

Inhibitory Control, Negative Emotionality, and Threat Appraisals as Predictors of
Children's Status in the Context of Bullying

by

Jeffrey Mintert

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Graduate Supervisory Committee:

Paul Miller, Chair
Nicole Roberts
Matt Newman

ARIZONA STATE UNIVERSITY

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ABSTRACT

A model of the effects of early adolescents' temperament (negative emotionality and inhibitory control) and threat appraisals on resulting status in the bullying dynamic was examined. Specifically, I examined the hypothesis that negative emotionality and passive victim versus bully-victim status would be mediated by threat appraisals, and that mediated effect would be moderated by levels of inhibitory control. The study used a sample of 56 early adolescents ages 7-16. Temperament characteristics were measured using the EATQ-R (Capaldi & Rothbart, 1992). Threat appraisals were assessed using items from Hunter, Boyle, and Warden (2004). Bullying and victimization were measured using items created for this study and additional cyber bullying items (Smith, Mahdavi, Carvalho, & Tippett, 2006). A multinomial logistic regression and test of moderated mediation were analyzed to examine the model (Hayes, 2012). Higher levels of negative emotionality were correlated with being a victim of bullying. The moderated mediation model was not statistically significant, however the direction of the patterns fit the hypotheses. Future directions and limitations are discussed.

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Inhibitory Control, Negative Emotionality, and Threat Appraisals as Predictors of Children's Status in the Context of Bullying

In recent years, there has been increased attention on bullying in schools. Studies show that as many as 30% of students in the United States from grades 6-10 are involved in bullying as either a bully (13%), a victim (10.6%), or both (6.3%) (Nansel, Overpeck, Pilla, Ruan, Simons-Morton, & Scheidt, 2001). These prevalence rates are comparable with multiple studies including those conducted internationally (Carney & Merrell, 2001).

Furthermore, bullying is important to examine because it is linked to a wide variety of poor psychological outcomes for both the victims and the bullies (Nansel, et al., 2001). This includes higher rates of depression, anxiety, lack of friends, and poor academic achievement (Nansel, et al., 2001).

More recently, to better understand the factors underlying the bullying and victim dynamic, researchers have begun to examine individual differences related to why children get bullied and are bullies (Andreou, 2000; Georgiou & Stavrinides, 2008; Wang, Iannotti, & Nansel, 2009). These differences include levels of self-esteem, temperament, attributions of peer violence, ethnicity, and gender.

Bullying is defined as a specific type of aggression characterized by intended harm that is repeated over time, with an imbalance of power, and a more powerful person or group attacking a less powerful one (Olweus, 1996). The aggression may be verbal (e.g. name-calling), physical (e.g. hitting), or

psychological (e.g. rumors). Additionally, some researchers have begun to explore cyber bullying that occurs on social media websites (e.g. Facebook), through text messages, and through email (Smith, Mahdavi, Carvalho, & Tippett, 2006). Bullies use these technological contexts to spread rumors and threaten their peers.

Researchers distinguish between two different types of victims of bullying. The first is the passive victim who tends to be “anxious, insecure, and tend to withdraw and/or cry when attacked” (Carney & Merrell, 2001, p. 367). Passive victims do not tend to use violence during peer conflict. The other type are the aggressive victims (described here as “bully-victim”) who are bullied, but also bullies their peers. Children who are bully-victims tend to elicit “negative reactions from most or all of the students in the classroom”, not just the bullies (Carney & Merrell, 2001, p. 368). These bully-victims display both anxious and aggressive reaction patterns (e.g. more anger and higher levels of contempt towards peers) and are less common than the passive victim (Wilton, Craig, & Pepler, 2000).

Distinguishing between the different groups within the bullying dynamic is important because they face different outcomes. Being a passive victim of bullying is correlated with anxiety, depression, social maladjustment, loneliness, a lack of close friends, and lower self-esteem (Carney & Merrell, 2001; Craig, 1998; Crick & Grotpeter, 1995; Nansel, et al., 2001). Bullies are more likely to be lonely, have poor social adjustment, use drugs and alcohol, commit crimes, and score poorly in their academics (Nansel, et al., 2001; Olweus, 1994). The bully-

victims (aggressive victims) are at risk for a combination of outcomes (anxiety, depression, etc.) that both victims and bullies face, and are the most disliked and rejected by their peers (Georgiou & Stavrinides, 2008; Veenstra, Lindenberg, Oldehinkel, Winter, Verhulst, & Ormel, 2005).

Many of these outcomes point to difficulties in peer interactions. This suggests that these children involved in bullying may have poor social skills because they have difficulty developing social competency in peer interactions. Researchers have examined different victim types, but little work has explored what causes social interaction difficulties in the context of bullying. Some research has suggested that a child's temperament may predispose them for being victimized or bullying others (Georgiou & Stavrinides, 2008). A growing body of literature regarding peer conflict and social competency demonstrates a link between a child's temperament and their social interactions.

Temperament. Research has shown that personality characteristics can influence peer acceptance and social interactions in children (Jensen-Campbell et al., 2002). More specifically, previous research has shown a link between children's temperament, specifically their dispositional regulation and emotionality, and their social functioning/competence (Jensen-Campbell et al., 2002; Eisenberg et al., 1997; Eisenberg et al., 2000; Eisenberg et al., 2005; Nelson, Martin, Hodge, Havill, & Kamphaus, 1999; Szewczyk-Sokolowski, Bost, & Wainwright, 2005). Temperament is defined as "constitutionally based individual differences in reactivity and self-regulation in the domains of affect, activity, and attention" (Rothbart & Bates, 1998, p. 100). Within temperament

there are multiple components, two of which may be especially relevant to children's ability to respond to bullying experiences.

Negative Emotionality. Previous studies have examined direct effects of negative emotionality, a measure of dispositional reactivity, on social behaviors. Negative emotionality is defined as a tendency to experience negative emotions in reaction to events (Rothbart & Bates, 1998). Murphy & Eisenberg (2002) found that children typically experience negative emotions during peer conflict and children high in negative emotionality experience greater negative arousal in response to stressful events and may attend more to negative cues in evaluating stressful events (Gilligan & Bower, 1984; Rothbart & Ahadi, 1994). Negative emotionality is consistently related to poor social competence (e.g. aggressiveness, disruptiveness) (Eisenberg, Fabes, Murphy, Maszk, Smith, & Karbon, 1995; Nelson et al., 1999).

Inhibitory Control. Some researchers have used inhibitory control as a measure of dispositional self-regulation (Eisenberg et al., 2000). Self-regulation refers to processes such as a child's level of effortful control, defined as his or her ability to inhibit a dominant response, to plan, and to detect errors (Rothbart & Bates, 1998). Capaldi and Rothbart (1992) include inhibitory control, the capacity to plan and to suppress inappropriate responses to provocation, within their measure of effortful control.

In the research on children's social competence, those with higher levels of self-regulation (i.e., effortful control) have been found to have better adjustment (Capaldi & Rothbart, 1992). Moreover, children with higher self

regulation tend to exhibit higher social competence (e.g., maintaining interactions, having friends, being liked; Fabes et al., 1999). When measured as a separate index, children with high levels of inhibitory control are found to be more competent in social and emotional domains (e.g., emotion recognition and management, positive social relationships; Eisenberg et al., 2005; Rhoades, Greenberg, & Domitrovich, 2009).

Negative Emotionality and Inhibitory Control. In addition, Eisenberg et al. (1997) have examined the combined role that reactivity and self-regulation play in children's interactions in social contexts. Specifically, children who have lower levels of self-regulation and concurrent higher levels of negative emotionality are more likely to exhibit externalizing behaviors (Eisenberg et al., 2000). Another study showed that problem behaviors and poor social functioning were positively correlated with negative emotionality and low levels of self-regulation as reported by teachers and parents (Eisenberg et al., 1997). Similarly, Fabes et al. (1999) found that children with higher levels of effortful control were less likely to experience negative emotional arousal in response to stressful peer interactions, and scores on negative emotionality and effortful control were inversely correlated. Previous research suggests that children high in effortful control are able to regulate attention in a way that "attenuates overreactivity, thereby maintaining emotional responsiveness at optimal levels" (p. 439).

Interestingly, children's levels of self-regulation appear to be most important in predicting social competence when they also are high in negative emotionality (Eisenberg et al., 1996). That is, children's levels of inhibitory

control are important when a child experiences simultaneous higher levels of negative emotionality because they are at risk for experiencing more negative emotions that need to be regulated. This previous work demonstrates that children's quality of social functioning varies at different levels of dispositional self-regulation and negative emotionality (Eisenberg et al., 1997). These differences in temperament appear to be relevant in children's social interactions and have been explored some within the context of peer rejection.

Temperament and Peer Rejection. Children with higher levels of negative affect are less accepted by peers (Szewczyk-Sokolowski et al., 2005). Children with lower levels of self-regulation are more likely to be rejected by their peers, and this rejection can lead to less opportunities to learn competent social interactions (Eisenberg, N., Fabes, R. A., Guthrie, I. K. & Reiser, M. 2002). This is consistent with the work of Frick and Morris (2004) who have proposed that children with higher negative emotionality and lower levels of effortful control of emotions may have their socialization by peers disrupted. Thus, children who have high levels of negative emotionality and low levels of effortful control may miss opportunities to learn social skills with their peers, which may increase their risk for peer difficulties.

Temperament and Bullying. In that bullying is a social stressor that many children encounter, their temperament characteristics may affect how they react emotionally and regulate their emotions within a bullying context. However, there has been little research on the possible effects of temperament on children's status as a victim of bullying. For example, children who are more "temperamental"

(e.g. get angry easily) have been shown to be at risk for bullying and victimization behaviors (Georgiou & Stavrinides, 2008). Pellegrini et al. (1999) have found that temperament has an impact on peer acceptance, and both victims and bully-victims experience more peer rejection. Also, Coie and Dodge (1998) found that aggressive children (i.e. bully-victims) and adolescents are more emotional than their nonaggressive peers. To the extent that bully-victims exhibit aggressive behaviors, it suggests the possibility that an inability to regulate emotions contributes to their difficulties in peer interactions. Thus, children's levels of negative emotionality and inhibitory control may affect the type of status as a passive victim or bully-victim in the bullying dynamic.

If a similar pattern is expected in children involved in the bullying dynamic, then children who score higher on negative emotionality, but that also score lower on inhibitory control may be more likely to be bully-victims. These children have less of an ability to control inappropriate behavioral responses and negative emotions when provoked, so therefore they may be more likely to bully others in addition to being bullied (Kumpulainen et al., 1998).

Unlike bully-victims, passive victims tend not to react aggressively when provoked in social situations (Carney & Merrell, 2001), so, the question remains why these children become passive victims. Bully-victims have lower inhibitory control and often have externalizing symptoms, while passive victims score higher on internalizing symptoms (Eisenberg et al., 2005). Research has not shown a connection between higher levels of inhibitory control and categorization as a passive victim, but it suggests that if children are high on inhibitory control

they may be able to regulate their immediate negative emotional and behavioral responses to being bullied.

While variations in children's negative emotionality and inhibitory control may increase their risk of being bullied, an additional question concerns the factors that initially elicit their negative emotional responses during bullying interactions.

Threat Appraisals. Lazarus (1991) argues that the different ways in which individuals appraise a situation may elicit different emotional responses. According to Lazarus and Folkman (1987), appraisals are defined as an individual's evaluations of what is happening from "the standpoint of its significance for their well-being" (p. 145). Appraising stressful situations involves determining what stakes a child may have in an encounter. One type of appraisal that has been linked to the experience of negative emotions is threat appraisals. Threat appraisals are defined as an individual's perception of anticipated harm to one's well-being (Lazarus & Folkman, 1987). Lazarus (1991) explains that when an individual appraises a situation as more threatening, the resulting emotional response will be negative. Thus, children who appraise bullying encounters as more threatening to their well-being may be more likely to exhibit negative emotional reactions. Lerner and East (1984) proposed that individuals' differences in temperament may predict how they appraise stressors, but few researchers have examined this link in detail.

While there does not appear to be research on bullying interactions, researchers have identified how dispositional negative reactivity precedes threat

appraisals within the context of interparental conflict and divorce. Lengua and colleagues (Lengua, Sandler, West, Wolchik, & Curran, 1999; Lengua & Long, 2002) have found that children who were higher on negative emotionality were more likely to make higher threat appraisals. Moreover, Costa, Somerfield and McCrae (1995) found that adults higher in negative emotionality tended to rate events as more stressful, suggesting that negative emotionality influences individuals' perceptions of threat in response to stressful events.

Accordingly, children with higher negative emotionality may be more inclined to perceive being bullied as more threatening as bullying stressor shares some features similar to interparental conflict. Specifically, both interparental conflict and being bullied are often chronic and uncontrollable stressors. Children cannot control whether or not a peer decides to bully them and bullying is defined as being chronic in that it is an aggressive act that is repeated over time (Olweus, 1996). Thus, a similar pattern might be occurring in victims of bullying, in that children with higher negative emotionality would be more likely to appraise being bullied as more threatening, and thereby have more intense emotional reactions that they then have to regulate.

In the context of bullying, there has been limited research on the relation of appraisals to children's emotional and behavioral responses. For example, Hunter, Boyle, and Warden (2004) found that challenge appraisals (positive outcomes are expected) predicted seeking help from others (Hunter, Boyle, & Warden, 2004). However, in their study, threat appraisals were unrelated to coping, and they did not assess children's temperament characteristics. In other

research, however, Hunter, Boyle and Warden (2006), did find that children's threat appraisals were associated with their reporting of higher levels of negative emotions, such as anger, fear, and sadness. Also, appraising situations as threatening is more common among victims of bullying (Hunter, Boyle, & Warden, 2007). Moreover, threat appraisals have been associated with behavioral outcomes for children. Children who make higher threat appraisals were more likely to have conduct problems (e.g. aggressive behaviors) (Lengua et al., 1999) and threat appraisals have been associated with aggressive responses to bullying (Hunter, Boyle, & Warden, 2007; Hunter, Boyle, & Warden, 2006). Thus, the way in which children appraise a bullying provocation may affect their behavioral responses, which then increase their risk for becoming a passive-victim or a bully-victim.

In summary, research has not examined how a child's temperament, specifically negative emotionality and inhibitory control, relate to the threat appraisals that children make in response to being bullied and how this in turn affects their status as a passive victim or bully-victim.

Specifically, the hypotheses for this study are as follows: children who rate themselves as high on negative emotionality will appraise being bullied as more threatening; additionally, if they score low on inhibitory control, then they will be more likely to be categorized as aggressive victims (bully-victims). On the contrary, this pattern will shift when levels of inhibitory control are high, increasing the likelihood of being a passive victim.

Method

Participants

The sample for the study consisted of fifty-six children from the Phoenix, Arizona area. There were 39 males and 17 females, with a mean age of 11.6 (range = 7-16). The ethnicity of the participants was as follows: 60.6% Caucasian, 23.2% Hispanic-American, 8.9% African-American, and 7.2% Asian-American, biracial, or other. Participants were recruited from local YMCA facilities (see below).

Procedure

All procedures were approved by the ASU Internal Review Board. Public school personnel were contacted about the study through formal and personal channels. The goal was to gather a large sample ($N > 200$) as other studies on bullying have in the past (Andreou, 2000; Nansel et al., 2001; Wang et al., 2009). However, after initially expressing interest over multiple email and phone contacts, the school personnel were unresponsive. Consequently, local YMCAs were contacted in the West Phoenix area in an attempt to recruit participants. The executive director was consulted and after reviewing study materials, gave permission to contact parents. Participants were recruited at YMCA youth basketball games. The study was explained to the parents in small groups during timeouts or at halftime in order to obtain parental consent (See Appendix C). Following this, the children gave their own assent and completed the questionnaires while sitting on the bleachers with researchers present to answer

any questions about individual items. The children took about fifteen minutes to complete the questionnaires.

Measures

Threat Appraisals. In order to measure threat appraisals in response to a bullying stressor, items from Hunter, Boyle, and Warden (2004) were used (See Appendix D). Hunter, Boyle, and Warden used these items to assess threat appraisals in multiple studies with In response to the stem “When other people are nasty to you, what do you think might happen?”, children responded to four statements related to threat appraisals (e.g., You will feel bad about yourself). Each item was rated on a 1 to 4 scale where 1 represented “Not Likely” and 4 represented “Very Likely”. The initial reliability with all four statements included was $\alpha = .61$. One of the threat appraisal items (“You will be hurt physically”) had weak inter-item correlations ($r_s = .14$ to $.21$) with the remaining items. This item was dropped from the scale and the remaining three items had a Cronbach’s Alpha of $.64$. These remaining items were also conceptually more related to each other since they did not assess physical harm, but only emotional and social threat. Consequently, they were used as the measure of threat in all analyses.

Negative Emotionality. The Early Adolescent Temperament Questionnaire-Revised (EATQ-R) was used to assess children’s negative emotionality (See Appendix D; Ellis & Rothbart, 2005). This measure of temperament was designed for children ages 11-16, but it has been used reliably in children ages 8-12 (Lengua, West, & Sandler, 1998). Children respond to each item on a 5 point Likert scale. Consistent with Rothbart and Bates (1998), the

Frustration (e.g., “I get very upset if I want to do something and my parents won’t let me”; $\alpha = .75$), Fear (e.g., “I worry about getting into trouble”; $\alpha = .62$), and Shyness (e.g., “I feel shy meeting new people”; $\alpha = .76$) subscales were combined as a measure of negative emotionality. Ellis and Rothbart (2005) define frustration as “negative affect related to interruption of ongoing tasks or goals”, fear as “unpleasant affect related to anticipation of distress”, and shyness as “behavioral inhibition to novelty and challenge, especially social.” When individual items on the subscales were combined to create one score for negative emotionality the internal consistency was high ($\alpha = .81$). Consequently, the three scales were combined to create the measure of negative emotionality.

Inhibitory Control. The 5 inhibitory control items from the EATQ-R were unreliable as a scale ($\alpha = .19$; See Appendix D). Ellis and Rothbart (2005) define inhibitory control as “the capacity to plan, and to suppress inappropriate responses.” Previous researchers have demonstrated acceptable internal consistency, with $\alpha = .69$ (Ellis & Rothbart, 2005). None of the items (e.g., “It’s easy for me to keep a secret”) were highly intercorrelated with each other ($r_s = -.19$ to $.29$). This posed a problem for using the scale with all five items. The item that was conceptually most similar to inhibitory control (i.e., “The capacity to plan, and to suppress inappropriate responses”) was used (“The more I try to stop myself from doing something I shouldn’t, the more likely I am to do it”) (Capaldi & Rothbart, 1992).

Bullying and Victimization. Levels of victimization and bullying were measured using eighteen items; nine for victimization and nine for bullying (See

Appendix D). Bullying and victim items were created for this study to measure physical and emotional bullying/victimization behaviors. This follows Bosworth, Espelage, and Simon's (1999) suggestion to measure specific behaviors (i.e. hitting, threatening, etc.) in addition to physical bullying. This ensures that a wider range of behaviors can be assessed. Items assessed different bullying behaviors including physical (e.g., "Has anyone at your school ever hit you?"), emotional (e.g., "Has anyone ever said bad things about you to other kids at school?"), and cyber victimization behaviors (e.g., "Has anyone ever said mean things to you through email?"). In addition to a victimization stem, each item was asked with a corresponding bullying stem to assess bullying behaviors (e.g., "Have you ever called anyone at your school mean names?"). The cyber bullying items were adapted from Smith, Mahdavi, Carvalho, and Tippett (2006).

Furthermore, Solberg and Olweus (2003) recommend including a definition of bullying that includes specific behaviors to ensure that each participant understands what bullying means and to avoid subjective interpretations of the term. The definition included in the measure was "Bullying involves hitting, teasing, making fun of others, saying mean things about others, threatening others, and excluding other on purpose. Some kids do these behaviors to other kids, while some kids have these things done to them." This differs from previous research that uses the Olweus (1996) definition, however, children in the age range of this study think more concretely (Berk, 2012), so the goal was to write items in behaviorally specific language. Participants responded to each item on a 1 to 5 scale with 1 meaning "Never" and 5 meaning "A Lot of the Time" in

order to measure the child's frequency perception of each event. The internal consistency coefficients for the victim subscale ($\alpha = .85$) and the bullying subscale ($\alpha = .86$) were high.

Categorization of Bullying and Victimization Data. Participants were categorized into four groups based on their self-reported scores on the victim and bullying scales: bystanders, passive victims, bullies, and bully-victims. Due to the small sample size and in an effort to increase variability, median splits were used to create high and low categories for the bullying and victim scales (Ireland, 2005). Participants who scored "low" on both the victim and bully scales were labeled bystanders (39%). Those scoring high on the bully scale and low on the victim scale were bullies (14.3%), high victim and low on bully as passive victims (14.3%), and those children high on both bully and victim were categorized as bully-victims (32.1%).

Results

Correlations. Pearson correlations were run to assess relations between the predictor variables (negative emotionality, inhibitory control, and threat appraisals) and both the bullying and victimization scales. Children scoring higher on negative emotionality were more likely to be victimized by their peers ($r = .36$, $p < .01$). Negative emotionality was not significantly correlated with the bullying scale. Contrary to the hypothesis, levels of negative emotionality were not significantly correlated with threat appraisals. Negative emotionality scores were significantly correlated with inhibitory control ($r = -.32$, $p < .01$). Levels of inhibitory control were negatively correlated with the bullying scale ($r = -.61$, $p <$

.01) and victimization scale ($r = -.36, p < .01$). The bullying and victimization subscales were positively correlated ($r = .61, p < .01$). Threat appraisals were not significantly correlated with any of the other variables.

Multinomial Logistic Regression. To test for specific factors that differentiate how children are categorized, a multinomial logistic regression was performed with inhibitory control, negative emotionality, and threat appraisal as the predictors of bully/victim status. The bystander group was used as the reference group. The overall model was statistically significant ($\chi^2 = 21.74, df = 9, p = .01$) with a Nagelkerke pseudo R -square of .36.

In reviewing the main effects in the model, threat appraisal was not a significant predictor in differentiating passive victims, bullies, and bully-victims from participants classified as bystanders (Table 1). Participants with scores higher on negative emotionality, however, were significantly more likely to be classified as a passive victim as compared to a bystander ($\beta = 1.12, p < .05$). Also, those scoring lower on inhibitory control ($\beta = .41, p < .05$) and separately, higher on negative emotionality ($\beta = 1.06, p = .086$, marginal) were more likely to be categorized as bully-victims compared to bystanders. Negative emotionality, threat appraisals, and inhibitory control did not significantly differentiate between children classified as bullies compared to those grouped as bystanders.

Moderated Mediation. Although criteria for testing the hypothesized model were not met, an exploratory test of the model was performed to assess the hypothesis that negative emotionality and passive victim versus bully-victim status would be mediated by threat appraisals, and that the mediated effect would

be moderated by levels of inhibitory control (Figure 4; Hayes, 2012). In this analysis, all of the p values were nonsignificant, but the focus is on the directions of the relations predicted by the model.

The relation between levels of negative emotionality and threat appraisals was in the predicted direction ($b = .02, p = .16$). In turn, the relation between threat appraisals and victim status was also in the predicted direction, with higher threat appraisals correlating with being a bully-victim versus passive victim ($b = 6.75, p = .36$). The interaction of inhibitory control and threat appraisal was negative ($b = -1.49, p = .41$), suggesting that as inhibitory control increased, the relation between threat appraisal and bully-victim versus passive victim became more negative. That is, higher levels of inhibitory control increased the likelihood of children being a passive victim as opposed to a bully-victim ($ab = -.004, SE_{ab} = .13, 95\% \text{ CI } [-.21, .35]$). Conversely, at low levels of inhibitory control, the threat appraisal mediation of negative emotionality on status is more positive, meaning that there was a greater likelihood of children being in the bully-victim category ($ab = .066, SE_{ab} = .26, 95\% \text{ CI } [-.25, .67]$). Thus, the relations between model variables did not support model predictions; however, trends in the data suggest that with more power, these hypotheses perhaps would receive empirical support.

Discussion

It is important to understand what factors may influence children to be victimized by their peers and to bully others. Identifying these features in children can influence prevention and intervention programs. In previous studies, researchers have demonstrated a link between children's negative emotionality

and inhibitory control, two specific measures of a child's temperament, and their influence on social behaviors and their threat appraisals of negative life events (Eisenberg et al., 2005; Lengua et al., 1999). Researchers have not examined the relations among these variables (negative emotionality, inhibitory control, and threat appraisals) within the context of bullying. The purpose of the current study was to examine whether individual differences in negative emotionality may lead children to make higher threat appraisals, and whether threat appraisals, depending upon the level of inhibitory control affect children's status as a passive or bully-victim in the bullying dynamic.

The hypothesis that children's levels of negative emotionality would predict higher threat appraisals in response to being bullied was not substantiated in the current sample. Threat appraisals, in fact, were not related to any of the other variables in the study. However, additional main effects among the variables were found. Participants who rated themselves higher on negative emotionality were significantly more likely to be victimized by their peers. Children's scores on negative emotionality were not related to their scores on the bullying subscale. While other studies have focused on the relation of children's negative emotionality to behavioral outcomes, this is the first to examine negative emotionality as a predictor of status within the bullying dynamic. Other studies also show that negative emotionality is related to externalizing (common among bully-victims) and internalizing symptoms (common among passive victims) (Eisenberg, et al., 2005). Therefore, as expected, participants in this study who

scored high on negative emotionality were more likely to be bullied by their peers.

In addition, children's scores on negative emotionality and inhibitory control were inversely related, meaning that higher scores on negative emotionality were related to lower scores on inhibitory control. This is similar to research conducted by Fabes and colleagues (1999) that showed the same inverse relationship between negative emotionality and inhibitory control.

Children's level of inhibitory control was also related to their bullying behaviors. Children with lower scores on inhibitory control were more likely to report bullying others. Kumpulainen et al. (1998) suggested that children's lower levels of self-regulation may lead to an inability to control their behavioral responses and negative emotions when provoked, and therefore they may be more likely to bully their peers. Additionally, children with lower scores on inhibitory control were also more likely to report being victimized by their peers. Children who are bullied are more likely to experience peer rejection (Pellegrini et al., 1999), therefore the relation between inhibitory control and being victimized may be similar to the finding that children who are rejected by their peers score lower on measures of self-regulation, such as inhibitory control (Eisenberg et al., 2002).

Children's scores on the bullying subscale and victimization subscale were positively related to each other. This suggests that children who are victimized are also more likely to report bullying their peers as well. This is inconsistent with previous work that suggests being both a bully and a victim is considerably more rare than being one or the other (Wilton et al., 2000).

In order to assess how the predictor variables influence categorization of children in this study, a multinomial logistic regression using inhibitory control, negative emotionality, and threat appraisals as the predictors of bully/victim status was run. The difference between this analysis and the test of main effects is that the variables (negative emotionality, threat appraisals, and inhibitory control) are predicting specific classification as a bully, passive victim, or bully-victim as compared to a bystander. The overall model was significant, suggesting that at least one of the predictors was affecting resulting status. Specifically, participants who scored higher on negative emotionality were significantly more likely to be classified as passive victims or bully-victims as compared to bystanders. This finding is similar to the main effects reported above, with negative emotionality predicting being victimized by peers.

Further, lower scores on inhibitory control predicted bully-victim status as compared to being a bystander. This effect is consistent with previous studies showing that externalizers score lower on inhibitory control (Eisenberg, et al., 2005; Veenstra, et al., 2006) and bully-victims scored high on externalizing behaviors (Kumpulainen et al., 1998). No previous studies, to the author's knowledge, have shown children categorized as bully-victims to score lower on inhibitory control. If bully-victims are high on externalizing symptoms, and externalizers are low on inhibitory control, then it makes sense that bully-victims would show lower levels of inhibitory control. Future studies could measure externalizing behaviors to determine if inhibitory control affects the display of

externalizing symptoms and if the display of these symptoms predicts being victimized by their peers or bullying others.

The hypothesis that the relation of negative emotionality to passive victim versus bully-victim status would be mediated by threat appraisals, and that that mediated effect then would be moderated by levels of inhibitory control was not supported statistically. The effects, however, were in the predicted direction. Based on the test of moderated mediation, the direction of the coefficients were consistent with the proposed model, however there was not enough power to confirm these patterns. Within this model, higher levels of negative emotionality were related to higher levels of threat appraisals. This is similar to the findings of Lengua and Long (2002), where higher levels of negative emotionality predicted higher appraisals of threat. The relation between threat appraisals and a child's status as a passive victim or bully-victim was also in the predicted direction. That is, children with higher levels of threat appraisals were more likely to be categorized as a bully-victim as compared to a passive victim. This is in line with previous studies that show that appraising situations as threatening is more common among bully-victims. This finding also may be explained by research that has linked threat appraisals with aggressive responses to bullying, which are more common among bully-victims (Hunter, Boyle, & Warden, 2007; Hunter, Boyle, & Warden, 2006).

Conversely, when levels of inhibitory control were considered, higher levels of inhibitory control increased the likelihood of children being a passive victim as opposed to a bully-victim. Inhibitory control may have a role in

moderating the mediation of threat appraisals from negative emotionality to children's status as a victim or bully-victim. That is, at low levels of inhibitory control, the threat appraisal mediation of negative emotionality on status was more positive, meaning that there was a greater likelihood of children being in the bully-victim category. Conversely, at higher levels of inhibitory control, the threat appraisal mediation of negative emotionality on status was more negative, meaning that there was a greater likelihood of children being in the passive victim category. Again, these patterns were not significant, but the direction of the effect is in the predicted direction.

While this study had low power and few significant effects, it is still important to do more research on the model due to its potential benefit to intervention programs. Understanding the links between temperament, appraisals, and victim type will help create a more complete picture of how children cope with being bullied. To the extent that negative emotionality, effortful control, and appraisals are directly and indirectly related to victim status, such knowledge can help facilitate more accurate intervention and prevention programs in schools. Also, knowing how children appraise being bullied can help create programs that help children appraise bullying situations as less threatening. Also, identifying children that are high in negative emotionality and also low in inhibitory control is important because they appear to be most at-risk for being victimized and bullying others.

A major limitation of the study was low power due to the small sample size. One issue regarding the small sample was the need to perform a median split

on the bullying and victimization scales to categorize the participants as bystanders, passive victims, bullies, or bully-victims. Other research has used one standard deviation above the mean on the victimization scale and one standard deviation below the mean on the bullying scale to classify a passive victim (Georgiou & Stavrinides, 2008). High on both scales would classify a bully-victim. This approach attempts to identify “true” bullies etc. since they are more chronically involved, that is they bully others repeatedly over a period of time. This categorization strategy would have left the data with little variability, as there would have only been a few children in the respective status groups. Another limitation could be the measures used for this study. Lengua and Long (2002) measured negative emotionality using both the EATQ and the Child Behavior Questionnaire (CBQ) in addition to using parent ratings of temperament. Future studies could use a parent questionnaire in an attempt to increase accuracy of the measure of negative emotionality, as other studies have shown parents to be reliable reporters of negative emotionality (Nelson, Martin, Hodge, Havill, & Kamphaus, 1999). Additionally, since only one item was used to assess inhibitory control due to poor loading of scale items, a better scale needs to be developed. Also, research on threat appraisals within the context of bullying is limited and only one measure of appraisals exists within this context (Hunter & Boyle, 2004). Researchers have used different measures of threat appraisals in children (Lengua & Long, 2002), however, these measures were not specific to appraising bullying scenarios. Future research should focus on validating measures of threat appraisals in children within the context of bullying and also

assess more components of threat, including multiple items on psychological or physical symptoms instead of one for each, respectively.

A final limitation of this study is that it was cross-sectional; therefore all relations were correlational and were not assumed to be causal in nature. A longitudinal study that measures these constructs (e.g., negative emotionality, threat appraisals, bullying behaviors) from an early age through high school would allow for a better understanding of the temporal nature of these variables in the proposed model.

It would be interesting to extend the model to examine how temperament, appraisals, and coping strategies predict status in a bullying dynamic. This study focused on what factors relate to making appraisals and how temperament can influence both the appraisals and the status of a child in a bullying situation. Additional research should examine this model as a whole with coping as a step after appraisals, in line with Lazarus and Folkman's (1987) transactional theory of emotions and coping. Understanding how threat appraisals and levels of inhibitory control are related to the coping styles of children who are bullied can also inform prevention and intervention programs. Identifying the most adaptive strategies that can stop the bullying would be useful in teaching children how to handle being bullied by their peers. Also, there already is data that demonstrate possible links between appraisals and coping within the context of bullying, however threat appraisals have not been examined specifically (Hunter et al., 2004).

Also, future studies could examine how additional types of bullying may be related to levels of threat appraisals. For example, further analyses could examine if physical versus verbal bullying leads to higher levels of threat appraisals among participants. If higher appraisals of threat are related to being a bully-victim, then understanding the factors related to the stressor (i.e. type of bullying) that elicit these responses would be worth investigating. Data already exist that demonstrate different types of bullying are related to the selection of certain coping strategies, such as seeking social support in response to an attack on personal property versus verbal bullying. (Kristensen & Smith, 2003). This supports the theory that the type of bullying experiences may affect a child's level of threat appraisals, since different types of appraisals have been linked to specific coping strategies (e.g., challenge appraisals predicting support seeking; Hunter et al., 2004).

In conclusion, children's temperament and appraisals of threat appear to play a role in determining how that child is categorized as a passive victim, bully-victim, bully, or bystander. High levels of negative emotionality predict higher scores of victimization, while lower levels of inhibitory control are associated with being a bully-victim. Threat appraisals did not mediate the relationship between negative emotionality and victim status but are associated in the research literature with behaviors that are consistent with children categorized as bully-victims. Since the overall moderated mediation model was not significant, future research with a larger sample size should attempt to test this model.

REFERENCES

- Andreou, E. (2000). Bully/victim problems and their association with psychological constructs in 8- to 12-year-old Greek schoolchildren. *Aggressive Behavior, 26*, 49-56.
- Berk, L. E. (2012). *Child Development*. New York: Pearson.
- Bosworth, K., Espelage, D. L., & Simon, T. R. (1999). Factors associated with bullying behavior in middle school students. *Journal of Early Adolescence, 19*(3), 341-362.
- Capaldi, D. M. & Rothbart, M. K. (1992). Development and validation of an early adolescent temperament measure. *Journal of Early Adolescence, 12*, 153-173.
- Carney, A. G., & Merrell, K. W. (2001). Bullying in schools: Perspectives on understanding and preventing an international problem. *School Psychology International, 22*(3), 364-382.
- Coie J. D., & Dodge, K. A. (1998), Aggression and antisocial behavior. In: W. Damon & N. Eisenberg (Eds.), *Handbook of child psychology, 5th ed, Vol 3: Social, emotional and personality development* (pp. 779-862). New York: Wiley.
- Costa, P. T., Somerfield, M. R., & McCrae, R. R. (1995). Personality and coping: A reconceptualization. In M. Zeidner & S. Endler (Eds.), *Handbook of coping: Theory, research, applications* (pp. 44-61). New York: Wiley.
- Craig, W. M. (2008). The relationship among bullying, victimization, depression, anxiety, and aggression in elementary school children. *Personality and Individual Differences, 24*(1), 123-130.
- Crick, N. R. & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development, 66*, 710-722.
- Dill, E. J., Vernberg, E. M., Fonagy, P., Twemlow, S. W., & Gamm, B. K. (2004). Negative affect in victimized children: The roles of social withdrawal, peer rejection, and attitudes toward bullying. *Journal of Abnormal Child Psychology, 32*(2), 159-173.
- Eisenberg, N., Fabes, R. A., Guthrie, I. K., & Reiser, M. (2000). Dispositional emotionality and regulation: Their role in predicting quality of social functioning. *Journal of Personality and Social Psychology, 78*(1), 136-157.

- Eisenberg, N., Fabes, R. A., Guthrie, I. K. & Reiser, M. (2002). The role of emotionality and regulation in children's social competence and adjustment. In L. Pulkkinen & A. Caspi (Eds.), *Paths to successful development: Personality in the life course* (pp. 46–70). Cambridge: Cambridge University Press.
- Eisenberg, N., Fabes, R. A., Murphy, B., Maszk, P., Smith, M., & Karbon, M. (1995). The role of emotionality and regulation in children's social functioning: A longitudinal study. *Child Development*, *66*, 1360-1384.
- Eisenberg, N., Fabes, R. A., Guthrie, I. K., Murphy, B. C., Maszk, P., Holmgren, R., & Suh, K. (1996). The relations of regulation and emotionality to problem behavior in elementary school children. *Development and Psychopathology*, *8*, 141-162.
- Eisenberg, N., Fabes, R. A., Shepard, S. A., Murphy, B. C., Guthrie, I. K., Jones, S., Friedman, J., Poulin, R., & Maszk, P. (1997). Contemporaneous and longitudinal prediction of children's social functioning from regulation and emotionality. *Child Development*, *68*(4), 642-664.
- Eisenberg, N., Sadovsky, A., Spinrad, T. L., Fabes, R. A., Losoya, S. H., Valiente, C., Reiser, M., Cumberland, A., & Shepard, S. A. (2005). The relations of problem behavior status to children's negative emotionality, effortful control, and impulsivity: Concurrent relations and prediction of change. *Developmental Psychology*, *41*(1), 193-211.
- Frick, P. J. & Morris, A. S. (2004). Temperament and developmental pathways to conduct problems. *Journal of Clinical Child and Adolescent Psychology*, *33*(1), 54-68.
- Georgiou, S. N. & Stavrinides, P. (2008). Bullies, victims, and bully-victims: psychosocial profiles and attribution styles. *School Psychology International*, *29*(5), 574-589.
- Gilligan, S. G. & Bower, G. H. (1984). Cognitive consequences of emotional arousal. In C. E. Izard, J. Kagan, & R. B. Zajonc (Eds.), *Emotions, cognition, and behavior* (pp. 547–588). New York: Cambridge University Press.
- Hayes, A. F. (2012). *PROCESS: A versatile computational tool for observed variable moderation, mediation, and conditional process modeling*. Manuscript submitted for publication.
- Hunter, S. C. & Boyle, J. M. E. (2002). Perceptions of control in the victims of school bullying: The importance of early intervention. *Educational Research*, *44*(3), 323-336.

- Hunter, S. C., & Boyle, J. M. E. (2004). Appraisal and coping strategy use in victims of school bullying. *British Journal of Educational Psychology*, *74*, 83-107.
- Hunter, S. C., Boyle, J. M. E., & Warden, D. (2004). Help seeking amongst child and adolescent victims of peer-aggression and bullying: The influence of school-stage, gender, victimization, appraisal, and emotion. *British Journal of Educational Psychology*, *74*, 375-390.
- Hunter, S. C., Boyle, J. M. E., & Warden, D. (2006). Emotion and coping in young victims of peeraggression. In P. Buchwald (Ed.), *Stress and anxiety: Application to health, community, workplace and education* (pp. 307–324). Newcastle, UK: Cambridge Scholar Press.
- Hunter, S. C., Boyle, J. M. E., & Warden, D. (2007). Perceptions and correlates of peer victimisation and bullying. *British Journal of Educational Psychology*, *77*(4), 797-810.
- Ireland, J. (2005). *Bullying among prisoners: Innovations in theory and research*. Devon, UK: Willan Publishing.
- Jantzer, A. M., Hoover, J. H., & Narloch, R. (2006). The relationship between school-aged bullying and trust, shyness and quality of friendships in young adulthood. *School Psychology International*, *27*(2), 146-156.
- Jensen-Campbell, L.A., Adams, R., Perry, D. G., Workman, K. A., Furdella, J. Q., & Egan, S. K. (2002). Agreeableness, extraversion, and peer relations in early adolescence: Winning friends and deflecting aggression. *Journal of Research in Personality*, *36*, 224-251.
- Kochenderfer-Ladd, B. (2004). Peer victimization: The role of emotions in adaptive and maladaptive coping. *Social Development*, *13*(3), 329-349.
- Kumpulainen, K., Rasanen, E., Henttonen, I., Almqvist, F., Kresanov, K., Linna, S. L., Moilanen, I., Piha, J., Puura, K., & Tamminen, T. (1998). Bullying and psychiatric symptoms among elementary school-age children. *Child Abuse & Neglect*, *22*(7), 705-717.
- Lazarus, R. S. (1991). Progress on a cognitive-motivational-relational theory of emotion. *American Psychologist*, *46*(8), 819-834.
- Lazarus, R. S. & Folkman, S. (1987). Transactional theory and research on emotions and coping. *European Journal of Personality*, *1*, 141-169.

- Lengua, L. J. & Long, A. C. (2002). The role of emotionality and self-regulation in the appraisal-coping process: Tests of direct and moderating effects. *Applied Developmental Psychology, 23*, 471-493.
- Lengua, L. J., Sandler, I. N., West, S. G., Wolchik, S. A., & Curran, P. J. (1999). Emotionality and self-regulation, threat, appraisal, and coping in children of divorce. *Development and Psychopathology, 11*, 15-37.
- Lerner, R. M., & East, P. (1984). The role of temperament in stress, coping and socioemotional functioning in early development. *Infant Mental Health Journal, 5*, 148-159.
- Murphy, B. C., & Eisenberg, N. (2002). An integrative examination of peer conflict: Children's reported goals, emotions, and behaviors. *Social Development, 11*(4), 534-557.
- Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US youth: prevalence and association with psychosocial adjustment. *Journal of the American Medical Association, 285*(16), 2094-2100.
- Nelson, B., Martin, R. P., Hodge, S., Havill, V., & Kamphaus, R. (1999). Modeling the prediction of elementary school adjustment from preschool temperament. *Personality and Individual Differences, 26*, 687-700.
- Olweus, D. (1994). Bullying at school. In Huesmann, L.R. (Ed.), *Aggressive Behavior: Current Perspectives* (pp. 97-130). New York, NY: Plenum Press.
- Olweus, D. (1996). The revised Olweus Bully/Victim Questionnaire. Bergen, Norway: Research Center for Health Promotion (HEMIL Center), University of Bergen.
- Pellegrini, A. D., Bartini, M, & Brooks, F. (1999). School bullies, victims, and aggressive victims: Factors relating to group affiliation and victimization in early adolescence. *Journal of Educational Psychology, 91*(2), 216-224.
- Putnam, S. P., Ellis, L. K., & Rothbart, M. K. (2001). The structure of temperament from infancy through adolescence. In A. Elias & A. Angleitner (Eds.), *Advances in research on temperament* (pp. 165-182). Germany: Pabst Science.
- Rhoades, B. L., Greenberg, M. T., & Domitrovich, C. E. (2009). The contribution of inhibitory control to preschoolers' social-emotional competence. *Journal of Applied Developmental Psychology, 30*, 310-320.

- Rothbart, M. K. & Ahadi, S. A. (1994). Temperament and the development of personality. *Journal of Abnormal Psychology, 103*, 55-66.
- Rothbart, M. K. (1989). Temperament and development. In G. Kohnstamm, J. Bates, & M. K. Rothbart (Eds.), *Temperament in childhood* (pp. 187-248). Chichester, UK: Wiley.
- Rothbart, M. K. & Bates, J. E. (1998). Temperament. In W. Damon (Series Ed.) & N. Eisenberg (Vol. Ed.), *Handbook of child psychology: Vol. 3. Social, emotional and personality development* (pp. 105-176). New York: Wiley.
- Smith, P. K., Mahdavi, J., Carvalho, M., & Tippett, N. (2006). An investigation into cyberbullying, its forms, awareness and impact, and the relationship between age and gender in cyberbullying. Research Brief No. RBX03-06. London: DfES.
- Solberg, M. E. & Olweus, D. (2003). Prevalence estimation of school bullying with the Olweus bully/victim questionnaire. *Aggressive Behavior, 29*, 239-268.
- Szewczyk-Sokolowski, M., Bost, K. K., Wainwright, A. B. (2005). Attachment, temperament, and preschool children's peer acceptance. *Social Development, 14*(3), 379-397.
- Veenstra, R., Lindenberg, S., Oldehinkel, A. J., De Winter, A. F., & Ormel, J. (2006). Temperament, environment, and antisocial behavior in a population sample of preadolescent boys and girls. *International Journal of Behavioral Development, 30*(5), 422-432.
- Veenstra, R., Lindenberg, S., Oldehinkel, A. J., De Winter, A. F., Verhulst, F. C., & Ormel, J. (2005). Bullying and victimization in elementary schools: A comparison of bullies, victims, bully/victims, and uninvolved preadolescents. *Developmental Psychology, 41*(4), 672-682.
- Wang, J., Iannotti, R. J., & Nansel, T. R. (2009). School bullying among adolescents in the United States: Physical, verbal, relational, and cyber. *Journal of Adolescent Health, 45*, 368-375.
- Wilton, M. M., Craig, W. M., & Pepler, D. J. (2000). Emotional regulation and display in classroom victims of bullying: Characteristic expression of affect, coping styles, and relevant contextual factors. *Social Development, 9*(2), 226-245.

APPENDIX A
MULTINOMIAL LOGISTIC REGRESSION

Table 1.

Multinomial Logistic Regression for Status

Status ^a	Predictor	β	Wald	Exp(β)
Victim	InhibCntrl	.031	.003	1.032
	ThrtApp	.109*	5.183	1.115
	NegEmot	-1.194	1.717	.303
Bully	InhibCntrl	-.542	1.477	.581
	ThrtApp	.039	.893	1.040
	NegEmot	-.596	.880	.551
Bully/Victim	InhibCntrl	-.901*	5.354	.406
	ThrtApp	.063	2.947	1.065
	NegEmot	-.236	.229	.790

Note. ^aThe reference category is Bystander. * $p < .05$.

APPENDIX B

HYPOTHESIZED MODEL OF MODERATED MEDIATION

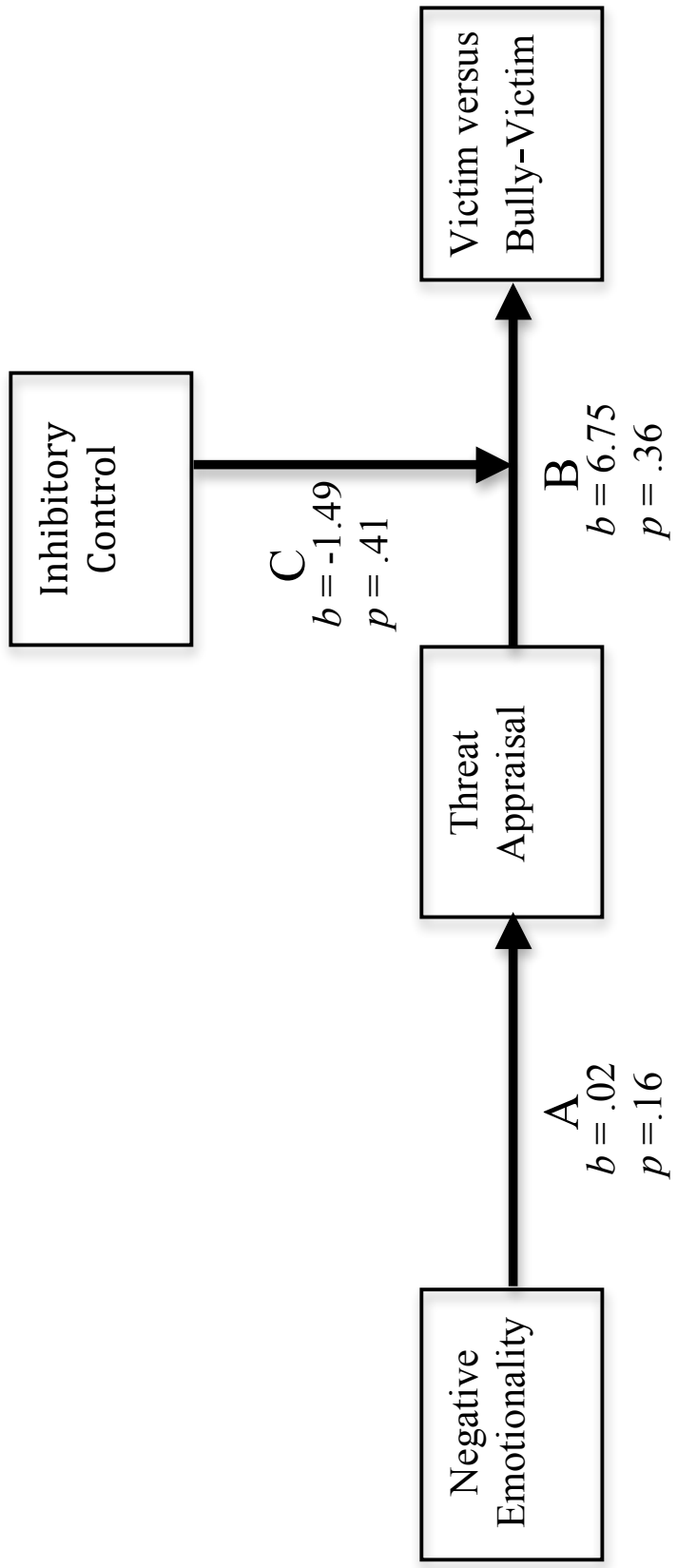


Figure 1. Inhibitory control as a moderator of the mediation of threat appraisals from negative emotionality to status

APPENDIX C
HUMAN SUBJECTS APPROVAL DOCUMENTS



Office of Research Integrity and Assurance

To: Paul Miller
Department

From: Mark Roosa, Chair
Soc Beh IRB

Date: 10/13/2011

Committee Action: Expedited Approval

Approval Date: 10/13/2011

Review Type: Expedited F7

IRB Protocol #: 1110006948

Study Title: Temperament, Appraisals, and Bullying Behavior Among Middle School Children

Expiration Date: 10/12/2012

The above-referenced protocol was approved following expedited review by the Institutional Review Board.

It is the Principal Investigator's responsibility to obtain review and continued approval before the expiration date. You may not continue any research activity beyond the expiration date without approval by the Institutional Review Board.

Adverse Reactions: If any untoward incidents or severe reactions should develop as a result of this study, you are required to notify the Soc Beh IRB immediately. If necessary a member of the IRB will be assigned to look into the matter. If the problem is serious, approval may be withdrawn pending IRB review.

Amendments: If you wish to change any aspect of this study, such as the procedures, the consent forms, or the investigators, please communicate your requested changes to the Soc Beh IRB. The new procedure is not to be initiated until the IRB approval has been given.

Please retain a copy of this letter with your approved protocol.

Bullying Behavior and Personality
PARENTAL LETTER OF PERMISSION

Dear Parent:

I am a graduate student under the direction of Professor Paul Miller in the College of Social and Behavioral Sciences at Arizona State University-West Campus. I am doing a study to try to better understand how bullying may be related to how children think about themselves, how they react when they are bullied, and whether they feel they are being bullied at school. I am requesting your permission for your child's participation. If you give your consent, your child will be asked to give their point of view about bullying, how they feel and what they think might happen to them when bullying occurs, and any experiences they may have had with bullying. It will take about 30 minutes to complete the questionnaires. No other child or YMCA employee will see what your child says to these questions at any time.

Your child's participation in this study is voluntary. If you choose not to have your child participate or if you decide later to withdraw your child from the study at any time, there will be no penalty (e.g. participation or access to YMCA activities). Also, if your child chooses not to participate or to withdraw from the study at any time, there will be no penalty. All questionnaires will be marked with a number, and not your child's name. In this way, their response will be confidential. They will be stored in a locked lab at ASU. The results of this study may be used in reports, presentations, or publications but your child's name will never be used.

Although there may be no direct benefit to your child, the possible benefit of your child's participation is that will have a better understanding of how they think and feel about bullying among children their age. There are no foreseeable risks or discomforts to your child's participation. Our hope is that this information will lead to helping school administrators, teachers, and parents better understand how bullying affects children when they are at school.

If you have any questions concerning the research study or your child's participation in this study, please call me at 847-507-1551 or Dr. Paul Miller at 623-543-6014.

Thank you very much for considering our request.

Sincerely,

Jeff Mintert
Graduate Program
Arizona State University-West Campus

Paul A. Miller
Associate Professor

By signing below, you are giving consent for your child _____ (child's name-please print) to participate in the above study.

Your Signature

Printed Name

Date

If you have any questions about you or your child's rights as a participant in this study, or if you feel for any reason that you or your child have been placed at risk, please contact the Chair of

ASU IRB Approved
Sign <i>[Signature]</i> for <i>[Signature]</i>
Date <i>10-13-11</i> to <i>10-12-12</i>

the Human Subjects Institutional Review Board, through the Arizona State University Office of Research Integrity and Assurance, at (480) 965-6788.

Please have your child return this form to the YMCA or use the addressed envelope to mail it back to the YMCA.

ASU IRB Approved	
Sign	<u>Dr. Mark A. Rosa</u>
Date	<u>10-13-11 to 10-12-12</u>

Bullying and How I Feel About Things

Dr. Paul Miller and Jeff Mintert are from ASU West and they are looking at bullying behaviors in children. I have been told that my parents (mom or dad) have given permission for me to take part in a project about bullying.

I will be asked my point of view about some things about me and about bullying. I am taking part because I want to. I will be asked to fill out questionnaires in a group of other students. It will take about 30 minutes to complete the questionnaires. I know that I can skip any of the questions. I know that I can stop at any time if I want to and it will be okay if I want to stop. I also know that no one will see my answers.

Sign Your Name Here

Print Your Name Here

Date

Parental Consent Form:

*Social Behavioral IRB Application Form – Page
Revised April 2011*

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	ASU IRB Approved
Sign	<i>Mark Pappa</i>
Date	10-13-11 to 10-12-12

APPENDIX D
QUESTIONNAIRES

Appraisal Items from Hunter, Boyle, and Warden (2004)

When other people are nasty or mean to you, what do you think might happen?

	Not Likely		Very Likely	
	1	2	3	4
1. You will learn to deal with bullying	1	2	3	4
2. You will learn to be nice to others	1	2	3	4
3. You will be stronger, more confident, person	1	2	3	4
4. The bully will be punished	1	2	3	4
5. Your friends won't like you anymore	1	2	3	4
6. You will be hurt physically (beaten up)	1	2	3	4
7. You will feel bad about yourself	1	2	3	4
8. More and more people will be nasty or mean to you	1	2	3	4
9. How easy is it for <i>you</i> to stop other people being nasty or mean to you?	1	2	3	4

Early Adolescent Temperament Questionnaire (EATQ)

We are going to ask you some questions about yourself. We are all different in our own ways. It is ok to say how you feel for each question. There are no right or wrong answers.

Really NOT true for me 1	Sort of NOT true for me 2	Sometimes true, sometimes not true 3	Sort of true for me 4	Really true for me 5
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1. ____ I tend to be rude to people I don't like.
2. ____ I get very frustrated when I make a mistake in my school work.
3. ____ I worry about my family when I'm not with them.
4. ____ I feel pretty happy most of the day.
5. ____ I get frightened riding with a person who likes to speed.
6. ____ I feel shy with kids of the opposite sex.
7. ____ It's hard for me not to open presents before I'm supposed to.
8. ____ I am very aware of noises.
9. ____ When I am angry, I throw or break things.
10. ____ I get irritated when I have to stop doing something that I am enjoying.
11. ____ I get sad more than other people realize.
12. ____ I worry about getting into trouble.
13. ____ When someone tells me to stop doing something, it is easy for me to stop.
14. ____ When I'm really mad at a friend, I tend to explode at them.
15. ____ I feel sad even when I should be enjoying myself, like at Christmas or on a trip.
16. ____ It bothers me when I try to make a phone call and the line is busy.
17. ____ I can stick with my plans and goals.
18. ____ I am shy.
19. ____ I notice even little changes taking place around me, like lights getting brighter in a room.

Early Adolescent Temperament Questionnaire (EATQ)

Really NOT true for me 1	Sort of NOT true for me 2	Sometimes true, sometimes not true 3	Sort of true for me 4	Really true for me 5
-----------------------------------	------------------------------------	---	--------------------------------	-------------------------------

20. _____ I am nervous of some of the kids at school who push people into lockers and throw your books around.
21. _____ My friends seem to enjoy themselves more than I do.
22. _____ If I get really mad at someone, I might hit them.
23. _____ I get very upset if I want to do something and my parents won't let me.
24. _____ I feel shy about meeting new people.
25. _____ I worry about my parent(s) dying or leaving me.
26. _____ It's easy for me to keep a secret.
27. _____ If I'm mad at somebody, I tend to say things that I know will hurt their feelings.
28. _____ It frustrates me if people interrupt me when I'm talking.
29. _____ I can tell if another person is angry by their expression.
30. _____ I get sad when a lot of things are going wrong.
31. _____ I pick on people for no real reason.
32. _____ The more I try to stop myself from doing something I shouldn't, the more likely I am to do it.
33. _____ I am not shy.
34. _____ I get upset if I'm not able to do a task really well.
35. _____ I feel scared when I enter a darkened room at home.
36. _____ It often takes very little to make me feel like crying.
37. _____ It really annoys me to wait in long lines.
38. _____ I tend to notice little changes that other people do not notice.

Bullying

Bullying involves hitting, teasing, making fun of others, saying mean things about others, threatening others, and excluding others on purpose. Some kids do these behaviors to other kids, while some kids have these things done to them. We are going to ask you questions about if these behaviors have ever been done to you or if you have ever done these behaviors to others.

	Never	Sometimes	A lot of the time		
1) Has anyone at your school ever hit you?	1	2	3	4	5
2) Has anyone at your school ever called you mean names?	1	2	3	4	5
3) Has anyone at your school told other kids not to be your friend?	1	2	3	4	5
4) Has anyone picked on you at school?	1	2	3	4	5
5) Has anyone at your school ever threatened to hurt you?	1	2	3	4	5
6) Has anyone ever said bad things about you to other kids at school?	1	2	3	4	5
7) Has anyone at school ever written something mean about you online(Facebook, Myspace, Twitter)?	1	2	3	4	5
8) Has anyone ever said mean things to you through texting?	1	2	3	4	5
9) Has anyone ever said mean things to you through email?	1	2	3	4	5
<hr/>					
10) Have you ever said bad things about someone to other kids at school?	1	2	3	4	5
11) Have you ever told other kids not to be friends with someone at school?	1	2	3	4	5

- | | | | | | |
|--|---|---|---|---|---|
| 12) Have you ever called other kids mean names at school? | 1 | 2 | 3 | 4 | 5 |
| 13) Have you ever hit anyone at school? | 1 | 2 | 3 | 4 | 5 |
| 14) Have you ever threatened to hurt anyone at your school? | 1 | 2 | 3 | 4 | 5 |
| 15) Have you ever picked on anyone at school? | 1 | 2 | 3 | 4 | 5 |
| 16) Have you ever written anything mean about someone online (Facebook, Myspace, Twitter)? | 1 | 2 | 3 | 4 | 5 |
| 17) Have you ever texted something mean about someone at school? | 1 | 2 | 3 | 4 | 5 |
| 18) Have you ever sent a mean email about someone from school? | 1 | 2 | 3 | 4 | 5 |