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# Recalled Bullying: Development of a Measure to Identify Childhood Victims and Perpetrators by Adults

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RECALLED BULLYING: DEVELOPMENT OF A MEASURE TO IDENTIFY  
CHILDHOOD VICTIMS AND PERPETRATORS BY ADULTS

A Dissertation

Submitted to the Graduate Faculty of the  
Louisiana State University and  
Agricultural and Mechanical College  
in partial fulfillment of the  
requirements for the degree of  
Doctor of Philosophy

in

The Department of Psychology

by

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May 2015

This dissertation is dedicated to my amazing family and friends, without whom its completion would not have been possible. Specifically, I dedicate this work to my amazing husband, Joseph Munson. His continued love, support, and patience made it possible for me to devote the time and energy needed to see this project through to completion. His perseverance in the completion of his own dissertation served as an example of how the hard work required to complete a doctoral degree can pay off in the end. He knew from the beginning that it was important for me to achieve my goals and he repeatedly sacrificed his own needs to ensure that I was able to reach my dreams. His support throughout this process was unwavering, even when things were hard and it seemed as though all was lost. I can never thank him enough for being the amazing man that he is, but I will love him for the rest of my life and I dedicate this work to him.

I also dedicate this project to our amazing children, Elizabeth and William. They are the light of my life and seeing their beautiful faces makes all things bearable. I hope that this accomplishment will serve to inspire them to always set high goals for themselves and to never give up until those goals are achieved. As their mother I want nothing more than for them to know that they are loved and supported in whatever path they choose for their lives. I hope that I have set an example that they can be proud of.

Finally, I dedicate this dissertation to my parents, Edward and Ruth Strawser and Pamela and Glenn Hoffmann. They raised me to always push myself to the highest standards and to never let barriers stand in the way of my dreams. They were always willing to sacrifice in order to ensure that I was able to complete my goals and have been proudly supporting me for my entire life. I would not have been able to achieve this amazing accomplishment without their love, support, and guidance over the years. At a

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## Abstract

The purpose of the study was to develop a psychometrically sound measure of recalled childhood bullying by adults who were either victims or perpetrators of this behavior. In order to accomplish this, a measure of childhood bullying, the Peer Interactions in Primary School (PIPS) Questionnaire, was modified into a retrospective measure in order to quantify recollections of childhood bullying by adults. Specifically, the modified PIPS (PIPS-R) was created to identify adults who identified themselves as bullies, victims, or bully-victims during their childhood or who do not recall having been a bully or a victim. Eight hundred and twelve undergraduate college students were recruited for participation. Participants completed a series of surveys via a secure, online host. The reliability of this measure was established using Cronbach's alpha, which ranged from good to excellent. Exploratory factor analysis indicated that the modified questionnaire was a three-factor scale. Implications for use of the measure and possibilities for further research were also discussed.



## Introduction

Violence among children has become a world wide concern. Incidents such as mass school shootings typically result in an even greater demand for explanations for this violent behavior (APA, 2004). According to the Centers for Disease Control and Prevention (2010), youth violence is the second leading cause of death for people between the ages of 10 and 24, with 5,764 people in this age range murdered in 2007 alone. Victims of non-fatal violence are even more common, with findings that for every homicide victim, there are 20-40 children who require medical treatment due to acts of violence (Mercy, Butchart, Farrington, & Cerda, 2002). Researchers have demonstrated that students involved in school shootings and other acts of violence have a history of being bullied. In fact bullying<sup>1</sup> is one of the major risk factors for youth violence (Mercy et al., 2002; Unnever, 2005). Being bullied also is associated with a variety of psychosocial problems in children, including lower self-esteem (Hodges & Perry, 1996; Olweus, 1993a), depression (Craig, 1998; Hodges & Perry, 1996; Olweus, 1993a; Salmon, James, Cassidy, & Javoloyes, 2000), anxiety (Craig, 1998; Hodges & Perry, 1996; Olweus, 1993a), and suicidal ideation (Rigby, 1996).

<sup>1</sup>Bullying is a broad term, used in varying ways throughout the literature. For the current study, the term bullying will be used as a verb to indicate more general findings related to this area of study that apply broadly to both the victim and the perpetrator. When discussing the findings related to the perpetrator, the term bully will be used. When discussing findings related to the victim, the term victim will be used. When discussing findings related to people who are both perpetrators and victims, the term bully/victim will be used.

Although there is extensive research examining the characteristics of childhood bullies, there is very little research on the long-term impact of being bullied on adult adjustment (see Storch & Ledley, 2005, for a review). Several researchers have demonstrated that bullying is not a problem that ends in childhood, but rather continues into college and the workplace (Chapell et al., 2004; Quine, 2001). Further, given the relationship between bullying and violent behavior (Mercy et al., 2002; Unnever, 2005), it is important to determine whether being bullied as a child contributes to adulthood problems. A measure that identifies adults who were victims and/or perpetrators of bullying as children could be useful as screening tool for identify students at risk for psychological problems as well as possibly committing a violent act. The purpose of the current paper was to create such a measure that allows the author to retrospectively identify adults who report having the perception that they were either bullies or victims of bullies during childhood and to evaluate the psychometric properties of the measure.

### **Description of Bullying**

Bullying is defined as aggressive behavior in which (1) the purpose is to cause harm or distress, (2) there is an imbalance of power in which the perpetrator has more power, and (3) the behavior is repeated over time (APA, 2004; Nansel, Overpeck, Pilla, Ruan, Simons-Morton, & Scheidt, 2001). Bullying can take several forms including physical harm, teasing, name-calling, exclusion from peer groups, sexual harassment, and cyber bullying.

Researchers have distinguished four groups of children based on their experiences: pure bullies (those who bully other children but are not victimized), victims (those who are the victims of bullying but do not victimize others), bully-victims (those who bully other children and are the victims of bullying), and neutral children (Schwartz, 2000; Unnever, 2005).

It is estimated that 20-30% of children are victims of bullying or perpetrators (Centers for Disease Control and Prevention, 2010; Forero, McLellan, Rissel, & Bauman, 1999; Nansel et al., 2001). Nansel and colleagues (2001) found that of the 29.9% of children that reported moderate to frequent involvement in bullying, 13% were bullies, 10.6% were victims, and 6.3% were both a bully and a victim. Although gender differences were not evident in the frequency of bullying, boys and girls tend to engage in different types of bullying. Boys are more likely to be involved in physical bullying (Baldry & Farrington, 2000; Grills & Ollendick, 2002; Kumpulainen et al., 1998; Nansel et al., 2001); however, girls are more likely to be involved in relational bullying (e.g., rumor-spreading and sexual comments; Nansel et al., 2001). Ethnic differences in bullying also have been found, but with mixed results. Some researchers found that Hispanic children reported higher involvement as the bully and African American children reported significantly less involvement as the victim than other ethnicities (Nansel et al., 2001), while others found that children who reported mixed ethnicity were more likely to report being victims (Stein, Duke, & Warren, 2007). Youth who are lesbian, gay, or transgendered are also more likely to categorize themselves as victims more often than their peers (Dawkins, 1996; Hunter, 1990; Yude, Goodman, & McConachie, 1998).

The most common time for bullying to occur is between 6<sup>th</sup> and 8<sup>th</sup> grades (Hugh-Jones & Smith, 1999; Nansel et al., 2001), with some researchers finding a relatively normal distribution with bullying peaking at around 13 years of age (Eslea & Rees, 2001). Although the stability of bullying is unclear, several researchers have demonstrated that involvement in bullying does not end in childhood, but rather continues into adulthood. Kumpulainen, Rasanen, and Henttonen (1999) conducted a longitudinal study in which the incidence of bullying was measured over a 4-year time period. They found that the incidence of bullying behavior decreased as the children got older. However, approximately 25% of the children involved in bullying (either as bullies, victims, or bully-victims) at the first evaluation were still involved in bullying four years later but their status was not necessarily the same. Other longitudinal studies have also found that being a bully or a victim at one age is associated with the same status several years later (Schafer, Korn, Brodbeck, Wolke, & Schulz, 2005; Sourander, Helstela, Helenius, & Piha, 2000) This finding suggests that, at least for some children, exposure to and/or participation in bullying is a prolonged event. Chapell and colleagues (2006) added further support to this finding by demonstrating that this relationship continues into college.

Several studies have examined factors that lead to bullying. Children identified as bullies are more likely to have authoritarian parents who use physical punishment as their primary discipline method (Baldry & Farrington, 2000; Olweus, 1994; Rigby, 2002; Smith & Myron-Wilson, 1998). Bullies also report living in families that have lower levels of cohesiveness (Berdondini & Smith, 1996; Bowers, Smith, & Binney, 1992). Some researchers have also suggested a correlational relationship whereby children who

are victimized by their peers are also more likely to be victims of parental abuse (Gladstone, Parker, & Malhi, 2006). Longitudinal studies of infants who later became bullies indicated that they were given less cognitive stimulation, less emotional support, and were allowed to watch more television than children who did not become bullies (Zimmerman, Glew, Christakis, & Katon, 2005).

### **Theories of Bullying**

Bullying has been best explained using a social-ecological perspective (Espelage & Swearer, 2003; Swearer & Doll, 2001). This theoretical framework is based off of Bronfenbrenner's (1979) ecological systems theory, and posits that bullying results from a complex interaction of individual and environmental characteristics. These characteristics are outlined below.

Individual characteristics appear to play an important role in bullying. As discussed previously, gender (Baldry & Farrington, 2000; Grills & Ollendick, 2002), race (Juvonen, Nishina, & Graham, 2001; Nansel et al., 2001), age (Hugh-Jones & Smith, 1999), and sexual orientation (Dawkins, 1996; Yude, Goodman, & McConachie, 1998) have been associated with bullying. Other important individual characteristics that contribute to the occurrence of bullying include anger (Bosworth, Espelage, & Simon, 1999; Hanish & Guerra, 2002), depression (Callaghan & Joseph, 1995; Craig, 1998; Neary & Joseph, 1994; Storch, Nock, Masia-Warner, & Barlas, 2003), and anxiety (Ginsburg, La Greca, & Silverman, 1998; Hanish & Guerra, 2002; La Greca & Lopez, 1998). Social skills deficits are another individual characteristic that have been implicated in bullying; however, research on its impact is mixed. Based on the theory of social information processing, Crick and Dodge (1994) argue that children are more aggressive

due to problems with encoding information from the environment (i.e. hostile attribution errors) and difficulty understanding others' mental and emotional states. Others have argued that bullies understand these emotional states, and use this to target children who will tolerate victimization (Garbarino & DeLara, 2002; Sutton, Smith, & Swettenham, 1999).

The social-ecological perspective posits the impact of several environmental factors on bullying. Several researchers have looked at the impact of friendship on bullying (Espelage, Holt, & Henkel, 2003; Long & Pellegrini, 2003; Rodkin & Hodges, 2003). Some studies posit that children with similar interests and characteristics tend to form peer groups (Cairns & Cairns, 1994) leading bullies to spend more time with other bullies (Espelage et al., 2003). Further, researchers have indicated that children are attracted to peers that exhibit characteristics associated with independence, such as aggression (Bukowski, Sippola, & Newcomb, 2000). This attraction likely explains the finding that bullies generally report the same number of peer relationships as those not involved in bullying (Espelage & Holt, 2001). Other environmental characteristics that have been found to be associated with bullying include family characteristics (Baldry & Farrington, 2000; Berdondini & Smith, 1996; Bowers, Smith, & Binney, 1992; Olweus, 1994; Rigby, 2002; Smith & Myron-Wilson, 1998), school climate (Kupermine, Leadbeater, Emmons, & Blatt, 2001; Ma, 2002), and whether teachers felt confident in their ability to handle bullying (Boulton, 1997).

## **Impact of Being a Childhood Bully**

Although there has been relatively little research on the long-term impact that bullying has on adults, there has been extensive research on the immediate impact to children. A meta-analysis conducted by Gini and Pozzoli (2009) evaluated six studies that provided data for children who bully and concluded that bullies generally had a higher rate of psychosocial problems than children not involved in bullying. Specifically, bullies have been characterized as aggressive, impulsive, confident, popular, and having below average academic success (Olweus, 1994; Stephenson & Smith, 1998). Bullies are also more likely to engage in problem behaviors and have poorer academic achievement and connection with school (Nansel et al., 2001).

Children identified as bullies consistently are found to experience more externalizing symptoms than their peers not only at the time of the bullying but also seven years later. Specifically, they found that childhood bullies compared to their non-bullying peers, exhibited more externalizing behavior problems and hyperactivity, excessive drinking, and drug use (Kaltiala-Heino, Rimpela, Rantanen, & Rimpela, 2000; Nansel et al., 2001). Other studies have found bullies to be rated highly on aggression and hyperactivity (Boutlon & Smith, 1994; Kumpulainen et al., 1998).

Several researchers have examined the extent of internalizing problems in bullies. Kaltiala-Heino, Rimpela, Rantanen, and Rimpela (2000) found that bullies were just as likely as victims to experience increased problems with anxiety, depression, and psychosomatic symptoms. In addition, bullies were found to have a higher number of co-occurring problems than victims (Kaltiala-Heino et al., 2000). Similarly, Roland (2002) found that bullies reported higher depressive symptoms than children not involved in

bullying, and that they were not significantly different from victims on their reports of depression. In addition, bullies reported significantly more suicidal thoughts than both victims and neutral children. In other studies, being a bully is associated with depression (Salmon, James, & Smith, 1996) and poorer perceived health problems (Rigby, 1998; Slee, 1995), and feelings of unhappiness and lack of enjoyment in school (Rigby & Slee, 1993).

Regarding social relationships, children who are identified as bullies have the same number of friends as non-bullying children (Espelage & Holt, 2001; Shin, 2010). This may be due to bullies tending to associate with other bullies. Although bullies exhibit less prosocial behavior than other children, they tend to have more leadership skills (Perren & Alsaker, 2006). Bully-victims, on the other hand, were found to be less socially skilled and more withdrawn from peers when compared to non-bullying children. (Perren & Alsaker, 2006).

### **Impact of Being a Childhood Victim.**

Many studies have examined the impact of being a victim on childhood functioning (see Gini & Pozzoli, 2009, for a review). A meta-analysis of the studies done in this area over a 20-year period found that victims had more problems with depression, anxiety, loneliness, and self-esteem (Hawker & Boulton, 2000). The largest effect size was for depression and the smallest for anxiety, with the other relationships falling in between. Victims often have lower self-esteem and self-worth than other children (Callaghan & Joseph, 1995; Neary & Joseph, 1994). Nansel and colleagues (2001) found that victims demonstrated more social and emotional adjustment problems than children who were bullies or neutral children. They had more difficulties making friends, did not



report as strong of relationships with their peers, and they reported greater loneliness. Their peers also rate them as more withdrawn and less prosocial than neutral children (Schwartz, Farver, Chang, & Lee-Shin, 2002). Of note, this association may be related to cultural expectations of the area, as withdrawn behavior is not related to being a victim in areas that value restrained and inhibited behavior (Chen, 2000).

Higher levels of teasing have been associated with greater social anxiety and lower levels of social acceptance for victims (Storch & Masia-Warner, 2004; Storch, Nock, Masia-Warner, & Barlas, 2003) Storch and Masia-Warner (2004), for example, found that levels of social anxiety and loneliness were higher in girls who were victims of relational aggression. Being a victim is also associated with greater symptoms of depression (Callaghan & Joseph, 1995; Craig, 1998; Neary & Joseph, 1994; Storch et al., 2003).

Bond and colleagues (2001) examined 8<sup>th</sup> graders over a 2-year period and found that being a victim at any point in 8<sup>th</sup> grade predicted anxiety symptoms in 9<sup>th</sup> grade, supporting the claim that victimization predicts anxiety during adolescence (Bond, Carlin, Thomas, Rubin, & Patton, 2001; Hanish & Guerra, 2002; Vernberg, Abwender, Ewell, & Beery, 1992; Storch, Masia-Warner, Crisp, & Klein, 2005).

### **Impact of Being a Childhood Bully-Victim**

Bully-victims are often reported to have more severe problems than either bullies or victims (Smokowski & Kopasz, 2005). They often display symptoms of hyperactivity and inattention which frequently irritate their peers (Carney & Merrell, 2001) and they often report low self-esteem, high anxiety, and low problem-solving abilities (Andreou, 2001). These difficulties make them more likely to turn to negative coping strategies to

handle their problems, as evidenced by the fact that bully-victims are more likely to carry weapons to school, use alcohol, and engage in physical fights (Brockenbrough, Cornell, & Loper, 2002).

Bully-victims are also more likely than either bullies or victims to experience mental health problems, including depression, anxiety, somatic problems, and eating disorders (Kaltiala-Heino, Rimpela, & Rimpela, 2000). In addition, Kumpulainen and colleagues (2001) reported that 21.5% of bully-victims were diagnosed with oppositional-defiant disorder, 17.7% were diagnosed with depression, and 17.7% were diagnosed with attention-deficit/hyperactivity disorder. These rates for depression and oppositional behavior were higher than those reported by bullies or victims. Among Brazilian children, bully-victims were also reported to have higher levels of anxiety than bullies and the same level of anxiety as victims (Isolan, Salum, Osowski, Zottis, & Manfro, 2013).

Socially, their peers often reject bully-victims because they are seen as annoying (Andreou, 2001; Smokowski & Kopasz, 2005). Teachers often perpetuate this social rejection by sending the message that these children deserve the negative interactions they receive because they are also bullying other students (McNamara & McNamara, 1997). When compared to bullies and victims, bully-victims were the most likely to have problems with peers and have a low perception of the school environment (O'Brennan, Bradshaw, & Sawyer, 2009).

Regarding social skills, bully-victims are less likely to adhere to social rules and are less likeable than victims or neutral children, but do not differ in verbal sharing, attending to others emotions, or analyzing emotions (Hussein, 2013).

## **Impact of Being a Childhood Bully in Adulthood**

Relatively few studies have examined the long-term impact of being a bully during childhood. Klomek et al. (2008) conducted one of the few longitudinal studies in this area. This study was conducted as part of a larger epidemiological study in which boys were evaluated at the age of 8, and then evaluated again at the age of 18.

Researchers found that being identified as a bully at age 8 was associated with severe depression at age 18.

Vaughn et al. (2010) found that adults who reported having been a bully were more likely to be male, less educated, and earn less money than non-bullying adults. Adults who were childhood bullies also reported more substance use and were more likely to be diagnosed with bipolar disorder and histrionic personality disorder (Vaughn et al., 2010). Other researchers have found that childhood bullies were more likely to be involved in serious crime as adults (Whitney & Smith, 1993) and other antisocial behavior (Bender & Losel, 2011; Hamalainen & Pulkkinen, 1995; Pulkkinen & Pitkanen, 1993).

## **Impact of Being a Childhood Victim in Adulthood**

Compared to the amount of research that has looked at the impact of being the victim in children, relatively little research has examined the long-term outcomes for adults. The majority of the early research in this area focused on the fact that children who were victims of teasing were more likely to have problems with body dissatisfaction and eating disorders than those who were not teased (Cattarin & Thompson, 1994; Grilo, Wifley, Brownell, & Rodin, 1994; Jackson, Grilo, & Masheb, 2000; Rieves & Cash, 1996). For instance, Grilo and colleagues (1994) found that victims who were teased as

children about their physical appearance had lower self-evaluations of their appearance and higher body dissatisfaction as adults than those who did not report being teased as children. Further, Thompson, Fabian, Moulton, Dunn, and Altabe (1991) developed an adult self-report measure designed to assess whether the person was a victim of teasing as a child specifically related to appearance and weight, called the Physical Appearance-Related Teasing Scale (PARTS). They found that college students who were bullied during their childhood, particularly weight related teasing, had higher levels of body dissatisfaction and more eating problems. Further, Jackson, Grilo, and Masheb (2000) found that women with binge eating disorder recalled having been a victim of appearance related teasing during their childhood.

Several researchers have found a link between childhood victims and internalizing problems in adulthood. Higher levels of self-reported victimization in junior high was found to be associated with lower self-esteem and higher levels of depression in a sample of Japanese college students (Matsui, Kakuyama, Ysuzuki, & Onglatco, 1996). College students who reported being victims during childhood reported increased stress and avoidant coping strategies during college (Newman, Holden, & Delville, 2011). Being a childhood victim has also been associated with lower levels of education, lower level jobs, and lower likelihood of cohabitation (Fosse & Holen, 2004).

McCabe, Antony, Summerfeldt, Liss and Swinson (2003) found that childhood victimization was associated with anxiety disorders in adulthood. Specifically, 92% of individuals diagnosed with social anxiety reported being severely teased as children. Individuals with other anxiety disorders reported much less childhood teasing. Similarly, Gros, Gros, and Simms (2010) found that being a victim of relational aggression during

childhood significantly predicted social anxiety symptoms in college students. In another study, Gladstone and colleagues (2006) reported that childhood victims of relational bullying had more negative coping styles (i.e. irritable, externalizing, and withdrawal) in response to stress in their adulthood.

The majority of studies examining the effects of childhood bullying on adult adjustment obtained their sample by asking single questions about whether they recalled being a victim or bully during their childhood. Some researchers, however, have developed retrospective measures of victimization (Roth, Coles, & Heimberg, 2002; Storch et al., 2004). For instance, Storch and colleagues (2004) created the Teasing Questionnaire-Revised (TQ-R), a 35-item measure that identified five domains of teasing: performance, academic issues, social behavior, family background, and appearance. The measure showed good psychometric properties (factor structure, internal consistency, convergent validity, test-retest reliability). Additionally scores on the various factors were associated with a number of adjustment problems in adulthood (Faith, Storch, Roberti, & Ledley, 2008; Strawser, Storch, & Roberti, 2005).

### **Impact of Being a Childhood Bully-Victim in Adulthood**

Even fewer researchers have looked at the long-term outcomes of bully-victims than on either bullies or victims. As mentioned above, many of the studies looking at adult outcomes of childhood bullying have relied on single-item questions about the behavior in childhood. This methodology makes it difficult to identify the bully-victim category. One longitudinal study that followed children from the age of 9 to 26 found that bully-victims had higher rates of psychiatric disorders in both childhood and young adulthood. Even after controlling for childhood diagnoses, bully-victims were at a higher

risk of depression, panic disorder, agoraphobia (females only) and suicidal behavior (males only; Copeland, Angold, & Costello, 2013). Adults who were classified as bully-victims as children also had poorer health, lower income, and more problems with social relationships than those were classified as bullies as children, and the same number of these types of problems as those that were classified as victims as children (Wolke, Copeland, Angold, & Costello, 2013).

### **Stability of Retrospective Reports**

Researchers have long questioned the use of retrospective reports in psychological research; however, it is not always feasible, or even possible, to obtain historical records of events. The most common criticism of retrospective reports is that autobiographical memories of traumatic events are not reliable over time (Burbach & Borduin, 1986; Lewinsohn & Rosenbaum, 1987). Although it is difficult to confirm whether an autobiographical event occurred that does not mean that the memory is not reliable. In fact, in a meta-analytical review of the literature on retrospective reporting, Brewin, Andrews, and Gotlib (1993) refuted the idea that the accuracy of retrospective reporting is compromised by contamination or changes to the memories. In other words a person's memory of an event was not impacted by other more recent events.

When looking at autobiographical memories, it is generally agreed upon that these memories are revisions of the events based on the individual's current experiences and understanding of the world (Greenwald, 1980; Neisser, 1982). Further, individuals with emotional disorders consistently have been found to have a negatively biased interpretation of ambiguous events (see Mathews & MacLeod, 2005 for a review). Although there is consensus that these memories are subject to contamination, there is

also agreement that the majority of people's memories regarding past events are relatively stable across time (Baddeley, 1990; Ross & Conway, 1986).

Researchers have specifically examined the stability of memories of bullying and victimization. Olweus (1993b), for example, evaluated a group of 9<sup>th</sup> grade children using peer nominations to determine victims and non-victims. He found a strong relationship between recalled victimization at age 23 and previous peer nominations of victim status, suggesting accuracy and stability of the reports over time. Further, Rivers (2001) found that retrospective reports of being bullied in childhood were relatively stable over a one-year period. Interestingly, outcomes of the events were recalled with less stability than the actual events themselves. One theory for this difference is that the outcome is less emotional to the child than the event, which supports Wagenaar's (1992) idea that the more emotional the event is to the individual the more likely it is to be accurately recalled. Overall, Rivers' (2001) findings support the idea that retrospective measures have a place in psychological research, particularly when longitudinal studies are not feasible.

### **Purpose of the Current Study**

Bullying is a significant problem that leads to a wide range of psychological and behavioral issues, both for the victim and for the perpetrator. Researchers have documented that bullies and victims suffer psychologically, with many of the difficulties continuing into adulthood (e.g. Klomek et al., 2008; McCabe et al., 2003; Storch et al., 2004). This area of research has focused primarily on the long-term impacts of being a victim of bullying as a child, despite the negative consequences associated with having been a bully. The long-term impact of being a childhood bully has been less frequently

studied. Also studies that have been conducted frequently identify childhood bullies by asking participants a single question (e.g. Fekkes, Pijpers, Verloove-Vanhorick, 2004; Forero et al., 1999; Natvig, Albrektsen, & Qvarnstrom, 2001; Schnohr & Niclasen, 2006). In addition, bullying does not appear to be a problem that ends in childhood, as several researchers have documented its occurrence in adulthood (e.g. Farrell, 1999; Laschinger et al., 2010). Although retrospective-report measures are available to identify victims (i.e. Storch et al., 2004), no psychometrically sound retrospective measures have been developed that are able to identify both bullies and victims.

Thus, the current study was designed to modify a child measure of bullying to create a retrospective measure for adults. Specifically, this study modified an established measure of bullying and victimization, the Peer Interactions in Primary School, to create a measure of adult's retrospective accounts of bullying during their childhood. The psychometric properties of the modified measure were evaluated to assess the reliability and the factor structure of the measure was examined.

### **Hypotheses for Current Study**

Hypothesis 1: The factor structure of the modified Peer Interactions in Primary School will be explored to determine whether it has a similar factor structure as the two-factor solution found by Tarshis and Huffman (2007) for the child version.

Hypothesis 2: The modified Peer Interactions in Primary School will have good internal consistency, both for the overall measure, and for the individual subscales. Consistent with the rule of thumb outlined by George and Mallery (2003), good internal consistency will be defined as having a Cronbach's alpha that is greater than or equal to .8.



## Method

### Participants

The participants were 800 (623 female) undergraduate college students who ranged in age from 18-29 ( $M = 19.89$ ,  $SD = 1.57$ ). The ethnic distribution of the participants was as follows: 76.4% Caucasian, 13.1% African American, 5.8% Asian, 3.5% Hispanic, and 1.2% other. The participants' college classification varied, with 32.5% freshman, 23.4% sophomore, 22.8% junior, and 21.3% senior. The average grade point average of the participants was 3.16 ( $SD = 0.55$ ) as reported by the participant. Participants were students in psychology classes at a large public university in the Southeastern United States. Students earned course credit or extra credit when they participated in a research study.

The initial number of participants was 816. Of the 816, eight were removed due to incomplete or duplicate responses or inconsistent data and eight were removed because they were outliers whose scores were more than 3 standard deviations above the mean (Howell, 1998). See Figure 1 for a flow chart of participants.

### Measures

**Demographic Questionnaire.** A demographic questionnaire was created to obtain basic demographic information as well as current educational status, current social situation, and current experiences with victimization. In addition, participants were asked about childhood demographics (e.g., parent income) schooling history, and social status.

**Peer Interactions in Primary School Questionnaire-Revised.** The Peer Interactions in Primary School Questionnaire (PIPS; Tarshis & Huffman, 2007) was designed as a 22-item self-report measure of bullying and victimization in children. Item

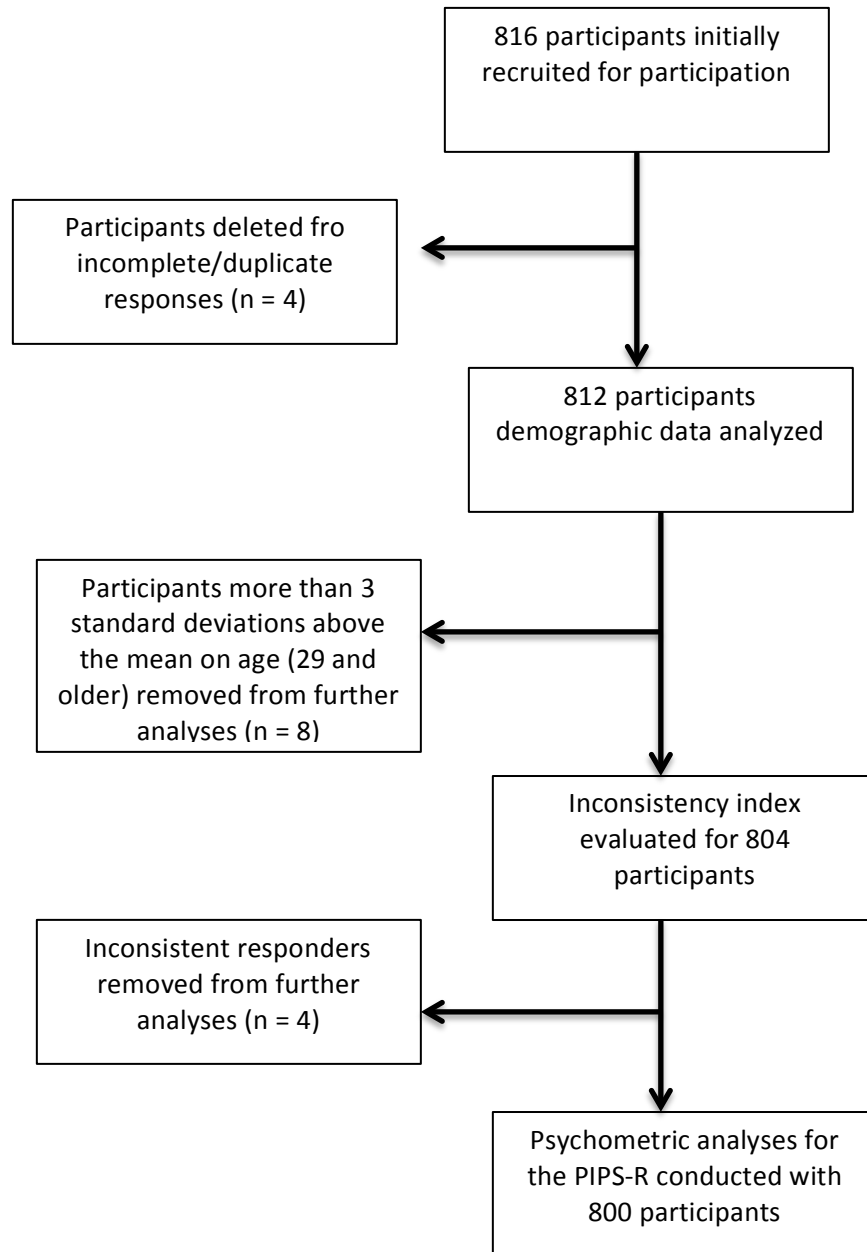


Figure 1  
Flow of Participants

responses range from 0 (never) to 2 (a lot), with items added together to obtain a total score and two subscale scores (bully and victim). Initial psychometric evaluation of the PIPS revealed a two-factor solution, which explained 88% of the variance (Tarshis & Huffman, 2007). The measure has high internal consistency (overall Cronbach alpha =

.90) and test-retest reliability (Bully scale ICC = .84, Victim scale ICC = .88). The PIPS has good concurrent validity as evidenced by the high correlations between PIPS scores and the Olweus Bully/Victim Questionnaire (OBVQ; Olweus, 1993) in the expected directions (Tarshis & Huffman, 2007). Exploratory factor analysis (EFA) supported a two-factor model (bullying and victimization).

For the purpose of this study, the original items were rephrased to the past tense to create a retrospective measure of recalled childhood experiences (see Appendix C). In order to create a measure of inconsistent responding, eight items were reworded to create new items (items 3, 10, 11, 15, 19, 26, 30) that were likely to be highly correlated with the original items. Procedures for the development of this inconsistency index were based off of the Inconsistency Index on the Multidimensional Anxiety Scale (MASC; March, 1997). Differences between scores on each pair were added together to create an index that measured inconsistent responding. The following items were matched to create this index: 1 and 11, 2 and 19, 8 and 26, 9 and 10, 12 and 30, 6 and 15, 14 and 17, and 3 and 29.

### **Procedure**

Approval from the Institutional Review Board was obtained before beginning data collection. Students participated via <http://surveymonkey.com>, which utilizes SSL encryption to ensure data security. An online informed consent form (see Appendix B) was completed prior to beginning the survey beginning, whereby participants were required to click to acknowledge that they had read and agreed with the purpose of the study. At the end of the survey a debriefing page (see Appendix D) was displayed which

explained the purpose of the study and provided the participants with resources should they have felt they were experiencing distress.

The PIPS-R was scored in a manner similar to the procedure outlined in Craig (1998), whereby participants were divided into three groups based on their scores: upper, middle, and lower third of the scales. Participants who scored in the upper third on the bully scale and the lower third on the victim scale were classified as reporting characteristics of bullies. Those that scored in the upper third on the victim scale and the lower third on the bully scale were classified as reporting characteristics of victims. Participants that scored in the upper third on both scales were classified as reporting characteristics of bully/victims. Participants that scored below the upper third on both scales were classified as neutral (not reporting characteristics of bullies or victims).

## Results

### Initial Analyses

Before conducting statistical analyses significant outliers on the basis of age were removed (as described above) and the data were screened to determine the whether any participants failed to complete the questionnaire.

Although the PIPS was previously found to have a two-factor structure that explained 88% of the variance using exploratory factor analysis, the retrospective version of the measure needed to be tested again to determine whether the same structure existed for the revised measure (Tarshis & Huffman, 2007). Therefore, exploratory factor analysis (EFA) was conducted on this measure. In order to ensure the assumptions for factor analysis were met, the Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity were calculated. EFA was then executed using principal axis factoring to extract factors in order to maximize variance extracted from each factor. This was followed by an oblique rotation (Direct Oblimin Rotation) that allowed the factors to correlate. This was chosen over an orthogonal rotation because bullying and victimization are not mutually exclusive constructs (Schwartz, 2000). The scree test and the Kaiser-Guttman rule were used to determine the number of factors that should be extracted. Items that did not have a primary factor loading of .4 or above and items with cross-loadings of .3 or above were deleted. Percentage of variance accounted for was reported. The internal consistency of the Peer Interactions in Primary School Questionnaire-Revised was evaluated using Cronbach's alpha coefficient (Cronbach, 1951). Using Cicchetti's (1994) rule of thumb, the scale was evaluated as having good internal consistency if alpha was above .8.

## Preliminary Analyses

Descriptive statistics for the items were examined and are presented in Table 1.

Table 1  
Descriptive statistics for 30 items of the Peer Interactions in Primary School – Revised

Item	N	Minimum	Maximum	Mean (SD)	Skewness (SE = .09)	Kurtosis (SE = .17)
1	800	0	2	.57 (.58)	.40	-.75
2	800	0	2	.45 (.54)	.65	-.72
3	800	0	2	.53 (.64)	.79	-.41
4	800	0	2	.26 (.48)	1.57	1.49
5	800	0	2	.14 (.37)	2.60	6.21
6	800	0	2	.13 (.35)	2.50	5.15
7	800	0	2	.61 (.61)	.46	-.65
8	800	0	2	.15 (.38)	2.52	5.78
9	800	0	2	.29 (.53)	1.65	1.82
10	800	0	2	.28 (.52)	1.71	2.03
11	800	0	2	.48 (.57)	.72	-.49
12	800	0	2	.47 (.56)	.65	-.63
13	800	0	2	.23 (.46)	1.80	2.37
14	800	0	2	.18 (.42)	2.17	3.95
15	800	0	2	.13 (.36)	2.71	6.80
16	800	0	2	.43 (.54)	.72	-.66
17	800	0	2	.07 (.28)	3.80	8.57
18	800	0	2	.71 (.63)	.31	-.67
19	800	0	2	.54 (.54)	.20	-1.19
20	800	0	2	.41 (.51)	.63	-1.04
21	800	0	2	.45 (.58)	.90	-.19
22	800	0	2	.10 (.31)	3.16	9.45
23	800	0	2	.72 (.60)	.19	-.58
24	800	0	2	.50 (.61)	.81	-.33
25	800	0	2	.69 (.62)	.31	-.65
26	800	0	2	.09 (.31)	3.55	12.9
27	800	0	2	.23 (.51)	2.23	4.09
28	800	0	2	.42 (.54)	.83	-.40
29	800	0	2	.30 (.52)	1.54	1.46
30	800	0	2	.40 (.53)	.77	-.66

Although several items were identified as having significant skew ( $>2$ ) and kurtosis ( $>7$ ), these items were not deleted because of the preliminary status of the retrospective questionnaire.

Inconsistent responses can compromise the accuracy of results for a measure. The inconsistency index was developed for the PIPS-R to identify respondents who were inconsistent in answering questions. Procedures for developing the inconsistency index were based on the development of the inconsistency index for the Multidimensional Anxiety Scale for Children (MASC; March, 1997). Eight items were created that were semantically similar to existing items; this resulted in eight matched-pairs of items. The similarity of items was then confirmed by examining the correlation matrix and ensuring that each item pair was correlated at .40 or higher. The correlation between item responses for each inconsistency index item is presented in Table 2. The average inconsistency score was 1.48 ( $SD = 1.24$ ) out of a possible 14. Responses were generally consistent, with 93.5% of respondents producing inconsistency index scores less than 2 standard deviations above the mean. Only 4 participants produced inconsistency index scores that were 3 standard deviations above the mean. These participants' data were excluded from further analyses.

### **Exploratory Factor Analysis**

The 8-items of the inconsistency index were removed prior to any further analyses being conducted as these items were only added to measure inconsistent responders. Prior to conducting the factor analysis, the factorability of the remaining 22-items of the PIPS-R was examined. Several well-recognized methods for factorability were used.

Table 2  
Inconsistent Responding (INC) Item Pair Correlations

Item pair	<i>r</i>
1. Other students made me cry. 11. I cried because of things other students did to me.	.66
2. I teased other students 19. I made fun of other students.	.53
8. I told other students I would hit or hurt them. 26. I threatened other students.	.66
9. At recess, I played by myself. 10. I played alone on the playground.	.90
12. I said mean things about a student to make other kids laugh. 30. I made jokes about a student that hurt their feelings.	.57
14. I made other students feel sad on purpose. 17. I made other students cry on purpose.	.52
6. Other students physically hurt me. 15. I was hit or kicked by other students.	.69
3. Other students did not pick me for games. 29. Other students left me out of games on purpose.	.60

First, the correlation matrix of the items of the PIPS-R was examined and all 22-items of the PIPS-R were found to significantly correlate at least .3 with at least one other item of the measure. Second, the Kaiser-Meyer-Olkin measure of sampling adequacy was .92, above the recommended value of .6. Barlett's test of sphericity, testing the null hypothesis that the correlations in the correlation matrix are zero, was significant ( $\chi^2(231) = 7640.78, p = .00$ ). The diagonals of the anti-image correlation matrix were all over .5, supporting the inclusion of each item in the factor analysis. Finally, the communalities of the majority of items (with the exception of the item "Other students took things from me that I did not want to give them) were above .3 (see Table 3) further confirming that each item shared some common variance with other items. Given these indicators, factor analysis was initially conducted with all 22 items.



Exploratory factor analysis using principal axis factoring was used because the primary purpose was to identify the factors underlying the PIPS-R (Tabachnick & Fidell, 2007). Specifically, principal axis factoring with direct oblimin rotation was used because it was expected that factors would be correlated. Using Kaiser criterion (eigenvalue > 1), three factors were identified. The first factor was labeled verbal victim (e.g. “Other students made me cry” and “Other students teased me”) and explained 31.13% of the variance. The second factor was labeled verbal bully (e.g. “I teased other students” and “I called other students bad names”) and explained 15.43% of the variance. The third factor was labeled physical bully/victim (e.g. “I pushed or slapped other students” and “Other students physically hurt me”) and explained 7.94% of the variance. The three-factor solution was further supported by the “leveling off” of Eigen values on the scree plot after three factors and the interpretability of the three factors. All items met the minimum criteria of a primary factor loading of at least .4 or no cross-loadings above .3. Subsequently, 6 iterations of an EFA resulted in a 22-item measure that accounted for 54.50% of the overall variance. Item factor loadings are presented in Table 3. All factor loadings were above .40. Ten items loaded on the verbal victimization factor, seven items loaded on the verbal bullying factor, and five items loaded on the physical victim/bully scale.

Table 3  
Factor loadings and communalities

PIPS-R	Verbal Victimization	Verbal Bullying	Physical Victim/Bully	Communalities
(1) Other students made me cry	<b>.680</b>	.027	-.204	.438
(4) Other students took things from me that I did not want to give them	<b>.448</b>	-.028	.158	.255
(7) Other students looked at me in a mean way	<b>.708</b>	.136	.019	.566
(9) At recess, I played by myself	<b>.595</b>	-.188	.076	.365
(18) Other students teased me	<b>.760</b>	.136	.023	.646
(21) Other students ignored me on purpose	<b>.732</b>	.101	-.002	.573
(23) Other students made me feel sad on purpose	<b>.788</b>	.168	-.144	.647
(25) Other students made fun of me	<b>.757</b>	.131	.041	.649
(27) I wanted to stay home from school because other students were mean to me	<b>.700</b>	-.105	.064	.496
(29) Other students left me out of games on purpose	<b>.752</b>	-.068	.067	.578
(2) I teased other students	-.089	<b>.681</b>	.154	.534
(12) I said mean things about a student to make other kids laugh	-.029	<b>.789</b>	-.097	.576
(14) I made other students feel sad on purpose.	.001	<b>.602</b>	.142	.439
(16) I called other students bad names.	.048	<b>.725</b>	.111	.609
(20) I was mean to other students.	.019	<b>.783</b>	.076	.665
(24) I felt bad because I was mean to other students.	.080	<b>.729</b>	-.116	.514
(28) I gave other students mean or dirty looks.	.132	<b>.566</b>	.064	.399

Table 3 Continued

PIPS-R	Verbal Victimization	Verbal Bullying	Physical Victim/Bully	Communalities
(5) I pushed or slapped other students.	-.089	.123	<b>.811</b>	.706
(6) Other students physically hurt me.	.264	-.118	<b>.646</b>	.526
(8) I told other students I would hit or hurt them.	-.070	.239	<b>.709</b>	.645
(13) Another student told me they would hurt me.	.219	.160	<b>.526</b>	.496
(22) I hit or kicked other students.	-.078	.077	<b>.807</b>	.652

### Reliability

Internal consistency reliability was assessed through Cronbach's Alpha (Cicchetti, 1994). Evaluation of the reliability was based on guidelines proposed by Cicchetti (1994) that suggest that alpha coefficients above .90 indicate excellent internal consistency, coefficients between .80 and .89 indicate good internal consistency, coefficients between .70 and .79 indicate fair internal consistency, and coefficients below .70 indicate unacceptable internal consistency. The PIPS-R total score (22 items) demonstrated good internal consistency ( $\alpha = .89$ ), as did the Verbal Victim (10 items;  $\alpha = .89$ ), Verbal Bully (7 items;  $\alpha = .85$ ), and the Physical Victim/Bully (5 items;  $\alpha = .80$ ) scale. Histograms for the total score and all three scales are presented in Figures 2-5. All three scales and the total score for the PIPS-R have positive skew indicating that the majority of participants did not report experiencing or participating in bullying as children.

Composite scores were created for each of the three factors, based on the total of all items that had their primary loadings on each factor. Higher scores indicated higher levels of experience with bullying/victimization as a child. Descriptive statistics are

presented in Table 4. Based on scoring criteria outlined in Craig (1998), 12% of the sample was classified as victims, 9.3% were identified as bullies, and 18% fell into the bully-victim category. These numbers were only calculated for the verbal behavior, as the physical behavior did not load on distinct scales for victims and bullies.

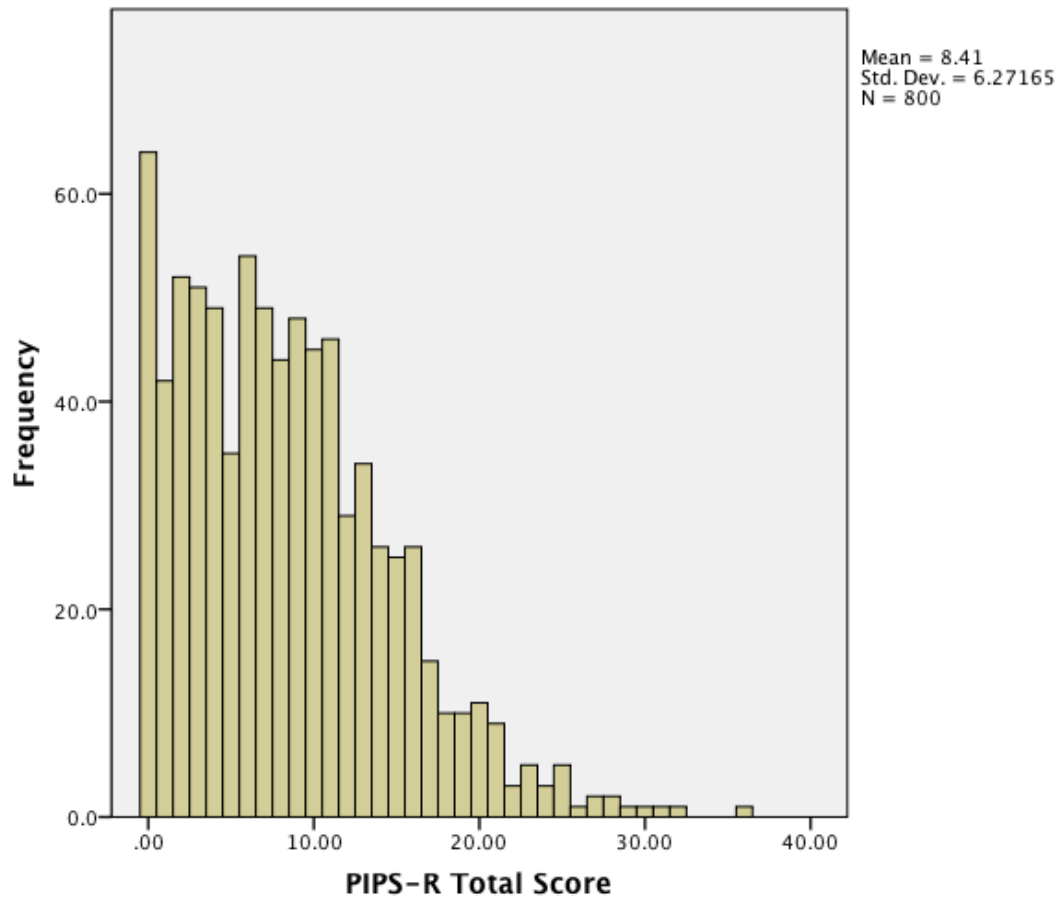


Figure 2  
Histogram of PIPS-R Total Score

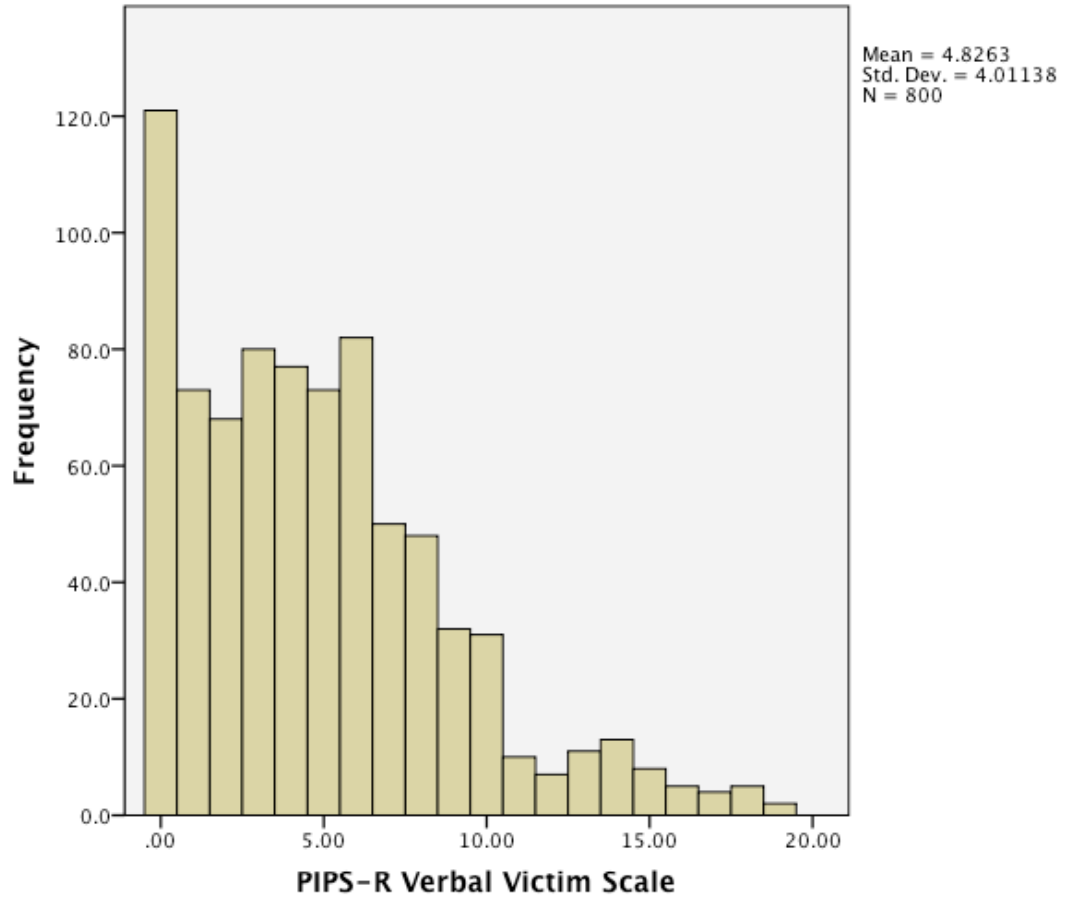


Figure 3  
Histogram of PIPS-R Verbal Victim Scale

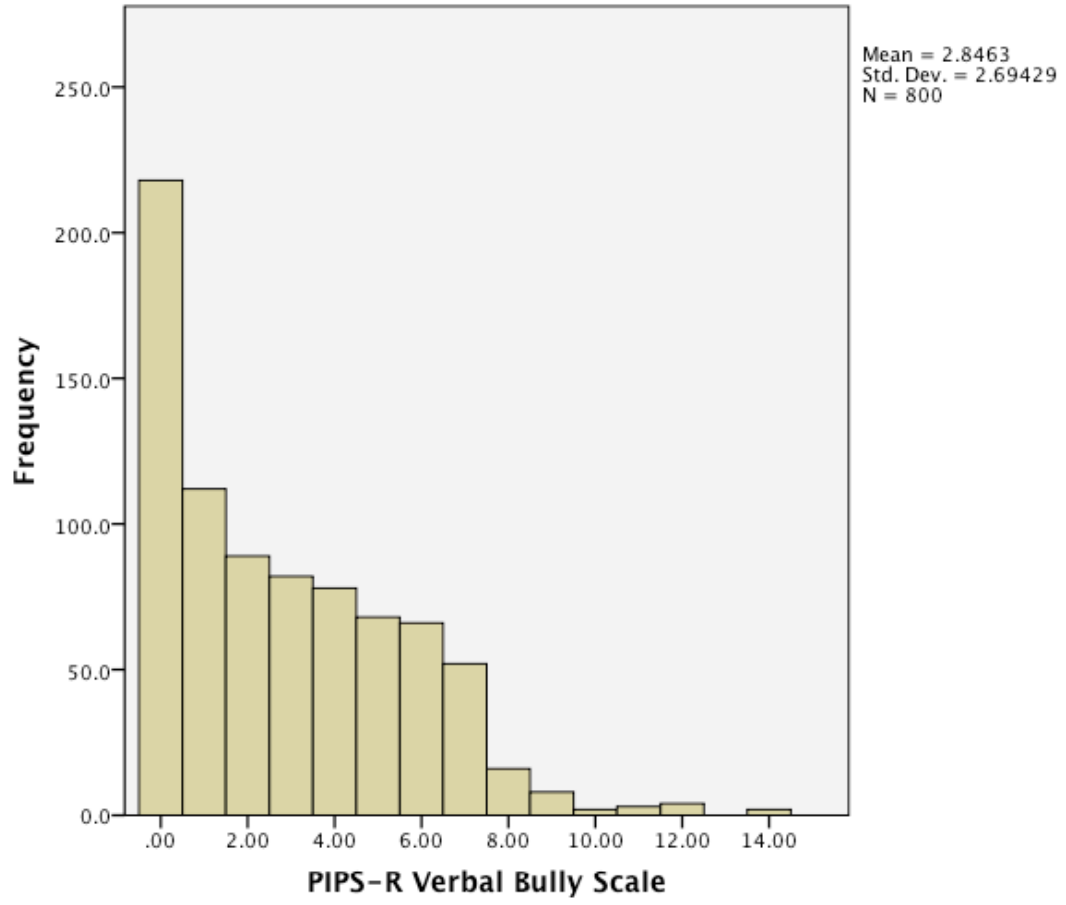


Figure 4  
Histogram of PIPS-R Verbal Bully Scale

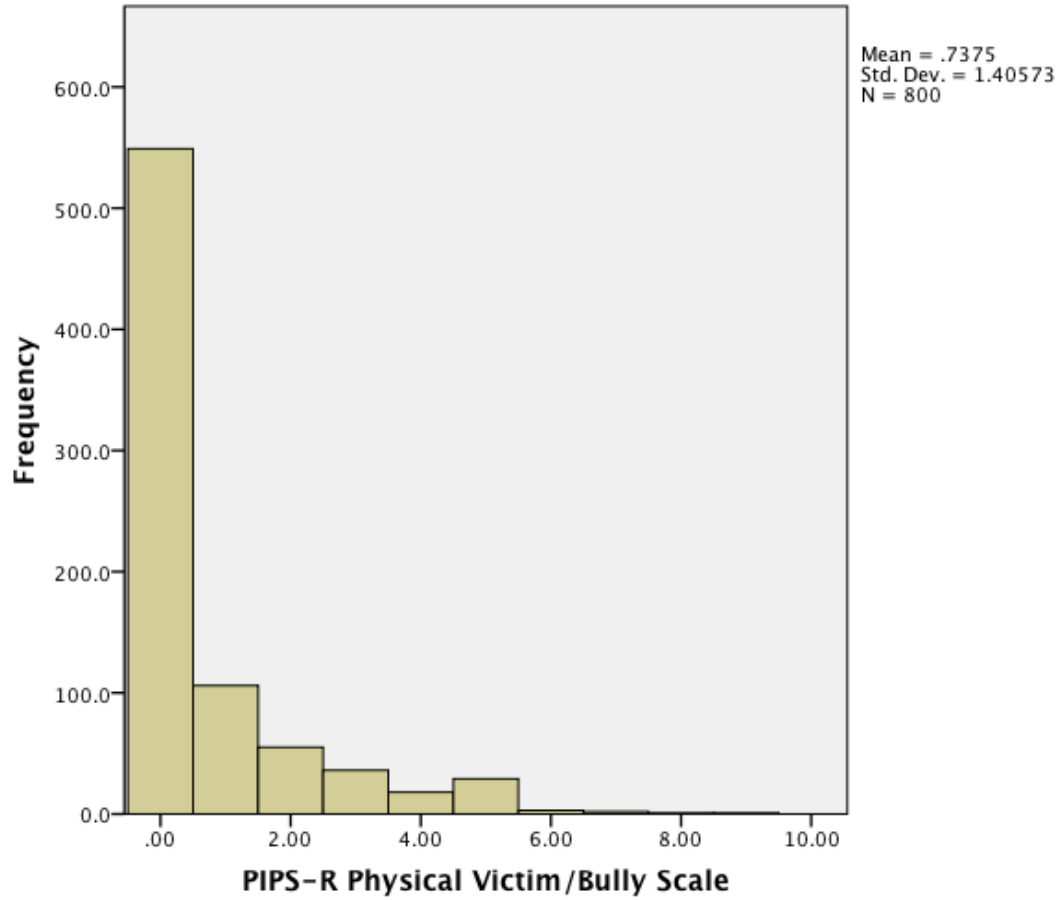


Figure 5  
Histogram of PIPS-R Physical Victim/Bully Scale

Table 4  
Descriptive statistics for the PIPS-R total score and the three factors (N = 800)

	No. of items	Total Possible	Min	Max	<i>M</i> ( <i>SD</i> )	Skewness	Kurtosis	Alpha
Total Score	22	44	0	36	8.41 (6.27)	.84	.71	.89
Verbal Victim	10	20	0	19	4.83 (4.01)	.97	.80	.89
Verbal Bully	7	14	0	14	2.84 (2.69)	.84	.33	.85
Physical Victim/Bully	5	10	0	10	.74 (1.41)	2.28	5.28	.80

## Demographic Analysis

Demographic analyses were conducted to determine whether there were any differences in scores on the PIPS-R based on the effects of age, gender, or ethnicity. No differences were found on the basis of age on the total score or any of the subscales.

An examination of gender effects revealed that men and women differed significantly on the total score of the PIPS-R [ $t(246.81) = 5.03, p = .00$ ], with males ( $M = 13.96, SD = 9.50$ ) reporting significantly higher scores than females ( $M = 10.10, SD = 7.44$ ). Men and women also significantly differed on the verbal bullying scale [ $t(259.73) = 5.52, p = .00$ ] and the physical bullying/victimization scale [ $t(212.44) = 7.00, p = .00$ ], with males reporting higher scores than females on both scales (see table 5). No significant differences were found between males and females on the verbal victimization scale,  $t(266.93) = 1.39, p = .16$ .

Table 5  
Demographic Analysis

	Total Score <i>M (SD)</i>	Verbal Victim <i>M (SD)</i>	Verbal Bully <i>M (SD)</i>	Physical Victim/Bully <i>M (SD)</i>
<b>Gender</b>				
Male	13.96 (9.50)	6.68 (5.65)	5.17 (3.89)	2.11 (2.67)
Female	10.10 (7.44)	6.03 (5.02)	3.41 (3.31)	0.66 (1.48)
<b>Ethnicity</b>				
Caucasian	10.51 (7.70)	6.02 (5.05)	3.71 (3.37)	0.79 (1.69)
African American	12.99 (9.39)	6.77 (5.85)	4.41 (3.90)	1.81 (2.51)
Asian	10.98 (7.76)	6.29 (4.11)	3.75 (4.20)	0.94 (1.85)
Hispanic	12.25 (9.41)	6.82 (6.41)	4.07 (3.51)	1.36 (1.93)
Other	10.67 (10.92)	4.78 (4.58)	3.33 (5.12)	2.56 (3.40)



A one-way ANOVA was conducted to determine whether significant differences existed between ethnic groups on the total scale score. Levene's test for homogeneity of variances was violated in the present analysis,  $F(4, 807) = 4.23, p = .00$ . Owing to this violation, a more robust test of equality of means was used and no significant differences were found between ethnic groups on the total score of the PIPS [*Welch F* (4, 43.19) = 1.78,  $p = .00$ ]. Similarly, Levene's test was violated when examining differences between ethnic groups on the verbal victimization scale [ $F(4, 807) = 3.34, p = .01$ ] and the physical victimization/bullying scale [ $F(4, 807) = 15.58, p = .00$ ]. No significant differences were found on the verbal victimization scale [*Welch F* (4, 43.89) = .66,  $p = .62$ ], but significant differences were found on the physical bullying/victimization scale [*Welch F* (4, 42.93) = 4.97,  $p = .00$ ]. Post hoc analyses using the Games-Howell criterion for significance indicated that African American respondents reported more experience with physical bullying/victimization than Caucasian respondents (see table 5); no other significant differences were found. No significant differences were found between ethnic groups on the verbal bullying scale [ $F(4, 807) = .99, p = .41$ ].

## Discussion

The purpose of this study was to create a retrospective measure of childhood bullying and victimization and report the psychometric properties of the measure in a college student sample. An inconsistency index was created to ensure that participants were constant in their responses to similar items and identify those that were not careful. Respondents were generally consistent in their responses, with the average inconsistency score at less than 1.5. This scale allowed participants who did not respond consistently to be removed from the dataset prior to other analyses being conducted. Exploratory factor analyses revealed a three-factor structure for the PIPS-R, including Verbal Victimization, Verbal Bullying, and Physical Bullying/Victimization. All three factors, as well as the total score, had adequate reliability. These initial analyses suggest that the PIPS-R is a psychometrically sound measure that warrants further exploration (e.g. validity, test-retest reliability) of its psychometric properties in future studies.

Given that the two-factor structure was obtained by Tarshis and Huffman (2007), we anticipated obtaining a similar factor structure. However, as mentioned above, the PIPS-R was found to have a three-factor solution that provided the best fit for the data. The original version of the measure was designed to be given to children and did not distinguish between verbal and physical bullying or victimization. This is likely because adults have experienced developmental changes that allow them to make more cognitive distinctions regarding events that have occurred (Stallard, 2002). This distinction is important because studies have shown that outcomes vary based on whether the negative behavior was physical or verbal in nature. For example, Bender and Losel (2011) found that being a physical bully was more predictive of anti-social outcomes than being a

verbal bully. Given that previous researchers have found that the long-term impact of engaging in experiences of bullying and or victimization varies based on whether the experience was physical or verbal in nature, it makes sense that physical behaviors would load on distinct scales from the verbal behaviors.

Composite scores were created for each factor and scores were used to determine how many participants recalled experiencing characteristics of victims (12% of the sample), characteristics of bullies (9.3% of the sample) or characteristics of bully-victims (18%). Previous studies looking at involvement in bullying behavior during childhood had reported similar results (Nansel et al., 2001). One interesting difference from previous studies is that the current sample reported higher rates of being both a bully and a victim (18% vs 6.3% reported by Nansel and colleagues, 2001). This is likely related to the disproportionate number of females in the current sample, as females are more likely than males to be verbal and relational bullies (Nansel et al., 2001). Verbal bullying often is bidirectional in girls. Composite scores on the Verbal Victim (4.83 out of 20 for PIPS-R vs. 6.74 out of 24 on the initial PIPS) and Verbal Bully (2.84 out of 14 for PIPS-R vs. 2.06 out of a possible 20) scales were similar to those reported by Tarshis and Huffman (2007), further supporting the reliability of the measure and the stability of the report over time.

Demographic analyses revealed that males reported greater verbal bullying and physical bullying/victimization, but no differences were found between genders on being a victim of verbal bullying. This is consistent with previous findings that boys are more likely to be involved in bullying that is physical in nature (Baldry & Farrington, 2000; Grills & Ollendick, 2002; Nansel et al., 2000). No differences were reported in the

current sample based on age, but African American respondents reported significantly more involvement in physical bullying/victimization than Caucasian respondents.

Previous findings in this area have had mixed results (Nansel et al., 2001; Stein, Duke, & Warren, 2007).

### **Limitations and Future Research**

As with all research, this study is not without its limitations. First, the sample consisted of only college students and thus, the results may not reflect bullying in a different sample. Specifically, people who experienced more severe forms of bullying may not be found in the college population due to lower academic performance and limited emotional resources. Future research should aim to replicate the current study with a more diverse sample in order to further demonstrate the measure's reliability. While the inclusion of only college students limits the generalizability of the results, college students are an important population for this measure as one possible use of the PIPS-R would be to identify incoming students who had experienced these problems. The demographic characteristics of the sample are further restricted by geographic location and a predominantly female sample. This sample was primarily collected in a suburban area and may not represent the experiences of those living in more urban or rural locations. As discussed above, researchers have demonstrated that males and females tend to engage in different forms of bullying. Specifically, males tend to engage in more physical types of bullying (Baldry & Farrington, 2000). The factor structure of the measure may look different in a sample that included more males.

The current study is retrospective in nature and therefore relies on participants' memories of events, rather than objectively verifying that an event occurred. As

mentioned above, retrospective studies have been criticized because participants' memories may not be reliable over time (Burbach & Borduin, 1986; Lewinsohn & Rosenbaum, 1987). Although several researchers have been able to show that memories of bullying behavior are stable over time (Olweus, 1993b; Rivers, 2001), it is possible that participants in the current study are describing perceptions of bullying behavior rather than actual involvement. Although this limitation is acknowledged, the perception of an event has also been shown to impact behavior independent of whether the event actually occurred (Clarkson, Hirt, Jia, & Alexander, 2010).

Although verbal bullies and victims of verbal bullying were identified on distinct scales, physical bullies and victims combined on one scale in the factor analysis. This is likely due to the fact that very few participants indicated being involved in physical bullying, either as the bully or the victim. Given the antisocial outcomes associated with physical bullying (see Bender & Losel, 2011), it is likely that people involved in this type of behavior as children are less likely to go to college as adults.

While the PIPS-R does attempt to examine physical and verbal bullying and victimization, there are domains of teasing that are not addressed by this measure. Cyber-bullying is likely the most significant domain that is not addressed by this measure. The lack of questions in this domain of bullying make it impossible to examine the long-term impacts of this form of bullying using this measure. Although the lack of questions regarding cyber-bullying is a limitation of the current measure, several researchers have suggested that cyber-bullying is just an extension of the location of other forms of bullying and therefore would have related outcomes (e.g. Grading, Strohmeier, & Spiel, 2009; Raskauskas & Stoltz, 2007).

## Implications

As discussed above, some long-term negative effects for bullies and victims have already been documented, with those experiencing these events reporting problems such as eating disorders (Thompson et al., 1991), depression (Klomeck et al., 2008; Matsui et al., 1996), anxiety disorders (McCabe et al., 2003), substance abuse (Vaughn et al., 2010), and criminal convictions (Whitney & Smith, 1993). Colleges and universities could utilize a measure such as the PIPS-R to identify students at risk for these kinds of problems because of their experiences as children with bullying and victimization. These students could then be referred for psychological services before these problems have negative impacts on their academic success or violent behavior.

Once the psychometric properties of the PIPS-R have been verified, the measure could be used to further examine long-term effects of bullying. This measure will allow examiners to explore differential effects of different roles in bullying behavior during adulthood. Although the effects have been documented with single items (Fekkes et al., 2004; Forero et al., 1999; Natvig, Albrektsen, & Qvarnstrom, 2001; Schnohr & Niclasen, 2006), few studies have evaluated the long-term impact of being a bully with a psychometrically sound instrument. The PIPS-R will not only allow this type of exploration in future studies, but will also allow the functioning of those that were in different roles (bully, victim, bully-victim, not involved) as children to be compared.

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# Appendix A IRB Approval Form



Institutional Review Board  
Dr. Robert Mathews, Chair  
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## ACTION ON PROTOCOL APPROVAL REQUEST

**TO:** Thompson Davis  
Psychology

**FROM:** Robert C. Mathews  
Chair, Institutional Review Board

**DATE:** January 4, 2013  
**RE:** IRB# 3340

**TITLE:** Recalled Bullying in Childhood: Development of a measure to identify adult victims and perpetrators of bullying behavior in childhood

**New Protocol/Modification/Continuation:** New Protocol

**Review type:** Full  Expedited  **Review date:** 1/7/2013

**Risk Factor:** Minimal  Uncertain  Greater Than Minimal

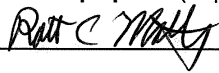
**Approved**  **Disapproved**

**Approval Date:** 1/7/2013 **Approval Expiration Date:** 1/6/2014

**Re-review frequency:** (annual unless otherwise stated)

**Number of subjects approved:** 1000

**Protocol Matches Scope of Work in Grant proposal:** (if applicable)

**By:** Robert C. Mathews, Chairman 

**PRINCIPAL INVESTIGATOR: PLEASE READ THE FOLLOWING –  
Continuing approval is CONDITIONAL on:**

1. Adherence to the approved protocol, familiarity with, and adherence to the ethical standards of the Belmont Report, and LSU's Assurance of Compliance with DHHS regulations for the protection of human subjects\*
2. Prior approval of a change in protocol, including revision of the consent documents or an increase in the number of subjects over that approved.
3. Obtaining renewed approval (or submittal of a termination report), prior to the approval expiration date, upon request by the IRB office (irrespective of when the project actually begins); notification of project termination.
4. Retention of documentation of informed consent and study records for at least 3 years after the study ends.
5. Continuing attention to the physical and psychological well-being and informed consent of the individual participants, including notification of new information that might affect consent.
6. A prompt report to the IRB of any adverse event affecting a participant potentially arising from the study.
7. Notification of the IRB of a serious compliance failure.
8. SPECIAL NOTE:

*\*All investigators and support staff have access to copies of the Belmont Report, LSU's Assurance with DHHS, DHHS (45 CFR 46) and FDA regulations governing use of human subjects, and other relevant documents in print in this office or on our World Wide Web site at <http://www.lsu.edu/irb>*

**Appendix B**  
**Demographic Questionnaire**

Age: \_\_\_\_\_

Gender:        M        F

Ethnicity:    Caucasian    African American    Asian    Hispanic  
Other \_\_\_\_\_

Academic status: Freshman    Sophomore    Junior        Senior

Current GPA: \_\_\_\_\_

How would you describe your current social network?

          More friends than most        The same friends as most        Less friends than  
most

Please indicate which of the following social activities you are currently involved with:

          Sorority/Fraternity    NCAA sports team                recreational sports team

          Academic clubs                Religious groups

**Please answer the following questions about your family of origin:**

How many siblings did you have? \_\_\_\_\_

When did you come along in the family? \_\_\_\_\_

Approximate family income (when you were a child)

\_\_\_\_\_

How would you describe your relationship with your family:

          Loving        Supportive        Indifferent        Neglectful        Abusive

**Please answer the following questions about your childhood:**

The school you attended could best be described as:

          Public        Private        Home-school

How would you describe your social status?

          Popular                Average        Ignored                Rejected

How many friends did you have?

          More than most kids        The same as most kids        Less than most

kids

Indicate any medical problems you had as a child:

Diabetes      Asthma      Allergies      Obesity

Other: \_\_\_\_\_

Indicate any psychological problems you were diagnosed with as a child:

General Anxiety      Social Anxiety      Obsessive-Compulsive

Specific Phobia      Depression      Oppositional Defiant

Attention Deficit Hyperactive

Other: \_\_\_\_\_

Were these problems treated?

Yes      No

## **Appendix C Informed Consent**

### **Louisiana State University**

### **Informed Consent for Participants**

### **in Research Projects Involving Human Subjects**

- 1. Title of Project:** Recalled Bullying in Childhood: Development of a measure to identify adult victims and perpetrators of bullying behavior in childhood
- 2. Sites:** Louisiana State University (Baton Rouge, LA)
- 3. Investigators:**  
Thompson Davis III, Ph.D.  
225-578-1500  
Available Monday – Friday, 11:00am-5:00pm  
  
Melissa Munson, M.A.  
[mmunson15@gmail.com](mailto:mmunson15@gmail.com)  
Available Monday – Friday, 11:00am-5:00pm

#### **4. The Purpose of Research**

The purpose of the current study is to examine the long-term effects of bullying behavior on psychosocial functioning in adulthood. Specifically, this study will evaluate the psychometric properties of a modified measure of bullying behavior. If the psychometric properties are sound, the relationship between having been a bully as a child and current psychosocial difficulties (e.g. anxiety, depression, loneliness, hyperactivity) will be explored.

#### **5. Subjects**

Individuals 18 years of age and older are invited to participate. The maximum number of participants will be 1000.

#### **6. Procedures and Duration of Participation**

You will be asked to complete several self-report questionnaires on-line. These questionnaires will involve you answering questions about behaviors exhibited during childhood as well as some demographic information and information regarding your history of medical and psychological problems. Filling out these questionnaires should take about 15 minutes – 30 minutes.

#### **7. Benefits**

Participants will be offered course credit or extra credit for participation. There are no other direct benefits to participants; however, information gained from this study will provide valuable data regarding the long term psychosocial problems related to having bullied other children during childhood.

#### **8. Risks**

Participation in this study is not expected to have risks, other than those associated with filling out questionnaires about your self.

### **9. Right to Refuse**

Participation in this study is voluntary and you may change your mind and withdraw from the study at any time without penalty or loss of any benefit to which you are otherwise entitled. Simply close your browser window.

### **11. Privacy**

All the information that you provide will be confidential and access to your data will be restricted to the primary investigators and their research staff. Your data, along with that of others, will be stored in a secure location. Some identifying information will be collected to assign you extra credit; however, it will not be linked to your responses. Data will be kept secure and confidential.

### **12. Compensation:**

For your participation in this study, you will receive the equivalent of 1.0 hour of credit or extra credit in any one course that offers credit or extra credit for participation in psychological experiments. Contact your course instructor regarding alternative means of obtaining extra credit. If your course does not offer credit or extra credit, you should understand that no compensation is provided.

**13. Freedom to Withdraw:** You are free to withdraw from the study at any time by closing the web page. If you choose to withdraw you will not be penalized.

The study has been explained to me and all my questions have been answered. I may direct additional questions regarding study specifics to the investigators by email or phone. If I have questions about subjects' rights or other concerns, I can contact Robert C. Mathews, Chairman, LSU Institutional Review Board, 225-578-8692. I agree to participate in the study described above and acknowledge the researchers' obligation to provide me with a copy of this consent form if signed by me (please click "Print" above on your browser's toolbar if you desire a copy or contact an investigator).

**If you have any questions regarding your participation in this study or this informed consent document, please do not hesitate to email Melissa Munson ([mmunso6@lsu.edu](mailto:mmunso6@lsu.edu)) or Dr. Davis (LSU, [ted@lsu.edu](mailto:ted@lsu.edu)).**

**By clicking the submit button you are giving your consent to participate in this study. You may withdraw at any time by closing your browser window.**

**Appendix D**  
**Peer Interactions in Primary School Questionnaire-Revised**

Instructions: Please select the appropriate response that most applied to you **when you were a child.**

- |   |       |           |       |
|---|-------|-----------|-------|
| 1. Other students made me cry.  | A lot | Sometimes | Never |
| 2. I teased other students.   | A lot | Sometimes | Never |
| 3. Other students did not pick me for games.                            | A lot | Sometimes | Never |
| 4. Other students took things from me that I did not want to give them. | A lot | Sometimes | Never |
| 5. I pushed or slapped other students.                                  | A lot | Sometimes | Never |
| 6. Other students physically hurt me.                                   | A lot | Sometimes | Never |
| 7. Other students looked at me in a mean way.                           | A lot | Sometimes | Never |
| 8. I told other students I would hit or hurt them.                      | A lot | Sometimes | Never |
| 9. At recess, I played by myself.                                       | A lot | Sometimes | Never |
| 10. I played alone on the playground.                                   | A lot | Sometimes | Never |
| 11. I cried because of things other students did to me.                 | A lot | Sometimes | Never |
| 12. I said mean things about a student to make other kids laugh.        | A lot | Sometimes | Never |
| 13. Another student told me they would hurt me.                         | A lot | Sometimes | Never |
| 14. I made other students feel sad on purpose.                          | A lot | Sometimes | Never |
| 15. I was hit or kicked by other students.                              | A lot | Sometimes | Never |
| 16. I called other students bad names.                                  | A lot | Sometimes | Never |
| 17. I made other students cry on purpose.                               | A lot | Sometimes | Never |
| 18. Other students teased me.   | A lot | Sometimes | Never |

19. I made fun of other students.	A lot	Sometimes	Never
20. I was mean to other students.	A lot	Sometimes	Never
21. Other students ignored me on purpose.	A lot	Sometimes	Never
22. I hit or kicked other students.	A lot	Sometimes	Never
23. Other students made me feel sad.	A lot	Sometimes	Never
24. I felt bad because I was mean to other students.	A lot	Sometimes	Never
25. Other students made fun of me.	A lot	Sometimes	Never
26. I threatened other students.	A lot	Sometimes	Never
27. I wanted to stay home from school because students were mean to me.	A lot	Sometimes	Never
28. I gave other students mean or “dirty” looks.	A lot	Sometimes	Never
29. Other students left me out of games on purpose.	A lot	Sometimes	Never
30. I made jokes about a student that hurt their feelings.	A lot	Sometimes	Never



## **Appendix E Debriefing Page**

The purpose of the study you have just completed is to create a measure of recalled bullying behavior and establish that the measure is reliable. Thank you for your participation in this study. If you have experienced any distress related to answering questions of a personal nature and feel that you would benefit from talking to someone about this distress, please call the Psychological Services Center at (225) 578-1494.

## Vita

Melissa Munson was born in Dunedin, Florida and received her bachelor's degree at the University of Florida in 2004. She worked to obtain research experience for two years before entering graduate school in the Department of Psychology at Louisiana State University. Her research interests are focused primarily on the etiology and treatment of child anxiety disorders.