# The Progression of Bullying from Elementary School to University

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## Abstract

*This study used a retrospective design to investigate the history of bullying behavior of 186 young adult bullies. There was considerable evidence that adult bullies were also adolescent and childhood bullies and that they engaged in similar bullying behaviors over time. Using RM-MANOVA, a decrease in verbal and physical bullying and in the frequency of targeting passive and active victims was found between high school and university; no difference in bullying behavior was found between elementary and high school. There were strong relationships between the use of verbal, physical, and internet bullying methods and targeting passive victims. Whether those who have bullied others perceive themselves as a bully appears to depend on the extent of their behaviors. This study provides insight into the stability of bullying behaviours as well as the interrelationships between types of bullying and the targets of long-term bullies.*

**Key words:** bullying, long-term bullying, bullying in university

## *1.0 The progression of bullying from elementary school to university*

Bullying has garnered significant attention in many countries and there are numerous programs designed to intervene with both bullies and victims. To date, the majority of research on bullying has focused on elementary and high school aged youth. Although bullying in adulthood has received increased attention in recent years (Crawford, 1997), knowledge regarding adult bullies and their history of bullying is limited, even though this information would provide important knowledge.

### 1.1 Incidence and Occurrence

Bullying is studied internationally and rates vary depending on the location of the sample (Batsche & Knoff, 1994; Olweus, 1995). While current findings indicate geographical location as a factor in bullying rates, childhood has the highest occurrence of bullying behavior (Batsche & Knoff, 1994). Bullying does not disappear with age; however, research has shown that fewer adults report bullying others compared to their earlier years (Chapell et al., 2006). Knowledge of the adult's bullying characteristics as children and adolescents would provide valuable knowledge for intervention and prevention. For specific bullying characteristics to persist from childhood into adulthood, the bully must benefit somehow from these specific behaviors. According to the Social Learning Theory (Bandura, 1963), an individual is likely to repeat a previously rewarded negative behavior. Therefore, it may be that some bully's change any previously unsuccessful techniques while others continually use the same bullying methods against similar types of targets. To date, little is known of the stability and progression of bullying from childhood to adulthood.

### 1.2 Persistence and stability

Researchers have investigated the persistence and stability of bullying, although much of this work has focused on children and adolescents. In studies of children, moderate to strong relationships have been found between being nominated by peers as a bully at multiple time points (Boulton & Smith, 1994; Salmivalli, Lappalainen, & Lagerspetz, 1998) and similar results are found in adolescent samples (see Kumpulainen et al, 1999; Schäfer, Korn, Brodbeck, Wolke, & Schultz, 2005; Sourander, Helstela, Helenius, & Phia, 2000). Although long-term investigation into the stability of bullying into adulthood is lacking, similar results as those found in child and adolescent samples are reported. For example, using a retrospective design, Chapell and colleagues investigated the presence of bullying during childhood by adult bullies and found a positive relationship between being a child and adult bully as well as an adolescent and adult bully (Chapell et al., 2006). In addition, over half of the adult bully participants (~54%) also bullied during childhood and adolescence (Chapell et al., 2006).

Therefore, it seems that for some adult bullies, their bullying started many years prior. It is also important to understand whether long-term bullies engaged in similar or different behaviors as they age.

### 1.3 Bullying characteristics

Researchers have found significant age differences with respect to bullying characteristics. For example, the percentage of youth who bully physically decreases with age, whereas the use of verbal bullying increases with age (Craig, 1997, Griffin & Gross, 2003, Moayed, Daraiseh, Shell, & Salem, 2006; Raskauskas & Stoltz, 2007; Rigby, 2005). Although research has shown that bullying behaviors differ based on the age of the bully, most of this work is based on age cohorts and not a longitudinal investigation of developmental changes within individuals. Cohort studies provide current behaviors at one time point within a specific group and, although informative, these studies do not indicate whether bullying behaviors remain stable as an individual ages (i.e., do physical bullies in childhood continue to bully physically as they age?).

Researchers have also investigated specific targets of bullies and it appears that certain characteristics increase the likelihood of being a victim. Targets of adult bullies are reported to be overly passive, insecure, and vulnerable (Griffin & Gross, 2003; Hansen et al., 2004; Smith, 2003) or competent, committed, self-confident, skillful, agreeable, and extroverted (Hodson et al., 2006; MacIntosh, 2005) individuals. Unlike adult bullies whose targets vary, children seem to target a specific group in that their victims tend to be passive, insecure, or vulnerable (Haynie et al., 2001; Perren & Hornung, 2005; Pellegrini, Bartini, & Brooks, 1999; Smith, 2003). If long-term bullies receive reinforcement for their behaviours early in their development, it is reasonable to assume that they would continually target victims with similar characteristics using similar bullying methods. Although it appears that there are some similarities between targets of child and adult bullies, it is unknown whether long-term bullies continually targeted similar victims.

### 1.4 Summary and current study

Currently, most research into long-term bullying has used cohort samples; thus little is known of individual progression. It is unknown whether adult bullies: 1) also bullied during childhood and adolescence, and 2) show stability in their bullying characteristics. An investigation into the early bullying behaviors of current adult bullies will assist to elucidate the stability of bullying characteristics. The goals of the paper are to investigate these questions.

## *2.0 Methdology*

### 2.1 Participants

The participants were 159 (81.1%) female and 37 (18.9%) male respondents who reported having bullied at least once since attending university. Participants were in 1st year (27.2%), 2nd year (39%), 3rd year (24.6%), and 9.2% in their fourth year of study. Participants ranged in age from 17 to 36 ($M$ = 20.04, $SD$ = 2.10) and their permanent residency (outside of the school year) was urban (44.9%) and rural (55.1%).

### 2.2 Procedure

Participants were undergraduate students recruited at the beginning of a lecture with permission of the professor. For those in 1st year, minimal class credit (i.e., 2 marks) for participating in at least one study during the school year was added to their final grades. First year students completed the questionnaire outside of class time while those in other years completed it at the beginning of a class. Informed consent was obtained and the questionnaire was distributed in a group setting. Confidentiality and anonymity were ensured by having students return their completed questionnaire to 1 of 3 drop boxes. The second author administered all questionnaires. Prior to completion, the administrator verbally provided the definition of bullying and also indicated that the definition was documented on the questionnaire. Bullying was defined as behavior that: a) occurs more than sporadically; b) can be menacing or conducted with malicious intent; and c) is characterized by an imbalance of power, such that the victim can neither defend himself or herself, nor control the termination of the action (Olweus, 1995; Raskauskas & Stoltz, 2007). The questionnaire required approximately 30 minutes for participants to complete. The University's Research Ethics Board approved the study.

### 2.3 Measures

#### 2.3.1 Bullying stability

Stability of bullying was assessed using a questionnaire designed specifically for this study and was based on other measures of childhood (i.e., Olweus Bully/Victim Questionnaire; Olweus, 1996) and adult (Sharpe, 2011;

Twemlow, Fonagy, Sacco, & Brethour, 2006) bullying. Participants completed 116 questions regarding victimization (38 questions) and bullying others (38 questions) during three different age group time points: elementary (grades K – 8), high school (grades 9 - 12), and post-secondary (university). Other questions included details of who bullied the respondents (if they were ever a victim (20 questions)) and the characteristics of their targets (if they bullied (20 questions)). Each question was responded to on a 3- point scale: Never = 0; Sometimes = 1, and Often = 2; a total score for each scale was derived by summing the responses. For the purposes of this study, only questions related to the participant's own bullying behaviors were used. In total, 5 bullying scales (physical, verbal, and internet bullying, and passive and active target) were calculated for each time point for a total of 15 scales. Internal consistency (Cronbach's Coefficient Alpha) for all scales was high (see Table 1). Higher scores on each scale indicate more use of that specific bullying characteristic.

*2.3.1.1 Physical bullying.* Physical bullying questions ($n$ = 11) included: engaged in fist fights; threw objects at people; pushed people out of their way; tripped others; was overly aggressive in sports; stole from others; violated physical space; used physical force to discipline; damaged personal property; made negative gestures toward others, and excluded others from activities. Total scores could range between 0 and 22.

*2.3.1.2 Verbal.* Verbal bullying questions ($n$ = 23) included: insulted people regarding their differences; pointed out mistakes made by others; used derogatory remarks; was overly sarcastic to others; belittled people in front of others; used threats of physical violence; wrote threats of physical violence; name called; taunted people to evoke a response; wrote hurtful things about others; screamed constantly at others; spread rumors; damaged personal property; made negative gestures toward others; gossiped; passed notes about a person; commented on clothing; commented about family wealth; commented about other's parents; laughed at others; made fun of physical appearance; commented on sports ability; commented on academic ability; belittled relationships; mocked perceived relationships. Total scores could range between 0 and 46.

*2.3.1.3 Internet.* Internet bullying questions ($n$ = 4) included: created a website to humiliate others; used emails to spread rumors; used chat rooms to degrade others, and posted negative comments on websites. Total scores could range between 0 and 8.

*2.3.1.4 Active*. Targeting an active victim of bullying was measured using 10 questions regarding the target's character: attempted to retaliate; was popular among peers; was a leader in the group; was someone you were jealous of; was active in social groups; retaliated; was rated highly by authority figures; had admirable qualities; challenged other students,and was extraverted. Total scores could range between 0 and 20.

*2.3.1.5 Passive.* Targeting the passive bully was measured using 10 questions to assess the target's character: was alone when bullied; has a noticeable disability; lacked social support; was overly inactive in situations; was quiet and withdrawn; was a member of a minority; suffered from depression; allowed bullying; followed others and; had no self-confidence. Total scores could range between 0 and 20.

*2.3.1.6 Self-identified*. To determine whether those identified as bullying at all three time points viewed themselves as such, respondents were simply asked to indicate yes or no to whether they: were a bully in elementary school; were a bully in high school; were a bully in university.

### 2.4 Inclusion Criteria

The goal of the study was to investigate the history of bullying in those who have bullied while in university. Therefore, to be included in the study, the respondent must have scored at least 1 on any measure of bullying in a post-secondary institution.

### 2.5 Analyses

Bivariate Pearson Product Moment Correlations were conducted to examine the relationships between the bullying variables. To investigate the progression of bullying from childhood to adulthood, Repeated Measures MANOVA (RM-MAOVA) using a within-subject design was conducted for each bullying characteristic. A within-subject RM-MANOVA allows for the examination of the mean similarities and differences in bullying characteristics as a function of time for a single sample. This method will provide information on whether adult bullies used the same tactics and targeted the same victims to similar extents as children, adolescents, and as adults. All post-hoc comparisons were paired-samples $t$-tests using Bonferroni adjustments for multiple comparisons. ANOVA was used to compare scores of those who did and did not self-report being a bully.

**2.6 Results**

Of the 196 adults who indicated at least one act of bullying at some point during their time at university (adulthood), few reported no bullying behaviors during elementary ($n$ = 5, 2.5%), high school ($n$ = 2, 1.0%), or at elementary and high school ($n$ = 2, 1.0%). Although there were too few participants who bullied in adulthood but not in childhood and adolescence (i.e., short-term bully) to compare on adult bullying behaviors, a review of the means suggests that behaviors of short-term bullies were no worse (and may have occurred to a lesser extent) than adult bullying behavior of the long-term bully. Short-term bullies did not use more physical ($M$ = 0.71, $SD$ = 0.95) or verbal ($M$ = 4.0, $SD$ = 3.21) methods or target more active ($M$ = 1.86, $SD$ = 2.97) or passive ($M$ = 0.85, $SD$ = 1.46) victims as adults compared to the long-term bullies (means for long-term bully presented in Table 3). Short-term bullies reported no use of the Internet. Further analyses included only those who bullied at all three time points ($n$ = 189).

To investigate the stability of bullying characteristics, 189 participants who reported at least one incident of bullying at all three time points were included. Of those who bullied at all three time points, 186 completed all questions allowing for scores on each variable of interest. The final sample included 37 males and 149 females aged 17 to 36 ($M$ = 20.02, $SD$ = 2.14). Participants were in their 1st (27.4%), 2nd (39.2%), 3rd (25.3%), or 4th (8.1%) of study. To ensure that the age of the respondent was not a potential covariate, bivariate correlations between respondents' age and each of the bullying variables were investigated. Relationships between age and bullying characteristics over time were not significant ($r$'s ranged between - 0.006 and - 0.12, all $p$'s > 0.09) (see Table 2); therefore, age was not considered further. Moderate to strong relationships were found between the various bullying characteristics (see Table 2). Relationships between the use of physical methods and targeting active victims in high school and post-secondary ($r$'s ranged from 0.15 – 0.31, all $p$'s < .05) were found; however, stronger relationships were found at each time point between targeting passive victims and using physical methods ($r$'s ranged from 0.45 to 0.63, all $p$'s < .000).

To compare the main effect of time on bullying characteristics a RM - MANOVA was conducted. Mauchly's test indicated that the assumption of sphericity had been violated for each bullying characteristic ($\chi^2$'s ranged between 20.23 and 124.65, all $p$'s < .000); therefore, degrees of freedom were corrected using Huynh-Feldt estimates (epsilon = .67 to .91). Results indicated a significant effect of time, Wilks' $\Lambda$ = .60, $F$ (10, 732.0) = 21.42, $p$ < .000, $\eta^2$ = 0.23. Univariate tests revealed significant changes over time for physical [$F$ (1.58, 291.68) = 31.56, $p$ <.000, $\eta^2$ = 0.15] and verbal [$F$ (1.67, 307.98) = 60.89, $p$ < .000, $\eta^2$ = 0.25] bullying and targeting passive [$F$ (1.83, 338.10) = 60.76, $p$ < .000, $\eta^2$ = 0.25] and active [$F$ (1.52, 280.51) = 56.83, $p$ < .000, $\eta^2$= 0.23] victims (see Table 3). Internet use to bully others was not significant. A discussion of time changes for each significant bullying characteristic follows.

**2.6.1 Physical Bullying**. Physical bullying showed significant linear [$F$ (1, 185) = 38.76, $p$ <.000, $\eta^2$ = 0.17] and quadratic [$F$ (1, 185) = 11.13, $p$ = .001, $\eta^2$ = .06] trends. Post-hoc tests reveal that post-secondary physical bullying scores were significantly lower than at elementary ($t_{185}$ = 6.23, $p$<.000) and high school ($t_{185}$ = 7.77, $p$ < .001). There was no significant difference between elementary and high school ($p$ > .05). Physical bullying scores decreased over time, but not significantly until post secondary (see Table 3).

**2.6.2 Verbal bullying**. Verbal bullying showed significant linear [$F$ (1, 185) = 61.89, $p$ <.000, $\eta^2$ = 0.25] and quadratic, [$F$ (1, 185) = 58.25, $p$ <.000, $\eta^2$ = 0.24] trends. Post-hoc tests revealed significant decreases in verbal scores in post-secondary when compared to elementary ($t_{185}$ = 7.86, $p$ <.000) and high school ($t_{185}$ = 12.56, $p$ <.000) (see Table 3). There was no difference in verbal bullying scores between elementary and high school.

**2.6.3 Passive.** Passive targets showed significant linear [$F$ (1, 185) = 80.80, $p$ < .000, $\eta^2$ = 0.30] and quadratic [$F$ (1, 185) = 21.79, $p$ < .000, $\eta^2$ = .10] trends. Significant decreases in scores regarding targeting passive victims were seen at post-secondary compared to elementary ($t_{185}$ = 8.99, $p$ < .000) and high school ($t_{185}$ = 9.07, $p$ <.000). Scores between elementary and high school approached significance ($t_{185}$ = 2.04, $p$ = .05).

**2.6.4 Active.** Active targets showed significant linear [$F$ (1, 185) = 60.30, $p$ < .000, $\eta^2$ = 0.25] and quadratic [$F$ (1, 185) = 47.03, p < .000, $\eta^2$ = 0.20] trends. Targeting active victims did not differ between elementary and high school; however, post-secondary scores were significantly higher than elementary ($t_{185}$ = 7.76, $p$<.000) and high school ($t_{185}$ = 8.86, $p$ <.000). Again, scores remained relatively constant between elementary and high school and then decreased at post-secondary school. Self-reports of being a bully revealed that approximately one-quarter of the long-term bullying sample described themselves as a bully in elementary (26.5%, $n$ = 53), high school (24.2%, $n$ = 45), and post-secondary (9.7%, $n$ = 18).

ANOVAs revealed significant differences in characteristics (see Table 4). Compared to self-reported *non*bullies, self-reported bullies engaged in more physical, verbal, and Internet bullying and had higher mean scores on targeting passive victims [all $F$'s (1, 184) = 12.32 to 43.03, all $p$'s < .001]. Targeting active victims did not differ between groups at any time point (see Table 4). However, of note, even those who reported *not* being a bully engaged, on average, in more than one act of bullying.

## *3.0 Discussion*

The purpose of the study was to determine whether university students who indicated recent bullying had a history of bullying as children and adolescents and, if so, whether they engaged in similar behaviors throughout. Most of those who acknowledged bullying during their post-secondary education also reported bullying using similar bullying behaviors at both elementary and high school ages. The results revealed that almost all university students who bullied had a history of bullying, suggesting that adult bullying may be entrenched and thus difficult to change. The percentage of those who bullied at all three time points was much higher (96%) than was found in another study of similar aged college students (54%) (see Chapell et al., 2006); the design of these studies may account for the differences as Chapell and colleagues simply asked whether the participant had bullied whereas we based a bullies history on the respondents endorsement of specific behaviors. To understand this percentage difference, investigation into those who self-identified within our sample revealed that the majority self-reported not being a bully, even though they engaged in multiple bullying behaviors. The higher mean scores on various bullying characteristics suggest that recognizing or defining oneself as a bully may be a function of their behaviors. Those who consider themselves a bully may judge this based on the extent of their behaviors compared to their peers, even though peers are still engaging in behaviors consistent with accepted definitions of bullying.

With such a large percentage of participants qualifying as long-term bullies, it was not possible to investigate long- and short- term bullies on their behaviors. It is possible that long-term bullies found greater benefit or fewer consequences early and thus continued to act in such a manner. It may also be that short-term bullies' behaviors are situation-specific and not stable. Further research should help to tease out the differences in behaviors of long- and short- term bullies. Consistent with previously reported research, there was a reduction in bullying characteristics with age; however, the decrease in this sample did not occur until post-secondary school (i.e., young adulthood). Decreases in the use of verbal and physical methods to bully found in post-secondary contexts suggests that climate, relationships, and age may be factors affecting bullying behaviors. As noted by Pepler and colleagues (2006), there are both developmental and relational aspects to bullying. Bullying has been linked to a power differential in which the bully has a size, status, age, or strength advantage (Olweus, 1993); within a university setting, it may be that the long-term bully no longer has advantages over as many peers as in earlier years thus lessoning the opportunity to bully. Bullies are often part of a supportive peer group (Salmivalli et al., 1997) and if new peers at university do not condone bullying behavior, the long-term bully will be required to adjust their behaviors to meet the new peer group's values.

The decrease in typically targeted victim characteristics may be a function of decreases in bullying in general (i.e., less bullying requires fewer victims) or fewer appropriate targets. Having knowledge of the target's vulnerabilities benefits the bully (Sutton et al., 1999); however, it may take time to identify the vulnerabilities necessary to choose an appropriate target or to determine which bullying behavior would be most effective within a new peer group. Strong relationships between physical and verbal bullying with passive targets were found across all age groups. Therefore, it seems that targeting those with passive characteristics increases the use of physical, verbal, and Internet methods or it may be that aggressive bullies seek out passive victims. Even though there was a decrease in verbal and physical bullying at university, passive individuals are seemingly continually at risk from long-term bullies.

The fact that many of the young adults had stable bullying characteristics suggests that they received minimal consequences or benefited from their behaviors. As noted by Harvey and colleagues, even though bullies may be unaware or ignore appropriate social convention, they have managed to harm others while avoiding negative consequence (Harvey, Heames, Richey, & Leonard, 2006). The decrease in post-secondary incidents may reflect that victims and bystanders do not remain silent. Research has revealed that bystanders may reinforce the bully by quietly watching or verbally encouraging the bully (O'Connell, Pepler, & Craig, 1999). Thorndike (2007) discussed various reasons why young bystanders do not intervene, which may include a fear of increasing the victim's embarrassment and following the behavior of other witnesses who remain uninvolved.

Decreases in bullying at university suggest that victims and bystanders may be less tolerant; future research regarding the impact of bystanders on young adult bullying will be valuable. Age changes may also be a factor in the results. Empathy increases with age (Davis & Franzoi, 1991) and is related to the treatment of others (Feshbach, 1989; Eisenberg & Miller, 1987; Zahn-Waxler & Radke-Yarrow, 1990). Similarly, self-conscious emotions of guilt and shame have shown relationships with age (Kalat & Shiota, 2007; Walter & Burnaford, 2006). It may be that with age comes more consideration for the impact of behavior on others and themselves. However, those whose behaviors are entrenched or who do not empathize with victims will continue, regardless of witnesses' and victims' reactions.

### 3.1 Limitations

A major strength of the present study was that it provided knowledge of bullying over time; however, there are limitations that affect the generalizability of the results. The sample was primarily female and Caucasian undergraduate university students attending the same school. Although gender was not of interest, it is possible that gender, as well as cultural differences in the progression of bullying, exists. Additionally, the retrospective self-report approach required participants to recall past bullying behaviors and these recollections may or may not have been accurate. Despite these limitations, this study provided insight into the history and stability of bullying characteristics of young adults who bully.

### 3.2 Implications and future directions

The present study provided important knowledge regarding the history and stability of bullying for young adults. By young adulthood, bullying characteristics decreased but still existed and those who continued to bully tended to target more victims who were passive. These results suggest that many young adults who bully likely have a long-term history of engaging in similar behaviors. Overall, those attempting to intervene with young adults who bully in university may want to ensure 1) there are appropriate consequences to the behaviors, 2) the bully is not benefiting from their behaviors, and 3) that victims and witnesses are aware of protocols to address bullying. Post-secondary institutions must ensure that measures are in place to address issues of bullying. Student safety, both on and off campus, and clearly defined procedures that address bullying behaviors must be clearly stated and understood by all.

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**Table 1 Internal consistency (Cronbach's Coefficient Alpha) for measures of type and target of bullying**

| Measures | Elementary | High school | Post-secondary |
|---|---|---|---|
| Type of bullying | | | |
| Physical | .89 | .78 | .80 |
| Verbal | .94 | .93 | .93 |
| Internet | .85 | .82 | .86 |
| Target of bullying | | | |
| Active | .82 | .84 | .89 |
| Passive | .84 | .83 | .86 |

**Table 2.Pearson correlations between age and bullying characteristics**

| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Age | -.09 | -.01 | -.09 | -.12 | -.05 | -.09 | -.06 | -.13 | -.11 | -.03 | -.07 | -.04 | -.08 | -.04 | -.09 |
| 2 E physical | | .66** | .45** | .82** | .58** | .53** | .58** | .55** | .55** | .15* | .15* | .10 | .51** | .46** | .48** |
| 3 HS physical | | | .68** | .58** | .73** | .70** | .34** | .57** | .60** | .19** | .27** | .24** | .54** | .64** | .62** |
| 4 PS physical | | | | .38** | .54** | .70** | .39** | .66** | .68** | .41** | .51** | .63** | .04 | .18* | .31** |
| 5 E verbal | | | | | .75** | .63** | .51** | .51** | .45** | .50** | .42** | .45** | .17* | .16* | .09 |
| 6 HS verbal | | | | | | .82** | .33** | .63** | .56** | .51** | .60** | .56** | .18* | .28** | .17* |
| 7 PS verbal | | | | | | | .38** | .68** | .67** | .47** | .55** | .69** | .05 | .13 | .24** |
| 8 E internet | | | | | | | | .59** | .55** | .36** | .32** | .40** | -.09 | .02 | .07 |
| 9 HS internet | | | | | | | | | .91** | .43** | .48** | .59** | -.06 | .03 | .11 |
| 10 PS internet | | | | | | | | | | .47** | .51** | .67** | -.11 | -.03 | .09 |
| 11 E passive | | | | | | | | | | | .81** | .64** | .22* | .21* | .21* |
| 12 HS passive | | | | | | | | | | | | .75** | .14 | .29** | .27** |
| 13 PS passive | | | | | | | | | | | | | .10 | .23* | .45** |
| 14 E active | | | | | | | | | | | | | | .82** | .46** |
| 15 HS active | | | | | | | | | | | | | | | .61** |
| 16 PS active | | | | | | | | | | | | | | | |

E = elementary, HS = high school, PS = post secondary
Physical = physical bullying, verbal = verbal bullying, internet = internet bullying, passive = passive target, active = active target
* $p < .05$ ** $p < .$

**Table 3. Means (Standard Deviations) for bullying characteristic scores over time**

| Time point | Physical | Verbal | Internet | Active* | Passive* |
|---|---|---|---|---|---|
| Elementary | 2.97 (3.42)[a] | 11.62 (7.76)[a] | .29 (1.00) | 5.84(3.93)[a] | 3.86 (3.28)[a] |
| High School | 2.63 (2.43)[b] | 11.80 (7.10)[b] | .41 (1.07) | 5.74 (3.83)[b] | 3.54 (3.21)[b] |
| Post Secondary | 1.48 (2.64)[a,b] | 7.97 (6.55)[a,b] | .34 (1.11) | 3.56 (3.80)[a,b] | 2.10 (2.94)[a,b] |

*Type of target for victimization
Note: the same letters in the same column indicate significant differences
All differences are significant at $p < .000$

**Table 4.Mean (Standard Deviation) for bullying characteristics between those who did and did not self-identify as a bully at each time point**

| | Elementary bully | | High school bully | | Post-secondary bully | |
|---|---|---|---|---|---|---|
| Characteristic | Yes ($n$ = 53) | No ($n$ = 133) | Yes ($n$ = 45) | No ($n$ = 141) | Yes ($n$ = 18) | No ($n$ = 168) |
| Physical* | 5.13 (4.83) | 2.10 (2.14) | 3.84 (3.53) | 2.25 (0.15) | 3.50 (3.05) | 1.30 (2.51) |
| Verbal* | 16.96 (9.04) | 9.50 (6.02) | 16.28 (8.94) | 10.38(5.75) | 15.78 (10.58) | 7.14 (5.37) |
| Internet* | 0.70 (1.67) | 0.12 (0.45) | 0.96 (1.86) | 0.25 (0.57) | 1.50 (2.41) | 0.21 (0.78) |
| Active | 5.91 (4.25) | 5.82 (3.82) | 6.18 (4.36) | 5.60 (3.65) | 3.67 (3.73) | 3.55 (0.29) |
| Passive* | 5.53 (3.96) | 3.20 (2.71) | 5.29 (3.87) | 2.99 (2.75) | 5.11(5.13) | 1.78 (2.41) |

* $p$'s < .001 between yes and no within age group.