SHATTERING THE ILLUSION: AN EXAMINATION OF UNDERLYING COGNITIVE AND AFFECTIVE MECHANISMS OF SELF-AFFIRMATION AND THEIR INFLUENCE ON REDUCING INFLATED PERCEIVED COMPETENCE AND AGGRESSION

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ABSTRACT

The goal of the current study was to examine whether the use of a value-affirmation manipulation can reduce the effects of ego threat in children with the positive illusory bias. Possible underlying cognitive and affective mechanisms of the value-affirmation task were also explored. No research, to date, has directly examined whether effects of the positive illusory bias can be decreased through intervention. Participants were 56 aggressive youth who were identified as having the positive illusory bias (overestimation of their social competence compared to teacher-report) and were randomly assigned to condition. Children in the experimental condition completed a value affirmation task while children in the control condition completed an unrelated written task. Findings from the current study did not support the proposed hypotheses. Children in the value affirmation condition did not report significantly lower social competence scores, nor did they exhibit lower levels of aggression. Notably, a significant change on self-reported behavioral competence was observed, with children in the value affirmation group reporting higher levels of behavioral competence. Additionally, children across conditions who did evidence a decrease in social competence scores reported higher levels of sadness following the negative feedback. This has important clinical implications, indicating that as children become more accurately aware of their status with peers, they may experience feelings of sadness. Targeting skill acquisition to adaptively express and regulate emotions, specifically sadness, may be indicated in the treatment of aggressive youth with the positive illusory bias. Finally, there was no evidence to suggest the cognitive and affective processes examined were active mechanisms of the value affirmation.

DEDICATION

For My Family

LIST OF ABBREVIATIONS AND SYMBOLS

β	Beta: Regression coefficient, the average amount by which the dependent variable increases with unit increases in the independent variable; the slope of a line
df	Degrees of Freedom: Number of values in a final calculation that are free to vary (i.e., number of independent observations minus the number of estimated population parameters)
F	*F* statistic: Value calculated by the ratio of two sample variances
M	Mean: The sum of a set of values divided by the number of values in the set
MS	Mean square
n	Sample size of a group
η^2	Partial eta squared
p	Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value
r	Pearson product-moment correlation
R^2	R-squared: Coefficient of determination, a measure of effect size
SD	Standard Deviation: Value of variation from the mean
SS	Sum of squares
t	*T* statistic: Value determining whether sample means differ
<	Less than
>	More than
=	Equal to
+/-	Plus or minus
%	Percentage

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CONTENTS

LIST OF TABLES

LIST OF FIGURES

1. INTRODUCTION

Childhood aggression is a serious and widespread problem, accounting for half of all child referrals for mental health services (Nelson & Finch, 2000). It has been associated with a number of negative outcomes including delinquency, substance abuse, conduct problems, academic difficulties, and poor adjustment (Larson & Lochman, 2011; Pardini, Raine, Erickson, Loeber, 2014). Problems associated with aggression in childhood often continue into adulthood, causing this behavioral characteristic to be a major concern for researchers and clinicians (Tremblay, 2000). Furthermore, the negative impact of aggressive behavior affects not only the aggressor but his/her victims along with society as a whole. In the school setting, children who engage in aggressive behavior can be a significant distraction. In addition to disrupting the learning environment, there is a threat of physical and psychological harm (Larson & Lochman, 2011).

Positive Illusory Bias

Aggressive children, particularly rejected-aggressive children, have been shown to overestimate their own peer acceptance in relation to others'. There could be possible benefits and costs to the aggressive child who overestimates his/her status. The relationship between aggression and peer rejection has caused researchers to question whether the positive illusory bias might offset some of the negative consequences of peer rejection. It has been suggested that having an inflated view of social competence may protect against negative consequences of rejection in the short-term, such as loneliness and depression (Sandstrom & Zakriski, 2004).

Significant debate has arisen over the utility of an inflated view of oneself. Some researchers posit that the presence of a positive illusory bias is adaptive, allowing for psychological well-being (Taylor, 1989; Hoza 2010). Proponents of the positive illusory bias as an adaptive feature argue that if we boost self-concepts, then symptoms of depression and levels of aggression can be decreased (Cairns & Cairns, 1988; Owens, Goldfine, Evangelista, Hoza, Kaiser, 2007). However, there is no empirical evidence to date that indicates fostering a false sense of competency will contribute to psychological adjustment. On the other side of the debate, researchers argue that there is no adaptive quality associated with an inflated self-view (Ackermann & DeRubeis, 1991; Robins & Beer, 2001). In fact, a number of recent studies have examined whether there are negative consequences associated with maintaining an inflated self-view. This direction of research grew out the threatened egotism literature introduced by Baumeister and colleagues (1996).

Baumeister et al. (1996) argued against the idea that aggression is associated with low self-esteem, proposing instead that people with overly positive self-perceptions were prone to engage in aggressive behavior. However, there are mixed findings regarding whether self-esteem is associated with aggression. Barry and colleagues (2007) found that narcissism, not self-esteem, was related to aggression. These results indicate that narcissism and high self-esteem seem to be separate constructs, operating differently especially during the preadolescent age period. Lochman and Dodge (1994) examined general self-worth with severely violent and moderately aggressive preadolescent (4th grade) and adolescent (7th grade) boys in a cross-sectional design. The severely violent boys were recruited from a state-wide legal program, and the moderately aggressive boys were identified by teachers in public school as being highly aggressive and disruptive. Findings from this study suggest that severely violent and moderately

aggressive preadolescent boys reported low general self-worth; however, moderately aggressive adolescents reported high general self-worth. Interestingly, the moderately aggressive adolescents reported high levels of perceived social competence. Results from this study indicate that there is a developmental process associated with explicit reports of global self-worth. Considering the potential links between high self-esteem, narcissism, and aggression, it is possible that interventions aimed at increasing a child's positive self-view to reduce aggression could potentially have the opposite effect of increasing aggression. The rationale underlying the proposed relationship between highly positive self-perceptions and aggression is that inflated beliefs about one's own competence might be the most prone to challenges by others. When a favorable view of the self is challenged, people might respond against the threat in order to avoid having to change a positive view of oneself.

It is common for young children to hold positively biased self-perceptions, believing that they are good at doing almost everything (David & Kistner, 2000). This view is not considered a distortion of reality; instead it is believed that young children do not have the cognitive abilities to logically evaluate their abilities (David & Kistner, 2000). However, by eight years old, children's self-perceptions begin to coincide with objective raters (Berndt & Burgy, 1996). Yet, there is a subset of children who maintain an overly positive self-perception. David and Kistner (2000) explored Baumeister's hypothesized link between the inflated self-view and aggression among elementary school children. Perceptual bias was measured by regressing the participants' perceived acceptance onto their actual acceptance. Results indicate perceptual bias significantly predicts peer-nominated aggression, offering support to Baumeister and colleagues' (1996) hypothesis that increases in a positively skewed self-view are associated with greater levels of aggressive behavior.

Further evidence of the negative effects of an inflated self-perception is offered by Hoza and colleagues (2010). Hoza et al. (2010) examined the relationships between biased self-perceptions and symptoms of depression. The findings of this study did not support the notion that biased self-perceptions are protective against depressive symptoms. In a study examining positively biased self-perceptions, findings suggest the positive illusory bias is linked to poorer treatment outcomes (Mikami, Calhoun, & Abikoff, 2010). Taken together, the results of this study lend further support to the belief that biased self-perceptions are maladaptive.

The link between the positive illusory bias and aggression is well established in the literature (Hoza, 2010; David & Kistner, 2000; White & Kistner, 2011). However, the ability to decrease the influence of the bias is unclear. Given the significant negative consequences of the bias, including increases in aggression, associated negative outcomes of aggression (delinquency, substance abuse, conduct problems, academic difficulties, poor adjustment, and financial, psychological, and physical cost to the public), and most importantly, poorer treatment outcomes, further research is necessary. Understanding the positive illusory bias can contribute to a better understanding of how to treat the most aggressive youth successfully.

Previous research has demonstrated that similar social cognitive biases, such as the hostile attribution bias, can be reduced through intervention (Lochman & Wells, 2002). To date, no research has explored the possibility of reducing the positive illusory bias through intervention. One study examined whether students could be motivated to reduce the bias in their reports of academic, behavioral, and social competence (Hoza, Vaughn, Washbush, Murray-Close, & McCabe, 2012). The sample for this study was restricted to children with ADHD, as previous research has demonstrated a strong reliance on self-protection in this population. While research with aggressive children has mainly focused on biased reporting of

social competence, the research with children with ADHD has documented the existence of biased reporting across multiple domains. More specifically, due to deficits associated with ADHD it has been argued that these children find it necessary to self-protect when reporting on their competence in areas of academic, behavioral, and social competency.

Hoza and colleagues (2012) examined whether children who were biased reporters could report their competencies more accurately when asked to try and match their answers to what they believe their teachers would report. Children were given two opportunities to match their teachers' ratings of competence. During the second attempt, an incentive was offered if they were able to match their teachers' ratings. Findings suggest participants with ADHD showed significant reductions in biased reporting within the academic and behavioral domains. However, no significant reductions in biased reporting emerged in the report of social competence. It may be that there is greater access to feedback within the academic and behavioral domains, but it may also suggest that lowering self-perceptions in the social domain is a particularly threatening experience. These findings suggest that biased reporting of social competence is unique from biased reporting of other domains. It logically follows that more intensive intervention is required to reduce biased reporting of social competence.

Alternative Explanations: Biased Self-Perceptions

Social Information Processing and Aggression. There are a number of factors associated with the development and maintenance of aggression, one of which is a specific pattern of social-cognitive processes. The way in which children evaluate and process social information can influence their behavior. Crick and Dodge (1994) proposed a Social Information Processing (SIP) model comprised of six steps that children follow when faced with a social situation.

During the first step, encoding, it is hypothesized that children selectively attend to particular external and internal cues. Based on the encoding of those cues, an interpretation of the event is constructed. Knowledge based on previous experience and causal inferences guide the interpretation and understanding of the social situation. During the remaining four steps, children process the social information that has been gathered. This includes selecting a desired outcome, accessing from memory or constructing new possible responses, selecting a response, and finally enacting the chosen response. Research suggests that biased and deficient processing leads to an aggressive response (Dodge & Crick, 1990).

In a study conducted by Dodge and Tomlin (1987), children were presented with hypothetical provocation situations along with information about the intent of the peer in each situation. Participants were asked to infer the intent of the provocateur, allowing researchers to assess whether children rely on information presented in the story or information from their own previous experiences (i.e., schemata). Results emerged indicating that aggressive children, compared to their non-aggressive peers, were more likely to rely on their own schemata when formulating an interpretation. Additionally, when interpreting social situations aggressive children have been found to use fewer social cues than their non-aggressive peers (Dodge & Newman, 1981). As a result of these studies, it has been suggested that during the encoding stage, aggressive children selectively attend to particular social cues and rely on a well-developed schemata which prevents them from using immediate social cues (Crick & Dodge, 1994).

In a laboratory-based study, the interpretation step was examined by setting up an ambiguous situation, having it appear that a confederate knocked down blocks that the participant built. Findings from this study suggest that aggressive children attributed hostile

intent to the peer more often than their non-aggressive peers. It is believed that aggressive children tend to have a hostile attribution bias, that is, when faced with an ambiguous situation they tend to assume malicious intent. The social information processing literature suggests that aggressive children perceive and interpret social situations in a way that increases the likelihood of responding aggressively (Crick & Dodge, 1994; 2006). Taken together, this would suggest that rather than the aggression being a reaction to protect the individuals inflated self-conceptualization, it is a response to misinterpreted social cues based on a maladaptive schema. While this process has been shown to contribute to the cycle of aggression, it does not fully explain how children who interpret their peers' actions with hostile intent then hold an inflated view of how well liked they are by their peers.

Inattention, Hyperactivity/Impulsivity, and the Positive Illusory Bias. Children with Attention-deficit/hyperactivity disorder (ADHD) exhibit developmentally inappropriate levels of inattention and/or hyperactivity/impulsivity. Their pattern of behaving (e.g., difficulty with sustained attention, constant movement, unfinished assignments, poor academic performance) poses significant disruption to the classroom setting and typically elicits frequent negative feedback. A major concern for children with ADHD is that the regular critical feedback they receive can lower their confidence and motivation to succeed. Furthermore, their socially immature presentation (e.g., difficulty waiting their turn, talking over others) coupled with their reputation for problematic behavior creates difficulty with making and keeping friends. Despite evidence to the contrary, and similar to aggressive children, youth with ADHD have been shown to hold inflated perceptions of their competencies (Owens & Hoza, 2003). Research has indicated that boys with ADHD are more likely to overestimate their academic, social, and behavioral competence compared to a normative, non-ADHD sample. Interestingly, the same

study found that ADHD boys with comorbid aggression overestimated their competence the most in the domain in which they likely had the lowest competence (i.e., behavioral; Hoza, Pelham, Dobbs, Owens, & Pillow, 2002).

In clinical and community samples, studies have identified an overlap of externalizing disorder symptoms (e.g., ADHD, ODD) ranging from 30% to 90% (Biederman, 2005; Drabick, Gadow, Carlson, & Bromet, 2004). Given the highly comorbid rates, research has sought to identify shared underlying mechanisms, including for the tendency to overestimate competencies. One explanation that has been offered in the ADHD literature for the positive illusory bias is deficits in cognitive functioning. Cognitive factors that have been examined include working memory, fluency, attention, planning, set shifting, and concept formation. Each of the aforementioned factors were found to uniquely distinguish between ADHD children with and without a positive illusory bias (McQuade, Tomb, Hoza, WaschBusch, Hurt, & Vaughn, 2010). When cognitive factors were examined in a sample of children with ADHD and high rates of aggression, teacher-rated inattention was primarily related to reports of inflated social competence (Scholtens and colleagues, 2012). Deficits with attention may lead to missed opportunities to gain a more accurate perception of one's competencies. Inattention, however, does not explain the overly hostile response when the child does attend to negative information about themselves.

Considering the available data, self-protection continues to emerge as a critical construct to evaluate and target in children who overestimate their competencies. Maintaining a defensive bias allows children to self-protect and therefore restore and maintain their self-integrity when faced with challenges by others. A social psychological intervention that lessens the threat experienced when challenged could serve as a buffer and improve accurate reporting of social

functioning. In addition to accuracy in reporting, children may become more open and responsive to feedback from others. Therefore, behavioral changes may occur including reductions in the need for and use of aggression. One possible intervention that can assist in forgoing of the need to establish self-integrity is the use of self-affirmations.

Self-Affirmation

Self-Affirmation theory posits that people, including children, are motivated to maintain a positive self-image. If there is a threat to the self (e.g. negative feedback), then one's self-worth will be undermined unless the self-image can be reinforced. According to self-affirmation theory, a person's self-image can be maintained by becoming less vulnerable to ego threat through the practice of self-affirming. The affirmation can be in an unrelated domain to the domain that is being threatened since self-affirmation is believed to defend a global sense of self-worth. In fact, targeting the domain that is being challenged directly may have the opposite effect of further deteriorating one's self-image and increasing defensiveness (Steele, 1988; Armitage & Rowe, 2011). Self-affirmation manipulations (also called value-affirmation manipulations) have been shown to successfully alter behavior with support for positive short and long-term consequences.

Long-term effects of value affirmations have been shown to persist, including with an adolescent sample. Thomaes and colleagues (2012) examined whether value affirmations could increase prosocial feelings and behavior in young adolescents. Participants, ranging in age from 11 to 14 years, completed a brief writing task affirming values they felt were most important (value-affirmation condition) or unimportant (control condition). Participants had been randomly assigned to the experimental or control condition, and teachers were blind to the

participants' condition. The writing task was completed twice in school, with a six-week lapse between exercises. At the time of the first affirmation exercise and three months following the first affirmation exercise, teachers completed surveys on the children's prosocial and antisocial behavior. Students rated high in antisocial behavior at the time of the first value affirmation task showed significant increases in teacher report of prosocial behavior three months after the exercise. Two other studies have also shown lasting effects in child and adolescent samples. Cohen and colleagues (2009) found that their value affirmation procedure had an impact on the targeted students' school performance for a period of two years. Additionally, Cook and colleagues (2011) also found that value affirmation exercises completed early in high school helped sustain students' sense of belonging for a period of up to two years. Thus, findings suggest self-affirming can produce short and longer-term positive effects on prosocial behavior, school performance, and students' sense of belonging.

One value affirmation task that has been utilized with children and adolescents entails completing a brief writing assignment (e.g. 15 minutes) which requires reflection upon their important personal values, skills, or traits. Previous research has shown this task to be an effective intervention with children and adolescents. For example, value affirmations have been used with adolescent samples (6th through 8th grade) to motivate engagement in social protective behavior and adhere to health risk communications, lower levels of defensiveness leading to more openness to threatening information, reduce aggression, and increase prosocial behavior (Armitage & Rowe, 2011; Sherman & Cohen, 2002; Thomaes, et al., 2009; Thomaes, et al., 2012). It has been argued that early adolescence is a particularly salient time to intervene using self-affirmation methods due to children beginning to experience higher rates of ego threat, yet simultaneously becoming increasingly motivated to develop an autonomous identity at this stage.

A self-affirmation task, which requires participants to reflect on core values that define them as a person is consistent with the developmental process of early adolescence (Thomaes, et al., 2009). Additionally, at this developmental period when self-views are beginning to mature, they are not yet deeply ingrained and therefore possibly more susceptible to change.

It is important to note that although the goal of the affirmation is to protect one's perceived integrity and worth of self, it is not intended to increase self-esteem. While value affirmations have not been shown to boost self-esteem, they do activate a stronger sense for the participant of their self-image, referred to as *buttressing the self* in the self-affirmation literature. According to self-affirmation theory, a person's self-image is composed of different domains including individual roles (e.g. being a student), values (e.g. being religious), social identities (e.g. membership in a group), and people's goals (e.g. succeeding in school). This self-image is activated when a threat to an important domain is experienced (Sherman & Cohen, 2006). Similar constructs of self-image have served as the framework for Harter's (1982) perceived competence model, which includes general self-worth (e.g. sure of self), social competence (e.g. have a lot of friends), physical competence (e.g. do well at sports), and cognitive competence (e.g. good at school work). Self-affirmation theory posits that writing about personal values satisfies certain needs when a threat to their self-image is perceived, including self-needs (e.g. need for self-integrity) and the need for self-consistency (i.e. confirming and perpetuating one's own self-concept). It has been suggested that for some people, the desire to have ones self-needs satisfied is so critical that they become overly self-interested. Through value-affirmation, self-esteem is not boosted, but it is made less vulnerable to ego threat. Therefore, these tasks will not necessarily work more effectively for those with low self-esteem. In fact, they have been shown

to be most effective for those with an inflated self-views (Crocker, Niiya, & Mischkowski, 2008).

Individuals with an inflated self-view, such as children with the positive illusory bias, are especially likely to become aggressive when their ego is threatened. As discussed, boosting the self-esteem of someone with the positive illusory bias (holding an inflated self-view and prone to aggression) could potentially lead to further aggression. Since a value-affirmation intervention does not artificially raise or inflate self-esteem, it may be a uniquely appropriate tool to help children with the positive illusory bias become open to threatening information and reduce their need to respond aggressively. Children who are susceptible to responding aggressively to ego threat tend to focus on the self. This can have the repercussion of preventing them from being aware of the needs of others. If the pressure to establish their own self-needs is alleviated through affirmation, then it can be expected that they will become more open and responsive to outside information (Thomaes, Bushman, Orobio de Castro, & Reijntjes, 2012). It is then possible that their shift in focus would lead to improved behavior.

Not only has research supported the notion that value-affirmation manipulations can have an impact on behavioral outcomes, but the tasks have particular influence on individuals with a tendency to focus on defensive information and engage in defensive strategies (Haddock & Gebauer, 2011). Taken together, value-affirmation tasks seem to be an appropriate intervention to implement with children who maintain a positive illusory bias. Considering the established link between the positive illusory bias, aggression, and poorer treatment outcomes (possibly resulting from a lack of openness to feedback), this population may benefit greatly from value-affirmation tasks. Thomaes and colleagues (2011) found that the affirmation tasks were most effective for relatively self-centered individuals, who prioritize their own needs over those of

others. Being self-centered is an underlying characteristic of aggressive youth, who tend to have low empathy, are indifferent to the needs of others, and are prone to harm others if doing so benefits their own interests (e.g. maintaining an inflated self-view). By shifting their focus from self to others, they may become more susceptible to accepting feedback and less susceptible to responding aggressively. Therefore, there is potential for the consequences to be two-fold, where their self-perceptions may decrease to be more accurate and outsider's perceptions of them may increase if their behavior improves. It is possible that as a result of the value-affirmation task, there is an opportunity for the reports to more closely align.

Potential Cognitive and Emotional Effects of Value-Affirmation Task

While there is empirical evidence supporting the usefulness of value affirmations to decrease aggression and defensiveness along with increasing prosocial behavior, there is little research examining how value affirmations work (Creswell, Welch, Taylor, Sherman, Gruenewald, & Mann, 2005). Self-Affirmation theory suggests that indirect psychological intervention (e.g. value affirmation task), assists people in recognizing that their self-worth does not depend upon any one evaluation in a given situation. It is possible that increasing their awareness of their overall self-worth allows people to *trivialize* individual threat provoking situations and refrain from *ruminating* when confronted with failure (Koole et al., 1999). Additionally, there is some research to suggest that value affirmation tasks may influence one's *affect*. While the results are mixed regarding affect, it logically follows that a less defensive, more open person with a strengthened sense of their self-image may report higher levels of positive affect than a person who has not self-affirmed (McQueen & Klein, 2006).

Trivialization. Trivialization is a concept developed out of the cognitive dissonance literature. According to cognitive dissonance theory, behavior must be guided by accurate

information about the environment and the self. Therefore, when discrepant information between outside information and one's own beliefs or behaviors is encountered, the experience is expected to be psychologically disturbing. Festinger (1957) referred to this negative affective state as dissonance. Dissonance theory posits that the discrepancy between information leads to pressure to reduce the tension, therefore leading people to seek out methods of dissonance reduction. There are three methods identified within the dissonance literature: (1) changing one of the dissonance elements (i.e. an attitude, opinion, belief, or behavior), (2) adding compatible cognitions that reduce the overall level of inconsistency, including seeking out new information, and (3) trivialization. When trivialization is used as a method of dissonance reduction, the level of inconsistency is not reduced, but instead, the importance of the dissonant elements is reduced (Simon, Greenberg, & Brehm, 1995).

Simon and colleagues (1995) examined the use of attitude change versus trivialization in reducing dissonance in a sample of undergraduate psychology students. Findings from the study suggest when important values were salient trivialization was the chosen method of dissonance reduction. Given value affirmation tasks make important values salient, it is plausible that people are more likely to use trivialization as a coping strategy after they have self-affirmed. To date, no study has examined whether children use the method of trivialization in response to inconsistent information to their beliefs (i.e. threatening information) following a value affirmation task. While trivialization may be an important construct to consider when evaluating how value affirmation works, some researchers caution that it does not fully explain the effects of self-affirming (Jordan et al., 2003).

Rumination. Rumination is defined as repetitive and recursive thinking in response to negative moods. Some have argued that rumination is adaptive, as a method to reduce perceived

discrepancies in one's life (Martin & Tesser, 1996). However, others have argued that ruminative thinking is maladaptive (Nolen-Hoeksema, 1996). A distinction has been made in the literature between adaptive (reflective) and maladaptive (brooding) ruminative thinking; however research has focused mainly on maladaptive rumination (Wade, Vogel, Liao, & Goldman, 2008). Research has shown links between the tendency to ruminate and cognitive and emotional disturbance. For example, rumination has been linked to decreased concentration (Lyubomirsky, Kasri, & Zehm, 2003), maintenance of negative affect following interpersonal injuries (McCullough, Bono, & Root, 2007), anger (Rusting & Nolen-Hoeksema, 1998), and aggression (Bushman, 2002).

In addition to using trivialization as a method to manage incoming threatening information, it has been suggested that value affirmations can reduce ruminative thinking. There are no studies that have directly examined the relationship between rumination and value affirmation; however Koole and colleagues (1999) evaluated the effect of value affirmation on an indirect measure of rumination with undergraduate students. In this study, participants were given failure feedback on an intelligence test. Following the feedback, half of the participants completed a values scale concerning their most important value, and the other half completed a values scale of a value they considered to be unimportant to them. Rumination was then indirectly measured by the accessibility of the words from the failed IQ test. The participants who affirmed an important value were less likely to ruminate after failure. Given potential consequences of being able to refrain from ruminating (e.g. more cognitive resources, lower levels of stress); it is important to evaluate whether value affirmations can reduce rumination in children (Sherman & Cohen, 2066).

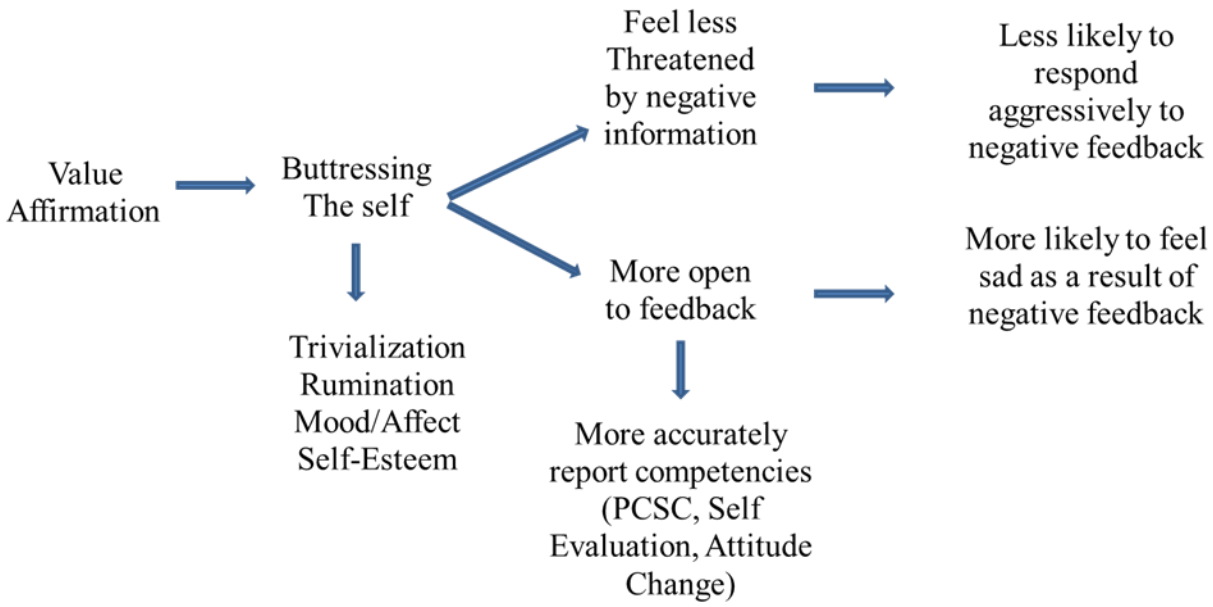
Mood/Affect. There have been mixed findings on the relationship between value affirmation tasks and mood/affect. In one study, self-affirmed individuals reported less positive mood compared to the control condition, and therefore researchers concluded that subsequent attitude change following the value affirmation task could not be attributed to changes in positive mood (Steele & Liu, 1983). Yet, other studies have found a positive effect of self-affirmation on mood relative to comparison conditions (Galinsky et al., 2000; Koole, Smeets, van Knippenberg, & Dijksterhuis, 1999; van den Bos, 2000). There have also been a number of studies that reported no significant effect of value-affirmation on mood (Cohen et al., 2000; Klein et al., 2001; Sherman et al., 2000; Shrira & Martin, 2005; Westfield, Brockner, & Martin, 1999). While the relationship between mood and value affirmation has been explored with adult samples, no study has examined this relationship in a child or adolescent sample.

Conceptual Model

Figure 1 below is a proposed conceptual model based on an integration of the findings reviewed in the previous sections. As a result of self-affirming through a value affirmation task a stronger sense of self is activated, referred to as *buttressing the self*. It is believed that maintaining a 'stronger sense of self' alleviates a person's need to self-protect and makes available additional cognitive resources to use coping strategies when faced with threat provoking situations. One such strategy that may be employed is trivialization, where the threatening information is thought of as unimportant. Additionally, the stronger sense of self may reduce a person's likelihood of ruminating over negative information, especially if they have deemed the threat unimportant. While value affirmation theory suggests self-affirming does not artificially inflate self-esteem, it is possible that through the process of activating a stronger sense of one's self-image, one's mood is enhanced.

As a result of self-needs being satisfied through the self-affirming process, then it can be expected that people will feel less threatened and become more open and responsive to outside information (Thomaes, Bushman, Orobio de Castro, & Reijntjes, 2012). If people are more open to feedback and less defensive, they may be more likely to report accurately about their own competencies. Therefore, if they had previously self-protected when reporting on competencies a change in self-evaluation will be observed. Being open and willing to accept rather than protect against threatening information however, may lead to feeling sad rather than angry when faced with negative feedback. The following figure represents an initial framing of how constructs might relate. While this study in not powered to engage in mediation analyses, understanding of the associations between these constructs can lead to future studies testing a meditational model in a larger scale study.

Figure 1. Proposed Conceptual Model



Purpose and Hypotheses

The goal of the current study is to examine whether the use of a value-affirmation manipulation can reduce the effects of ego threat in children with the positive illusory bias. More specifically, this project aims to explore whether a value-affirmation manipulation can reduce bias in self-reports of social competence and lower the likelihood of responding aggressively following negative feedback. No research, to date, has directly examined whether effects of the positive illusory bias can be decreased through intervention.

The *first aim* of the present study is to examine the potential effects of the value affirmation on trivialization, rumination, affect, and self-esteem. It is hypothesized that completion of the value affirmation will (H1a) lead to more trivialization, (H1b) reduced rumination, (H1c) increased positive mood, and (H1d) have no effect on self-esteem.

The *second aim* of the study is to evaluate change in self-report of social competence in children with the positive illusory bias following a value-affirmation task. Scores from the pre-manipulation self-report measure of social competence will be compared to self-reported social competence following the value affirmation manipulation for participants in the experimental and control conditions. The following hypotheses are proposed: (H2a) Participants in the experimental condition will have significantly different pre to post social competence scores, with post scores being lower indicating a less inflated self-view; (H2b) Participants in the control condition will not have significantly different pre to post social competence scores.

Similar to the previous aim, a *third aim* of the study is to evaluate change in self-report of the following areas of competency: academic, behavioral, physical, and athletic, following a value-affirmation task. Scores from the pre-manipulation self-report measure of competence will

be compared to self-reported competence following the value affirmation manipulation for participants in the experimental and control conditions. The following hypotheses are proposed: (H2a) Participants in the experimental condition will have significantly different pre to post competence scores, with post scores being lower indicating a less inflated self-view; (H2b) Participants in the control condition will not have significantly different pre to post competence scores.

A *fourth aim* of the study is to examine the influence of the manipulation and post-manipulation bias score on levels of aggression following provocation (i.e. negative feedback). Following the value affirmation task, participants will experience provocation from a virtual peer and then engage in a computer game with that peer intending to measure aggression. It is hypothesized that (H4) participants in the experimental group who show a decrease in inflated self-report of social competence will engage in less aggressive behavior during the game.

A *fifth aim* of the study is to compare levels of aggression following provocation of children in the value affirmation manipulation task and the control group. It is hypothesized that (H5) participants in the experimental group will engage in significantly less aggressive behavior during the game than participants in the control condition.

A *sixth aim* of the study is to compare the self-report measure of social competence to the teacher report of social competence in order to evaluate how closely the self-report matches outside raters. The teacher report was previously collected and used to identify children with the positive illusory bias. In order for participants to be identified as having the positive illusory bias, their report of social competence was inconsistent with the teacher report. It is hypothesized that following the value affirmation manipulation, (H6a) participants in the

experimental condition will report social competence scores that correlate positively with teacher-reported social competence scores, and (H6b) participants in the control condition will report pre and post manipulation social competence scores that correlate similarly with teacher-reported social competence scores.

The *final aim* of the study is to compare participants' reports of how sad and mad the feel following the negative feedback across conditions to evaluate the experience of "buttressing the self." It is hypothesized that following the negative feedback, (H7a) participants in the experimental condition will report being more mad and less sad than participants in the control condition.

A set of *exploratory aims* will be explored to examine the associations between constructs. Following the conceptual model, associations between the constructs that are potentially aspects of buttressing the self (trivialization, rumination, mood, and state self-esteem) and perceived competence will be examined. Additionally, associations between perceived competence and levels of aggression and sadness will also be explored.

2. METHODOLOGY

Participants

Participants were recruited from an ongoing longitudinal study, funded by the National Institute of Drug Abuse, examining the treatment outcomes of group versus individually implemented versions of the Coping Power Program (Lochman, Boxmeyer, Powell, Roth, & Windle, 2006). The Coping Power Program is a preventative intervention designed to reduce youth violence and other antisocial outcomes (Lochman & Wells, 2004). In the original study, participants were identified on the basis of being rated by teachers and parents as having high levels of aggressive and disruptive behaviors. Participants received an evidence-based intervention delivered in either a group or individual format, and results of the study supported reductions in externalizing and internalizing behavior problems at the one-year follow-up (Lochman, Dishion, Powell, Boxmeyer, Qu, Sallee, 2015). The sample includes 360 families, which consists of 75.8% African American, 20.8% Caucasian, and 0.03% other ethnicity, and 65% male. Retention rates have been very high over time, and most recently were calculated at 94% overall across cohorts.

For the current study, participants were recruited from those who provided permission to be contacted for future studies during the most recent wave of data collection for the larger study. An attempt was made to restrict recruitment to the most recent cohort; however, it was necessary to also recruit from the prior cohort in order to achieve the proposed sample size. Data were collected from participants in the child's home or at the research office by trained research

assistants. The sample consisted of 56 adolescents, aged 14-17 years old (*M* = 14.6), and the majority of the participants were male (*N* = 39; 70%). Participants' self-identified race was primarily African American (*N* = 37; 66 %), followed by Caucasian (*N* = 18; 32 %) and Bi-racial (*N* = 1; 2%).

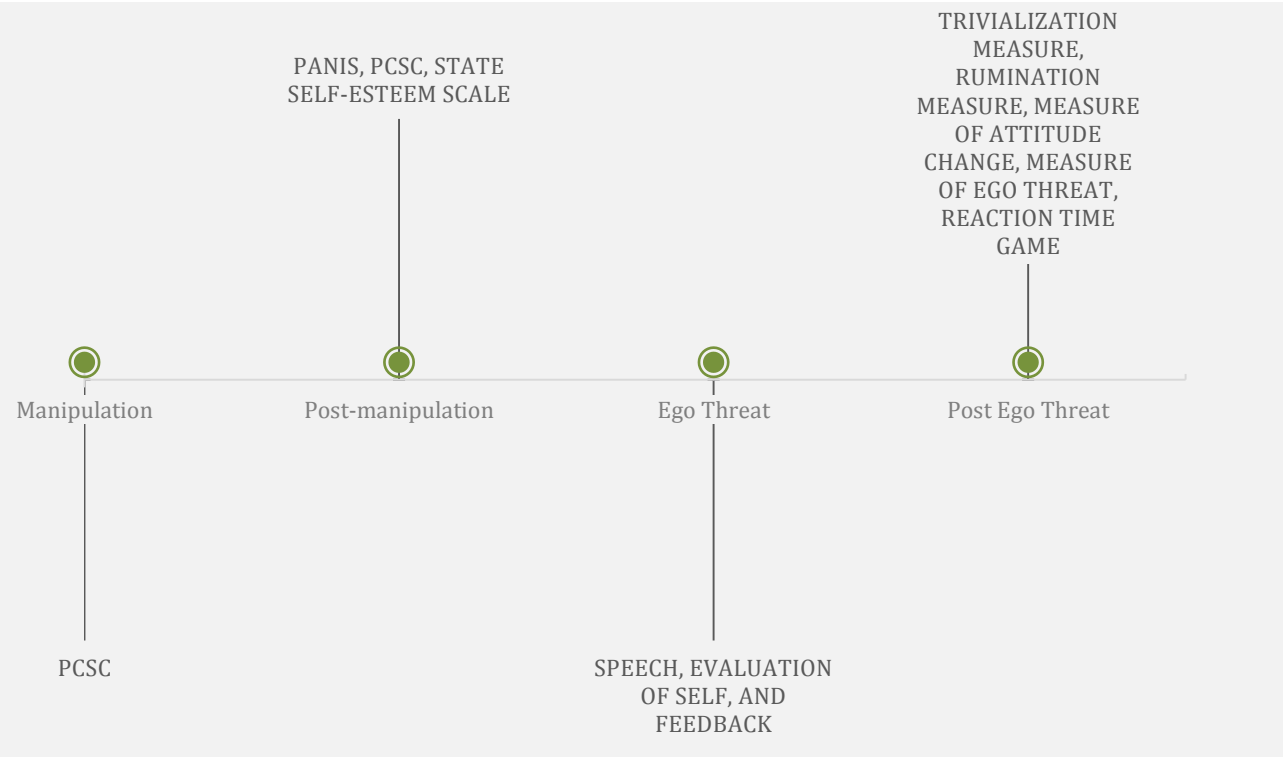
Procedure

Children were recruited from city and county public schools in Tuscaloosa and Bessemer, Alabama. A two gate screening system was used to identify potential participants. First, teachers were asked to rate all of the children in their classroom using the Proactive and Reactive Behaviors Scale (Dodge & Coie, 1987). Based on these ratings, students were identified who were rated as being the top 25 percent most aggressive children across all classes. In order to be eligible to participate, those children had to be rated average or higher by a parent on the aggression subscale from the BASC. Informed consent from the parents and assent from the children were required for participation. Screening occurred during April of Grade 4, and baseline assessments were administered shortly after for each cohort. Data were collected from child participants at each time point in the child's home or at the research office by trained research assistants.

For the current study, data from the most recent wave of data collection, collected during Summer 2014, was used to identify potential participants and for analytical purposes (e.g., covariates, moderation). This data included the Teacher Observation of Classroom Adaptation-Revised (TOCA-R), Perceived Competence Scale for Children (PCSC), and Behavior Assessment System for Children – Teacher Rating Scales (BASC-TRS). Data collection for the current study spanned from January 2015 through January 2016. Therefore, data from the larger

study was collected up to 18-months prior to data collection for the current study. In order to identify eligible participants, a bias score was calculated by subtracting the standardized teacher report of social competence from the self-report. Children meeting the requirement for the positive illusory bias, scores above zero (0), were eligible to participate. There were 179 children across two cohorts who had the necessary data available to create a bias score. Of those children, 140 participants met eligibility requirements, with an average bias score of 1.68, *SD* = .99. Once recruited, participants were randomly assigned to complete either the value-affirmation manipulation or control condition. Data collection for the current study took place in the participant's home or in the lab, and participants were met with individually.

Figure 2. Experimental Paradigm



Note. The Experimental Paradigm displays the measures collected during the current study. There were teacher (TOCA, BASC) and self-report (PCSC) measures used to identify potential participants and as covariates that are not depicted in above figure. They are not shown in the experimental paradigm because they were collected as part of a larger on-going project prior to the start of the current study.

Consistent with previous research, participants were given a list of values (e.g. being athletic, being good at art, trying hard academically, being independent, living in the moment, being religious). In previous studies using value affirmations, one of the listed values has been 'belonging to a social group.' Since the focus of the current study is on accurate reporting of social competence, that particular value was not included. Participants in the value affirmation condition were instructed to choose two or three of their most important values and told to 'think about times when these values were important to you' and to 'describe in a few sentences why these values are important to you.' The children were reminded to focus on their thoughts and feelings, and not to worry about spelling or grammar (Cohen, Garcia, Apfel, Master, 2006). In the control condition, participants also engaged in a writing task, however it was on a separate topic. Research has shown that writing about values in general may lead to attitude change, and therefore, the control condition will not write about values (McQueen & Klein, 2006). Participants in the control condition, consistent with previous research, were instructed to write everything they had eaten or drunk in the past forty-eight hours (Appendix D; Cohen, Arson, & Steele, 2000). Following the written task, participants completed self-report measures of their own social competence (PCSC), affect (PANAS), and state self-esteem (SSES). Participants then completed a computer task as a measurement of aggression.

A modified version of the Taylor Aggression Paradigm (Denson et al., 2011) was completed in order to measure levels of aggressive behavior following the value affirmation/control task and questionnaires. In order to evaluate whether the value affirmation task decreased the defensiveness of participants as compared to the control group and thereby decrease aggression, participants were provoked by a virtual peer prior to engaging in the task

measuring aggression. The intention of the provocation was to simulate an ego threat, which is defined as occurring when negative feedback creates a discrepancy between internal (positive) and external (negative) appraisals (Stucke & Sporer, 2002). Participants were told that they are going to exchange a video of themselves giving a speech to a peer, provide feedback to the peer on his/her speech, and receive feedback on their own speech from the peer. The participant was encouraged to write the best speech they could, something they can be proud of, in order to increase the likelihood that they will have a positive opinion of their own speech. The peer each participant interacted with was an ethnically and sex-matched confederate who was pre-recorded. Participants were instructed to write a speech, and the instructions read, 'Imagine there is a new kid in your class. Write seven sentences telling him/her how to make friends at his/her new school. The gender in the directions was consistent with the gender of the participant. Once the participant completed recording the speech, he/she evaluated his/her own speech on a 5-point Likert scale. They then watch the virtual peer's speech. After watching the speech, participants were recorded providing 1-2 sentences of feedback to the peer and were told they would receive feedback from the peer. All participants received the same feedback, which was meant to be insulting ("I didn't think your speech was helpful. I thought your speech was boring and it was a waste of my time to listen to you"). Previous research has shown that this procedure successfully increases anger, aggression, and blood pressure (Denson, 2010). After receiving the negative feedback, participants again completed the measure evaluating their own speech.

Participants were then told that they would be playing a competitive reaction time game against the same peer. During this game, participants were able to deliver a retaliatory blast of loud noise. The participant was able to specify the intensity and duration, which included a non-aggressive option, of the blast. Aggression was operationalized as the mean duration and

intensity of the noise blast selected. The Taylor paradigm is a valid and widely used measure of aggression (Anderson & Bushman, 1997; Hoaken & Pihl, 2000). Once the session was completed, participants were evaluated for suspicion and debriefed.

Pilot

A pilot study was conducted to gather information about, and reactions to, the paradigm. The child was compensated for participation. Participants were recruited from the participant pool to be used for the proposed dissertation study. This pool of participants came from an ongoing longitudinal study examining the treatment outcomes of group versus individually implemented versions of the Coping Power Program. The goal was to recruit 6 participants for the pilot. To reach this goal, 18 potential participants were contacted. Of the 18 people contacted, 7 did not answer the phone, 2 families had moved out of state, and 3 families were interested but could not find a time within the two weeks of the pilot. However, the latter three families agreed to be contacted for the proposed dissertation study. Six parents agreed for their child to participate in this pilot study. There were no potential pilot participants who were reached who declined to participate. Pilot participants were 4 boys (67 percent) and 2 girls (33 percent), ages 12-15. Sixty-seven percent of the pilot sample identified as Caucasian and 33 percent as African American.

The Pilot study was used to answer questions of feasibility such as how long data collection lasts for each participant, the usability of the equipment, and the appropriateness of the tasks and determined compensation. The value affirmation task was evaluated for time spent writing and the written product was evaluated based on whether the participant wrote on the intended topic. Difficulty of the affirmation task and believability of the provocation paradigm

and game was evaluated using a semi-structured interview conducted by the primary investigator and a questionnaire. Participants were asked to comment on how well they understood what they were being asked to do, how interesting they found the tasks, whether they think other children their age would be interested in participating, and how difficult they found the tasks. Open-ended questions were asked of the participants following the study to evaluate the believability of the provocation paradigm. On average the data collection lasted approximately an hour and ranged from 45 minutes to 1 ½ hours.

Value Affirmation. Participants did not raise any questions while completing the value affirmation task, and time to complete the task ranged from five to twelve minutes. There was no observable difference in quality among the products based on time to completion. Participants were asked to report on a 4-point Likert scale "how difficult" and "how confusing was the value writing task?" The scale ranged from 1 (not difficult at all) to 4 (very difficult). The mean for the question of difficulty was 1.8, with most participants endorsing, 'not difficult at all.' The mean for the question of being confusing was 1.8, with most participants endorsing, 'somewhat confusing.' When prompted to share what was confusing about the task, participants' answers included: (a) not being sure if it was about things you currently value or instead valued at one time in the past, and (b) needing time to think about their answer. As a result, during data collection for the main study, it was emphasized to write about values that are *currently* important and participants were encouraged to take their time in responding.

Each value affirmation was examined to ensure participants had written on the intended topic. There were no instances where the directions were not followed, or where writing was off topic. Below are excerpts from the value task:

Being religious is important to me because in your future, it helps build a foundation for you. Following the set guidelines and rules will make you a better person and earn you your reward (afterlife, heaven, etc.)

I like being religious because god and Jesus are my beliefs and I care for it. And I want to help people that are troublemakers get right with god. And because when the world ends one day I want to stay with my family the whole time.

I try hard academically because I can have a better future. I can stay from being ungrounded. And I will be able to participate on sports teams. I just like the feeling of getting good grades.

Ego Threat Paradigm. The first step of the ego threat paradigm was to have the participants write a speech that they were told would be shared with and evaluated by a peer. The original instructions were to write a two minute speech, however it became apparent while creating the confederate video that participants would have difficulty gauging a 'two minute speech.' The instructions were altered in order to give more structure and consistency to the task. Participants of the current study were instructed to write a 7 – 10 sentence speech, and there was no mention of how long their speech should last in the spoken format. Participants did not indicate that they were confused by the task and did not report that they found it difficult.

Additionally, no participants or parents of participants hesitated about being/having their child video recorded for this task. Although some participants appeared nervous when reading their speech, they did not request to skip the task. Below is an example of a participant's speech:

> *Hey! Just talk to people and tell them about yourself. Be cool and just try to join in. Talk to people that you wouldn't usually talk to because us here might be different. Talk about sports or the coolest thing in life you have went through. Talk to girls and get their numbers. Just try to do anything unless it's acting crazy. Join sports and make it to a high position and get known. And sit with people that you have classes with at lunch.*

Participants' reactions to the negative feedback provided by the peer ranged from expecting the peer to dislike the speech to shock at the feedback. The feedback was played through the speakers of an IPad for the pilot, but during the dissertation study was played over headphones. The headphones permitted the experimenter to remain neutral while the negative feedback was heard. During the debriefing, all six participants reported that they did not think there was anything strange about the peer interaction, and each participant shared that they did not question whether the peer was real. One participant stated, 'Of course he was real, I saw him. It felt like I met him.'

Reaction Time Game. The sound element of the reaction time game, the noise blast, was not able to be assessed during the pilot. However, participants were able to see on the screen the intensity level and length of time the 'peer' chose for the noise blast if they lost the round. All of the participants commented on the noise level shown on the screen at some point during the game, saying things like: 'I didn't think he would start off so low.' Of note, during data collection for the main study, participants often expressed a similar sentiment regarding it being

odd that the peer started the game at such a low level of aggression. Although the participants did not hear the noise blast, their comments indicated that they were paying attention to the level of noise that would have been administered by the peer. There were two participants who were skeptical that they were not playing against a real peer during the computer game. However, when asked generally 'How much did you think the peer existed,' on a three-point Likert scale (1 – not at all; 3 – totally) the mean response was 2.8 indicating the participants believed they were interacting with another child.

Pilot feedback. Data were collected on the participant's level of enjoyment and response to the deception. Participants indicated on a four-point Likert scale (1 – not likely; 4 – definitely) whether they would recommend this study to a friend. The mean rating was 2.6, with most participants indicating they would 'probably' recommend the study to a friend. Participants also indicated on a four-point Likert scale (1 – not at all; 4 – very much) how much they enjoyed participating. The mean rating was 3.6, with most participants indicating they 'very much' enjoyed participating. Finally, participants rated on a three-point scale (1 – a lot; 3 – not at all) whether they were upset about what was done (the deception), and every participant endorsed 'not at all.'

Pilot Study: Lessons Learned. As a result of the pilot, minor changes were made to the study protocol. Difficulty experienced by the confederate while writing the speech led to greater structure being placed on the task. More specifically, instead of being told to write a two minute speech, the directions were changed to write a 7-10 sentence speech. Pilot participants were able to generate at least seven sentences for this task. Additionally, participants during the current study listened to the negative feedback given during the ego threat paradigm through headphones

instead of over the computer speakers. That way, it was more likely that the experimenter was perceived as neutral.

The pilot not only provided an opportunity to identify necessary changes, but also offered insight into the feasibility and believability of the study. In terms of recruitment, once contact was made participants were accessible and available. Timing of the study procedures worked out as anticipated, and fit in the expected amount of time of approximately an hour. Upon completion of the study protocol, participants were asked to rate the level of difficulty of the tasks and comment on their experience with the peer. Data suggest that the measures and tasks were appropriate. Additionally, data on believability of the peer interaction paradigm was encouraging. All six participants believed that they had been interacting with a real peer, and no participant endorsed being upset when told the peer was a confederate that had been pre-recorded.

Measures

Perceived Competence Scale for Children (PCSC; Appendix E*).* The Perceived Competence Scale for Children (PCSC) consists of 36 items assessing children's perceptions of academic competence, social competence, athletic competence, physical appearance, behavioral competence, and general self-worth (Harter, 1985). The social competence subscale was used to calculate the positive illusory bias score. The social competence subscale, comprised of seven items, is a measure of peer acceptance with questions regarding having friends, being easy to talk to, and doing things with their peers. The items are scored on a four-point scale, ranging from 1 ("Not Very Competent") to 4 ("Very Competent"). Silon and Harter (1985) documented good internal consistency, ranging from .75 to .86, and test – retest reliability, ranging from .78-.87 for

nine months. Internal consistency for the current study was .71 and .81 pre and post administration respectively. This measure was collected prior to the current project as part of a larger ongoing study. Data from the most recent wave of collection (Summer 2014) was used for the current project. This measure was also completed before and following the value affirmation manipulation by participants in the experimental and control conditions.

Teacher Observation of Classroom Adaptation-Revised (TOCA-R; Appendix F*).* The Teacher Observation of Classroom Adaptation- Revised measure consists of 16 behavioral items that teachers complete for the children in their classroom (Schwartz, 1991). The social competence subscale, made up of 3 items, is most relevant to the current study. The items are scored on a six- point scale, ranging from 0 ("Almost Never") to 5 ("Almost Always"). This measure was collected as part of a larger ongoing study. Data from the most recent wave of collection was used for the current project. This measure was collected before the manipulation takes place, previous research with a similar sample showed high concordance of children's social competence among teachers across years (Time 1 to Time 2: $r = .77$; Time 2 to Time 3: $r = .58$, $p < .01$) (Sallee, 2013).

Behavior Assessment System for Children – Teacher Rating Scales (BASC-TRS; Appendix G*).* The BASC-TRS is a behavior problem checklist completed by children's teachers. The BASC Teacher Rating Scale yields scores on 10 clinical syndromes: aggression, anxiety, attention problems, atypicality, conduct problems, depression, hyperactivity, learning problems, somatization and withdrawal. The BASC also contains four scales assessing positive traits: adaptability, leadership, social skills, and study skills. The aggression and inattention subscales are the most relevant to this study. The items are scored on a four-point scale, ranging from 0 ('Never') to 3 ('Almost Always"). Previous research has demonstrated strong construct

validity of this measure. It has also been found to correlate strongly with counterpart subscales on the Achenbach Teacher Report Form (Reynolds & Kamphaus, 2002). This measure was collected as part of a larger ongoing study. Data from the most recent wave of collection was used for the current project (Summer 2014).

Perceptual Bias Difference Score. The standardized bias difference score was calculated using teacher report of social competence (TOCA-R score) and Perceived Competence Scale for Children (PCSC). The bias score will be calculated by subtracting teacher reports of participants' social competence from the participants' own self-reported social competence. While it is also possible to calculate the perceptual bias score using peer report, there are advantages to using the teacher report of social competence. First, previous research with a similar sample showed teacher and peer report as strongly correlated, $r = .57$, $p < .01$, indicating that the teacher report is an appropriate proxy for peer ratings (Sallee, 2013). Second, the teacher is able to observe each child in the classroom, whereas some students may have very little contact with one another. Therefore, the students may be less reliable reporters on peers with whom they have little interaction. This is a particularly important consideration at the middle school and high school level where students change classes and may not know one another well. Finally, teachers have a sense of normative behavior through their work with many children. Since teachers are able to observe all of the children in their classroom and are able to take a normative view, the teachers may have particular strengths that the peers are lacking.

Rumination about an Interpersonal Offense Scale (RIO; Wade et al., 2008; Appendix H*).* The Rumination about an Interpersonal Offense scale was developed to assess rumination about a specific situation (i.e. state rumination) rather than disposition to ruminate. The RIO consists of six questions, and respondents complete the measure with a 5-point Likert scale ranging from

1 (strongly disagree) to 5 (strongly agree). Participants are prompted to recall a specific event; in this case, they will be instructed to recall the negative feedback from the peer. Then they rated the degree to which they agree with statements such as: 'I can't stop thinking about how I was wronged by this person.' Wade and colleagues (2008) documented adequate internal consistency, all estimates above .90. Convergent and discriminant validity were also supported. Excellent internal consistency was demonstrated in this sample, Cronbach's α = .91.

*Trivialization (*Appendix I). Based on previous research, trivialization was measured by asking participants two questions which have been tailored to this specific paradigm, "How important is it that your peer says nice things about your speech," and "How important is it that your peer likes your speech?" (Simon et al., 1995). Participants responded using a five-point Likert scale, ranging from 1 ("not at all important) to 5 (Extremely important). Prior studies have averaged the two trivialization items into one index resulting in good internal consistency, Cronbach's α = .86 (Koole et al., 1999). Internal consistency for the current study was good, Cronbach's α = .86. Values from the trivialization measure were reversed scored so that higher scores correspond with greater trivialization.

State Self-Esteem Scale (SSES; Appendix J*).* The State self-esteem scale measures a participant's self-esteem at a given point in time. The scale consists of 20 items, which are subdivided into three components of self-esteem: (1) performance self-esteem, (2) social self-esteem, and (3) appearance self-esteem. There is evidence that the SSES is psychometrically sound, with internal consistency ranging from .78 to .87 (Heatherton & Polivy, 1991). Acceptable internal consistency was demonstrated for the current study, Cronbach's α = .71.

Ego Threat (Appendix K). Ego threat was operationalized as the discrepant score between how the participant rates his/her own speech and how he/she perceives how the peer would rate his/her speech. Participants will rate the following questions on a five-point Likert scale ranging from 1 (very bad) to 5 (very good): (1) "How would you rate your speech," and (2) "How do you think your peer would rate your speech." A discrepant score with the participant rating on the positive side and perceived peer rating on the negative side would indicate a threat to the participant's ego.

Buttressing the Self (Appendix L). Two questions were asked to evaluate participants' reaction to the negative feedback: (1) "How sad did the feedback make you," and (2) "How mad did the feedback make you." Participants rated how sad and mad they were on a five-point Likert scale ranging from 1 ("not sad at all") to 5 ("very sad"). If a coping skill (buttressing the self) was successful, the feedback should be internalized and the participant should feel sad rather than mad. However, if no coping skill was used and the ego threat was felt, the participant should feel more mad (Stucke & Sporer, 2002). An additional item was included on this measure, (1) "How happy did the feedback make you," in order to maintain the believability of the paradigm that the child was interacting with a live peer and the feedback had not been prerecorded.

Change in Attitude (Appendix M). Prior to and after receiving peer feedback, participants rated his/her own speech. Consistent with prior research, participants rated their speech on a five-point Likert scale ranging from 1 ("very bad") to 5 ("very good") (Simon, Greenberg, & Brehm, 1995). The change score was calculated by subtracting the pre feedback rating from the post feedback rating. Therefore, a negative score indicates the participant lowered the rating of their own speech following the negative feedback from his/her peer.

Positive and Negative Affect Schedule (PANAS; Appendix N). The PANAS is a 20-item (10 positive affect items, 10 negative affect items) adjective rating scale designed to measure affect. Each item is rated on a scale ranging from 1 (very slightly/not at all) to 5 (extremely) to indicate how much the item describes the way the respondent feels. Watson and Clark (1991) reported substantial reliability and validity with an adult sample. Lonigan and colleagues (1999) demonstrated good internal consistency (α =.82) with a children in 6 – 11th grade. Internal consistency for the current study was good across scales, with Cronbach's α = .89 for the Positive Affect scale and Cronbach's α = .84 for the Negative Affect scale.

3. RESULTS

The following section delineates the findings from the current study. Initial analyses are discussed within the *Preliminary Analyses* subheading. This includes evaluating baseline variables to ensure successful randomization of groups. Additionally, means, standard deviation, skewness, and kurtosis of study variables for the sample and subsample are reported. Finally, bivariate correlations of study variables are described. Equivalence testing was conducted to evaluate differences that emerged between correlations across the subsamples (i.e., experimental and control conditions).

Analyses addressing the main study aims are presented within the *Primary Analyses* section. When warranted, follow-up analyses were conducted to further examine findings that were inconsistent with the proposed hypothesis. Due to the emergence of a pattern of non-significant results, a series of exploratory analyses were conducted, including moderation, which are presented at the end of the section.

Preliminary Analyses

Initial analyses indicated that the bias score used to identify qualifying participants, baseline self-reported competence scores, gender distribution, and age did not differ between groups. Thus, random assignment to the self-affirmation and control groups was successful.

Table 1 shows the means, standard deviations, skewness, and kurtosis of the study variables, Tables 2 and 3 present the means, standard deviations, skewness, and kurtosis of study

variables delineated by condition, and Tables 4 through 6 show the main study variable correlations for the entire sample, experimental, and control groups. An examination of bivariate correlations was conducted using Pearson's correlation coefficients. Correlations from the overall sample revealed that perceived behavioral and social competence at time 1 correlated positively with perceived behavioral and social competence at time 2 respectively. Perceived behavioral competence at times 1 and 2 (i.e., pre and post manipulation) correlated positively with state self- esteem and negatively with negative affect. Perceived social competence at time 2 correlated positively with state self-esteem and negatively with negative affect.

The extent to which participants felt sad (FbS) and mad (FbM) following the negative feedback was positively correlated. The more participants ruminated following the negative feedback, the more they reported feeling sad and mad. A change in attitude (CA; difference score subtracting the pre self-rating of speech from the post self-rating of the speech following negative feedback) was negatively correlated with how mad the feedback made the participant feel. That is, the more mad a participant was following the negative feedback; the more he/she increased their own self-rated evaluation of their speech. How much the participant cared about how his/her speech was rated (FbC) was negatively correlated with trivialization. Consistent with expectations, the more a participant trivialized the feedback, the less he/she reported caring what the peer thought of his/her speech. Additionally, higher state self-esteem was associated with lower levels of negative affect, the more participants trivialized the feedback the louder and longer they set the sound blast during the game, and how loud and long the sound blast were set positively correlated.

Differences in correlations of study variables by condition were observed and were tested as noted below with equivalence testing. In the experimental group, perceived behavioral and

social competence at time 2 were positively correlated. Feeling sad following the negative feedback was positively correlated with caring about what the peer thought of their speech and negative affect. Feeling sad following the negative feedback was correlated negatively with state self-esteem, with higher levels of sadness being associated with lower state self-esteem. Feeling mad following the negative feedback was associated with lower state self-esteem and higher negative affect. The more the participant cared about what the peer thought of his/her speech, the shorter the length of time on average the noise blast was set.

In the control condition, perceived social competence at time 1 correlated positively with state self-esteem and intensity of the noise blast. That is, higher social competence scores at time 1 were associated with higher levels of state self-esteem and more aggression (operationalized as intensity/loudness of the noise blast). Perceived social competence at time 2 also correlated positively with aggression (operationalized as intensity/loudness of the noise blast). Additionally, higher levels of rumination were associated with lower reports of positive affect. Of note, there were a number of correlations that were significant for the entire sample, but were not significantly correlated in the control group when examined independently by condition. Specifically, in the control group, no significant correlations emerged between negative affect and perceived social competence time 2 (correlated negatively in the overall sample), feeling mad following the negative feedback and rumination (correlated positively in the overall sample), feeling mad following the negative feedback and a change in speech rating (negatively correlated in overall sample), and state self-esteem and negative affect (negatively correlated in overall sample).

Equivalence testing was conducted to evaluate whether there was a significant difference between the correlations by condition. Using the Fisher r-to-z transformation, a value of z was calculated to assess the significance of the difference between two correlation coefficients found in two independent samples. When the experimental correlation coefficient is greater than the control correlation coefficient, the resulting value of z has a positive sign; when the experimental correlation coefficient is smaller than the control correlation coefficient, the sign of z is negative. Table 7 displays the calculated z- difference score and corresponding p-values.

Significant differences in correlations across conditions emerged. Feeling sad following the feedback was negatively correlated with state self-esteem in the experimental condition, while the association was positive in the control condition. Feeling sad following the negative feedback was positively correlated with negative affect in the experimental condition, but the association was negative and non-significant in the control condition. Feeling mad following the negative feedback was positively correlated with rumination, however only significantly in the experimental condition. Feeling mad was also negatively correlated with a change in attitude (higher scores indicated rating speech higher after feedback); however this association again was only significant in the experimental condition. Feeling mad following the negative feedback was positively correlated with negative affect, but the association was negative and non-significant in the control condition. How much the participant cared about how the peer rated their speech was negatively correlated with average duration of noise blast in the experimental group, and the association was positive and non-significant in the control group. Higher levels of rumination was associated with lower levels of positive affect in the control group, however the association was positive and non-significant in the experimental group. Finally, state self-esteem and

negative affect were significantly negatively correlated in the experimental group, but the association did not reach significance in the control group.

Primary Analyses

Aim 1. A one-way between groups multivariate analysis of variance was performed to examine whether the manipulation led to differences on six dependent variables: trivialization, rumination, positive affect, negative affect, change in attitude, and self-esteem. The independent variable was condition (e.g., experimental vs. control). Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices, and multicollinearity, with no serious violations noted. No significant differences emerged between the experimental and control conditions on the combined dependent variables, $F(6, 47) = .922$, $p = .488$ (see Table 8).

Aim 2. A one-way between-groups analysis of covariance was conducted to evaluate whether participants in the experimental group evidenced a significant reduction in self-reported perceived social competence compared to the control group (see Table 9). The independent variable was the condition (experimental, control), and the dependent variable consisted of the post-manipulation perceived social competence scores. Participants' scores on the pre-manipulation administration of the perceived social competence scale were used as the covariate in this analysis. Preliminary checks were conducted to ensure that there was no violation of the assumptions of normality, linearity, homogeneity of variances, homogeneity of regression slopes, and reliable measurement of the covariate. After adjusting for pre-intervention scores, there was a non-significant trend in the difference between the two groups on post-manipulation scores on

perceived social competence, F (1, 51) = 3.06, p = .08, partial eta squared = .06. The experimental group (M= 2.9), while not significant, reported lower levels of social competence than the control group (M= 3.14). A consideration was made of potential factors affecting variability, and the ANCOVA model was run controlling for sex, race, and/or baseline levels of aggression independently and together. No significant improvement to the model was observed.

Aim 3. Previous research has found self-reported social competence to be less likely to change compared to other self-reported competencies (e.g., academic, behavioral; Hoza et al., 2012). Considering this finding, a one-way between-groups analysis of covariance was conducted to examine differences between groups on all other subscales measuring competence from the PCSC. After adjusting for pre-intervention scores, there was a significant difference between the two groups on post-manipulation scores on perceived behavioral competence, F (1, 53) = 5.92, $p < .05$, partial eta squared = .10 (see Table 10). Interestingly, there was an increase in reported behavioral competence in the experimental group (M = 2.96) as compared to the control group (M = 2.8). That is, participants in the experimental group (i.e., those who completed the value affirmation task) reported higher levels of behavioral competence than the control group when controlling for pre-manipulation self-reported behavioral competence scores. No further significant differences between groups on measures of self-reported competence, specifically academic and athletic competence and physical appearance, emerged.

Aim 4. A one-way analysis of variance was conducted to evaluate whether participants in the experimental group whose bias score decreased evidenced significantly lower levels of aggression compared to participants in the experimental condition who did not evidence a decrease in the bias score. No significant results emerged across all measures of aggression (see Table 11).

A follow-up analysis was conducted to examine whether participants across groups who evidenced a decrease in the bias score exhibited significantly lower levels of aggression compared to participants who did not show a decreased bias score. A one-way between-groups analysis of variance was conducted to explore the impact of a change in self-reported competence on levels of aggression, as measured by the noise blast task. Subjects were divided into two groups according to whether their score on the social competence subscale on the PCSC (1) decreased or (2) increased/stayed the same. There was a non-significant trend for aggression operationalized as average duration of noise blast, $F(1, 50) = 3.48$, $p = .068$, partial eta squared = .07. The decrease in self-reported social competence group (M= 6.41), while not significant, engaged in lower levels of aggression than the increased/stayed the same group (M= 7.44).

Aim 5. A one-way analysis of variance was conducted to evaluate whether participants in the experimental group evidenced significantly lower levels of aggression compared to participants in the control condition. No significant results emerged across all measures of aggression (see Table 13).

Aim 6. Tables 14 and 15 present bivariate correlations of teacher and self-reported social competence by condition and Table 16 shows the results of equivalence testing. Upon examination of the correlations and subsequent equivalence testing, the data suggest there were no significant differences between the teacher-reported social competence and pre- and post-manipulation self-reported social competence within and across condition.

Aim 7. A one-way analysis of variance was conducted to test the hypothesis that participants in the experimental condition, when compared to the control condition, would report being more mad and less sad as an indication of "buttressing the self" (see Table 17). Results

did not support a significant difference on measures of feeling mad, F (1, 54) = 0.05, p = .824, or sad, F (1, 54) = 0.006, p = .937, following negative feedback.

Additional one-way analyses of variance were conducted to evaluate differences in reports of feeling mad and sad between bias change groups (decrease and increase/stay same). A significant difference emerged between groups on the measure of feeling sad following the negative feedback, F (1, 51) = 6.87, $p < .05$, partial eta squared = .12. Participants in the self-reported social competence decrease group (M = 2.41) reported higher levels of feeling sad compared to the self-reported social competence increase/stay the same group (M= 1.58), potentially reflective of internalizing negative feedback and consistent with what would be expected when one has "buttressed the self." Additionally, subjects were divided into two groups according to whether their score on the behavioral competence subscale on the PCSC (1) increased or (2) decreased/stayed the same. Participants in the self-reported behavioral competence increase group (M = 2.32) reported higher levels of feeling sad compared to the self-reported behavioral competence decrease/stay the same group (M = 1.59), F (1, 51) = 6.87, $p <$ .05.

A follow-up analysis was conducted to examine the bivariate correlations among the social competence change score, behavioral competence change score, and feelings of sadness following the negative feedback. Change scores were significantly correlated in the expected direction with feelings of sadness, however the change scores were not significantly correlated. More specifically, the social competence change score was negatively correlated with feeling sad, r (53) = -.33, $p < .05$, indicating participants' decreased reports of their own social competence was associated with feeling more sad following the negative feedback. Similarly, the behavioral change score was positively correlated with feeling sad, r (56) = .40, $p < .01$,

indicating participants' increased reports of their own behavioral competence was associated with feeling more sad following the negative feedback.

Exploratory Aims

Regression. A standard multiple regression was conducted to simultaneously evaluate the predictive power of multiple independent variables (trivialization, rumination, positive affect, negative affect, change in attitude, and self-esteem) on the dependent variable (change score of self-reported perceived social competence from time 1 to time 2). The change score was calculated by subtracting the time 1 (pre-manipulation) perceived social competence score from the time 2 score. Therefore, negative values would indicate a decrease in reported perceived social competence. No significant findings emerged (see Table 18, Model 1).

Two additional multiple regression models were tested to examine study variables' predictive power of pre (time 1) and post (time 2) social competence scores. In the first model, state self-esteem, trivialization, rumination, feedback-sad, and feedback-mad were entered simultaneously to evaluate whether they predict the post social competence score (Model 2). The results of the regression indicated the predictors explained 34% of the variance ($R^2 = .34$, $F(5, 48) = 4.856$, $p < .01$). It was found that feedback-sad significantly predicted post-manipulation social competence scores ($\beta = -.14$, $p < .05$), as did state self-esteem ($\beta = .02$, $p < .01$). In the second model, state self-esteem, trivialization, rumination, feedback-sad, and feedback-mad were entered simultaneously to evaluate whether they predict the pre social competence score; however, no significant findings emerged (Model 3).

A multiple regression analysis was also used to test if state self-esteem, trivialization, and rumination significantly predicted participants' report of how sad the negative feedback made

them feel (Model 4). The results of the regression indicated the overall model was not significant; however, it was found that rumination significantly predicted participant report of how sad the negative feedback made them ($t = 2.143$, $p < .05$).

A simple linear regression was calculated to predict a change in self-reported social competence based on self-reported state self-esteem. A significant regression equation was found ($F(1, 51) = 4.898$, $p < .05$.), with an R^2 of .088.

Moderation. A number of models were tested to examine whether baseline levels of aggression (teacher report), sex, race, and/or baseline levels of inattention (teacher report) moderated the relationship between post-manipulation self-reported social competence and aggression. To test these models, the statistical package PROCESS was used, which utilizes an ordinary least squares or logistic regression-based path analytic framework for estimating interactions in moderation models. Bootstrap and Monte Carlo confidence intervals are implemented for inference about indirect effects, including various measures of effect size. The following interaction terms were tested: (1) self-reported social competence time 2 X teacher-reported aggression (BASC subscale), (2) self-reported social competence time 2 X sex, (3) self-reported social competence time 2 X race, (3) self-reported social competence time 2 X teacher-reported inattention (BASC subscale). Of the potential moderators considered, no significant models emerged.

4. DISCUSSION

Negative outcomes associated with holding an inflated self-view, particularly with regard to social competence, is well established in the literature (Hoza, 2010; David & Kistner, 2000; White & Kistner, 2011). Children and adolescents who maintain a biased view of their own social competence have been shown to engage in higher levels of aggression and be less amenable to treatment (Mikami et al., 2010). The current study extended prior research by examining whether a brief intervention, a value affirmation task, could reduce one's inflated self-report of social competence and thereby decrease aggressive behavior during a competitive reaction time game. Additionally, a goal of the current study was to explore specific cognitive and affective processes that may be impacted by the value affirmation task, and therefore, contribute to its effectiveness.

Findings from the current study did not support the proposed hypotheses. Children in the value affirmation condition did not report significantly lower social competence scores, nor did they exhibit significantly lower levels of aggression. Notably, a significant change on self-reported behavioral competence was observed, with children in the value affirmation group reporting higher levels of behavioral competence than those in the control condition. Finally, there was no evidence to suggest the cognitive and affective processes examined were active mechanisms of the value affirmation.

The Value Affirmation Task: Perceived Social Competence and Aggression

Results from the current study do not support the value affirmation task as an effective intervention to reduce aggressive children's inflated self-views of their own social competence. Participants in the value affirmation and control groups also did not exhibit significantly different levels of aggression following an ego threat (negative feedback). Prior research has shown that writing about an important value can reduce defensiveness (self-protection) and aggression, along with increasing openness to feedback and prosocial behavior (Thomaes et al., 2009; Thomaes et al., 2011; Thomaes et al., 2012; ward et al., 2011; Cohen & Sherman, 2014; Crowell, Page-Gould, & Schmeichel, 2015; Crocker et al., 2008). Furthermore, researchers have argued that adolescence is a particularly salient time to utilize value affirming interventions as it is a developmental period marked by focus on the self and one's identity. Outcomes observed in previous research (i.e., successful application of the value affirmation task) and the current study (i.e., null findings) seem to suggest that it is especially difficult to reduce inflated reports of one's own social competence despite targeted intervention.

Indeed, Hoza and colleagues (2012) found that when children with ADHD were given an incentive to match their teacher's report of their competencies, they consistently overestimated their social competence while closely matching other areas of competence (e.g., academic, behavioral). These findings suggest that self-protection may not fully explain the discrepancy between the self and other report of social competence for children with the positive illusory bias. An interplay of attentional and social information processing deficits along with limited direct feedback may contribute to the discrepant reports. For example, while youth may receive direct feedback regarding their academic (e.g., test grades) and behavioral (e.g., consequence such as detention) competencies, there are few, if any, formal procedures in place within the

school setting to provide direct feedback on social functioning. Therefore, limited awareness of others' perceptions of their social competence may contribute to an inflated view. It may not be sufficient to only consider the self-protection model in order to reduce overestimation of social competence, suggesting it requires a more comprehensive intervention.

Notably, previous research examining the use of value affirmation with children differed from the current study on several factors. First, the current study evaluated a restricted sample of aggressive children whereas prior work with the value affirmation task was used, similar to a universal classroom intervention, in full classes of children (Thomaes et al., 2011). This offers further support that while the value affirmation task has produced significant changes in exhibited prosocial behavior within a normative sample, the strength of the intervention may not be sufficient for aggressive children holding inflated self-views. A second difference is that outcomes of the value affirmation task were not based on self-report, but on an outside reporter (e.g., teacher, parent; Thomaes et al., 2011, Thomaes et al., 2012). While the intervention may have produced noticeable behavioral changes in a non-aggressive sample, it may fall short of yielding significant changes related to deficient cognitive processes (e.g., overestimation of social competence) in an at-risk sample.

Factors related to the design of the study may also have prevented the detection of intervention effects. While considering possible factors contributing to the null findings with regards to the primary aim of the study, it is important to note that a non-significant trend and moderate effect size did emerge when comparing social competence scores between groups following the manipulation. Average social competence scores were lower in the experimental group compared to the control group. Given the lower mean social competence scores in the experimental condition and moderate effect size, it is possible that adjustments to the design of

the study could result in significant findings. First, increased power may have allowed for the intervention effects to meet the threshold for statistical significance.

A second issue to consider is the temporal administration of the pre and post perceived social competence scale, both independent of the value affirmation task and in how it may have impacted the task's salience. More specifically, participants in the experimental condition completed the measure of perceived social competence directly before and after engaging in the value affirmation task. The goal of the value affirmation task is to invoke a more expansive view of the self in order to weaken the negative effects of information that could threaten one's personal integrity (Cohen & Sherman, 2014). The act of rating one's competencies may itself induce a threat reaction, initiating a mode of self-protection and reducing the ability to fully benefit from the value affirmation task. Additionally, completing the identical measure within such a short time lapse could have caused participants to try and match their answers to their initial response. Completing the pre-manipulation perceived social competence scale on a separate day may have allowed for an increased confidence that the post social competence scores were attributable to the manipulation task rather than possibly influenced by the pre-measure administration.

A third issue to consider is dosage. Although there was not a significant difference in social competence scores following the manipulation, scores were lower from pre to post in the experimental condition while scores increased in the control condition. In this particular design, the value affirmation task may not have been as powerful as necessary to produce significant change in reports of social competence or behavior (i.e., aggression). There are a number of ways in which the design could be altered to enhance the strength of the intervention. One possibility would be to provide more time between delivery of the intervention and assessment of

its effect. Given the desired self-reflective aspect of the task, it may require contemplation over a period of time to influence change.

Another possible method for increasing the potency of the value affirmation is to engage participants in a discussion about the chosen values following the written portion of the task. This could serve multiple functions, including providing an extended opportunity to reflect on the chosen set of values and allowing for those administering the task to confirm appropriate understanding and participation in the activity. A discussion could serve as a natural extension to incorporate multiple modes of integrating and processing information (i.e., written and verbal). Multiple modes of reflecting on the information may also provide added benefits, particularly for those who find the written portion challenging. It is possible that for children with deficits in writing, their focus may at least partially be consumed by the writing itself rather than the content of the writing. While a discussion could be beneficial, it would be important to consider possible factors that might weaken any intervention effects. Allowing the discussion to be child-led and using open-ended questions to elicit further reflection would be important considerations.

Similarly, it may not be enough to formally engage in the value affirmation on one occasion. In fact, there is evidence to suggest that a "booster" value affirmation task may play a role in behavioral outcomes (Thomaes, 2012). Considering technological advances, there are various delivery modalities of the booster that could be explored. For example, using a prompt via text could remind participant to think about important values or even respond in a written format about values that they consider important. This form of delivery could increase feasibility and be accomplished with relatively little imposition to the participant. Another option, on a larger scale, would be to implement this intervention in the school setting. This

would allow access to a much larger sample, examination of real-world effectiveness, and evaluation of outcomes in a more ecologically sound approach. For example, teacher report of children's behavioral outcomes across various intervals could be studied.

Finally, a fourth factor that may have influenced the non-significant differences is related to measurement. While the Perceived Competence Scale for Children (PCSC) has demonstrated good psychometric properties (Silon & Harter, 1985), it is possible that it is not sensitive enough to detect a *change* in how an individual is evaluating their competencies. This is especially important to consider in terms of whether the broad, global domains measured by the PCSC appropriately target the examination of potentially evolving evaluations of oneself. It is also worth considering the ecological validity of the competitive reaction time game in measuring aggression. Criticisms of the game have included the lack of alternative choices (absence of a choice to be prosocial), distance between participants, and experimenter permissiveness of aggressive responding (Ritter & Eslea, 2005). Researchers have also argued that the competitive nature of the game may override a desire to be more or less aggressive, and instead be driven by a desire to win (Ritter & Eslea, 2005). That is, winning as an instrumental goal where the focus is mainly on advancing their own personal outcome and less focused on harming the other person. Notably, during debriefing, there were participants who commented that they found it odd when the "peer" set the noise blast so low at the beginning of the game.

These adolescents stated that most kids would start the noise blast on high, which made them question whether they were playing against the computer rather than the peer with whom they had previously interacted. Interestingly, every participant (including those who questioned the believability of reaction time game) indicated that they believed they were interacting with a real peer during the speech exchange. Taken together, it logically follows that if participants

potentially viewed the reaction time game as against the computer and/or operated from a script with an expectation of receiving a noise blast at a high level, then they themselves would be less hesitant to set the noise blast on a high level. Therefore, the focus was possibly shifted from getting revenge for providing negative feedback, and instead, playing a computer game consistent with their competitive computer/video game schema.

Changes in Perceived Competence

Despite the lack of evidence to suggest the value affirmation task had an effect on inflated reports of social competence, there was an effect observed on behavioral competence, though in the opposite direction as hypothesized. Children who completed the value affirmation task reported higher levels of behavioral competence than those in the control condition when accounting for pre-manipulation behavioral competence. This finding suggests that the value affirmation task was a robust enough intervention to produce differences between groups on participants' report of their behavioral competence. It could be argued that this effect would result in either negative or positive behavioral outcomes. It is possible that an increased perception of behavioral competence would negatively impact amenability to treatment, as is documented with children who have a positive illusory bias (Mikami, 2010). That is, an increased perception of behavioral competence may lead to a belief that intervention and a need to behave differently is unnecessary. However, it is also possible that perceptions of behavioral competence operate differently than holding an inflated self-view of social competence.

Increases in perceptions of behavioral competence may lead to children behaving more in line with their expected competence level. Previous research has indicated that aggressive youth who completed a value affirmation task showed increases in prosocial behavior (Thomaes,

2012). The findings from the current study may help to inform the process by which behavioral change occurs in value-affirmed aggressive youth. The potential link between an increased perception of behavioral competence and prosocial behavior is interesting, especially taking into account the lack of support for lower levels of aggression in the current study. It suggests that holding a belief that one is behaviorally competent may be enough to increase positive behavior, however be insufficient to decrease antisocial behavior. Further cognitive and behavioral intervention may be necessary before being able to observe decreases in aggressive behavior.

A major missing piece of information related to participants' reported behavioral competence is how it compares to an outside rater (e.g., teacher report). Based on prior research, there is concordance among perceived areas of competence, including between inflated social and behavioral competence (Hoza et al., 2012). However, it cannot be stated with certainty whether the increased report of behavioral competence in this study is indicative of further inflation. Just as it cannot be evaluated in the current study whether the increased perception, regardless of accuracy, could result in increased prosocial behavior. Though, it does not appear to be associated with increased aggression since there was no significant difference between groups on levels of aggression.

The Value Affirmation Task: Cognitive and Affective Processes

Grounded in the theoretical framework that value affirmation tasks assist people in recognizing that their self-worth does not depend upon any one evaluation in a given situation, it was hypothesized that completion of the value affirmation would (1) lead to more trivialization, (2) reduced rumination, (3) increased positive mood, and (4) have no effect on self-esteem. No significant differences emerged between groups (i.e., experimental and control) on these

variables. Considering the value affirmation task did have an effect on behavioral competence, it logically follows that the aforementioned variables were not active mechanisms. This would suggest there are active mechanisms of change that were not measured. One such mechanism may be how people feel about others. While the current study did not show a difference in their own mood, there may be a difference in one's other-directed feelings, with value-affirmed individuals feeling more positive resulting in more openness and greater engagement in prosocial behavior.

Bias Change Group

Participants who showed a decrease in reported social competence indicated feeling higher levels of sadness following the negative peer feedback. It is possible that the mechanism causing them to report lower levels of social competence also made them more susceptible to internalizing the negative feedback. However, having a lower, more accurate self-view of their social competence may have made them more open to rather than defending against the negative feedback. While it is not possible to determine the causal relationship, one could speculate possible influences. It was only the experimental group who completed the value affirmation task; however, both groups performed a writing task.

Potentially, for participants that significantly struggle with writing, they may have experienced feelings of being generally less competent. This is an interesting possibility given it could imply that the challenging task did not trigger a defensive response in terms of inflating their competence. Notably, state self-esteem was significantly associated with post manipulation social competence scores, but not pre-manipulation social competence scores. Participants with higher reported state self-esteem also reported higher social competence. This suggests that state

self-esteem may play a role in inflation of competencies. Unfortunately, the study was not designed to test temporal ordering of effects. On the other hand, a confounding factor (e.g., positive interaction with a research assistant) could have had a bolstering effect allowing them to be more open and honest in their reporting of self-esteem and competencies along with accepting feedback as meaningful (i.e., therefore it having a more significant impact of sadness). Again, although cause and effect cannot be determined, it is a valuable finding because it indicates that reducing the inflated social competence score is achievable and the reduction is associated with a significantly different response to feedback compared to youth who did not evidence a reduction in their reported social competence.

Interestingly, an increase in reported behavioral competence was also associated with higher levels of feeling sad following the negative feedback. In both cases, where children are adjusting their report of social (decreasing) and behavioral (increasing) competence, they appear to be demonstrating greater openness and feeling more vulnerable to incoming information (e.g., negative feedback). That is, sadness, as it was presented in the model of the current study, is an index of one's willingness to show an openness and vulnerability to information.

This finding highlights an important clinical implication associated with this potential effect of a willingness to show vulnerability. Data suggest that as youth become more accurately aware of their status with peers, they may experience feelings of sadness. Additionally, as they adjust the report of their behavioral competence, they also experience feelings of sadness. Sullivan and colleagues (2010) found that aggressive children who had difficulty expressing and coping with sadness showed higher rates of relational aggression. Therefore, in terms of intervention, it is important to assess for, validate, and provide targeted treatment for the expression and regulation of emotions including sadness. Sadness in treatment may indicate a

more realistic recognition of one's competencies, and may be a positive indicator of effectiveness of the intervention. However, if adaptive strategies for coping with internalized emotions are not provided, further maladaptive strategies (e.g., increased relational aggression) and outcomes (e.g., depressed mood) could be exhibited.

Limitations & Future Directions

This study has several limitations. A major limitation was related to power. The sample size was small leaving limited power to detect significance. This is especially important to consider when evaluating the non-significant trend and moderate effect size for differences between groups on social competence scores following the manipulation. Future research could examine the influence of the value affirmation task with a more adequate sample size.

Modifications to the delivery of the task itself may also increase the likelihood of detecting intervention effects. First, the pre-manipulation assessments should be collected on a separate day from when participation in the experimental paradigm occurs. This would eliminate potential confounding effects of an initial reflection on competencies, which may produce an unintentional ego threat. If an ego threat was in fact induced, it could be argued that the paradigm then tested if the value affirmation could work to counteract an ego threat rather than defend against a new threat. A second alteration would be to the dosage of the intervention. The current findings may be a result of the value affirmation task not being powerful enough rather than it not being an appropriate tool to decrease inflated social competence and aggression. As such, repeating the task as a booster would be an important addition to future studies. This could also be an opportunity to evaluate feasible modalities of delivering brief interventions to at-risk youth.

Measurement limitations, both in terms of measures used and those not included should be addressed in future studies. As previously mentioned, the measure of aggression may not have been adequate to assess the influence of the value affirmation task. One possible problem is that the competitive nature of the game may have produced more normative engagement in instrumental aggression. Furthermore, the measurement of aggression did not provide a non-aggressive option. Therefore, only levels of aggressive responding were presented as behavioral options and assessed as outcomes, which may have implied an expected partaking in of aggression to the participant.

Results emerged in support of an increase in reported behavioral competence in the experimental group. Without a post-manipulation measure of antisocial and prosocial behavior, it could not be determined whether this effect is associated with positive or negative outcomes. Additionally, the other-reporter (teacher) measures used in this study were collected up to nearly a year prior to the intervention. Collecting collateral data within a shorter timeframe would increase the reliability of their salience.

Overall, this study highlights the difficulty in targeting inflated perceptions of one's own social competence. It does lend support to the value affirmation affecting reported behavioral competence. However, the consequence of that change beyond could not be determined. Future studies could assess a more powerful value affirmation task (i.e., include a booster session), feasibility of technologically enabled delivery of an enhanced version, and more temporally relevant and ecologically sound measures of behavioral outcomes.

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TABLES

Table 1
Study Variable Descriptives

	Mean	Std. Deviation	Skewness	Kurtosis
Perceived Comp Acad T1 (PCacad1)	2.81	.569	-.541	-.483
Perceived Comp Athletic T1 (PCath1)	1.71	.594	-.721	-.858
Perceived Comp Behavior T1 (PCb1)	2.85	.671	-.598	-.767
Perceived Comp Physical T1 (PCphy1)	3.16	.478	-1.61	2.84
Perceived Comp Peer T1 (PCp1)	3.03	.466	-.567	-.514
Perceived Comp General T1 (PCgen1)	3.17	.412	-.558	-.494
Perceived Comp Acad T2 (PCacad2)	2.85	.584	-.545	-.560
Perceived Comp Athletic T2 (PCath2)	2.86	.602	-.822	-.475
Perceived Comp Behavior T2 (PCb2)	2.88	.647	-.815	-.161
Perceived Comp Physical T2 (PCphy2)	3.10	.488	-1.15	.757
Perceived Comp Peer T2 (PCp2)	3.02	.512	-.688	-.268
Perceived Comp General T2 (PCgen2)	3.15	.471	-1.05	.911
Feedback – sad (FbS)	1.84	1.13	.965	-.293
Feedback – mad (FbM)	1.63	1.04	1.73	2.54
Feedback – care (FbC)	1.79	.909	.747	-.556
Change in Attitude (CA)	-.107	.623	-2.27	2.21
Rumination (RIO)	11.70	5.15	.940	.628
State Self – esteem (SSE)	84.02	10.70	-.548	-.304
Trivialization (Triv)	3.41	1.25	.019	-1.28
Aggression Duration T1 (DurT1)	6.65	3.02	-.426	-1.01
Aggression Duration Avg (Dur)	7.06	1.88	-.077	-.969
Aggression Intensity T1 (IntT1)	7.65	2.75	-.960	.010
Aggression Intensity Avg (Int)	7.49	1.77	-.294	-.859
PANAS – Negative Affect (NA)	23.47	11.08	2.56	2.48
PANAS – Positive Affect (PA)	38.82	10.53	-.419	-.587

Table 2
Study Variable Descriptives: Experimental Condition

	Mean	Std. Deviation	Skewness	Kurtosis
Perceived Comp Acad T1 (PCacad1)	2.75	.558	.105	-1.32
Perceived Comp Athletic T1 (PCath1)	2.82	.631	-.729	-.939
Perceived Comp Behavior T1 (PCb1)	2.79	.697	-.474	-1.01
Perceived Comp Physical T1 (PCphy1)	3.13	.453	-.901	-.454
Perceived Comp Peer T1 (PCp1)	3.00	.464	-.502	-.234
Perceived Comp General T1 (PCgen1)	3.11	.452	-.674	-.698
Perceived Comp Acad T2 (PCacad2)	2.78	.626	-.191	-.959
Perceived Comp Athletic T2 (PCath2)	2.91	.569	-.821	-.302
Perceived Comp Behavior T2 (PCb2)	2.96	.549	-.901	.453
Perceived Comp Physical T2 (PCphy2)	3.09	.487	-.712	-.916
Perceived Comp Peer T2 (PCp2)	2.90	.497	-.230	-1.27
Perceived Comp General T2 (PCgen2)	3.15	.439	-.605	-.945
Feedback – sad (FbS)	1.83	1.17	1.23	.545
Feedback – mad (FbM)	1.66	1.14	1.98	2.49
Feedback – care (FbC)	1.79	.902	.753	-.536
Change in Attitude (CA)	-.207	.819	-1.69	2.46
Rumination (RIO)	12.07	5.89	1.03	.627
State Self – esteem (SSE)	84.69	10.10	-.366	-.229
Trivialization (Triv)	3.24	1.40	-.093	-1.42
Aggression Duration T1 (DurT1)	6.62	3.14	-.437	-1.13
Aggression Duration Avg (Dur)	6.95	1.91	-.026	-.927
Aggression Intensity T1 (IntT1)	7.66	2.88	-1.07	.230
Aggression Intensity Avg (Int)	7.23	1.81	-.278	-.648
PANAS – Negative Affect (NA)	21.44	7.09	1.91	2.92
PANAS – Positive Affect (PA)	38.55	8.81	-.353	-.382

Table 3
Study Variable Descriptives: Control Condition

	Mean	Std. Deviation	Skewness	Kurtosis
Perceived Comp Acad T1 (PCacad1)	2.88	.584	-1.24	1.09
Perceived Comp Athletic T1 (PCath1)	2.86	.564	-.722	-.770
Perceived Comp Behavior T1 (PCb1)	2.92	.648	-2.25	1.04
Perceived Comp Physical T1 (PCphy1)	3.19	.511	-.686	-.606
Perceived Comp Peer T1 (PCp1)	3.06	.475	-.108	-1.11
Perceived Comp General T1 (PCgen1)	3.22	.364	-1.05	-.675
Perceived Comp Acad T2 (PCacad2)	2.93	.537	-.821	-.618
Perceived Comp Athletic T2 (PCath2)	2.82	.644	-.769	-.288
Perceived Comp Behavior T2 (PCb2)	2.80	.740	-.638	-.723
Perceived Comp Physical T2 (PCphy2)	3.10	.498	-1.65	2.85
Perceived Comp Peer T2 (PCp2)	3.14	.509	-1.38	2.24
Perceived Comp General T2 (PCgen2)	3.14	.510	-1.39	2.19
Feedback – sad (FbS)	1.85	1.10	.690	-1.22
Feedback – mad (FbM)	1.59	.931	1.25	.206
Feedback – care (FbC)	1.78	.934	.786	-.644
Change in Attitude (CA)	0	.278	.001	1.30
Rumination (RIO)	11.33	4.33	.478	-.898
State Self – esteem (SSE)	83.30	11.46	-.667	-.407
Trivialization (Triv)	3.59	1.07	-.093	-1.51
Aggression Duration T1 (DurT1)	6.69	2.94	-.432	-.801
Aggression Duration Avg (Dur)	7.19	1.87	-.134	-.953
Aggression Intensity T1 (IntT1)	7.65	2.65	-.862	-.085
Aggression Intensity Avg (Int)	7.78	1.70	-.285	-1.28
PANAS – Negative Affect (NA)	25.73	14.11	2.14	1.25
PANAS – Positive Affect (PA)	39.11	12.29	-.478	-.871

Table 4
Study Variable Correlations: Entire Sample

Variable	PCb1	PCp1	PCb2	PCp2	FbS	FbM	FbC	RIO	SSE	Triv	Dur	Int	CA	NA	PA
1.PCb1	-----														
2.PCp1	.14	-----													
3.PCb2	.76**	.18	-----												
4.PCp2	.25	.63**	.21	-----											
5.FbS	-.08	.02	.20	-.22	-----										
6.FbM	.06	.21	.21	.07	.51**	-----									
7.FbC	-.06	.15	.05	.02	.25	.05	-----								
8.RIO	-.17	.02	-.04	.04	.31*	.42**	.12	-----							
9.SSE	.27*	.26	.39**	.45**	-.15	-.16	-.06	-.17	-----						
10.Triv	-.01	.20	-.05	.20	.07	.20	-.40**	.06	.01	-----					
11.Dur	.06	.00	-.06	.16	-.21	.08	-.22	.18	.01	.13	-----				
12.Int	.06	.19	-.08	.33*	-.11	.11	-.17	.25	.06	.28*	.84**	-----			
13.CA	-.20	.00	-.05	.10	-.21	-.49**	.06	-.26	.25	-.15	-.03	-.02	-----		
14.NA	-.30*	-.17	-.28*	-.35**	.07	.12	.06	.12	-.39**	.11	-.10	-.11	-.12	-----	
15.PA	.22	.18	.26	.09	-.01	.17	.21	-.10	.19	-.04	.03	.08	-.04	-.04	-----

Note. ** indicates correlation is significant at the .01 level; * indicates correlation is significant at the .05 level

PCb1= Perceived competence, behavior subscale Time 1, PCp1= Perceived competence, peer subscale Time 1, PCb2= Perceived competence, behavior subscale Time 2, PCp2= Perceived competence, peer subscale Time 2, FbS= “How sad did the feedback make you”, Fbm= “How mad did the feedback make you”, FbC= “How much do you care about what the peer thought of your speech”, RIO= rumination scale, SSE= State self-esteem scale, Triv= Trivialization measure, Dur= Average duration of sound blast across trials, Int= Average intensity of sound blast across trials, CA= change in attitude , PA= PANAS, negative affect subscale, PA = PANAS, positive affect subscale

Table 5

Study Variable Correlations: Experimental Condition

Variable	PCb1	PCp1	PCb2	PCp2	FbS	FbM	FbC	RIO	SSE	Triv	Dur	Int	CA	NA	PA
1.PCb1	-----														
2.PCp1	.11	-----													
3.PCb2	.76**	.18	-----												
4.PCp2	.34	.49**	.39*	-----											
5.FbS	-.30	.20	.01	-.16	-----										
6.FbM	.00	.34	.08	.12	.57**	-----									
7.FbC	-.30	.20	-.03	-.06	.44*	.14	-----								
8.RIO	-.17	.13	-.12	.01	.51*	.63**	.21	-----							
9.SSE	.33	.11	.27	.60**	-.54**	-.42*	-.22	-.35	-----						
10.Triv	.13	.05	-.04	.21	.09	.25	-.37*	.05	-.09	-----					
11.Dur	.16	-.06	.08	.06	-.09	.05	-.55**	.15	.10	.17	-----				
12.Int	.09	-.02	.08	.11	.10	.15	-.35	.26	-.03	.32	.83**	-----			
13.CA	-.31	-.09	-.06	-.01	-.19	-.61**	.18	-.29	.36	-.25	.02	-.04	-----		
14.NA	-.31	-.23	-.37*	-.40**	.43*	.49**	.22	.37	-.65**	.17	.16	.19	-.37	-----	
15.PA	.08	-.01	.12	.01	.03	.11	.05	.17	-.03	.01	-.12	-.15	-.09	-.01	-----

Note. ** indicates correlation is significant at the .01 level; * indicates correlation is significant at the .05 level

PCb1= Perceived competence, behavior subscale Time 1, PCp1= Perceived competence, peer subscale Time 1, PCb2= Perceived competence, behavior subscale Time 2, PCp2= Perceived competence, peer subscale Time 2, FbS= “How sad did the feedback make you”, Fbm= “How mad did the feedback make you”, FbC= “How much do you care about what the peer thought of your speech”, RIO= rumination scale, SSE= State self-esteem scale, Triv= Trivialization measure, Dur= Average duration of sound blast across trials, Int= Average intensity of sound blast across trials, CA= change in attitude , PA= PANAS, negative affect subscale, PA = PANAS, positive affect subscale

Table 6

Study Variable Correlations: Control Condition

Variable	PCb1	PCp1	PCb2	PCp2	FbS	FbM	FbC	RIO	SSE	Triv	Dur	Int	CA	NA	PA
1.PCb1	-----														
2.PCp1	.17	-----													
3.PCb2	.84**	.19	-----												
4.PCp2	.12	.77**	.15	-----											
5.FbS	.19	-.18	.37	.30	-----										
6.FbM	.15	.04	.35	.01	.43*	-----									
7.FbC	.20	.10	.11	.12	.04	-.06	-----								
8.RIO	-.14	-.13	.03	.13	.04	.05	.01	-----							
9.SSE	.24	.42*	.47*	.34	.25	-.15	.09	.05	-----						
10.Triv	-.26	.15	.-03	.12	.05	.14	-.46*	.11	.14	-----					
11.Dur	-.10	.06	-.18	.25	-.37	.11	.15	.24	-.06	.06	-----				
12.Int	-.02	.41*	-.08	.54**	-.38	.07	.05	.27	.17	.19	.86**	-----			
13.CA	.00	.26	.03	.32	-.38	-.15	-.30	-.16	.17	.07	-.26	-.07	-----		
14.NA	-.37	-.20	-.23	-.49**	-.14	-.10	-.03	.00	-.29	.04	-.28	-.36	.02	-----	
15.PA	.34	.32	.35	.16	-.04	.25	.33	-.39*	.35	-.10	.15	.28	.05	-.06	-----

Note. ** indicates correlation is significant at the .01 level; * indicates correlation is significant at the .05 level

PCb1= Perceived competence, behavior subscale Time 1, PCp1= Perceived competence, peer subscale Time 1, PCb2= Perceived competence, behavior subscale Time 2, PCp2= Perceived competence, peer subscale Time 2, FbS= “How sad did the feedback make you”, Fbm= “How mad did the feedback make you”, FbC= “How much do you care about what the peer thought of your speech”, RIO= rumination scale, SSE= State self-esteem scale, Triv= Trivialization measure, Dur= Average duration of sound blast across trials, Int= Average intensity of sound blast across trials, CA= change in attitude , PA= PANAS, negative affect subscale, PA = PANAS, positive affect subscale

Table 7
Correlation Equivalence Testing

Correlated variables	Z difference score	Two-tailed p-value
PCp1 with PCp2	-1.71	.09
Pcp1 with SSE	-1.19	.23
Int withPCp1	-1.61	.10
PCb2 with PCp2	0.92	.36
PCb2 with SSE	-0.82	.41
PCb2 with NA	-0.54	.59
PCp2 with Int	-1.74	.08
FbS with FbC	1.53	.13
FbS with RIO	1.85	.06
FbS with SSE	-3.04	< .01
FbS with NA	2.12	.03
FbM with RIO	2.44	.01
FbM with SSE	-1.05	.29
FbM with CA	-1.97	.05
FbM with NA	2.25	.02
FbC with Dur	-2.72	.01
RIO with PA	2.06	.04
SSE with NA	-1.68	.09
Triv with Int	0.16	.87

PCb1= Perceived competence, behavior subscale Time 1, PCp1= Perceived competence, peer subscale Time 1, PCb2= Perceived competence, behavior subscale Time 2, PCp2= Perceived competence, peer subscale Time 2, FbS= "How sad did the feedback make you", Fbm= "How mad did the feedback make you", FbC= "How much do you care about what the peer thought of your speech", RIO= rumination scale, SSE= State self-esteem scale, Triv= Trivialization measure, Dur= Average duration of sound blast across trials, Int= Average intensity of sound blast across trials, CA= change in attitude , PA= PANAS, negative affect subscale, PA = PANAS, positive affect subscale

Table 8
MANOVA

	F value	P	η^2
Model 1: Condition			
Trivialization	1.14	.29	.02
Rumination	.46	.50	.01
Positive affect	.06	.80	.00
Negative affect	1.84	.18	.03
State self-esteem	.10	.76	.00
Change in attitude	1.55	.22	.03

Table 9

ANCOVA: Post-manipulation social competence controlling for pre-manipulation social competence

Source	Type III SS	df	MS	F	p	η^2
Covariate	5.26	1	5.26	32.98	<.01	.39
Condition	.489	1	.489	3.06	.086	.06

Note. Covariate = Perceived Social Competence Score T1; Condition = Experimental, Control

Table 10

ANCOVA: Post-manipulation behavioral competence controlling for pre-manipulation behavioral competence

Source	Type III SS	df	MS	F	p	η^2
Covariate	14.05	1	14.05	86.47	<.01	.62
Condition	.963	1	.963	5.92	.02	.10

Note. Covariate = Perceived Behavioral Competence Score T1; Condition = Experimental, Control

Table 11
ANOVA: Aggression by Change in Reported Social Competence in Experimental Group

Source	df	SS	MS	F	p
Model 1: Duration Average					
Between groups	1	.204	.204	.054	.818
Within groups	27	101.41	3.76		
Total	28	101.62			
Model 2: Duration T1					
Between groups	1	7.04	7.04	.705	.409
Within groups	27	269.78	9.99		
Total	28	276.83			
Model 3: Intensity Average					
Between groups	1	.013	.013	.004	.951
Within groups	27	92.18	3.14		
Total	28	92.195			
Model 4: Intensity T1					
Between groups	1	.031	.031	.004	.953
Within groups	27	232.52	8.61		
Total	28	232.55			

Table 12

ANOVA: Aggression by Change in Social Competence Score

Source	df	SS	MS	F	p
Model 1: Duration Average					
Between groups	1	12.18	12.18	3.48	.068
Within groups	50	175.02	3.5		
Total	51	187.21			
Model 2: Duration T1					
Between groups	1	.057	.57	.006	.939
Within groups	50	478.64	9.57		
Total	51	478.69			
Model 3: Intensity Average					
Between groups	1	7.79	7.79	2.55	.116
Within groups	50	152.61	3.05		
Total	51	160.41			
Model 4: Intensity T1					
Between groups	1	2.02	2.02	.256	.615
Within groups	50	394.67	7.89		
Total	51	396.69			

Table 13

ANOVA: Aggression by Condition

Source	df	SS	MS	F	p
Model 1: Duration Average					
Between groups	1	.821	.821	.230	.633
Within groups	53	189.10	3.57		
Total	54	189.92			
Model 2: Duration T1					
Between groups	1	.070	.070	.008	.931
Within groups	53	492.37	9.29		
Total	54	492.44			
Model 3: Intensity Average					
Between groups	1	4.03	4.03	1.30	.259
Within groups	53	164.43	3.10		
Total	54	168.46			
Model 4: Intensity T1					
Between groups	1	.000	.000	.000	.999
Within groups	53	408.44	7.71		
Total	54	408.44			

Table 14
Social Competence Variable Correlations: Experimental Condition

Variable	PCp1	PCp2	Tsc
1.PCp1	-----		
2.PCp2	.49**	-----	
3.Tsc	-.241	.037	-----

Note. ** indicates correlation is significant at the .01 level;
* indicates correlation is significant at the .05 level
PCp1= Perceived competence, peer subscale Time 1,
PCp2= Perceived competence, peer subscale Time 2,
Tsc= Teacher-reported social competence from TOCA subscale

Table 15
Social Competence Variable Correlations: Control Condition

Variable	PCp1	PCp2	Tsc
1.PCp1	-----		
2.PCp2	.77**	-----	
3.Tsc	-.11	.15	-----

Note. ** indicates correlation is significant at the .01 level;
* indicates correlation is significant at the .05 level

Table 16
Correlation Equivalence Testing: Social Competence Scores

Correlated variables	Z difference score	Two-tailed p-value
PCp1 with Tsc (by condition)	-0.49	.62
PCp2 with Tsc (by condition)	-0.4	.69
PCp with Tsc (by time-point- exp cond)	-1.02	.31
PCp with Tsc (by time-point- cont cond)	-0.94	.35

PCp1= Perceived competence, peer subscale Time 1, PCp2= Perceived competence, peer subscale Time 2,
Tsc= Teacher-reported social competence from TOCA subscale

Table 17
ANOVA: Response to Feedback by Change in Social Competence Score

Source	df	SS	MS	F	p
Model 1: Mad					
Between groups	1	.130	.130	.115	.736
Within groups	51	57.76	1.13		
Total	52	57.89			
Model 2: Sad					
Between groups	1	7.93	7.93	6.87	.012
Within groups	51	58.87	1.15		
Total	52	66.79			

Table 18
Regression model outcomes

	β	**Standard Error**	***p* value**
Model 1 (Dependent Variable: change score of perceived social competence)			
Trivialization	-.20	.42	.16
Rumination	.05	.01	.71
Positive affect	-.01	.01	.96
Negative affect	-.12	.01	.43
Change in attitude	.05	.10	.74
State self-esteem	.29	.01	.08

Model 2 (Dependent Variable: post-manipulation perceived social competence)			
State Self-esteem	.47	.01	< .001
Trivialization	-.20	.03	.10
Rumination	.12	.01	.35
Feedback- Sad	-.31	.07	.03
Feedback- Mad	.22	.07	.15
Model 3 (Dependent Variable: pre-manipulation perceived social competence)			
State Self-esteem	.29	.01	.04
Trivialization	-.05	.03	.73
Rumination	-.03	.01	.83
Feedback- Sad	-.08	.07	.62
Feedback- Mad	.30	.08	.08
Model 4 (Dependent Variable: Feedback- Sad)			
State Self-esteem	-.09	.01	.50
Trivialization	-.09	.06	.52
Rumination	.29	.03	.04

APPENDIX A

Please complete the following survey honestly, there are no right or wrong answers.

1. How difficult was the values writing task

   Very difficult somewhat difficult a little difficult not difficult at all

2. How confusing was the values writing task

   Very confusing somewhat confusing a little confusing not confusing at all

3. How much fun was the values writing task

   Very fun somewhat fun a little fun not fun at all

4. Would you recommend this study to a friend?

   Definitely probably maybe not likely

5. How much did you enjoy participating today?

   Very much somewhat a little not at all

6. If the peer's speech was good, their negative feedback would make me feel

   _____ more mad _____ less mad

7. If the peer's speech was bad, their negative feedback would make me feel
   _____ more mad _____ less mad

APPENDIX B

Debriefing Protocol

Title of Project: Influence of Value Affirmation on Social Interactions

Researchers:

Meghann L. Sallee, M.A.
Department: Psychology
Contact Information: 205-348-4309
Email: mlkelly1@crimson.ua.edu

John E. Lochman, Ph.D.
Department: Psychology
Contact Information: 205-348-7678

What did you think about the peer interaction activity?

Did you have any questions about it, or think any parts of it were kind of strange?

Did you find it strange that you were not talking with the peer?

Did you ever question whether the peer was real? What made you question whether they were real?

The truth is that the peer didn't really exist. There wasn't any peer online.

We tell all of our participants about the peer, and they all believe us.

Do you have any idea why we make up the peer when kids like you do our study?

We're trying to recreate real-life social situations, so that we can figure out how children really respond in these kinds of situations—this will help us understand more about how children interact.

Ultimately, we want to understand how to help kids interact better with their peers. We really appreciate your help today!

And, if you know someone else that is participating in this study, please don't tell them what happens. We want every child who participates to have the same experience and it is important that other kids believe that the peer is real.

If you have questions, concerns, or complaints about your rights as a participant in this research study, you may contact Ms. Tanta Myles, the Research Compliance Officer at UA, at 205-348-8461 or toll-free at 1-877-820-3066.

Post Debriefing Questions:

How much did you think the peers existed?

Totally somewhat not at all

How much were these situations like real-life situations?

Totally somewhat not at all

How much do you understand why we told you that they existed even though they didn't?

Totally somewhat not at all

Are you upset about what we did?

A lot a little not at all

It is your choice whether we use your data for the study. If you do not want us to use the information you have given us in our study, we will not. Do you want us to use your data?

Yes, use my data. No, do not use my data

APPENDIX C

Pilot Survey

1. Tell me what you thought of the writing task that was about values
2. Was there anything confusing about the writing task about values?
3. What would you change about the writing task that was about values
4. Tell me what you thought of the speech
5. Was there anything confusing about (1) writing the speech

   (2) giving the speech?

6. Tell me what would you change about the speech writing task (giving speech, feedback)

APPENDIX D

Value Affirmation

Choose two or three of your most important values and think about times when these values were important to you. Describe in a few sentences why these values are important to you. Focus on your thoughts and feelings, and not to worry about spelling or grammar.

Choose from the following list of values:

Being athletic

Being good at art

Trying hard academically

Being independent

Living in the moment

Being religious

_____
_____
_____
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Writing Task: Control Condition

Write everything you have eaten and drank in the past forty-eight hours (since _____am/pm on _____)

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APPENDIX E
Perceived Competence Scale for Children

1351292227

CDC C1T3

ID#: | | | | | | | | |

PERCEIVED COMPETENCE SCALE

Instructions

"We're interested in what you're like, what kind of person you are like, and how you think and feel about different things. So, I'm going to read you some sentences that will help us understand better what you are like. First let's do a practice sentence. 'Some students would rather play outdoors in their spare time... BUT ...Other students would rather watch TV.' This sentence talks about two kinds of students.

(1.) What I want you to decide *first* is whether you are more like the students who would rather play outdoors, or whether you are more like the students who would rather watch TV. Which kind of student is most like you?

(2.) Now, the *second* thing I want you to think about, now that you have decided which kind of student is most like you, is to decide whether that is only *sort of* true for you, or *really* true for you. Is it *sort of* true for you or *really* true for you?

Any questions? OK, now we're going to do some more sentences just like that one." *Interviewer: Please fill in the bubbles as completely as possible.*

Ex.: Some students would rather play outside in their spare time	***BUT***	Other students would rather watch TV.
O Really true for me O Sort of true for me		O Really true for me O Sort of true for me
1. Some students feel that they are *very good* at their school work	***BUT***	Other students *worry* about whether they can do the school work assigned to them.
O Really true for me O Sort of true for me		O Really true for me O Sort of true for me
2. Some students find it *hard* to make friends	***BUT***	Other students find it *pretty easy* to make friends.
O Really true for me O Sort of true for me		O Really true for me O Sort of true for me
3. Some students do very *well* at all kinds of sports	***BUT***	Other students *don't* feel that they are very good when it comes to sports.
O Really true for me O Sort of true for me		O Really true for me O Sort of true for me
4. Some students are *happy* with the way they look	***BUT***	Other students are *not* happy with the way they look.
O Really true for me O Sort of true for me		O Really true for me O Sort of true for me
5. Some students often do *not* like the way they *behave*	***BUT***	Other students usually *like* the way they behave.
O Really true for me O Sort of true for me		O Really true for me O Sort of true for me
6. Some students feel that there are a lot of things about themselves that they would change if they could	***BUT***	Other students would like to stay pretty much the same.
O Really true for me O Sort of true for me		O Really true for me O Sort of true for me

19

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CDC C1T3

ID#: | | | | | | | | |

18. Some students feel good about the way they act.	***BUT***	Other students wish they acted differently.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
19. Some students often *forget* what they learn	***BUT***	Other students can remember things *easily*.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
20. Some students are always doing things with *a lot* of students	***BUT***	Other students usually do things *by themselves*.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
21. Some students feel that they are *better* than others their age at sports	***BUT***	Other students *don't* feel they can play as well.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
22. Some students wish their physical appearance (how they look) was *different*	***BUT***	Other students *like* their physical appearance the way it is.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
23.Some students usually get in *trouble* because of things they do	***BUT***	Other students usually *don't* do things that get them in trouble.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
24. Some students think that maybe they are not a very good person	***BUT***	Other students are pretty sure they are a good person.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
25. Some students like school because they do well in class	***BUT***	Other students don't like school because they aren't doing very well.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
26. Some students wish that more people their age liked them	***BUT***	Other students feel that most people their age *do* like them.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
27. In games and sports some students usually *watch* instead of play	***BUT***	Other students usually *play* rather than just watch.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
28. Some students wish something about their face or hair looked *different*	***BUT***	Other students *like* their face and hair the way they are.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me

21

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ID#: | | | | | | | | |

29. Some students do things they know they *shouldn't* do	***BUT***	Other students *hardly ever* do things they know they shouldn't do.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
30. Some students are very *happy* being the way they are	***BUT***	Other students wish they were *different.*
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
31. Some students wish it was easier to understand what they read	***BUT***	Other students don't have any trouble understanding what they read.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
32. Some students are *popular* with others their age	***BUT***	Other students are *not* very popular.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
33. Some students *don't* do well at new outdoor games	***BUT***	Other students are *good* at new games right away.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
34. Some students think they are good looking	***BUT***	Other students think that they are not very good looking.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
35. Some students behave themselves very well	***BUT***	Other students often find it hard to behave themselves.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
36. Some students *are not* very happy with the way they do a lot of things	***BUT***	Other students think the way they do things is *fine.*
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
37. Some students have trouble figuring out the answers in school	***BUT***	Other students almost always can figure out the answers.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
38. Some students are really easy to like	***BUT***	Other students are kind of hard to like.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
39. Some students are among the last to be chosen for games	***BUT***	Other students are usually picked first.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me
40. Some students are usually sure that what they are doing is the right thing	***BUT***	Other students aren't so sure whether or not they are doing the right thing.
○ Really true for me ○ Sort of true for me		○ Really true for me ○ Sort of true for me

22

APPENDIX F

2405417003

CDC C1T3

ID#: ☐☐☐☐☐☐☐

TEACHER OBSERVATION OF CHILD ADAPTATION
---REVISED (TOCA-R)

School Name_____ School Code: ☐☐☐☐
Teacher Name_____
Child Name_____ Teacher Code: ☐☐☐☐

***School and Teacher Code will be filled in by researcher.**

Instructions: Based on your experience with this child, please use the full scale range and bubble in the circle under the most appropriate answer for each category.

	Almost Never	Rarely	Some-times	Often	Very Often	Almost Always
1. Completes assignments	○	○	○	○	○	○
2. Friendly	○	○	○	○	○	○
3. Stubborn	○	○	○	○	○	○
4. Breaks rules	○	○	○	○	○	○
5. Harms others	○	○	○	○	○	○
6. Breaks things	○	○	○	○	○	○
7. Takes others' property	○	○	○	○	○	○
8. Self-reliant	○	○	○	○	○	○
9. Fights	○	○	○	○	○	○
10. Lies	○	○	○	○	○	○
11. Trouble accepting authority; disobedient	○	○	○	○	○	○
12. Teases classmates	○	○	○	○	○	○
13. Stays on task	○	○	○	○	○	○
14. Yells at others	○	○	○	○	○	○
15. Is liked by classmates	○	○	○	○	○	○
16. Is disliked by classmates	○	○	○	○	○	○

2

APPENDIX G

2270443361

IGCP
C3T1

Name: _____

ID#: | | | | | | | | | | |

	Never	Sometimes	Often	Almost Always
12. Complains of being cold	O	O	O	O
13. Reads assigned chapters	O	O	O	O
14. Refuses to talk	O	O	O	O
15. Has toileting accidents	O	O	O	O
16. Threatens to hurt others	O	O	O	O
17. Worries about things that cannot be changed	O	O	O	O
18. Is easily distracted from classwork	O	O	O	O
19. Tries to hurt self	O	O	O	O
20. Skips classes at school	O	O	O	O
21. Says, "I don't have any friends."	O	O	O	O
22. Bothers other children when they are working	O	O	O	O
23. Is creative	O	O	O	O
24. Makes careless errors	O	O	O	O
25. Says, "please" and "thank you."	O	O	O	O
26. Complains of shortness of breath	O	O	O	O
27. Studies with other children	O	O	O	O
28. Avoids competing with other children	O	O	O	O
29. Blames others	O	O	O	O
30. Sees things that are not there	O	O	O	O
31. Cheats in school	O	O	O	O
32. Complains about being teased	O	O	O	O
33. Talks too loud	O	O	O	O
34. Bullies others	O	O	O	O
35. Seeks attention while doing schoolwork	O	O	O	O

3846443361

IGCP
C3T1

Name: _____

ID#: | | | | | | | | | | |

	Never	Sometimes	Often	Almost Always
36. Encourages others to do their best.	○	○	○	○
37. Analyzes the nature of a problem before starting to solve it	○	○	○	○
38. Is stubborn	○	○	○	○
39. Breaks other children's things	○	○	○	○
40. Is nervous	○	○	○	○
41. Does not pay attention to lectures	○	○	○	○
42. Eats things that are not food	○	○	○	○
43. Has to stay after school for punishment	○	○	○	○
44. Changes moods quickly	○	○	○	○
45. Taps foot or pencil	○	○	○	○
46. Has lots of ideas	○	○	○	○
47. Says that textbooks are hard to understand	○	○	○	○
48. Has a sense of humor	○	○	○	○
49. Complains about health	○	○	○	○
50. Does extra credit	○	○	○	○
51. Plays alone	○	○	○	○
52. Stutters	○	○	○	○
53. Talks back to teachers	○	○	○	○
54. Says, "I'm afraid I will make a mistake."	○	○	○	○
55. Has a short attention span	○	○	○	○
56. Seems out of touch with reality	○	○	○	○
57. Steals at school	○	○	○	○
58. Says, "Nobody likes me"	○	○	○	○
59. Acts without thinking	○	○	○	○
60. Makes decisions easily	○	○	○	○

2211443366

IGCP
C3T1

Name: _____

ID#: | | | | | | | | | | |

	Never	Sometimes	Often	Almost Always
61. Gets failing school grades	○	○	○	○
62. Compliments others	○	○	○	○
63. Complains of being hot	○	○	○	○
64. Works hard, even in courses he or she does not like	○	○	○	○
65. Avoids other children	○	○	○	○
66. Orders others around	○	○	○	○
67. Plays in toilet	○	○	○	○
68. Complains about police or other law enforcement officers	○	○	○	○
69. Says, "Nobody understands me."	○	○	○	○
70. Calls out in class	○	○	○	○
71. Is critical of others	○	○	○	○
72. Uses medication	○	○	○	○
73. Tries to bring out the best in other people	○	○	○	○
74. Appears confident before tests	○	○	○	○
75. Adjusts well to changes in routine	○	○	○	○
76. Calls other children names	○	○	○	○
77. Is fearful	○	○	○	○
78. Has trouble concentrating	○	○	○	○
79. Complains about being unable to block out unwanted thoughts.	○	○	○	○
80. Is truant	○	○	○	○
81. Cries easily	○	○	○	○
82. Interrupts others when they are speaking	○	○	○	○
83. Gives good suggestions for solving problems	○	○	○	○
84. Has spelling problems	○	○	○	○
85. Politely asks for help	○	○	○	○

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IGCP
C3T1

Name: _____

ID#: | | | | | | | | | | |

	Never	Sometimes	Often	Almost Always
86. Complains of pain	O	O	O	O
87. Reads	O	O	O	O
88. Is chosen last by other children for games	O	O	O	O
89. Seems to take setbacks in stride	O	O	O	O
90. Shows off	O	O	O	O
91. Expresses self-doubt before tests	O	O	O	O
92. Listens attentively	O	O	O	O
93. Chews clothing or blankets	O	O	O	O
94. Uses foul language	O	O	O	O
95. Is easily upset	O	O	O	O
96. Makes loud noises when playing	O	O	O	O
97. Is good at getting people to work together	O	O	O	O
98. Has problems with mathematics	O	O	O	O
99. Congratulates others when good things happen to them.	O	O	O	O
100. Gets sick	O	O	O	O
101. Completes homework	O	O	O	O
102. Has trouble making new friends	O	O	O	O
103. Teases others	O	O	O	O
104. Repeats one thought over and over	O	O	O	O
105. Has reading problems	O	O	O	O
106. Has seizures	O	O	O	O
107. Hurries through assignments	O	O	O	O
108. Throws tantrums	O	O	O	O
109. Sings or hums to self	O	O	O	O

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IGCP
C3T1

Name: _____

ID#: | | | | | | | | | | |

	Never	Sometimes	Often	Almost Always
110. Makes suggestions without offending others	○	○	○	○
111. Asks to make up missed assignments	○	○	○	○
112. Is a "good sport"	○	○	○	○
113. Complains about rules	○	○	○	○
114. Gets ill before a major school test	○	○	○	○
115. Forgets things	○	○	○	○
116. Hears sounds that are not there	○	○	○	○
117. Has been suspended from school	○	○	○	○
118. Is sad	○	○	○	○
119. Acts silly	○	○	○	○
120. Works well under pressure	○	○	○	○
121. Has poor handwriting or printing	○	○	○	○
122. Admits mistakes	○	○	○	○
123. Has headaches	○	○	○	○
124. Has good study habits	○	○	○	○
125. Is shy with adults	○	○	○	○
126. Has touble shifting gears from one task to another	○	○	○	○
127. Hits other children	○	○	○	○
128. Says, "I'm not very good at this"	○	○	○	○
129. Listens to directions	○	○	○	○
130. Babbles to self	○	○	○	○
131. Has friends who are in trouble	○	○	○	○
132. Says, "I want to die" or "I wish I were dead"	○	○	○	○
133. Is overly active	○	○	○	○

0045443369

IGCP
C3T1

Name: _____

ID#: | | | | | | | | | | |

	Never	Sometimes	Often	Almost Always
134. Joins clubs or social organizations	O	O	O	O
135. Completes assignments incorrectly because of not following instructions	O	O	O	O
136. Offers help tp other children	O	O	O	O
137. Has fevers	O	O	O	O
138. Uses the school library	O	O	O	O
139. Refuses to join group activities	O	O	O	O
140. Is a "sore loser"	O	O	O	O
141. Has strange ideas	O	O	O	O
142. Has eye problems	O	O	O	O
143. Has a hearing problem	O	O	O	O
144. Cannot wait to take turn	O	O	O	O
145. Is usually chosen as a leader	O	O	O	O
146. Rocks back and forth for long periods of time	O	O	O	O
147. Shows interest in others' ideas	O	O	O	O
148. Is well organized	O	O	O	O

APPENDIX H
RIO

ID Number:_____

1. I can't stop thinking about how I was wronged by this person

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

2. Memories about this person's wrongful actions have limited my enjoyment of life

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

3. I have a hard time getting thoughts of how I was mistreated out of my head

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

4. I try to figure out the reasons why this person hurt me

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

5. The wrong I suffered is never far from my mind

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

6. I find myself replaying the events over and over in my mind

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

APPENDIX I

Trivialization

ID: _____

Please circle the number that best describes how you feel. There are no right or wrong answers.

1. How important is it that your peer says nice things about your speech?

Not at all important	Somewhat unimportant	Neutral	Somewhat important	Extremely important
1	2	3	4	5

2. How important is it that your peer likes your speech?

Not at all important	Somewhat unimportant	Neutral	Somewhat important	Extremely important
1	2	3	4	5

APPENDIX J

State Self-Esteem

This is a questionnaire designed to measure what you are thinking at this moment. There is of course, no right answer for any statement. The best answer is what you feel is true of yourself at the moment. Be sure to answer all of the items, even if you are not certain of the best answer. Again, answer these questions as they are true for you **RIGHT NOW.**

1. I feel confident about my abilities.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

2. I am worried about whether I am regarded as a success or failure.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

3. I feel satisfied with the way my body looks right now.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

4. I feel frustrated or rattled about my performance .

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

5. I feel that I am having trouble understanding things that I read.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

6. I feel that others respect and admire me.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

7. I am dissatisfied with my weight.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

8. I feel self-conscious.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

9. I feel as smart as others.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

10. I feel displeased with myself.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

11. I feel good about myself.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

12. I am pleased with my appearance right now.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

13. I am worried about what other people think of me.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

14. I feel confident that I understand things.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

15. I feel inferior to others at this moment.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

16. I feel unattractive.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

17. I feel concerned about the impression I am making.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

18. I feel that I have less scholastic ability right now than others.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

19. I feel like I'm not doing well.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

20. I am worried about looking foolish.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

APPENDIX K

Ego Threat

ID:_____

How do you think your peer would you rate your speech?

Very Bad	Bad	Neutral	Good	Very Good
1	2	3	4	5

APPENDIX L

Buttressing the Self

ID:_____

1. How happy did the feedback make you?

Not happy at all	not very happy	Neutral	somewhat happy	Very happy
1	2	3	4	5

2. How sad did the feedback make you?

Not sad at all	not very sad	Neutral	somewhat sad	Very sad
1	2	3	4	5

3. How mad did the feedback make you?

Not mad at all	not very mad	Neutral	somewhat mad	Very mad
1	2	3	4	5

4. How much do you care how your peer rated your speech?

Not at all	A little bit	Somewhat	Very Much	Exteremely
1	2	3	4	5

APPENDIX M

Attitude Change

ID:_____

How would you rate your speech?

Very Bad	Bad	Neutral	Good	Very Good
1	2	3	4	5

Appendix N

PANAS Questionnaire

This scale consists of a number of words that describe different feelings and emotions. Read each item and then list the number from the scale below next to each word. **Indicate to what extent you feel this way right now, that is, at the present moment *OR* indicate the extent you have felt this way over the past week (circle the instructions you followed when taking this measure)**

1	2	3	4	5
Very Slightly or Not at All	A Little	Moderately	Quite a Bit	Extremely

_____ 1. Interested

_____ 2. Distressed

_____ 3. Excited

_____ 4. Upset _

_____ 5. Strong

_____ 6. Guilty

_____ 7. Scared

_____ 8. Hostile

_____ 9. Enthusiastic

_____ 10. Proud

_____ 11. Irritable

_____ 12. Alert

_____ 13. Ashamed

_____ 14. Inspired

_____ 15. Nervous

_____ 16. Determined

_____ 17. Attentive

_____ 18. Jittery

_____ 19. Active

_____ 20. Afraid

Appendix O

Office for Research

Institutional Review Board for the
Protection of Human Subjects

June 22, 2015

THE UNIVERSITY OF
ALABAMA
RESEARCH

Meghann Sallee
Dept. of Psychology
College of Arts & Sciences
Box 870348

Re: IRB# 14-010-R1
"Influence of Value Affirmation on Social Interactions"

Dear Ms. Sallee:

The University of Alabama IRB has received the revisions requested by the full board on 5/22/15. The board has reviewed the revisions and your protocol is now approved for a one-year period. Please be advised that your protocol will expire one year from the date of approval, 5/22/15.

If your research will continue beyond this date, complete the IRB Renewal Application by the 15th of the month prior to project expiration. If you need to modify the study, please submit the Modification of An Approved Protocol Form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, please complete the Request for Study Closure Form.

Please use reproductions of the IRB approved stamped consent/assent forms to provide to your participants.

Should you need to submit any further correspondence regarding this proposal, please include the assigned IRB application number.

Good luck with your research.

Sincerely,

[redacted]

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Tuscaloosa, Alabama 35487-0127
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TOLL FREE (877) 820-3066