrity, which included Gresham's (1993) component integrity and daily integrity as estimates of integrity. *Component integrity* referred to the mean integrity for a specific element of the intervention and *daily integrity* referred to the mean integrity of all daily intervention elements combined (Gresham,

1993). Power and colleagues (2005) illustrated some of the limitations of the prevailing models of treatment integrity such as the hierarchal or top-down approach of evaluation, which limited the input of multiple stakeholders and was less conducive for implementation in naturalistic settings. Another limitation was the tendency of previous models to evaluate treatment integrity at the end of the intervention (i.e., summative evaluation) rather then on-going monitoring of treatment integrity over the course of the intervention (i.e., formative evaluation). Power et al. expanded previously described partnership models (Nastasi et al., 2000; Nastasi et al., 2004) to include additional elements related to treatment integrity (Table 2).

Table 2. *Partnership model for assessing treatment integrity*

<table>
<tr><td colspan="2">• Collaboration between the researchers and those implementing the intervention.</td></tr>
<tr><td colspan="2">• Clarification of the critical elements of the intervention.</td></tr>
<tr><td colspan="2">• Collaborative development of implementation choices based that are empirically sound and culturally responsive</td></tr>
<tr><td colspan="2">• Creation of an integrity monitoring plan involving contributions from multiple stakeholders to address the following components:</td></tr>
<tr><td>Process Components
• Quality of delivery
• Participant responsiveness</td><td>Content Components
• Exposure,
• Adherence,
• Program Differentiation (i.e., revealing unique program elements)</td></tr>
<tr><td colspan="2">• Ongoing review of treatment integrity data by stakeholders</td></tr>
<tr><td colspan="2">• Review of program alterations and evaluation of the influence of alternations on program outcomes.</td></tr>
</table>

Schulte and colleagues (2009) also reviewed dimensions of treatment integrity, which were under three categories including *treatment delivery*, *treatment receipt*, and *treatment enactment*. The treatment delivery dimensions were *adherence, exposure, quality*, and *program differentiation* (i.e., the degree to which only program-specific elements were administered or the degree of difference between comparison treatments; Schulte et al., 2009). Treatment delivery dimensions were focused on both quantitative and qualitative measurement of intervention program elements. Treatment receipt dimensions included *participant exposure/dose*, *participant comprehension*, and *participant responsiveness*. This category focused on dimensions that illustrated the degree to which the program elements were received. The treatment enactment dimensions included *participant mastery in controlled setting* and *participant use and generalization in intended setting* (Schulte, Easton, & Parker, 2009). The authors described participant mastery in a controlled setting as the degree to which participants were able to demonstrate targeted skills within the confines of the program or intervention (e.g., role-playing prosocial skills within a counseling session). Participant use and generalization in the intended setting referred to the participant's ability to transfer skills mastered within the group to the natural setting (Schulte et al., 2009).

The multidimensional models of treatment integrity described above have constituted an expansion of the definition of treatment integrity. The multiple dimensions diverged from a sole focus on the strict implementation of treatment components as designed to include a wide-range of factors that have the potential to influence treatment (Power et al., 2005; Sanetti et al., 2011). While adherence has been one of the most widely applied elements of treatment integrity, researchers have suggested that a focus on

process dimension (i.e., quality of delivery, participant responsiveness) could provide important information related to the implementation of interventions in naturalistic settings (Power et al., 2005).

Application of Treatment Integrity

Treatment integrity has been described as an important but frequently overlooked component in school-based intervention research (Gresham & Gansle, 1993; Sanetti, Fallon, & Collier-Meek, 2011; Schulte et al., 2009). Authors have noted that detailed data regarding treatment integrity is important to advance scientific knowledge, to promote generalizability (Sanetti et al., 2011) and to make interventions more fully understood by the consumers (Gresham & Gansle, 1993; Perepletchikova et al., 2009). Further, the level of treatment integrity has the potential to influence intervention outcomes and could be particularly important in the school setting due to changes in educational law, policies, and procedures (Sanetti et. al, 2011; Schulte et al., 2009).

Power and colleagues (2009) conducted one of the few published studies designed specifically to address treatment integrity. The authors investigated *participant engagement*, a component of treatment integrity, related to teacher investment in a family-school intervention to address the symptoms associated with ADHD. The intervention utilized the *Family-School Success* (FSS) program to develop a problem-solving partnership to address presenting concerns through school-home collaboration. The *Coping with ADHD through Relationships and Education* (CARE) program was implemented to provide education and to facilitate a network of support among families. The study design included the collection of quantitative measures before, during, and after the intervention. Both parents and teachers completed surveys. The researchers were

able to conclude that teacher investment in the intervention varied based on the quality of the parent-teacher collaboration and grade-level. Further, parent-report of the quality of the family-school relationship and the level of teacher assistance with homework at baseline was correlated with teacher investment in family-school interventions (Power et al., 2009). This study provided important information related to teacher investment and the results suggest that quantitative measures have the potential to inform researchers and practitioners about aspects of the intervention that were valued and those which may require adaptation to increase or support their implementation. Adding a qualitative component could have strengthened the intervention by providing data regarding the reasons certain elements of the intervention were more or less salient to the participants.

Rationale for a Comprehensive Integrated Model

Authors have suggested that treatment acceptability and treatment integrity are related constructs with the potential to influence treatment outcomes (Perepletchikova & Kazdin, 2005, Witt & Elliott, 1977). However, few published studies have included a comprehensive evaluation of the constructs. There are several elements of acceptability and integrity that can have complementary effects on intervention suggesting the need for a joint evaluation of the constructs. For example, both treatment acceptability and treatment integrity have been described as contributing to the understanding of study results (Gresham & Gansle, 1993; Perepletchikova et al., 2009; Wolf, 1978). Treatment acceptability and treatment integrity data reportedly help researchers and practitioners identify the most salient intervention elements or components (Kazdin, 1980). If expected outcomes are not obtained, treatment acceptability data could indicate that change agents did not find the intervention content or procedures feasible to implement or culturally

relevant. Treatment integrity data could reveal which specific components were implemented and provide information regarding the quality of implementation. These data could inform the design and implementation of school-based interventions.

The models of treatment acceptability and treatment integrity reviewed have indicated that it is relevant to consider, facilitate, and measure the level of training and preparation of individuals responsible for delivering the intervention when selecting and preparing to implement an intervention (Lennox & Miltenberger, 1990; Perepletchikova & Kazdin, 2009; Waltz et al., 1993). Determining the capacity (i.e., training, competence) of the interventionist (e.g., teacher, parent, therapist) to carry out an intervention could be an important aspect to consider when determining which treatment is most acceptable for the target problem and context (Lennox & Miltenberger, 1990). Documentation of choices made based on the competence of the interventionist over the course of the intervention can provide evidence about the quality of treatment delivery, a component of treatment integrity (Dane & Schneider, 1998 Perepletchikova & Kazdin, 2009). Given that the training and skill development of the interventionist may play a role in the acceptability and integrity of a treatment, it could be important to obtain information from interventionists at multiple stages of the intervention to promote greater treatment acceptability and integrity.

The viewpoint of the participant about acceptability and integrity was often considered but rarely directly assessed by the models presented above. Participants who view the treatment as more acceptable may be less resistant, more engaged, and more likely to continue treatment. Researchers have suggested that the ease of participant recruitment and attendance are associated with treatment acceptability (Mendelson et al.,

2010). A similar link was identified with *treatment receipt*, a related dimension of treatment integrity, as described by Schulte, Easton and Parker (2009) as the number of sessions attended has been used to provide support for intervention integrity (Schulte, Easton, & Parker, 2009).

Limited data have been published regarding the nature of assessing both constructs in applied settings, using multiple methods, multiple informants, or based on data collection at various time points throughout the intervention process. A comprehensive conceptual model is needed to provide a framework for evaluating these constructs and to clarify and expand the definitions of both acceptability and integrity. This type of comprehensive framework has the potential to enhance the relevance of these constructs for applied settings, by outlining the procedures for ongoing evaluation through a collaborative relationship among stakeholders that could facilitate empirical investigation to better understand the relationships among acceptability, integrity and efficacy.

The Comprehensive Culture - Specific Model of Acceptability and Integrity

The Comprehensive Culture-Specific Model of Acceptability and Integrity (Table 4) utilizes a non-hierarchal participatory approach to integrate the perspectives of multiple raters over the course of the intervention. The proposed model outlines procedures for the consideration and evaluation of treatment acceptability, treatment integrity and cultural factors prior to, during, and after intervention implementation. The use and documentation of cultural modifications are emphasized (Nastasi et al., 2004). Treatment acceptability and treatment integrity are defined broadly to address the multiple dimensions associated with the constructs. The model promotes the use of mixed

methods data collection to facilitate an evaluation of both content (i.e., what was implemented) and process (i.e., how elements were implemented) integrity dimensions (Power et al., 2005). Further, the model is designed to be applicable to naturalistic settings. The goals of the Comprehensive Culture-Specific Model of Acceptability and Integrity are described in Table 3.

Table 3. *Goals of the Comprehensive Culture-Specific Model of Acceptability and Integrity*

- Partnership or non-hierarchal relationship among stakeholders
- Consideration/Implementation of Cultural Modifications
- Use of recursive process (i.e., utilizing data collected over the course of the intervention to inform current intervention implementation as well as future iterations
- Focus on the evaluation of multiple dimensions of treatment acceptability and treatment integrity
- Data collection across time, using multiple methods and multiple sources

Table 4. *Comprehensive Culture-Specific Model of Acceptability and Integrity*

Stage of Intervention	Activities	Personnel	Outcome(s)
Pre-intervention	Collaboration among stakeholders and researchers	Researchers, interventionists (e.g., parents, teachers, mental health professionals, students)	- Selection and development of culturally relevant intervention content and procedures - Gain input regarding acceptability and integrity assessment tools and procedures
Intervention	Formative Evaluation - Mixed methods evaluation of treatment acceptability	Researchers Interventionists	- Gain knowledge regarding the acceptability of treatment components and procedures - Inform recursive process - Gain recommendations for cultural modifications
	Formative evaluation - Mixed methods evaluation of treatment integrity	Researchers Interventionists	- Gain knowledge regarding which intervention components were implemented - Understand the degree to which specific components were implemented - Inform recursive process
	Documentation of cultural modifications	Researchers Interventionists	- Gain knowledge of cultural relevant changes to promote acceptability and integrity - Inform the recursive process for current and future iterations

Post- intervention	Summative evaluation of treatment acceptability, treatment integrity, and cultural modifications	Researchers Interventionists	- Provide information to help explain study findings - Provide data for future iterations of the intervention

Participatory research

The proposed model incorporates elements of participatory research. A participatory research framework facilitates collaboration among researchers and stakeholders, while involving a partnership with key stakeholders and non-hierarchal relationships across the various phases of the intervention (Nastasi et al., 2000; Power et al., 2005). In contrast to some of the models of treatment acceptability and treatment integrity reviewed in this paper, the perspectives of the interventionists and participants are given equal consideration in the development of the intervention and their active participation in implementation and evaluation are critical. Theorists have suggested that utilizing a partnership model may be particularly beneficial when working with underserved communities, as it facilitates their involvement in the development of culturally relevant interventions with empirical support (Gullan et al., 2009). Involving interventionists and participants in the development, implementation, and assessment of treatment integrity may facilitate engagement and motivate participants to take ownership of the intervention thereby increasing treatment acceptability (Power et al., 2005) and treatment integrity.

Cultural modifications

Another important aspect of the proposed model is the inclusion of cultural modifications at various time points throughout the intervention process. Cultural

modifications (i.e., documented changes to the process of implementation or content of the intervention) appear to be related to both treatment acceptability and treatment integrity (Nastasi, Moore, & Varjas, 2004). Changes in treatment protocols are frequently observed in school-based interventions in order to be more responsive to the contextual and cultural variables that are an integral part of intervention work in naturalistic environments. It important to document and evaluate these changes in order to understand their influence on integrity and to contribute to further iterations of the intervention (Nastasi et al., 2004; Power et al., 2005). This is in contrast to some models of treatment integrity that emphasize the need for strict adherence to the treatment protocol (Gresham & Gansle, 1993; Perepletchikova & Kazdin, 2005; Yeaton & Sechrest, 1981). These changes have the potential to influence treatment acceptability by making the intervention more feasible and tailored to the target population and context. Modifications also have the potential to influence treatment integrity and should be documented in detail and analyzed as a part of treatment integrity.

Pre-intervention Evaluation

The Comprehensive Culture-Specific Model of Acceptability and Integrity is based on the development of a collaborative relationship among key stakeholders. This collaborative relationship could be facilitated through the development of multidisciplinary teams with knowledge of the target problem (e.g., teachers, parents, students, interventionists, administrators). Through a non- hierarchal relationship, each stakeholder could contribute important information with the potential to enhance treatment acceptability and treatment integrity. Interventionists could provide information regarding their training and competence (i.e., knowledge and skills related to specific

treatments). As described in the literature, the interventionist's level of training related to the proposed treatment has the potential to influence treatment acceptability (Carter, 2008; Lennox & Miltenberger, 1990) and treatment integrity (Perepletchikova & Kazdin, 2005; Waltz et al., 1993). Interventionists also are knowledgeable about the ethical and legal guidelines associated with their profession. Administrators could contribute information regarding feasibility and resources. Teachers could provide information regarding the cultural context of the school and classroom. Parents and students could provide information regarding the cultural context (e.g., home environment, family dynamics). Researchers have knowledge of evidenced-based interventions or those with promising findings that could be applicable to the presenting problem and cultural context. Information obtained during the pre-intervention phase could be used to aid in the intervention selection process or could be used to make cultural modifications to existing interventions. Information provided through the pre-intervention collaboration could also inform the development of acceptable, culturally relevant evaluation tools and procedures.

Formative Evaluation

The proposed model includes a formative evaluation of both *content* and *process* dimensions related to treatment acceptability and treatment integrity. The Comprehensive Culture-Specific Model of Acceptability and Integrity highlights the need for a mixed methods evaluation of the constructs. The use of both qualitative and quantitative methods has the potential to influence the breath and depth of information gained related to treatment acceptability and treatment integrity. For example, quantitative data collection tools could allow the interventionists/researchers to examine the

implementation of treatment content and procedures across participants and groups. This would facilitate a comparison of the intervention with other treatments or standard practice. Qualitative methods (e.g., semi-structured interviews, focus groups, open-ended survey items) could provide detailed information regarding the acceptability and integrity components identified by the stakeholders prior to the intervention. Qualitative data also could reveal other content or procedures that serve as barriers or facilitators to treatment acceptability and treatment integrity.

The model recommends the inclusion of data collection by multiple stakeholders throughout the intervention. Key elements for inclusion in the assessment of treatment content related to integrity include documentation of 1) which treatment elements were implemented; 2) the degree to which the content was implemented (e.g., the number of sessions attended, the length of each session); 3) which cultural modifications were made. The process dimensions include documentation of the quality of treatment implementation (i.e., how were the treatment elements implemented; how did the participants respond to the treatment; what was the perceived level of interventionist competence). The proposed model addresses the on-going assessment of treatment acceptability through the documentation of the appropriateness of individual treatment components by multiple stakeholders including interventionists and recipients of the intervention over the course of the intervention. The evaluation of treatment acceptability could also include an assessment of the degree to which participants enjoyed individual treatment components. Consistent with the goals of the Comprehensive Culture-Specific Model of Acceptability and Integrity both constructs would be assessed using

quantitative and qualitative methods utilizing a range of assessment tools selected or developed through stakeholder collaboration and input.

Summative Evaluation

The proposed model promotes the collection of summative data regarding treatment acceptability and treatment integrity in order to facilitate a better understanding of efficacy data. As described earlier, treatment acceptability and treatment integrity data may help to explain findings and reveal the degree to which components were implemented and thereby had the potential to influence findings (Ryan & Smith, 2009). The summative evaluation results are also needed to provide information for future iterations of the intervention. The model emphasizes a recursive process through which key stakeholders receive the treatment acceptability and treatment integrity findings for member checking (i.e., obtaining feedback regarding the validity of data) and for developing cultural modifications to address treatment elements that were found less acceptable, not implemented, or incongruent with the views of the stakeholder or the needs of the cultural context. While this recursive process has the potential to facilitate changes during intervention implementation, an ongoing post-intervention examination of findings related to treatment acceptability and treatment integrity is recommended to facilitate changes for future intervention implementation as well as to provide information that could be disseminated to other practitioners and contribute to the literature base regarding assessing the constructs in naturalistic settings.

Implications for Research and Practice

The Comprehensive Culture-Specific Model of Acceptability and Integrity may be beneficial to researchers and practitioners in significant ways. The model includes a

focus on designing culturally relevant interventions through collaborative partnerships among stakeholders. The model emphasizes the importance of including multiple methods (i.e., qualitative-quantitative), multiple sources (i.e., a variety of assessment tools), and multiple raters (i.e., interventionists, recipients of treatment, outside observers) to assess treatment acceptability and treatment integrity. The model emphasizes the importance of data collection at multiple time points throughout the intervention.

The model's focus on the inclusion of cultural modifications to enhance treatment acceptability and treatment integrity may facilitate the development and implementation of interventions, assessment tools, and procedures that are more applicable to a specific context or cultural group. The participatory relationships included as a central focus of this model could serve to enhance the level of trust and communication needed between stakeholders to incorporate culturally valued content and procedures in a competent manner. Cultural modifications could be systematically documented and analyzed in order to gain insight into the most essential treatment elements and procedures. These data could be used to adapt the intervention for future use or to generalize the intervention to other populations with similar characteristics. Based on the non-hierarchal model employed in this model, stakeholders could provide input regarding the target population and context and contribute to the development of culturally appropriate assessment tools and procedures. The use of intervention materials developed through a partnership model rather than a top-down approach could foster participant ownership of the intervention and thereby lead to intervention sustainability over time. This could have

an impact on overall treatment acceptability and treatment intervention and potentially influence the results of a given intervention.

Comprehensive evaluations of treatment acceptability and treatment integrity data have not been routinely included in publications of school-based research. There are a number of factors that could contribute to the absence of these data including the limitations of existing models of treatment acceptability and treatment integrity. Many of the treatment acceptability models reviewed in this paper provided information that was designed to inform researchers or those responsible for selecting the target intervention. In most cases, the models outlined procedures for considering factors related to treatment acceptability prior to intervention selection and implementation. The Comprehensive Culture-Specific Model of Acceptability and Integrity extends existing models by outlining procedures for school-based researchers and practitioners regarding the evaluation of both constructs in applied settings. Embedding the consideration and evaluation of factors related to treatment acceptability and treatment integrity throughout the intervention process could bring relevant findings related to both constructs to the forefront and make the information available for future researchers and practitioners.

Researchers have hypothesized about the relationship between treatment acceptability and treatment integrity (Mautone et al., 2006). This model could provide a framework for the investigation of the relationship between the constructs through the collection of comprehensive treatment acceptability and treatment integrity data (e.g., multiple methods, multiple sources, multiple stakeholders). Researchers could develop data analysis procedures to examine the correlations between the constructs and investigate the ways in which interventionist perceptions and behaviors influence

participants and the converse. The proposed model also could help to streamline the process of evaluation of the two constructs by examining participant and interventionist behaviors and perceptions that influence treatment acceptability and treatment integrity simultaneously. This may address interventionist concerns related to time constraints (e.g., limited time to evaluate the construct in applied settings) and thereby be more acceptable.

Empirical studies are needed to evaluate this conceptualization as it relates to school-based mental health intervention. These data about acceptability may be used to inform the clinician or researcher evaluation of essential treatment elements, which are defined as variables of the treatment that could be altered while maintaining the integrity of the intervention.

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CHAPTER 2

TREATMENT ACCEPTABILITY, TREATMENT INTEGRITY, AND CULTURAL MODIFICATIONS OF A BULLYING PREVENTION INTERVENTION

Treatment acceptability (Kratochwill & Stoiber, 2000; Nastasi & Truscott, 2000) and treatment integrity (Lane et al., 2004; Mautone et al., 2009) have been investigated over the past few decades as they relate to treatment efficacy. It has been argued that it is important to monitor both constructs when evaluating school-based mental health interventions in order to provide the most appropriate treatment for the target population (Brown & Rahn-Blakeslee, 2009; Nastasi, Moore, & Varjas, 2004). Nevertheless, few published outcome studies have documented comprehensive information related to treatment acceptability and treatment integrity using both qualitative and quantitative data collected at multiple time points across the intervention with input from multiple sources (i.e., facilitators, direct observers, students; Lane et al., 2004; Leff, Hoffman, & Gullan, 2009). Details associated with these constructs could be helpful for school-based mental health professionals as they design, implement, and evaluate interventions. Further, the collection of data related to treatment acceptability and treatment integrity may be particularly salient for researchers and clinicians who work to address intractable social and behavioral problems such as bullying.

The potential negative social, emotional, and behavioral outcomes related to bullying are well-known and have been addressed by a variety of interventions (Merrell et al., 2008, Nansel et al., 2001; Ttofi, & Farrington, 2011). However, little is known about the treatment acceptability of bullying interventions from the perspective of teachers, parents, students and mental health professionals involved in interventions.

Treatment acceptability data could be used to help researchers and practitioners select interventions that would closely match the needs and characteristics of the target population (Calvert & Johnston, 1990). Likewise, treatment integrity has not been well documented in the bullying intervention literature. As a result, data are lacking regarding which session(s) or component(s) of a specific bullying intervention were implemented with integrity.

The purpose of this study was to evaluate the treatment acceptability and treatment integrity of a bullying prevention intervention using data collected from multiple informants, using multiple methods, collected at multiple time points over the course of the intervention. In addition, the researchers investigated the role of cultural modifications, changes made to the content or presentation of the intervention to make it more appropriate to the specific cultural needs of the target population (Nastasi et al., 2004). This investigation was informed by a review of literature related to treatment acceptability, treatment integrity, and cultural modifications.

Treatment Acceptability

Kazdin (1981, 2000) put forth one of the most widely used definitions of treatment acceptability. He defined treatment acceptability as the extent to which consumers (e.g., clients, parents, teachers, and students) found a particular procedure or intervention to be fair, appropriate, reasonable, and consistent with their expectations of treatment. Wolf (1978) prompted the interest in *social validity*, a term often associated with treatment acceptability, as it related to applied behavioral analysis. Wolf (1978) emphasized the need for societal validation of treatment goals, procedures, and effects. Although Kazdin (1981) also investigated treatment acceptability of behavioral

treatments, he focused on the viewpoint of consumers (e.g., teachers, parents, students) rather than members of society that may not be direct consumers of the proposed intervention. More recently, theorists have highlighted the need to expand the definition of consumer to include the individuals involved in selecting and administering the treatment as well as the recipients of the treatment (Lennox & Miltenberger, 1990; Swartz & Baer, 1991). Despite the interest in treatment acceptability in the field of psychology, few studies have documented the collection of treatment acceptability data related to intervening with targets of bullying from multiple stakeholders, using multiple methods, multiple time points throughout the intervention process.

Treatment Acceptability Studies

Although there have been few research studies related to treatment acceptability, positive relationships have been identified between treatment acceptability and referral, enrollment, implementation, and effectiveness of interventions (Girio & Owens, 2009). Researchers have primarily utilized quantitative methods to investigate acceptability and have covered a range of interventions including applied behavioral analysis (Wolf, 1978), assessment procedures (Eckert, Hintze, & Shapiro, 1997), behavioral therapy (Kazdin, 1980; Reimers, Wacker, Cooper, & de Raad, 1992), classroom intervention (Amato-Zech, Hoff, & Doepek, 2006; Skinner & Belfiore, 1992; Musser, Bray, Kehle, & Jenson, 2001), and medical treatment (Laseck, Olympia, Clark, Jenson, & Heathfield, 2008). The results of previous studies using quantitative methods such as post-intervention surveys or analogue techniques have contributed to the understanding of treatment acceptability (Kazdin, 1980). Analogue techniques typically required service providers or members of the target population to select the most acceptable treatment after reviewing a scenario or

a particular diagnosis. The Treatment Evaluation Inventory (TEI; Kazdin, 1980), the children's version of the TEI (Kazdin, 1984, 1986), and the Intervention Rating Profile (IRP; Witt &Elliott, 1985) have been widely used to determine consumer preferences for treatment options after reading or hearing a case study or scenario.

Girio and Owens (2009) evaluated teacher acceptability of evidence-based and promising treatments for students with Attention Deficit Hyperactive Disorder (ADHD) by having elementary school teachers read vignettes and rate them using the Intervention Rating Profile – 10. The authors found that promising treatments (i.e., those without documented efficacy data) were rated as acceptable and in some instances rated more favorably than evidence-based treatments (Girio & Owens, 2009). Mendelson and colleagues (2010) investigated the feasibility of a mindfulness intervention for urban youth and found the intervention was acceptable to students, teachers, and school personnel. Primary outcome measures were related to recruitment and retention. They collected data regarding student attendance throughout the intervention and conducted focus groups with teachers and students at the end of the intervention (Mendelson et al., 2010). Although these studies have contributed information regarding the acceptability of treatments in hypothetical situations or at the end of treatments, they have not provided comprehensive data regarding treatment acceptability over the course of an intervention within the school setting.

Varjas et al., (2006) assessed acceptability as a part of a pilot study designed to investigate a school-based peer victim intervention. Treatment acceptability was evaluated over the course of the intervention using quantitative and qualitative methods. Group leaders and students participated in data collection and the results revealed

consistently positive perceptions of the intervention based on student report and predominately positive perceptions based on group leader response. Further, the results of the study suggested that there was a relationship between group leader and student participant perceptions of treatment acceptability (Varjas et al., 2006). Similarly, a case study of counseling intervention with an identified bully revealed a high degree of treatment acceptability based on student, parent, and teacher report with an increase in facilitator acceptability over the course of the intervention (Huddleston, Varjas, Meyers, & Cadenhead, 2011). While these findings are promising and contribute to the bullying literature, more studies focused on the process of assessing treatment acceptability would be beneficial for researchers interested in incorporating an evaluation of treatment acceptability in school-based bullying prevention studies. Detailed information regarding the assessment of treatment acceptability in naturalistic settings is not frequently included in published articles. The lack of these data limits opportunities for replication of treatment acceptability assessment procedures.

In summary, several important reasons to consider and evaluate treatment acceptability data as they relate to school-based intervention research were revealed. It has been suggested that high levels of treatment acceptability may improve treatment integrity and ultimately influence efficacy (Mautone et al., 2009; Reimers, Wacker, & Koppl, 1987). As described earlier, treatment acceptability data could help school-based personnel select the most appropriate intervention with respect to fit. For example, treatment acceptability data could provide logistical information regarding the complexity of implementation, the resources necessary to implement the intervention, and other characteristics of the intervention and context that have the potential to

influence feasibility (Kratochwill & Stoiber, 2000; Nastasi et al., 2004; Nastasi & Truscott, 2000). Perceived treatment acceptability has the potential to influence treatment selection and high fidelity of implementation for service providers (i.e., teachers, psychologists, counselors; Kazdin, 1980). Furthermore, information regarding the treatment acceptability of an intervention may influence participants' (e.g., patient, student, parent, teacher) decision to continue and complete treatment or may mitigate perceived barriers to treatment (Kazdin, 2000). Due to the potential influence on treatment selection, implementation, and adherence; it is important to include an evaluation of treatment acceptability when conducting school-based interventions.

Few studies have examined the construct of treatment acceptability utilizing multiple methods and multiple informants, which is recommended as best practice (Finn & Sladeczek, 2001; Nastasi & Hitchcock, 2009; Swartz & Baer, 1991). Using multiple methods is important because employing a single method or methodology (i.e., analogue methods, surveys) may limit the depth of information obtained and might not provide a clear explanation of study events related to treatment acceptability. Similarly, it is important to gain information from the perspectives of the consumers of the treatment as well as the service providers as buy-in from both groups may serve to promote the success of the intervention (Swartz & Baer, 1991). Based on a review of the bullying literature, little is known regarding the acceptability of bullying interventions in naturalistic settings using quantitative and qualitative methods with input from multiple stakeholders. However, of the few bullying intervention studies that included an investigation of treatment acceptability, positive findings were revealed based on student and facilitator reports (Huddleston et al., 2011; Varjas et al., 2006). One of the goals of

the current study was to contribute to the research literature related to the treatment acceptability of bullying interventions by describing the process and outcomes associated with a mixed methods evaluation of treatment acceptability from multiple sources over the course of the intervention.

Treatment Integrity

Treatment integrity has been defined as the extent to which an intervention or treatment is carried out as planned by the developer (Gresham & Gansle, 1993; Lane et al., 2004). Authors have asserted that treatment integrity is an important construct with respect to mental health issues such as bullying intervention because empirical evidence suggests there is a positive relationship between treatment integrity and efficacy (Gresham & Gansle, 1993; Power et al., 2005). Authors have argued that identifying changes in the target behavior that are related to the implementation of treatment components (i.e., specific parts of the intervention) could facilitate understanding of the relationship between treatment integrity and efficacy (Gresham et al., 1993). For example, the success or failure of an intervention may be influenced by participant characteristics, context variables, and previous or concurrent exposure to similar interventions (Lane et al., 2004). Consequently, mental health professionals may have a limited ability to interpret study findings without an adequate assessment of treatment integrity (McIntyre et al., 2007). An evaluation of treatment integrity could provide information about the dosage or critical components necessary to be effective (Mautone et al., 2009; Sanetti & Kratochwill, 2009). An analysis of treatment integrity data may reveal that only some intervention components are critical or that all components need

not be implemented in a rigid manner in order to be successful (Sanetti & Kratochwill, 2009).

Treatment Integrity Studies

Gresham and Gansle (1993) reviewed the literature on the use of treatment integrity data in school-based behavioral interventions and determined that despite the need for documentation of the role of the target variable inherent in behavioral intervention, only 14.4% of studies included a measure of treatment integrity. The authors suggested that treatment integrity data could aid in differentiation between an ineffective treatment and one that is poorly implemented. Similarly, Perepletchikova, Treat, and Kazdin (2007) reported that treatment integrity was adequately addressed in only 3.50% of psychosocial interventions reviewed. In addition to helping potential consumers understand the intervention (Gresham & Gansle, 1993), treatment integrity data could be used to guide changes in the intervention when the desired effects are not observed. Data on treatment integrity can inform modifications in training or procedures when the intervention is ineffective and/or is not implemented with integrity (McIntyre et al., 2000).

Although several studies have included quantitative measures of treatment integrity, (e.g., Fuchs & Fuchs, 1989; Sheridan, Swanger-Gagne, Welch, Kyongboon, & Garbacz, 2009; Sanetti, Gritter, & Dobey, 2011; Kazdin, 1988; Gresham & Gansle, 1993; Gresham, Gansle, & Noell, 1993), few have measured treatment integrity using both quantitative and qualitative methods. The failure to include both quantitative and qualitative methods could be limiting in several ways. For example, quantitative methods may not reveal rich descriptions related to the process of implementation as consumers

filling out quantitative treatment integrity surveys may not reflect on how and why particular intervention components were or were not implemented. The quantitative studies reviewed typically assessed treatment integrity utilizing a single method, at one time point, with one rater group (i.e., interventionists). Treatment integrity measures administered at a single time point (i.e., at the end of the treatment) may not differentiate among the intervention components or may require the participants to respond to questions about treatment elements that occurred long before the assessment.

Similar to the general intervention literature, few bullying intervention studies have included a comprehensive evaluation of treatment integrity. The majority of studies included in a meta-analysis of school-based interventions with goals related to preventing or reducing bullying and at least one outcome measure related to bullying or victimization included some form of integrity documentation (Ryan & Smith, 2009). The authors examined *integrity promotion* and *integrity verification*. Integrity promotion was defined as efforts to promote treatment integrity such as providing treatment manuals, training, and supervision of treatment providers. Integrity verification included an assessment of *adherence* (i.e., the degree to which program procedures were followed), *dosage* or the amount of the participants' exposure to treatment, *quality of intervention*, *participant responsiveness* and *program diffusion*. *Quality of intervention* referred to facilitator perceptions of the program, their level of competence, and effectiveness. *Participant responsiveness* referred to the level of participation and enthusiasm and *program diffusion* referred to the degree to which the program diverged from other treatments. Of the studies assessed, the findings indicated that the following components of integrity verification were addressed: adherence 35%; exposure 22.6%; quality of

delivery 22.6%, participant responsiveness 19.3%, and program diffusion 6.4%. Less than 25% of the studies included a qualitative component. The authors recommended the inclusion of a mixed methods evaluation of treatment integrity in order to provide contextual information related to treatment implementation and study findings (Ryan & Smith, 2009).

A database (i.e., Psych Info, ERIC, Medline) search utilizing the terms bullying and integrity over the past ten years yielded two peer reviewed articles describing a school-based intervention in the United States. In the first study identified, Varjas et al., (2006) found a high degree of treatment integrity related to a peer-victim bullying prevention intervention. Although integrity data were collected over the course of the intervention, findings were based solely on qualitative methods (Varjas et. al., 2006). In the second study, which presented the results of an individualized bullying intervention, positive qualitative findings were revealed related to treatment integrity, with 100% implementation of the essential components of the intervention across all sessions (Huddleston et al., 2011). These positive qualitative findings have contributed to the knowledge base related to the treatment integrity of bullying interventions. Building upon the findings of Varjas et al. (2006) and Huddleston et al. (2011), the current study was designed to assess integrity at multiple times throughout the intervention using both quantitative and qualitative methods with input from interventionists and an outside observer.

Cultural Modifications

Cultural competence has received substantial attention in the delivery of mental health and educational services over the past few decades (Ingraham & Oka, 2006;

Whaley & Davis, 2007). Cultural competence refers to the ways in which belief in the value of all cultures is displayed through professional activities (e.g., problem-solving, assessment, prevention, consultation) or systems-level policies that advocate for better care (National Association of School Psychologists [NASP]; 2003). Despite the increase in research about evidence-based treatments in the medical, mental health (Whaley & Davis, 2007), and education fields (Kratochwill & Shernoff, 2004), these treatments or interventions have not been well translated to culturally diverse populations (e.g., DHHS, 2001; Varjas et al., 2009). This is particularly concerning in light of the ever increasing cultural and racial diversity of U.S. schools and the over-identification of minorities with certain diagnoses and the underutilization of mental health services by certain cultural groups (Whatley & Davis, 2007). Herman, Merrell, Reinke, and Tucker (2004) suggested that school mental health professionals should develop intervention methods that are designed to be modified by incorporating culture-specific factors using a sociocultural lens that is designed to address the mental health needs of all students.

Researchers have shown that cultural variables related to the individual (e.g., race, religion, sexual orientation, gender) could place individuals at-risk for victimization (Larochette, Murphy, & Craig, 2010; Varjas et al., 2006, 2008). Contextual variables related to school culture could serve as barriers or facilitators to the success of bullying prevention programs (Colye, 2008). Nevertheless, few bullying intervention studies have documented procedures implemented to address cultural variables. Of the studies that have addressed cultural modifications, findings suggested that adapting curriculum procedures to be more responsive to the culture of the participants or context has the potential to influence treatment acceptability (Huddleston et al., 2011; Varjas et al.,

2006). Further investigation of the role of cultural modifications with respect to bullying intervention is needed to understand the ways in which changes to make interventions more culturally relevant influence acceptability and integrity.

Researchers have proposed definitions and models of integrity that promote the use of multiple informants and multiple methods to examine treatment integrity (e.g., Nastasi et al, 2004; Power et. al., 2005). Nastasi et al. (2004) defined integrity as the degree to which core program elements are implemented and cultural adaptations are documented. Central to the Participatory Culture Specific Intervention Model (PCSIM) was the importance of collaboration among stakeholders at multiple stages of the intervention and the use and documentation of cultural modifications in an effort to increase treatment acceptability, treatment integrity, and efficacy (Nastasi et al., 2004). Similar to the tenets of the PCSIM, Power and colleagues (2005), proposed a partnership model for treatment integrity that emphasized collaboration with stakeholders in an effort to be culturally responsive while maintaining the essential components and content of the intervention.

A unique component of this study was the focus on a less researched construct, cultural adaptations or modifications of intervention content and delivery. Culture was defined as shared beliefs, values, norms, and practices of a group of individuals based on one or more common characteristics (e.g., age, race, ethnicity, gender, sexual orientation, socioeconomic status [SES], ability; Nastasi et al., 2004). The intervention used in this investigation addressed cultural factors related to the school context (e.g., previous interventions and policies related to bullying, school demographics) as well as group (i.e.,victims) and individual characteristics (age, ability level, gender; Varjas et al., 2006).

For the purposes of this study, cultural modifications were defined as changes in curriculum presentation or content determined through a recursive process of feedback from stakeholders (i.e., students, school personnel, researchers) while maintaining the essential components (i.e., research-based strategies with evidence of efficacy) of the intervention.

Mixed Method Research

The current study explored content and process outcomes related to treatment acceptability and treatment integrity and cultural modifications using mixed methods. Consequently, the literature on mixed methodology was reviewed. Mixed methods research has been proposed as an alternative to relying solely on qualitative or quantitative data (Johnson & Onweugbuzie, 2004). Authors have suggested that the use of mixed methods draws on the strengths of qualitative and quantitative methods while buffering their weaknesses (Johnson & Onweugbuzie, 2004).

Mixed methods research (MMR) has been described as a relatively new paradigm with no commonly held definition within the research community (Al-Hamdan & Anthony, 2010). A review of literature revealed that the key difference among current definitions of MMR is the degree to which qualitative and quantitative methods were integrated into a study. For example, studies identified as MMR included those utilizing multiple forms of qualitative or quantitative tools, those using both qualitative and quantitative methods within a single data collection tool, as well as those that integrated substantial qualitative and quantitative elements across one or more phases of the research study or program (Creswell & Plano, 2007; Tashakkori & Creswell, 2007; Tashakkori & Teddlie, 2003). For the purposes of this study, mixed methods was defined

as research in which qualitative and quantitative data were collected, analyzed, integrated, and used to draw inferences related to treatment acceptability, treatment integrity, and cultural modifications (Tashakkori & Creswell, 2007). The procedure for incorporating qualitative and quantitative approaches was explicated in the methods section.

Purpose of the Study

This mixed methods study evaluated treatment acceptability and treatment integrity data collected as a part of an eight-week bullying prevention intervention for students at-risk for being bullied. For the purposes of this study, treatment acceptability was defined as documentation of consumer satisfaction with the process and or content of the intervention. This included documentation of positive or negative affect of group members, non-verbal cues, or other observable behaviors over the course of the intervention. Treatment acceptability also encompassed the stakeholder's (i.e., group members, facilitators, process recorders) perceptions of or statements regarding the appropriateness, fairness, or feasibility of the intervention processes or content.

Treatment integrity was defined as the degree to which core elements or essential components of the intervention were implemented and culturally responsive modifications or adaptations were documented by multiple stakeholders (Nastasi et al., 2004; Power et al., 2005). Treatment integrity data included documentation of what was implemented, how it was implemented, as well as the amount of treatment received (i.e., attendance, group length). In addition, factors that had the potential to enhance or limit treatment integrity were documented. As described above, this study employed qualitative and quantitative measures to explore student, facilitator, and observer

perceptions of treatment acceptability, treatment integrity, and the role of cultural modifications (i.e., the degree to which appropriate procedural or curriculum changes enhanced the acceptability or integrity of the intervention).

In the current study, the research questions were best addressed through the use of mixed methods. This study utilized data collected from multiple informants (i.e., group facilitators, process recorders, and student participants) at eight time points. Further, the study compared data collected from students who were assigned to eight different peer-victim groups that were separated by gender and grade level. The qualitative and quantitative data were integrated at the analysis and interpretation phases in order to address the following research questions.

1. In what ways and to what extent were Essential Components acceptable in each intervention session? [1]**QUAN + QUAL** [treatment acceptability]
2. In what ways and to what extent were the essential components implemented throughout the session? **QUAN + qual** [treatment integrity]
3. To what extent were cultural modifications to the essential components considered or made in order to potentially enhance treatment acceptability, treatment integrity, and treatment efficacy of each intervention session? **QUAL**
4. In what ways do the results of questions 1 – 3 vary according to gender and/or grade?

Method

[1] QUAN is the abbreviation for quantitative methods and QUAL is the abbreviation for qualitative methods. Capitalized letters are used to identify the dominant method used within an instrument.

Design

The research design and measures used in this study were based on the Partnership Model of Intervention Integrity (Power et al., 2005) and the Participatory Culture Specific Intervention Model (Nastasi et al., 2004). As a result, this study included input from multiple stakeholders prior to, during, and after the intervention. Data were collected from multiple informants using multiple methods of inquiry. Both the quality of the intervention as well as participant response to the content and process of the intervention were evaluated. Critical or essential components of the intervention and cultural adaptations or considerations were documented. Examples of multiple informants included interventionists, direct observers, and student participants. Multiple methods referred to the use of both qualitative and quantitative methodology and formative and summative evaluation. Critical components of the intervention were defined as essential elements of the intervention that were consistent with theoretical evidence and the findings of previous studies related to the target concern. Adaptations or modifications were described as strategies designed by the interventionists to address the needs of the context and target students (Power et al., 2005).

This study utilized a mixed methods design in an effort to obtain data from one method to enhance the findings obtained through another method with a goal of providing unique information and overcoming potential weaknesses of a single methodology (Teddlie & Tashakkori, 2009). Both qualitative and quantitative data were collected concurrently from identical samples, as the same individuals participated in both qualitative and quantitative data collection components during the same time period (Onwuegbuzie & Collins, 2004).

Context

This study occurred during first year of a CDC funded multi-year bullying prevention and intervention project designed as a part of a collaborative long-term relationship with the target school system (For a description of previous research in the district see Huddleston et al., 2011; Varjas et al., 2006, 2009). One of the unique components of this study was the extensive engagement and collaboration with school personnel in the development, implementation, and evaluation stages of the study. This level of involvement is one of the tenets outlined in the Participatory Culture-Specific Intervention Model (Nastasi et al., 2004), which was used to design the overarching intervention program from which the current study was developed. The initial stages of the intervention project consisted of multiple meetings with school administrators, lead teachers, and school counselors. The focus of these interactions was to identify cultural brokers and to learn about the school climate, school culture, and the values held by stakeholders. A cultural broker was defined as a member of the target population who informed the researchers about the local customs, procedures, values, and the nature of interpersonal relationships and roles (Nastasi et al., 2004).

The student participants attended a middle school and an upper elementary school in a racially and ethnically diverse charter school district in the metropolitan Atlanta area. African American (40%) and White (52%) students constituted the majority of the student population with 2% Asian, 2% Hispanic, and 4% Multiracial representation within the district. One third of the district population received free or reduced lunch. The total student population of the district was 2,484.

Bullying Prevention Intervention

The current study utilized data collected from a preventive intervention for targets of school-based bullying developed by the Center for Research on School Safety, School Climate, and Classroom Management at Georgia State University. The intervention was the fifth iteration of a bullying prevention curriculum developed through collaboration between university researchers and school personnel from the target district. The intervention was implemented across 10 weeks during the spring term of 2010 and consisted of 8 sessions held weekly. There were two weeks during which groups did not meet due to breaks in the school calendar and the spring testing schedule. Middle school groups were conducted during non-core academic courses (e.g., band, chorus, physical education) and upper elementary school groups were conducted after school per the request of school administrators.

The intervention utilized a psycho-educational curriculum developed to promote a positive school climate at the elementary and middle school levels, to prevent bullying and negative outcomes associated with bullying, and to teach and promote coping skills for students at-risk of being bullied. The goals of the first session were to develop rapport among group members and to establish group rules and expectations. The second and third sessions consisted of group interviews designed to elicit information regarding student perceptions of and experiences with bullying. Session four addressed problem-focused coping through the introduction of a problem-solving model that could be applied to bullying situations. During session five, the students defined empathy and participated in activities designed to increase their ability to understand verbal and non-verbal cues. Session six was designed to help students explore their personal

competencies and session seven facilitated an exploration of environmental resources that could be used to prevent or intervene with bullying situations. The final session was a review of the topics addressed over the previous weeks (see Table 1 for session objectives).

Table 1. *Session Objectives*

Session	Objectives
1: Group Rules and Icebreakers	To build rapport among group members and leaders To establish group rules and expectations
2 & 3: Students' Perception of Bullying	To explore students' perceptions regarding bullying behavior To help students engage in self-reflection To help students practice empathy To help students practice problem-solving skills
4: Problem Focused Coping	To provide the students with the skills to identify bullying situations and apply problem-solving skills to those situations
5: Empathy	To help students understand empathy
6: Body Maps – Culturally Valued Competencies	To increase awareness of positive feelings, likes, and competencies
7: School Maps – Identifying Social-Cultural Resources	To identify safe and unsafe or high-risk areas in the school To discuss reasons for responses To identify ways to increase feelings of safety
8: Review, Skill Application, and Wrap-up	To review information and lessons learned To encourage implementation of skills learned To discuss how to make school safer place

Data Sources

Participants

Group members. All 4th and 6th grade students with signed parental consent and student assent forms completed a self-report, computer-based screening assessment in the Fall of 2009. The screening survey assessed the students' role (i.e., victim, bystander, bully, not involved) and level of involvement with bullying. The screening survey included items related to direct bullying (i.e., physical, verbal) and indirect bullying (i.e., ignoring, turning others against the student, spreading rumors). Based on a predetermined cut-off score for level of victimization, those students most at-risk for victimization were invited to participate in the intervention. Students who were identified as bullies or bully-victims based on self-report were not included in intervention groups. A separate individualized counseling intervention was developed for students identified as bullies. The final sample included twenty-five students at-risk for victimization from each grade level in the intervention groups. The students were assembled in eight homogeneous groups with respect to grade and gender (i.e., two male and two female groups per grade level). Group racial and ethnic demographic information was reported in Table 2.

Table 2. *Self-identified Racial/Ethnic Breakdown of Intervention Groups*

Girls	Race/Ethnicity	Boys	Race/Ethnicity
4th Group1	3 Other(Mexican, Cherokee, Senegalese) 2 White	4th Group1	2 African American 1 Other (Black) 3 White
4th Group2	2 African American 1 Other (German/Italian) 3 White	4th Group2	2 African American 1 Latino/Hispanic 1 White
6th Group1	3 African American	6th Group1	1 Black (Somali)

	1 Asian 1 Latino/Hispanic 1 Multiracial 1 White		1 Multiracial 1 Other (Muslim) 2 White
6th Group2	1 African American 2 Multiracial 2 Unknown 2 White	6th Group2	2 African American 1 Multiracial 2 White

Graduate Research Personnel. The facilitators and process recorders included experienced and novice graduate students in school psychology and school counseling who attended a 20-hour training session related to implementing and evaluating the intervention curriculum. They also attended weekly group supervision sessions with advanced doctoral students and faculty advisors to provide ongoing support and supervision. There were 11 graduate students who served as facilitators and process recorders in multiple groups. Of the graduate researchers, 54% were Caucasian, 18% Hispanic, 18% African American, and 9% Asian. There were two male and nine female graduate students. It is important to note that this author participated in the training and supervision of graduate research personnel and assumed the role of participant observer by serving as a facilitator for one of the intervention groups and a process recorder for another intervention group while completing a year-long school psychology internship within the target district. Participant observation is defined as an approach to research wherein the researcher observes the target population or phenomena of interest within the cultural milieu and participates to some degree in the activities being observed (Mack, Woodson, MacQueen, Guest, & Namey, 2005; Spradley, 1980).

Data Collection Tools

Data were obtained through the collection of the following forms: Essential Components Form; Process Documentation Form; Facilitator Reflection Form; and the Student Evaluation Form (Table 3, Appendices A - D). The instruments were developed through an iterative process using data collected from previous implementations of the bullying prevention intervention as well as through a review of the literature on treatment acceptability, treatment integrity, and cultural modifications. All data collection forms were completed immediately following each session and submitted to university personnel on a weekly basis.

Table 3. *Data Sources*

Data Collection Form	Raters	Construct/Dimension(s)
Student Evaluation	4th and 6th grade students	Treatment Acceptability; Treatment Integrity (treatment receipt)
Essential Components	Facilitators and Process Recorders	Treatment Acceptability; Treatment Integrity (adherence, participant engagement, quality of delivery); Cultural Modifications
Process Documentation Form	Process Recorders	Treatment Acceptability; Treatment Integrity (adherence, participant engagement, quality of delivery, exposure); Cultural Modifications
Facilitator Reflection Form	Facilitators	Treatment Acceptability; Treatment Integrity (adherence, participant engagement, quality of delivery, exposure); Cultural Modifications

Essential Components Form. The Essential Components form (Appendix A) was a mixed methods instrument completed over the course of the intervention. The Essential Components form was completed independently by the two facilitators and the process recorder at the end of each session. The form consisted of closed-ended Likert-scale questions (quantitative component) and open-ended questions (qualitative component). The Essential Components form allowed the facilitators and process recorders to indicate whether or not key elements of each session were completed. The form also allowed the group leaders and observer to indicate the degree to which the component was implemented (i.e., excellent, satisfactory, needs improvement). The qualitative portion of the Essential Components Form included a prompt to explain their quantitative responses to each item. The items addressed on the Essential Components forms varied each week to correspond to the session content.

Process Documentation Form. The Process Documentation Form (Appendix B) was a mixed methods data collection tool completed by the process recorder that was utilized to capture information related to student engagement, attendance, language used, curriculum changes and the nature of student and facilitator interactions. The quantitative elements included attendance information and ratings of student behavior/engagement. The qualitative component included a narrative section in which process recorders provided detailed descriptions or summaries related to student-facilitator and peer interactions. Observations related to cultural modifications were also recorded.

Facilitator Reflection Form. The Facilitator Reflection Form (Appendix C) was a qualitative data collection tool used to document information related to the process and outcome of each session, facilitator self-evaluation, perception of student acceptability,

and session modifications. Each facilitator responded to 6 questions/prompts at the end of each session. Sample items included the following: To what extent were you pleased with the process and the outcome of today's session, To what extent were you pleased with your own performance as a group leader, and To what extent did the students accept today's session.

Student Evaluation Form. The Student Evaluation Form (Appendix D) was a mixed methods data collection tool that included Likert scale type questions and open-ended questions used to collect information related to student perceptions of acceptability. Each student was asked to complete an evaluation form at the end of every intervention session. The qualitative elements included 3 open-ended questions related to what the student learned during the session, favorite components of the session, and suggested changes. The quantitative portion consisted of 3 Likert scale items, which assessed student interest and perceived appropriateness of the session based on age and gender. The form also included a multiple-choice item that allowed students to rate how the session made them feel (i.e., happy, sad, excited, angry, nervous) and provide a short answer to explain their endorsement.

Data Analysis

Consistent with concurrent mixed methods designs, data analysis took place after all quantitative and qualitative data were collected (Onwuegbuzie & Teddlie 2003). The first step of data analysis was data reduction, which entailed gleaning the key elements from the data collected through qualitative and quantitative methods (Collins & O'Cathain, 2009). Qualitative and quantitative data reduction procedures were described below.

Qualitative data collected from facilitators, process recorders, and group members were aggregated by session (i.e., qualitative components from the Facilitator Reflection Form, Essential Components Form, Process Documentation Form, Student Evaluation Form) and by group (e.g., all eight sessions for 6th grade girls group #1) to form a coding unit for data analysis purposes. There were a total of eight units (i.e., one per intervention group). Next, all eight sessions of one unit (i.e., 6thGirls1) was independently coded by two graduate researchers. Coding the data consisted of reading through the qualitative data and assigning a word or phase to represent the most salient aspects of the qualitative content.

The coders used a deductive – inductive approach to determine the prominent themes related to the definitions of treatment acceptability, treatment integrity, and cultural modifications outlined in this study and to identify emerging themes related to the constructs within a context of a bullying prevention intervention. The coders met weekly to discuss and solidify definitions for the emerging themes. The resulting codes constituted the initial coding manual (Appendix E) which was subsequently used to recode the eight sessions of the first unit.

Intercoder agreement of 90% or above was calculated for each of the eight sessions with an overall intercoder agreement of 93% for unit one. Intercoder agreement was calculated by dividing the total number of coding agreements by the sum of coding agreements and disagreements. Outliers (i.e., content that was coded differently by raters) were discussed and used to clarify definitions and refine the coding manual. The revised manual was then applied to a subsequent unit of qualitative data (e.g., 4thGirls1) and coded independently by the two raters to obtain reliability of the coding manual.

Interrater reliability of 98% was achieved. The remaining qualitative units were divided between the researchers and periodic checks for coder drift were conducted. In order to assess coder drift, each researcher coded 10 percent of the units that were assigned to the other coder. Intercoder agreement was calculated and an average of 93% intercoder agreement was maintained throughout remaining qualitative data analysis. An audit trail containing qualitative raw data, analysis, and interpretations was maintained (Lincoln & Guba, 1985; Nastasi et al., 2004). Qualitative data analysis procedures were consistent with those recommended to promote reliability, creditability, and trustworthiness (Lincoln & Guba, 1985).

Quantitative data were analyzed using SPSS Version 18 (quantitative data analysis software). Three quantitative Likert-scale (4 = Strongly Agree, 3 = Agree, 2 = Disagree, 1 = Strongly Disagree) acceptability items from the Student Evaluation Form were averaged to yield a session (n = 8) and an overall treatment acceptability score for each group (n = 8). A one-way analysis of variance (ANOVA) was utilized to determine whether or not overall treatment acceptability was significantly different based on gender or grade. Quantitative treatment integrity data based on facilitator and process recorder report were analyzed using descriptive statistics. Mean scores were calculated based on two facilitator and one process recorder rating for all of the essential components in each session and used to calculate the overall average of treatment integrity by session (n = 8) and by group (n = 8). Percentages of student attendance and student engagement, as documented by the process recorders for each session, were obtained as measures of treatment integrity. The number of total absences for each session and group were

summed and overall percentages of student engagement by session and by group were calculated.

Results

Qualitative and quantitative data were collected from multiple raters across all sessions. Research questions one through three were addressed by construct (i.e., treatment acceptability, treatment integrity, cultural modifications) with findings related to research question four (i.e., age and gender differences) embedded throughout the results section.

Treatment Acceptability

Quantitative treatment acceptability results were presented based on student data and described in terms of mean scores by session (n = 8) and by group (n = 8). Qualitative student report acceptability data were described in terms of positive and negative themes related to student perceptions of group content and process. Qualitative themes based on facilitator report included a description of the degree of treatment acceptability (e.g., high, moderate, low) and examples of the associated curriculum content. Facilitator perceptions of the appropriateness of the session content and procedures for the target population were reported. Due to the structure of the data collection tools and the nature of qualitative responses obtained, qualitative findings were described both quantitatively and qualitatively.

Table 4. *Treatment Acceptability by Group and Session (Student)*

Group	S1	S2	S3	S4	S5	S6	S7	S8
6th Girls 1	3.14	3.27	3.71	3.52	3.66	3.83	3.57	3.66
6th Girls 2	3.24	3.38	3.57	3.44	3.38	3.52	3.47	3.95
6th Boys 1	3.40	3.25	2.93	3.33	3.13	3.20	3.13	3.46
6th Boys 2	3.11	3.50	3.38	3.27	3.22	3.38	3.27	3.27
4th Boys 1	3.44	3.38	3.60	3.73	3.75	3.61	3.72	3.88

4th Boys 2	3.00	3.11	3.11	3.11	3.11	3.22	3.22	3.44
4th Girls 1	3.40	3.66	3.58	3.58	3.77	3.00	3.75	4.00
4th Girls 2	3.16	2.76	3.00	3.09	3.08	3.66	3.00	3.80

Quantitative Student Evaluation Form Data. Group mean scores (n = 8) of overall treatment acceptability ranged from 3.25 to 3.7 on a 4-point scale (Table 4). Overall treatment acceptability ratings increased from Session 1 to Session 8 (Figure 1). The results suggested that students found the intervention more acceptable over the course of the intervention. The results of the one-way ANOVA indicated that treatment acceptability ratings were not significantly different based on grade F (31, 14) = .837, p = .68 or gender F (31, 14) = 1.02, p = .50.

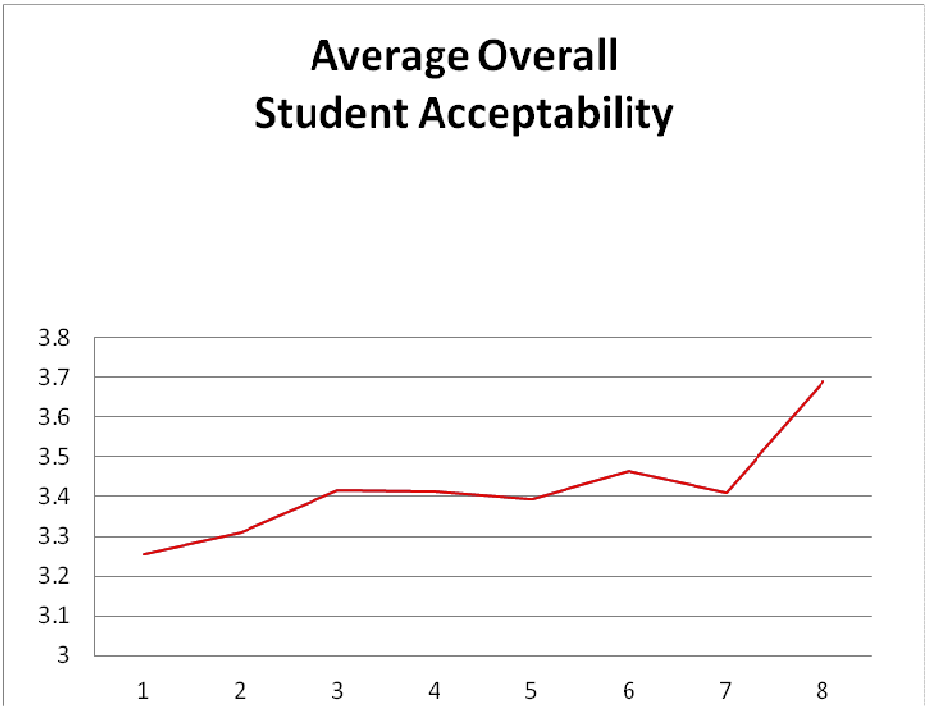

Figure 1. Overall Treatment Acceptability – Student Report

Qualitative Student Evaluation Form Data. The results of the multiple-choice and short answer item regarding acceptability suggested that students experienced positive feelings related to participation in group sessions. All of the feelings endorsed by student participants were positive (i.e., happy or excited) in 47 of the 64 sessions across all groups. Negative emotions were endorsed by no more than one student per session. Of the negative feelings endorsed, three were related to missing a preferred class or activity, three were related to family or personal concerns unrelated to the group, and the remaining negative feelings were related to the group process or content. For example, three participants acknowledged having sad feelings related to their experiences as victims of bullying. In response to Session 3 one 6th grade male student stated, "thinking about how and when people are bullied is sad". However, most students expressed positive feelings related to learning about the experiences of others and sharing with peers their feelings regarding being bullied. For example, one 4th grade girl endorsed feeling happy "because [she] got to talk about [her] feelings". Six negative emotions were related to feeling nervous about attending group or participating in session activities. After Session 7, a 4th grade male student stated that he felt "nervous, because he didn't know what they were going to do" during the session. Similarly, a 4th grade girl indicated that she felt nervous because she "thought people would make fun of [her]" (Session 1). Students expressed positive views of sessions that included a creative component (i.e., drawing body maps, role-playing). A 4th grade girl acknowledged enjoying the body map activity because "people said nice things about [her]". Two students expressed regret about the conclusion of the group sessions. After Session 8, a sixth grade boy stated, "I enjoyed everything, but it's sad to be leaving". Overall, qualitative responses were

consistent with quantitative findings and suggested that students found the sessions interesting, enjoyable, and exciting. Similar responses were noted with respect to age and gender (See Table 5 for illustrative quotes).

Table 5. *Illustrative Quotes – Treatment Acceptability (Student data)*

Group	Today's group made me feel… Why?
4th Girls	• It made me feel happy because I got to express my feelings about the person who is bullying me; Happy that I can tell people about my bullying problems without getting teased (Session 1) • Nervous because it was my first one (Session 2) • Nervous, I was scared to answer questions (Session 3) • Happy because I learned what to do when you see somebody getting bullied (Session 3)
4th Boys	• Nervous, I thought I was in trouble when I was coming up (Session 1) • Nervous because I didn't know what we were going to do (Session 1) • Excited, I found out my strengths (Session 7 - Body Maps) • Excited because we got to make body maps (Session 6)
6th Girls	• Excited because I feel like everyone is on my side, I feel like I have a soft pillow to fall on when I'm upset; Nervous, I am anxious to see what happens but nervous for the outcome (Session 1) • It was quite interesting to hear from other girls my age (Session 2 Interview) • Sad, because I heard stories about bullying (Session 2) • Happy, I could get my feelings out, I like that other people feel the same way I feel (Session 3 Interview) • Happy, this way is interesting to learn about different emotions (Session 4 – Problem Solving) • Happy because we got to be creative; I liked making the body map, it was really exciting to me, it made me feel happier (Session 6 – Body Maps) • Happy, we got to act and talk (Session 8- Review)
6th Boys	• Happy, I enjoyed talking and listening (Session 1) • Sad, hearing other kid's stories moved me (Session 2- Interview) • Happy, we talked about when we get teased (Session 2 Interview) • Happy, the solution and the clip were fun (Session 4 – Problem Solving) • Excited, new stuff to learn (Session 5 – Empathy) • Happy, I know how to deal with bullying (Session 8, Review) • I enjoyed everything but it's sad to be leaving (Session 8 – Review)

Qualitative Facilitator Reflection Form Data. An analysis of qualitative facilitator data for fourth grade groups indicated that they were pleased with session processes and outcomes and deemed session activities appropriate in all sessions. Facilitators indicated that sessions were acceptable to students in 31 of 32 fourth grade sessions. Facilitators of sixth grade groups reported being pleased with the process and outcome of 28 out of 32 sessions. They also perceived the sessions to be acceptable to the group in 30 of 32 sessions and appropriate in 30 of 32 sessions. Similar to the student responses, facilitators indicated that students enjoyed the body map activity and role-playing. One facilitator stated in regard to the final session of a 4th grade girls group, "They enjoyed the role playing activity and demonstrated good depictions and solutions for the scenario." Another facilitator stated, "The students really liked today's whole session. They liked stretching out on the floor, getting to talk about themselves and explaining their strengths, and they also mentioned that they liked learning things they have in common when they moved around (6th Grade Boys, Session 6)." Facilitator responses suggested that the majority of the sessions were viewed as appropriate (See Table 6 for additional quotes). Although a high degree of treatment acceptability was reported for both grade levels, sixth grade sessions were rated somewhat less acceptable than fourth grade sessions. Facilitators cited behavior difficulties and lack of interest or engagement as barriers to treatment acceptability. These data were reported in the treatment integrity section below. Several facilitators noted suggestions for making sessions more appropriate for students based on age, gender, and level of cognitive functioning. These recommendations were described in the Cultural Modifications section.

Table 6. *Illustrative Quotes - Treatment Acceptability (Facilitator data)*

Grade	Quotes
4th Girls	• I was really pleased because the energy level was high, both the facilitators and the girls were excited and participating throughout the session (Session 1) • At the end of the session the students said they enjoyed the session. The mood in the room was happy and energetic. (Session 3) • The students accepted the session 100%.(Session 6) • The students accepted the session by participating and providing feedback.(Session 7)
4th Boys	• I was pleased. I felt that my excitement I had for the group showed through my attitude and actions (Session 1) • The students appeared to have fun with the icebreaker and were positive in the evaluation forms. (Session 1) • I was very pleased with today's session. There were no serious behavior problems and the boys seemed to enjoy the activities. The boys were able to grasp the problem-solving model with little difficulty (Session 3). • The students really enjoyed acting out the facial expression activity. They like the challenge of guessing using few choices (Session 5)
6th Girls	• I was not pleased with the outcome and process. We had several behavioral issues. The students were resistant to accept the problem solving model as an option to address bullying. More interested in hitting or talking back to a bully. (Session 4) • They really enjoyed the game, everyone took a turn, lots of smiles and excitement (Session 5) • Some of the students said they did not understand the session. I got the sense that they did not like the activity or understand the value of it because one of the students say that bullying could happen anywhere (Session 7) • I was somewhat pleased with the outcome of the session. Students seemed to enjoy the opportunity to create and act out their own skits and solutions to the scenarios. However, there was an altercation between two members that could have been handled better (Session 8)
6th Boys	• I was pleased with the session. The activities went smoothly and the students were very cooperative.(Session 1) • The kids seemed to like the session and it seemed to be easy to implement. I enjoyed this session. (Session 4) • I was pleased with the session. The students were much more attentive to the activity (Session 6) • Overall, I thought today was only mediocre. Reviewing was boring for the kids and kind of subdued the group. Letter-writing went over well, but I feel the last group should have been more fun (Session 8)

Treatment Integrity

This study addressed multiple dimensions of treatment integrity to facilitate an understanding of the quantity (e.g., dosage, exposure) of treatment received and quality (e.g., level of student engagement/responsiveness; quality of service delivery) of the bullying prevention intervention. Qualitative and quantitative treatment integrity data obtained through the Essential Components form were reported by facilitators and process recorders. Treatment integrity data included findings obtained from process recorders through the Process Documentation Form. Findings related to gender and age differences were described.

Essential Components Form Quantitative Data. The essential components of the intervention were implemented in 100% of the sessions based on facilitator and process recorder report. Facilitators and process recorders also rated the delivery of the essential components and the level of student engagement observed during the implementation of each component as "excellent, satifactory, needs improvement, or unsatisfactory". Overall, quality of essential component delivery and student engagement were rated satisfactory or above across all eight sessions. Both dimensions appeared to follow a similar trajectory across sessions with Session 2 (Interview Part-1) receiving the lowest ratings and Session 5 (Empathy) receiving the highest ratings (Figure 2).

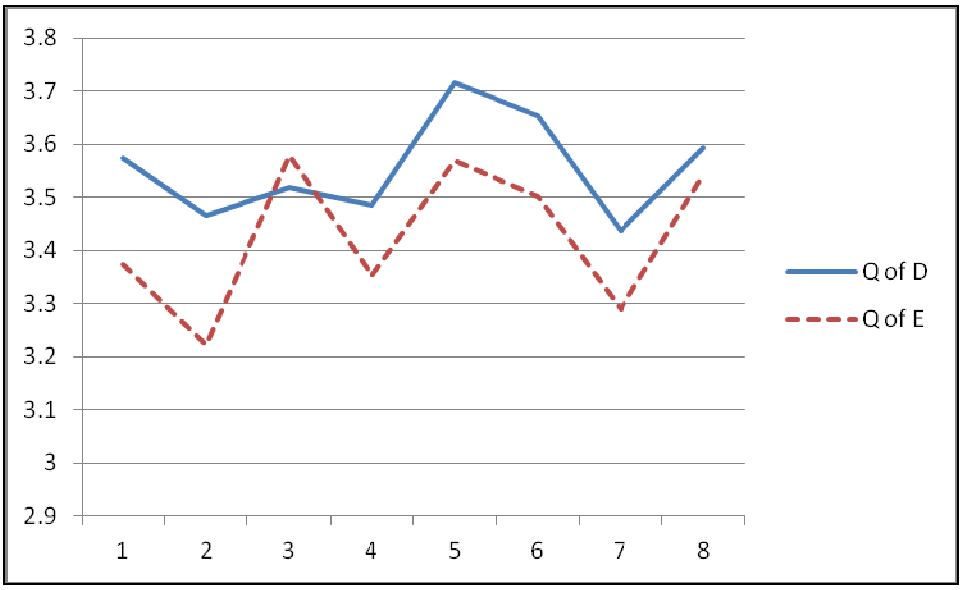

Figure 2. Treatment Integrity (Quality of Delivery and Student Engagement)

Differences were observed with respect to gender and age. Facilitators and process recorders reported a higher degree of perceived student engagement for 4th grade students (Figure 3). Girls were rated as more engaged durings sessions 3, 5, 6, and 8 and boys were rated as more engaged during sessions 1, 2, 4, and 7 (Figure 4). The results suggest that boys were more engaged at the beginning of the intervention and participated at a higher level during the problem-solving and school map activities. While girls became more engaged over the course of the intervention and participated at a higher level during the sessions on empathy, body maps, and culminating activities all of which involed creativity and role-playing. Quality of delivery as rated by process recorders and facilitators was higher in boys groups than girls groups (Figure 5). The perceived level of quality of delivery was somewhat higher for 4th grade students (i.e., sessions 1,2,4,7, 8) than 6th grade students (i.e., sessions 5 and 6; Figure 6).

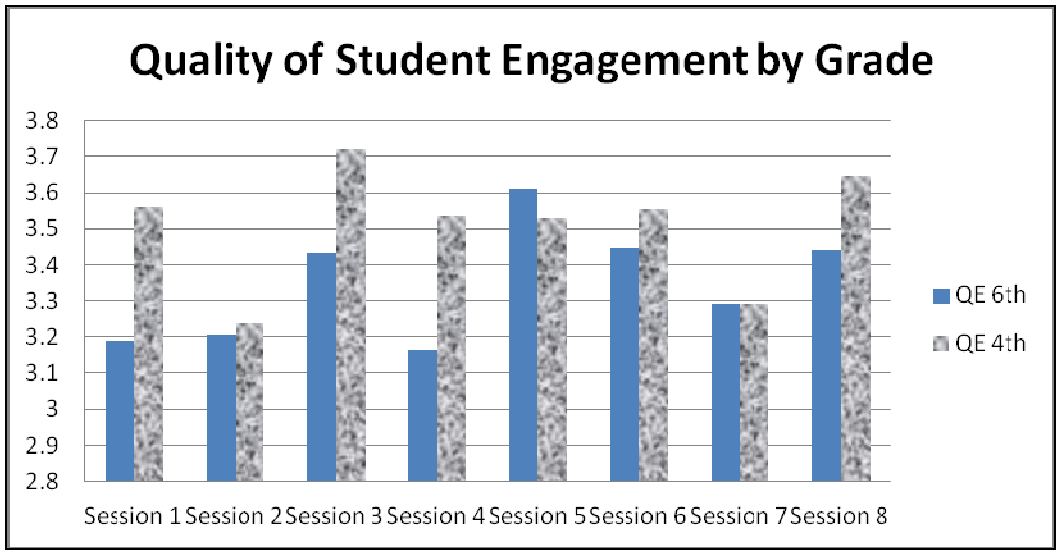

Figure 3. Quality of Student Engagement by Grade

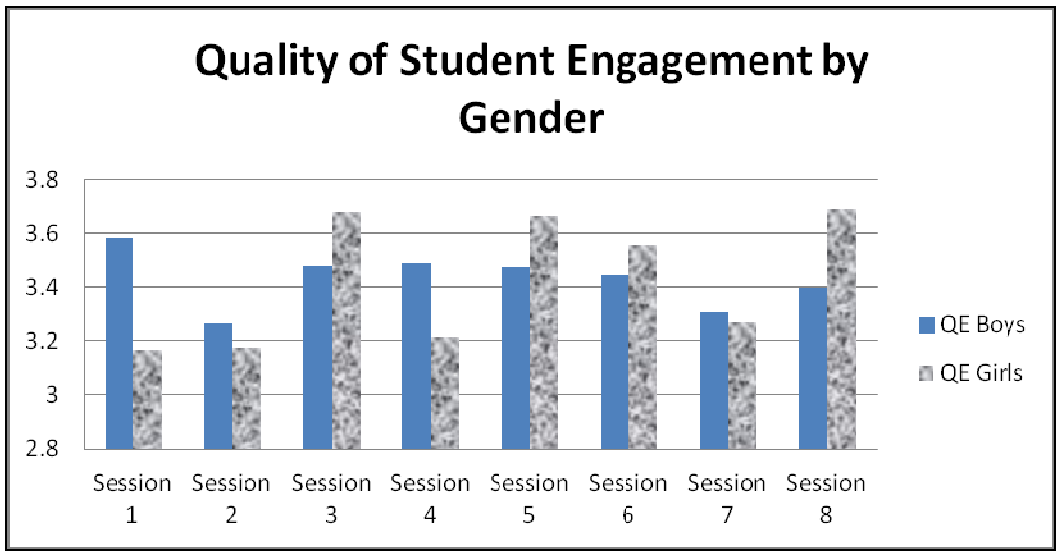

Figure 4. Quality of Student Engagement by Gender

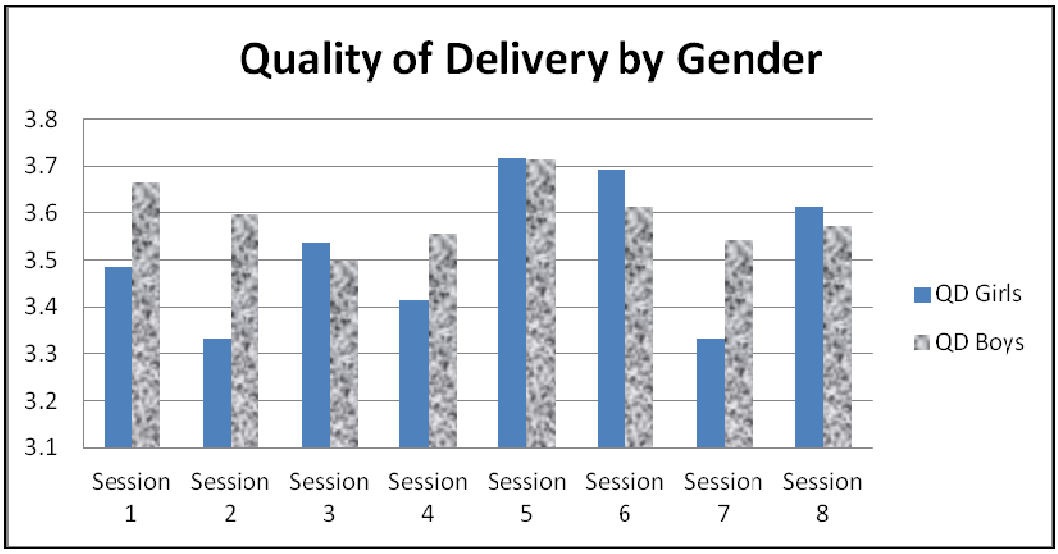

Figure 5. Quality of Delivery by Gender

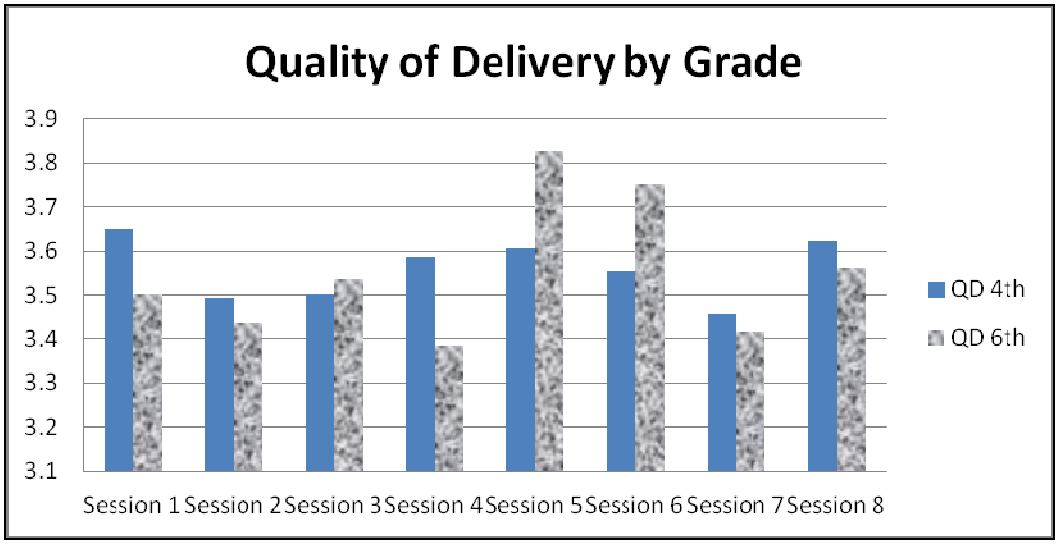

Figure 6. Quality of Delivery by Grade

Essential Components Form Qualitative Data. An analysis of qualitative data revealed four themes related to treatment integrity: *facilitator competence*, *student engagement*, *behavior mangagement*, and *time management* (see Table 7 for illustrative quotes). The qualitative themes were observed across grade level and gender. Examples of the four themes related to treatment integrity were reported by both facilitators and process recorders.

Table 7. *Illustrative Quotes – Treatment Integrity (Facilitator Data)*

Code	Quotes
Student Engagement	• The student was particularly open and shared many examples of verbal bullying related to her cultural background. All students were engaged and each took turns sharing something the learned during the session (6th girls, Session 3). • The students were very engaged and eager to give their insight into bullying (6th boys, Session 2) • Students were not engaged in activity would look at facilitators to answer questions (6th boys, Session 7).
Facilitator Competence	• The facilitators were careful to check for understanding during and after the session. Students were frequently questioned to ensure that they were paying attention (4th boys, Session 4). • Facilitator 1 did a good job of referring to the problem solving model in both technical terms and kid friendly language (6th boys, Session 4) • Facilitator did a good job at not only summarizing what they learned but also asked students how sure they felt they could use this tool.
Behavior Management	• Some students had a hard time focusing on the activity. There was constant "goofing around" This sometimes distracted the other students. Facilitators had to constantly keep students on track (4th girls, Session 6) • Many of the students did not seem motivated to participate and there was some off-task behavior which included passing licks and eye-rolling (6th girls, Session 1)
Time Management	• Time constraints prevented a deep discussion of what they'd learned but the students were able to answer

	the question of 'what did you learn today' with something that was indeed relevant to the session (4th boys, Session 3). • We didn't go over what we learned- jumped into snacks/forms because of time (6th girls, Session 2).

Facilitator competence described facilitator or process recorder documentation of issues related to the facilitator's skill level or training. Across grade and gender groups, facilitators documented numerous instances where background knowledge or skills taught during pre-intervention facilitator training were implemented and served to enhance treatment integrity. A 6th grade boy's group facilitator wrote, "This [facial expressions game] was a huge success…Facilitators kept it going, were organized, and asked probing questions". A 6th grade girl's group facilitator noted, "Facilitator 2 did a great job of bringing out students who were not initially talkative. She also normalized their experiences when they disclosed potentially embarrassing or sensitive information". Facilitator competence was also identified by a process recorder in a 4th grade group, "two students struggled with the activity and the facilitators were able to help clarify the activity for one student and help the other student understand her peer's comments". Overall, the results suggested that the facilitators demonstrated a high degree of competence when implementing the curriculum.

Student engagement referred to documentation of the students level of participation. Consisent with quantitative findings, facilitators reported a high degree of student engagement. A process recorder stated, "the students seemed eager to get started and one student who initially wanted to leave group and return to class was interested after the introduction the activity and decided to stay (6th girls, Session 6)". A 4th grade group facilitator noted the following: "… the girls were super excited about the activity

and came together as a group. [They] did an excellent job acting out the roles (Session 8)". Although a high degree of student engagement was documented for essential components, some degree of lack of engagement was observed. For example, one 6th grade girls group facilitator stated, "…group cohesiveness and involvement needs improvement. Some of the students were distracted by things in their hands or other students' inappropriate comments."

Behavior mangagement was used to describe off-task and aggressive behaviors observed during the group. Behavior concerns were reported across grade and gender groups. Problematic 4th grade behaviors included being "off-task, silly, or distracted". One 4th grade boy's group facilitator stated, "I was disappointed with my performance today. I felt as if Facilitator1 was depending on me to keep the boys under control, but I'm not sure I was able to follow through like she expected me to. I think we have let this group get away with a lot and its difficult to reel them in so late in the group process." More severe behavior concerns were observed during 6th grade girls groups. A 6th grade girl's group process recorder stated "the session ended early and the lead facilitator seemed to be frustrated with the behavior of some of the group members." A facilitator described an instance where one 6th grade female participant made verbally aggressive statements towards other group members. She stated "because one cussed I was thrown off guard. I felt like I was doing more behavior management than building rapport." Few behavior problems were noted with regard to 6th grade boys and the nature of concerns were consistent with those reported for 4th grade students.

Time management encompassed the facilitator or process recorders' experiences related to time constraints. Difficulties were noted in area of time constraints across

groups. Facilitators or process recorders frequently noted that although all of the essential components were implemented, the last activity of the day was typically less fully explored due to time limitations. The final activity of each session consisted of a review of the session goals. An exemplar of time management included "We briefly had students write what they learned and checked in with each of them. We ran out of time for this part in an effort to get through more questions. I think if there was more time, this could have been done more thoroughly. (4^{th} Boys, Session 3).

Process Documentation Form Quantitative Data. An analysis of student attendence by session revealed fewer than two absences across all groups (Table 8). There were more absences reported during 4^{th} grade sessions than 6^{th} grade sessions. Mean session length ranged from 29 to 45 minutes (Table 9). Sessions were approximately the same length for 6^{th} grade sessions and session length was more varied for 4^{th} grade sessions. Process recorders rated the level of student engagement for each student across sessions and the results were consistent with the quantitative findings from the Essential Components form and documented 93% Student Engagement across groups and sessions.

Table 8. *Number of Absences (Process Recorder data)*

Group	S1	S2	S3	S4	S5	S6	S7	S8
6^{th} Girls 1	0	1	0	0	0	0	0	0
6^{th} Girls 2	0	0	0	1	1	0	0	0
6^{th} Boys 1	0	0	0	0	0	0	0	0
6^{th} Boys 2	0	0	0	0	0	0	0	0
4^{th} Boys 1	1	0	0	0	0	0	0	0
4^{th} Boys 2	0	0	1	1	2	0	0	0
4^{th} Girls 1	1	0	2	1	1	1	0	0
4^{th} Girls 2	0	1	2	1	2	1	1	0

Table 9. *Session Length (Process Recorder)*

Group	Mean	Median	Range
4th Boys 1	40	40	35 - 45
4th Boys 2	39	38	32 - 41
4th Girls 1	29	32	27 - 40
4th Girls 2	42	43	26 - 50
6th Girls 1	41	41	35 - 48
6th Girls 2	45	47	32 - 48
6th Boys 1	40	41	30 - 50
6th Boys 2	42	43	36 - 44

Cultural Modifications

Facilitator Reflection Form Cultural Modification Data. In the area of cultural modifications, facilitator-reported themes included consideration of or suggestions for cultural modifications and documentation of changes made during a session to be more culturally responsive. Suggestions for cultural modifications were made in 14 of the 64 sessions. The facilitators indicated that male participants were physically active and could benefit from having more structure with respect to the seating arrangement and active activity choices to promote engagement with the curriculum content. The suggested changes related to boys groups included incorporating high-movement options for active groups (6th grade), providing a more structured seating arrangement (4th grade). A 6th grade girls group leader recommended addressing issues related to diversity in the class rules for a group with more than 50 percent of participants from racial minority groups. The following suggestions were recommended for both grades and genders: utilizing developmentally appropriate language; including diverse characters in the video clips; and changing school maps to be more consistent with current floor plans at the local school. These suggestions are consistent with the definition of culture as outlined in the current study which includes a focus on individual as well as contextual variables.

Facilitators documented six cultural modifications implemented during a group session. One facilitator noted that she provided the instructions in short segments to make the activity more manageable for an active group of 6th grade boys. She stated, "I broke the session's activity into pieces in order to make sure that every part was covered and that everyone remained on task in this group. For example, we started with likes and dislikes, then added why. Then we moved to strengths and weaknesses, and then added how we knew and felt about them. Both of us moved around during each piece to check in individually, but we stayed together as a group in regard to pace and question (Session 6)." Facilitators of a 6th grade girls group with a history of making verbally aggressive statements during sessions modified Session 5 (Empathy) to focus on managing and responding to anger by selecting a role-playing scenario with an anger-related dilemma (See Table 10 for additional quotes related to cultural modification).

Table 10. *Illustrative Quotes – Cultural Modifications (Facilitator data)*

Group	Quotes
4th Girls	• One aspect that could be an issue is the varying degrees of cognitive abilities each student possesses. In the future if possible it may be helpful to consider this when making the groups (Session 3) • I was surprised at the difference between the behavior of middle school and elementary girls. I would have spent more time thinking about the sitting arrangement in order to allow them to be more focused on the activity (Session 7)
4th Boys	• I would simplify the language in the questions about characteristics; this would make it easier for some students to respond (Session 2) • I might choose a clip that involves a more racially diverse cast. It was pretty appropriate as far as age and gender go; Possibly find a middle school video clip or elementary (Session 4)

6th Girls	• I was very pleased with the session. It seemed that tailoring the scenarios to the students' problems with bullying was helpful to students. One student picked the scenario based on the type of bullying she encounters (being left out). She also shared with the group how she is always left out from other people's b-day parties. She also mentioned that even when she invites others to her b-day nobody attends. As a result, I suggested to all sing happy b-day given it was her birthday that week. She seemed to enjoy this (Session 8). • Session 8 I liked that I tailored the scenarios to the students' experiences with bullying. An example was a student had mentioned she is bullied because of her race. As a result I created a scenario where a girl is bullied due to race. Also, I set parameters on what could be said during the skit. I was glad to see the student picked that scenario and others helped her solve it. I also based the scenarios on what students had said in the interview at the beginning of the year

Process Documentation Form Cultural Modifications Data. An analysis of Process Documentation Forms revealed no cultural modifications across sessions based on process recorder report.

Discussion

Authors have indicated that an evaluation of treatment acceptability and treatment integrity could contribute to the understanding of findings from intervention research. While researchers have highlighted the importance of assessing treatment acceptability and treatment integrity, studies conducting a comprehensive assessment of these constructs have been limited, particularly in naturalistic settings (DuPaul, 2009, Mautone et al., 2009; Ryan & Smith, 2009). The current study examined the treatment acceptability and treatment integrity of a bullying prevention intervention. This study also explored the relationship between treatment acceptability and treatment integrity and the role of cultural modifications as they related to the 8-week bullying prevention curriculum.

The current study makes a substantial contribution to the literature related to evaluating treatment acceptability, treatment integrity, and cultural modifications in a

school-based preventive intervention targeting bullying. Key findings include data regarding working with targets of bullying and data regarding tailoring an intervention to address upper elementary and middle school students in an urban suburban school district. The current study highlighted the benefits of utilizing mixed methods, multiple sources, and multiple raters over the course of the intervention. Limitations and implications for school-based mental health practice and future research were described.

Study findings have implications for working with students who are at-risk for being targets of bullies. One of the outcomes that characterizes victims of bullying is the development of internalizing problems such as anxiety. While quantitative ratings were high for acceptability, several students, particularly those in 4th grade, reported anxiety related to joining the groups and speaking about their victimization in front of others. Although not the focus of this study, the bullying intervention included a pre- and post-test evaluation of the behavioral and emotional functioning of each participant. As a part of this study, the researchers reviewed and considered the characteristics associated with the target group in order to develop a plan for initiating the intervention. This included reviewing relevant school data and meeting with school personnel to obtain information regarding the school culture as it related to bullying prior to beginning the intervention. Facilitators met with children prior to implementing an intervention to introduce the group, explain what would take place during the group, and answer any questions students had with a goal of reducing feelings of anxiety. Another important consideration when working with students at-risk for victimization is the need to limit the opportunity for bullying during groups. The current study suggested that it is important to establish rules that prohibit bullying based on race, sexual orientation, and other aspects of cultural

diversity. The study also highlighted the importance of creating a climate that reduced the likelihood of victimization during group sessions. For example, 6th grade girl's group facilitators developed a plan to address verbal aggression observed during group session. They introduced a verbal bullying scenario and used it as a "teachable moment" to teach problem-solving and empathy and to highlight the need for prosocial behavior during group sessions.

The current study included the use of multiple data collection methods (i.e., qualitative-quantitative), multiple sources, and multiple raters across several time points. Treatment integrity data were collected from facilitators and process recorders across all sessions utilizing multiple sources (i.e., Facilitator Reflection Form, Process Documentation Form, Essential Components Form). The input from multiple raters using multiple instruments served to enhance trustworthiness and credibility through triangulation (Nastasi et al., 2004). To date, studies evaluating treatment integrity have been largely quantitative and narrowly focused on adherence and dosage. The qualitative findings included in this mixed methods investigation, served to explain and enhance quantitative findings. While this study revealed a high degree of treatment integrity based on quantitative results, qualitative findings revealed themes that could serve as barriers or facilitators to treatment integrity (i.e., facilitator competence, behavior management, time management, student engagement). For example, a high degree of facilitator competence was associated with confidence to modify curriculum as needed with a goal of enhancing treatment acceptability. The results also revealed that behavior difficulties served as barriers to treatment integrity (i.e., essential components were implemented to a lesser degree due to the need to address behavior problems). Student engagement emerged as a

facilitator to treatment acceptability based on the perspectives of group leaders. When asked to assess the degree of treatment acceptability, facilitators often described the degree to which students were engaged in the intervention. In examples with a high degree of student engagement, facilitators frequently viewed sessions or session components and procedures as more acceptable. Without the inclusion of qualitative methods, these findings regarding this potential link between treatment integrity and treatment acceptability would not have been revealed. The collection of multiple forms of treatment integrity data provided important information regarding the multiple dimensions of integrity that have the potential to influence treatment outcomes. The researchers gained knowledge regarding the degree to which components were implemented, the level of student engagement for each essential component, the length of each session, and participant attendance. Data regarding each dimension could be used to enhance the quality and impact of school-based bullying prevention interventions.

Treatment acceptability data also were collected from student participants and graduate student researchers at multiple time points throughout the intervention process. Students, process recorders, and facilitators noted similar levels of student acceptability over the course of the intervention. The collection of acceptability data at multiple time points using qualitative and quantitative methods helped to clarify which sessions and activities were appropriate and preferred by participants. Assessment over the course of the intervention increased the depth and breath of information and had a greater impact than a single measure of acceptability for a proposed intervention (e.g., analogue methods) prior to or at the conclusion of the intervention. The researchers used the information related to acceptability to enhance subsequent sessions and future iterations

of the intervention. While qualitative treatment acceptability data were somewhat limited and did not yield enough data to solidify qualitative themes commensurate with those obtained for treatment integrity, the findings were consistent with quantitative results. Although the results were suggestive of a link between facilitator and student perceptions of treatment acceptability, more research is needed to fully characterize the relationship.

Qualitative findings indicated that group facilitators considered cultural factors across sessions. The majority of suggestions for cultural modifications were related to characteristics associated with gender, racial background, and experiences as victims of bullying. Male participants appeared to have a need for more structure and opportunities for movement. Group leaders highlighted the need for curriculum materials that were representative of the racial backgrounds of group participants. Group leaders also emphasized the importance of incorporating the participants bullying experiences in the scenarios utilized to teach curriculum content. These findings illustrated some of the cultural issues that could be addressed in effort to increase treatment acceptability and treatment integrity with a goal of enhancing treatment efficacy.

Limitations and Future Research

The current study explored the relationships among treatment acceptability, treatment integrity, cultural modifications, and treatment efficacy of a bullying prevention intervention. While the study demonstrated some of the ways in which the mixed methods, multiple raters, and multiple time points could facilitate the investigation acceptability and integrity, potential limitations were revealed. The current study investigated all three constructs from the perspectives of multiple raters. However, data collection tools were not consistent across raters. While the use of different tools

facilitated the collection of unique data with the potential to enhance the knowledge related to treatment acceptability, treatment integrity, and cultural modifications, the findings could be difficult to compare on a larger scale. As a result, future studies could include consistent quantitative items that would facilitate a comparison across raters as well as a qualitative component increase the depth and breath of knowledge obtained.

In some instances, the structure of the data collection tools could have contributed to the limited nature of the responses obtained. This was observed with respect to open-ended questions designed to explore facilitator and process recorder perceptions of treatment acceptability. For example, the wording utilized for several treatment acceptability items prompted responses related to treatment integrity and cultural modifications. Future studies could include semi-structured interviews or focus groups to facilitate a deeper exploration of all three constructs.

As a part of the collaborative relationship among stakeholders, the researchers consulted with school-based personnel to establish meeting times for the intervention groups in an effort to influence acceptability and integrity. Based on the scheduling needs of the schools, fourth grade groups met afterschool and sixth grade groups met during the school day. While incorporating the viewpoints of school personnel was a strength of this intervention, the afterschool meeting time lead to more absences for 4th graders due to conflicting afterschool activities and family commitments. Due to the structure imposed by the school schedule, the duration of 6th grade group sessions was more stable across the eight sessions. While the differences in the amount of the exposure did not appear to limit the implementation of essential components, facilitators reported that the final session objectives were not fully explored in some sessions due to time

constraints. Difficulties related to time constraints were reported for both grade levels and genders. More research is needed to investigate the ways in which bullying prevention studies can be tailored to address the needs of students within the parameters of the school schedules.

Facilitators received pre-intervention training related to cultural modifications and were encouraged to gain information prior to and during the intervention to facilitate the development of changes in the curriculum content or procedures to be more culturally relevant while maintaining the essential treatment components. Few cultural modifications were suggested or implemented across sessions. As a participant observer, this author noted that the majority of cultural modifications were implemented or suggested by experienced facilitators. The role of facilitator experience was not explored in the current study. More research is needed to understand the role of cultural modifications in the implementation and evaluation of bullying prevention interventions and to investigate potential barriers and facilitators to the implementation of cultural modifications.

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APPENDIXES

APPENDIX A

Selected Example - Essential Components Form

Name: Date: Role:

School: Group:

Session 2 & 3: Students' Perceptions of Bullying

Please indicate if the component was ***(1) fulfilled, (2) Facilitator Rating (3) Group Engagement Rating (E = Excellent, S = Satisfactory, NI = Needs Improvement, & U = Unsatisfactory) and (4) explanation(s) for ratings****.*

Essential Components	**Fulfilled: Y/N**	**E**	**S**	**NI**	**U**
Facilitator sought insight on students' general perceptions of bullying was…					
Students' level of engagement during their perceptions of bullying was…					

Explanation of Ratings:

Facilitator sought insight on students' perceptions of how others react to bullying was…					
Students' level of engagement during their perceptions of how others react to bullying was…					

Explanation of Ratings:

Facilitator exploration of students' personal experience was …					
Students' level of engagement regarding their personal experience was ...					

Explanation of Ratings:

Facilitator role in helping students process what they had learned during the session was…					
Students' level of engagement in discussing what they had learned during the session was…					

Explanation of Ratings:

APPENDIX B

Process Documentation Form

School: _____ Facilitator(s):

Date: _____

Session # and Name: _____ Process Recorder:

Group = Boy/Girl (circle one)

Student	A	B	C	D	E	F
Attendance						
Engaged?						
How are they responding?						
Paying Attention?						
Discipline?						
Language Used….						

	Start Time	End Time
Introduction		
Part 1		
Part 2		
Wrap-up		
Snack		

Notes on Process (ideas to keep in mind):

Remember this form is meant as a guide; there will definitely be more…

Record "what" happened not what you "think" what happened.

Look for victimization within the group. What did it look like? Who was involved?

Content:

(a) Changes to Curriculum?

(b) How are kids reacting to the curriculum?

(c) Culture? Where any changes made to address culture specificity?

Instruction:

(a) Changes to presentation?

(b) Changes to curriculum?

Interpersonal:

Other:

APPENDIX C

Facilitator Reflection Form

1. To what extent were you pleased with the process and the outcome of today's session? Give reasons.

2. To what extent were you pleased with your own performance as a group leader? Explain.

3. To what extent did the students accept today's session? Give examples.

4. Considering the age, gender, and ethnicities of the group members, to what degree was this session appropriate?

5. What would you change about today's session? Why?

6. What changes would you suggest in order to make the curricula more appropriate for the age, gender, and ethnicities of your group members?

APPENDIX D

Student Evaluation Form

Did you like the snack today? (Circle Your Answer) Yes No

What did you learn today?

What did you like best about today's group?

What would you change about today's group?

Today's group was interesting to me. (Circle Your Answer)

Strongly Agree Agree Disagree Strongly Disagree

Other boys/girls would have liked today's group. (Circle Your Answer)

Strongly Agree Agree Disagree Strongly Disagree

Other students my age would have liked today's group. (Circle Your Answer)

Strongly Agree Agree Disagree Strongly Disagree

Today's group made me feel… (Circle your answer)

Happy Excited Sad Angry Nervous

Why?

APPENDIX E

(Excerpt from Coding Manual)

Codes

Level 1

Treatment acceptability **(TA)** – includes indicators of consumer satisfaction with the process/content of the intervention. This may include documentation of positive or negative affect or feelings (e.g., happiness, frustration), comments (e.g., those regarding interest, enjoyment, boredom, etc.), non-verbal cues, or other observable behaviors prior to, during, or after the intervention. Treatment acceptability also encompasses the stakeholders' perceptions of the appropriateness or feasibility (i.e., comments regarding the fit of the intervention with the setting, participants) of the intervention process or content.

Examples:

EC_PR_S1_6thGirls1 – "…the lead facilitator seemed to be frustrated with the behavior of some of the group members."

FRF_F2_S4_6th Girls1 – "I was pleased how students contributed to the group discussion. I did notice some students seemed to overly criticize others during game. I would like to address this." (double coded with Treatment integrity and behavior management)

Treatment integrity **(TI)** – documentation of the degree of intervention content implemented and descriptions of the process of treatment implementation (e.g., what was implemented, how was it implemented, who participated, what information was received based on student report, how long was the session, etc.) Treatment integrity also includes documentation of factors that have the potential to enhance or limit integrity (e.g., changes in dosage; facilitator competence/competence, changes in schedule).

Examples:

EC_F2_S3_*6thGirls1* – "The students were able to discuss what they had learned during the session."

EC_PR_S4_6th Girls1 –" … while this went well, I think it (one of the ECs) was cut short to address some behavioral issues."

Cultural modifications **(CM)** – consideration or documentation of alterations to the curriculum do to the cultural characteristics (e.g., race, ethnicity, grade, age, sexual orientation) of the target population or context (e.g., school, community).

Example:

FRF_F1_S4_6th Girls1- "The video clip may have been too young for this group. Several of the students in this group act mature for their age and their behavior suggested that the clip was babyish." (Double coded as TA, TAS)

FRF_F1_S7_6thGirls1 – "I don't this session is appropriate for this age group. We may give [get] better information by having thing them rank places and people from more safe to least safe. Looking at the top 10 and leading the discussion about how or why." (Double coded as TA)

Level 2

Facilitator competence/confidence: **(FC)** This code refers to descriptions of the facilitator actions related to their training, knowledge, and skills that influence the delivery of curriculum content or process through which the content was carried out. The term also relates to the qualitative assessment of facilitator performance and may include a description of both positive and negative attributes. [Facilitator competence is a Level 2 code under Treatment Integrity].

Examples:

EC_PR_S1_6thGirls1 - "the lead facilitator explained the purpose well…"

FRF_FI_S1_6thGirls1– I wish I had been more prepared and hadn't been so affected by their behaviors".

FRF_F1_S2_6thGirls1 – "I struck a nice balance between drawing out the quiet student and cutting of the talker. I felt more confident as a group leader. I tried to make the students feel heard and appreciated through my verbal and nonverbal cues (e.g., eye contact, leaning forward, summarizing, clarifying, and linking).

FRF_F2_S2_6thGirls1 – "I think I was able to better manage the group this time. I also made sure everyone got a chance to speak."

EC_PR_S3_6thGirls1 – "Facilitators presented the topic in a confident manner"

EC_F1_S5__6thGirls1 – "One student shared a story about another child being unempathetic. One student initially thought it was unrelated to the topic and I was able to show how it related to the topic and point out some of the ways that another group member showed empathy to her by her comments, body language, and tone of voice."

EC_F1_S6__6thGirls1 – "The facilitators did a good job of point out the strengths that the students wrote about and helping them to elaborate on their responses."

Student engagement/student participation – **(SEP)** The term encompasses facilitator or process recorders references to the students' degree of active involvement in the curriculum content or process. The term may be used to document high, moderate, or low levels of participation [Level 2 code under Treatment Integrity].

Examples:

FRF_F2_S1_6thGirls1 – "Some [students] were actively participating in activities. However, the majority seemed very distracted or refused to participate."

EC_F1_S3__*6thGirls1* – "Student was particularly open and shared many examples of verbal bullying related to her cultural background"; "The students were engaged and each took turns sharing something the learned during the session."

EC_F1_S4_*6thGirls1* – "The students had already seen the video clip. They knew how the problem was resolved in the episode and were less willing to come up with other alternatives."

Behavior management **(BM)** – This code refers to examples of student behavior that had the potential to limit engagement with the group content or process. It also encompasses facilitator or process recorder description of techniques or procedures used to address behavior problems within the group. It includes documentation of facilitator/process recorder perceptions of student behavior.

Examples:

EC_PR_S1_6thGirls1 – "…there was some off-task behavior which included passing licks and eye rolling."

PDF_PR_S3_6th Girls1 – "There were a few [instances] in which girls would make faces or exchange looks, particularly when they were not chosen to answer a question or when another girl disagreed with them. For example, when another girl didn't agree with her answer, Student X shook her head and looked at Student Y to roll her eyes.

FRF_F1_S4_6th Girls1 – "We had several behavioral issues. The students were resistant to accept the problem solving model…"

FRF_F2_S4_6th Girls1 – "I did notice some students seemed to overly criticize others during the game"

PDF_PR_S4_6th Girls1 – "Student X was sticking things in the other girl's ears and being distracting so she (F1) asked her to move to a seat. Student X protested but then got up and went to the other side of the circle, moving the chair far away from the group to separate herself and show she was upset. F1 asked her to move in to be in the circle and she scooted maybe an inch up and crossed her arms against her chest. She then started playing with pocket book, flinging it around."

Time management – **(TM)** This refers to the inability to complete activities due to interruptions in the schedule or references to the limited amount of time allocated for the groups. [Level 2 code under TI]

Examples:

EC_F1_S4_6th girls1: "We did not end up having much time to discuss what was covered this week."

PRF_PR_S5_6th girls1: "Didn't do perspective taking – not enough time"

EC_PR_S6_6th girls1: "The description was a little rushed but pressed for time because of late start."

Facilitator Self-rating **(FSR) -** this code refers to the facilitator's perceived level of acceptability of the curriculum content or process. It also includes the PR's perceptions of how acceptable the group content or process was to the facilitators. [Level 2 code under TA]

Example:

FRF-F2_S7__*6thGirls1* – "I was not very pleased with the outcome and process of today's session. I felt as though the girls were getting caught up in the small details of the activity and losing sight of the big picture about safe and unsafe places."

Student Self-rating **(SSR)** – this code refers to ratings of the students' perceived level of treatment acceptability based on the facilitator/process recorders perspectives. [Level 2 code under TA]

Examples:

EC_PR_S1__6thGirls1 – "…some of the students did not appear to be interested in participating."

FRF_F1_S4_*6thGirls1* – "The students were resistant to accept the problem solving model as an option to address bullying."

EC_F2_S4_*6thGirls1* – "Students seemed bored when discussing the model give the school counselor had already talked about it."

TA Student **(TAS)** – this refers to the students' report/perceptions of acceptability with the curriculum content or process. [Level 2 code under TA] (Typically obtained from the last two items of the Student Evaluation)