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# Students' Experiences of Bullying in High School and Their Adjustment and Motivation During the First Semester of College

Alan K. Goodboy, Matthew M. Martin, & Zachary W. Goldman

*Bullying is a highly destructive communicative behavior. The purpose of this study was to determine if high school victimization experiences from bullying influence college students' first-semester transition experiences. College students (N = 149) completed a questionnaire during their first month in school measuring their retrospective bullying experiences in high school (relational-verbal bullying, cyberbullying, physical bullying, culture-based bullying), their current motivation for attending college (intrinsic motivation, extrinsic motivation, amotivation), and their first-semester adjustment (academic adjustment, social adjustment, personal-emotional adjustment, institutional attachment). Results revealed negative relationships between first-semester students' reports of high school victimization and their current motivation to attend and adjustment to their first month of college. These findings suggest that even though the college experience may be a new start for some students, victimization experiences during high school have a lingering effect on first-semester students' academic and social transitions to college.*

*Keywords:* College Adjustment; First-Semester Transition; High School Bullying; Motivation

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For many first-semester college students, the transition to college is one of the most rewarding and exciting of life endeavors. After all, college offers students a variety of educational and social experiences that foster intellectual growth, psychosocial change, moral development, and lifestyle changes (Pascarella & Terenzini, 2005). Although ideally the transition from high school to college should be an enlivening time, in reality this transition can be difficult for some students. Colleges and universities are aware of this strain on students, which is why many institutions offer seminars, programs, or courses (e.g., Conley, Travers, & Bryant, 2013) that help ease students into the first-year experience by emphasizing “the importance of students connecting in meaningful ways to their peers” (Kuh, Kinzie, Schuh, & Whitt, 2005, p. 248). The first-semester college experience is particularly demanding for students; as Renn and Reason (2013) pointed out, “successfully navigating this time period is crucial to student success because students are presented with a myriad of new challenges while simultaneously losing some existing social and family support” (p. 78).

It is especially important for first-year college students to form new peer relationships and become involved in social activities early on to have a successful college transition (Milem & Berger, 1997). For some students, however, bonding with peers in school becomes a difficult undertaking. Namely, students who are bullied in school have trouble forming peer relationships in young adulthood (Jantzer, Hoover, & Narloch, 2006). Although students who have peer support tend to be victimized less in school, peers can also serve as sources for repeated victimization and marginalization for students (Pellegrini & Van Ryzin, 2011). Research clearly stresses that involvement, peer support, and integration into social activities are helpful during the transition to college (Conley et al., 2013), but students who are bullied in school may lack these opportunities as outcasts in social circles and thus have difficulty with the transition process. Students who struggle with the transition to college often experience motivational and adjustment problems (Renn & Reason, 2013; Terenzini et al., 1994; Wentzel & Brophy, 2014), complications which could be exacerbated by previous experiences of bullying in high school (Hampel, Manhal, & Hayer, 2009; Nansel, Haynie, & Simons-Morton, 2003). Therefore, the purpose of this study was to determine if bullying experiences in high school are associated with first-semester college students’ transition to the university. Specifically, this study argued that bullying experiences in high school bleed over into college life by hindering motivation and adjustment during the first semester.

## **Bullying**

Although several definitions of bullying exist, partnerships between the National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, and U.S. Department of Education (Gladden, Vivolo-Kantor, Hamburger, & Lumpkin, 2014) offer a uniform definition of bullying among youth (i.e., school-aged individuals 5–18 years of age). Bullying is defined as “any unwanted aggressive behavior(s) by another youth or group of youths who are not siblings or current dating partners that involves an observed or perceived power imbalance and is repeated

multiple times or is highly likely to be repeated” (p. 7). Gladden et al. (2014) reported that bullying consists of different modes (direct vs. indirect), types (physical, verbal, relational, damage to property), and contexts (school, neighborhood, online). Hunt, Peters, and Rapee (2012) note that bullying in youth encompasses a wide range of victimizing behaviors including relational-verbal bullying (making fun of a victim, name-calling, trying to turn others against the victim), cyberbullying (communicating nasty or threatening messages via text, phone, e-mail, websites), physical bullying (hitting, punching, kicking, shoving, destroying property), and culture-based bullying (making fun of language, cultures, and backgrounds).

Bullying in school has long-term psychological correlates in adult life that lead to self-esteem issues, feelings of loneliness, and lower quality of life (Schafer et al., 2004; Swearer, Collins, Radliff, & Wang, 2011). Bullying also has deleterious effects on students’ academic outcomes including class participation (Buhs, Ladd, & Herald-Brown, 2012), academic competence, (Ma, Phelps, Lerner, & Lerner, 2009), absenteeism (Gastic, 2008), and academic achievement (Nakamoto & Schwartz, 2010).

Although much of the research on bullying and victimization focuses on primary and secondary schooling (Salmivalli & Peets, 2009; Smith, 2012), college may afford opportunities for victims to escape previous bullies, a possibility that might explain Schafer et al.’s (2004) statement that “university life may let a former victim recover, at least partially” (p. 391). Despite this potential chance for victims to form new peer relationships in college and avoid former bullies, unfortunately research suggests that bullying occurs in college and does carry over from high school (Chapell et al., 2004, 2006). As Adams and Lawrence (2011) summarized, “Students who are bullied in high school and/or junior high school continue to be victimized (called names, excluded from class activities, physically abused, etc.) in college” (p. 8). It is likely, then, that bullying experiences in high school play an important role in students’ motivation to continue their education at college and their adjustment to college immediately after high school.

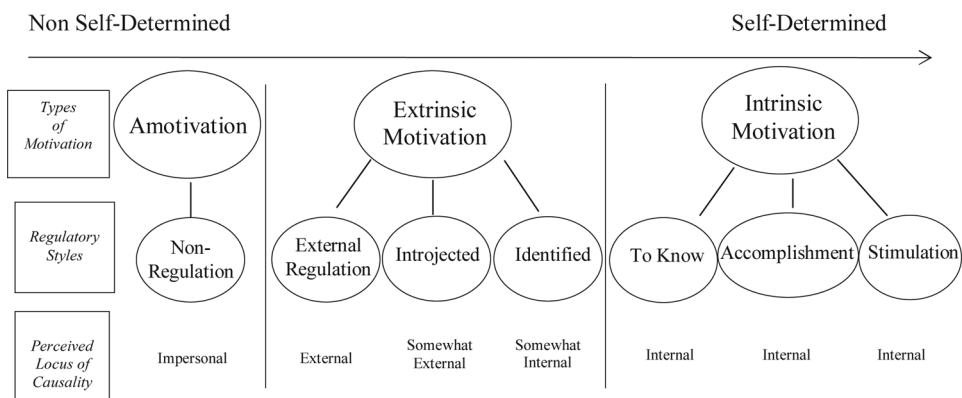
### **Motivation for Attending College**

Motivation for attending college has been considered “one of the most important psychological concepts in education” (Vallerand et al., 1992, p. 1004). Within instructional communication literature, scholars have frequently recognized the importance of motivation in the classroom as a predictor of student success and learning (e.g., Christophel, 1990; Christophel & Gorham, 1995; Richmond, 1990). However, few have acknowledged or examined the importance of students’ motivation for attending college; this dynamic can significantly influence students’ involvement in educational experiences (Vallerand et al., 1993), approaches toward studying (Fairchild, Horst, Finney, & Barron, 2005), and the overall likelihood of completing a college degree (Allen, 1999). Previous research has demonstrated students have a multitude of reasons for pursuing higher education that provides unique influences on their college experiences (see Bui, 2002). One theory extensively used to

examine these reasons and motivations in various educational contexts is self-determination theory (SDT; Deci & Ryan, 1985, 2000).

SDT posits that all students have an internal desire for stimulation, growth, and development that is either supported or discouraged by a host of variables subsumed within previous educational experiences and learning environments (Deci, Vallerand, Pelletier, & Ryan, 1991). This internal desire for growth and development, often called intrinsic motivation, is dependent upon the fulfillment of three basic psychological needs: the need for autonomy (i.e., perceiving to be the origin or source of one's own behavior), the need for competence (i.e., feeling effective with required tasks and experiencing opportunities to express one's capabilities), and the need for relatedness (i.e., perceiving personal connections with others in the social context; Ryan & Deci, 2002). Collectively, the extent to which these three psychological needs are fulfilled determines the type of motivation that individuals experience (Ryan & Deci, 2009). Specifically, SDT argues for the existence of three general types of motivation that dictate and guide individuals' behaviors: amotivation (AM), extrinsic motivation (EM), and intrinsic motivation (IM; Deci & Ryan, 1985). Based upon these three types of motivation, Vallerand et al. (1992) proposed a continuum of seven distinct motivation dimensions that reflect the multitude of reasons students have for pursuing a college degree (see Figure 1).

As seen in Figure 1, the SDT continuum ranges from amotivation (far left) to intrinsic motivation to experience stimulation (far right) and reflects the degree to which individuals perform self-determined behaviors (Vallerand et al., 1992). On the left side of the continuum, actions that lack self-determination are considered to elicit *amotivation*, or the absence of drive and intent needed to pursue activities and engage in behaviors (Ryan & Deci, 2000b). Individuals are said to be amotivated when they are neither extrinsically nor intrinsically driven to pursue a behavior (Horyna & Bonds-Raacke, 2012). When individuals are amotivated they do not find their behaviors to be valuable or rewarding and often question the motives behind



**Figure 1** Continuum of Motivation (Self-Determination Theory). *Note.* Visual representation of motivation to attend college (Vallerand et al., 1992) modeled after Ryan and Deci's (2000a) continuum of motivation.

their actions (Fairchild et al., 2005). According to Deci and Ryan (1985), amotivation occurs when individuals feel incompetent or unqualified to engage in a behavior, or when they perceive that forces beyond their control dictate their decisions and actions. With regard to education, students who are amotivated tend to experience negative consequences and outcomes (Vallerand et al., 1993). For example, amotivated students tend to have difficulty adjusting to school, are less persistent in completing their degree, and are less satisfied with their academic experiences (Vallerand, Blais, Briere, & Pelletier, 1989).

Additionally, SDT asserts that individuals engage in some behaviors for extrinsic reasons (Deci & Ryan, 1985). *Extrinsic motivation* refers to “the performance of an activity in order to attain some separable outcome” (Ryan & Deci, 2000a, p. 71). According to Vallerand and Ratelle (2002), extrinsic motivation encompasses an array of behaviors enacted for instrumental purposes such as receiving rewards or avoiding punishments. Based upon the degree to which these behaviors are internalized and autonomous, three specific types of extrinsic motivation are thought to exist (Vallerand et al., 1992). *Externally regulated* motivation occurs when individuals engage in behaviors “to attain a positive end state or avoid a negative end state which are separate from the activity itself” (Vallerand & Ratelle, 2002, p. 42). *Introjected* motivation occurs when individuals begin to move beyond purely external motives and start to internalize the reasons for their behaviors (Ryan & Deci, 2009); however, as Vallerand et al. (1992) note, “This form of internalization, while internal to the person, is not truly self-determined since it is limited to the internalization of past external contingencies” (p. 1006). In other words, introjected motivation exists when individuals engage in behaviors in order to avoid negative internal feelings such as shame or guilt (Vallerand & Ratelle, 2002). *Identified* motivation occurs when individuals enact behaviors because they find them to be somewhat valuable and rewarding (Ryan & Deci, 2009); while still extrinsic, individuals who act from identified motives are said to be relatively autonomous and self-determined in their behaviors.

Finally, when individuals’ psychological needs of autonomy, competence, and relatedness are fulfilled, they tend to become fully self-determined and experience a third type of motivation known as intrinsic motivation (Deci & Ryan, 1985). *Intrinsic motivation* refers to individuals’ tendency to “engage in activities that interest them and, in so doing, help them to learn, develop, and expand their capacities” (Ryan & Deci, 2000b, p. 16). Decades of empirical investigations support the notion that intrinsic motivation is the most productive and valuable driving force of human behavior (see Deci, Koestner, & Ryan, 1999). Based upon Deci’s (1975) contention that intrinsic motivation derives from multiple origins, Vallerand et al. (1992) advanced three types of intrinsic motivation toward education: IM to know, IM to accomplish, and IM to experience stimulation. First, *intrinsic motivation to know* refers to engaging in behaviors for the pleasure and satisfaction derived from learning and understanding new ideas or concepts (Ryan & Deci, 2009). Second, *intrinsic motivation to accomplish* refers to “engaging in activities because of the pleasure and satisfaction derived from trying to surpass oneself, creating, or accomplishing

something” (Vallerand & Ratelle, 2002, p. 42). Third, *intrinsic motivation to experience stimulation* refers to engaging in behaviors because they are internally fulfilling and are intellectually stimulating to the individual (Vallerand et al., 1992).

Taken together, SDT and supporting empirical investigations suggest that intrinsically motivated students thrive in educational settings (Reeve, 2002); but, as many educators attest, many students attend college and approach their classes with little to no intrinsic motivation (Deci et al., 1991). Although multiple reasons may exist for college students’ perceived lack of motivation, one of the more salient explanations is the influence of students’ high school experiences carrying over and impeding their motivation to attend college. More specifically, bullying experiences from high school often resonate with students long after they have received their high school diploma (Adams & Lawrence, 2011) and arguably demotivate students who continue to pursue their education into college. According to Legault, Green-Demers, and Pelletier (2006), academic beliefs such as amotivation are “strongly influenced by key social agents in the student’s environment, whether these be teachers, parents, or peers” (p. 569). Previous research suggests that students who are amotivated toward education lack social support from peers (Legault et al., 2006) and experience stress in college (Baker, 2004). In contrast, students are more likely to pursue and succeed in their educational experiences when influential others in their lives (e.g., family, friends, classmates) openly value and encourage academic success (Astill, Feather, & Keeves, 2002). Moreover, in accordance with SDT, bullying experiences in high school likely impede the fulfillment of students’ basic psychological needs (i.e., autonomy, competence, relatedness) because bullied students often doubt their own self-concepts (Marsh, Parada, Craven, & Finger, 2004), lack self-perceived academic competence (Ma et al., 2009), and do not relate well with their peers (Jantzer et al., 2006). Bullying certainly can prevent students from meeting their basic psychological needs, and SDT clearly predicts that when students’ psychological needs remain unfulfilled, they will lack motivation and, instead, experience amotivation. Therefore, we offer the following hypotheses:

- H1: Students’ bullying experiences (relational-verbal bullying, cyberbullying, physical bullying, culture-based bullying) in high school will be related positively to amotivation for attending college during the first semester.
- H2: Students’ bullying experiences (relational-verbal bullying, cyberbullying, physical bullying, culture-based bullying) in high school will be related inversely to extrinsic motivation for attending college (external regulation, introjected, identified) during the first semester.
- H3: Students’ bullying experiences (relational-verbal bullying, cyberbullying, physical bullying, culture-based bullying) in high school will be related inversely to intrinsic motivation for attending college (to know, to accomplish, to experience stimulation) during the first semester.

### Adjustment

Although SDT makes predictions about students’ need fulfillment to explain their motivation to attend college, the theory also frames students’ adjustment to the



college experience. SDT research suggests that when students' psychological needs are met, they experience enhanced growth and personal adjustment (Black & Deci, 2000; Deci et al., 1991). Although adjustment in college has been operationalized in many ways, Baker and colleagues (Baker, McNeil, & Siryk, 1985; Baker & Siryk, 1984, 1986, 1999) revealed that college students typically experience four distinct types of adjustment in college: academic adjustment (meeting the educational demands of college and performing well), social adjustment (coping with the interpersonal demands of college), personal-emotional adjustment (feeling physically and psychologically well and lacking distress), and institutional attachment (feeling good about college in general and having a quality bond with the chosen institution). A variety of factors that influence whether or not students adjust to the college experience include parental attachment, expectations, and home life (Agliata & Renk, 2008; Mattanah, Lopez, & Govern, 2011; Tyler et al., 2011), friendship quality (Beyers & Goossens, 2002; Buote et al., 2007; Pittman & Richmond, 2008), self-efficacy (Ramos-Sánchez & Nichols, 2007), social development goals (Shim & Ryan, 2012), coping ability (Byrd & McKinney, 2012), timing of the school year (Sutton, Muller, & Langenkamp, 2013), and marital status (Meehan & Negy, 2003).

In a meta-analysis, Credé and Niehorster (2012) found that students who do not adjust well to college have a lower grade point average, are less likely to finish college, and are more likely to seek counseling services and experience loneliness, depression, and stress. There is plenty of empirical evidence to confirm that bullying in elementary and middle school is linked with adjustment problems in school (Nansel et al., 2001). Victimized children have academic adjustment struggles such as performing well with assignments, getting along with classmates, following rules, and completing homework (Nansel et al., 2003; Wang, Iannotti, & Luk, 2011), coupled with higher rates of mental health and adjustment problems later on in life (Gibb, Horwood, & Fergusson, 2011; Schafer et al., 2004; Stavrinides, Georgiou, Nikiforou, & Kiteri, 2011). Moreover, the effects of bullying on adjustment are enhanced when students have maladaptive coping skills (Hampel et al., 2009).

Undoubtedly, bullying in elementary and secondary school harms students both academically and personally (Myers & Rittenour, 2010) by creating self-esteem and interpersonal problems (Suresh & Tipandjan, 2012). Further, it is clear that students who are bullied have adjustment problems during elementary school and middle school (Hampel et al., 2009; Nansel et al., 2001, 2003; Wang et al., 2011). However, it is not clear if these early bullying experiences create pervasive adjustment problems in college. Although research suggests that the effects of bullying last into college (Adams & Lawrence, 2011), it is unclear if adjustment during the onset of college is tainted by prior bullying experiences in high school. Schafer et al. (2004) suggest that a new experience in college may allow students to escape previous bullies and "start over." Yet, it is likely that students who were bullied in high school possess negative ideas about school and peer relations, and their victimization experiences may continue to provide maladjustment as they transition to college. Moreover, as SDT posits, bullying denies students' basic psychological needs, thus likely affects



their maladjustment to school (Black & Deci, 2000; Deci et al., 1991). Therefore, we offer a fourth hypothesis:

- H4: Students' bullying experiences (relational-verbal bullying, cyberbullying, physical bullying, culture-based bullying) in high school will be inversely associated with student adjustment (academic adjustment, social adjustment, personal-emotional adjustment, institutional attachment) during the first semester of college.

## Method

### *Participants*

The participants sampled in this study were 149 first-year college students attending their first semester of college (72 men, 77 women) who were enrolled in large lecture introductory level communication studies courses at a Mid-Atlantic university. These courses were selected because they were general education courses with a variety of students and majors. Participants were sampled during the first month of their first semester as they began to adjust to college. Participants' ages ranged from 18 to 25 years old ( $M = 18.25$ ,  $SD = 0.87$ ) and approximately 15% ( $n = 22$ ) of the sample consisted of first-generation college students.

### *Procedures and Measurement*

After obtaining IRB approval, participants completed an anonymous questionnaire during the first month of their first semester in college. Participants were instructed to complete a retrospective questionnaire measuring their victimization experiences in high school (spanning from grades 9 through 12) and their current level of motivation and adjustment to college during the fourth week of their first semester. This data collection decision is consistent with other adjustment studies where data were collected at the beginning of the semester and before the midterm (e.g., Feldt, Graham, & Dew, 2011). The questionnaire was comprised of the Personal Experiences Checklist (PECK; Hunt et al., 2012), Academic Motivation Scale (AMS; Vallerand et al., 1992), and Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1999), along with demographic questions.

### *Bullying*

The PECK consists of 32 items and measures four types of bullying experiences during youth, including relational-verbal bullying (11 items, e.g., "other students called me names because I'm a bit different"), cyberbullying (eight items, e.g., "other students said nasty things to me through text messages"), physical bullying (nine items, e.g., "other students hit me"), and culture-based bullying (four items, e.g., "other students made fun of my culture"). Responses were solicited using a 5-point Likert-type response format ranging from (1) *Never* to (5) *Most Days*. Previous internal reliability estimates for the subscales have ranged from .78 to .91 (Hunt et al., 2012). The obtained Cronbach alphas in this study were: relational-verbal bullying

( $\alpha = .86$ ,  $M = 1.97$ ,  $SD = .61$ ), cyberbullying ( $\alpha = .79$ ,  $M = 1.31$ ,  $SD = .40$ ), physical bullying ( $\alpha = .86$ ,  $M = 1.14$ ,  $SD = .39$ ), and culture-based bullying ( $\alpha = .79$ ,  $M = 1.31$ ,  $SD = .65$ ).

### *Motivation*

The AMS consists of 28 items and measures students' intrinsic motivation (i.e., to know, towards accomplishments, to experience stimulation), extrinsic motivation (i.e., external regulation, introjected, identified), and amotivation towards college education using seven subscales (four items each). The scale prompts respondents by asking "Why do you go to college?" and lists the 28 items as representative answers. Sample items include: "Because I experience pleasure and satisfaction learning new things" (intrinsic motivation to know); "For the pleasure I experience while surpassing myself in my studies" (intrinsic motivation toward accomplishment); "For the intense feelings I experience when I am communicating my own ideas to others" (intrinsic motivation to experience stimulation); "Because with a high school degree I would not find a high paying job later on" (extrinsic motivation–external regulation); "To prove to myself that I am capable of completing my college degree" (extrinsic motivation–introjected); "Because I think that a college education will help me better prepare for the career I have chosen" (extrinsic motivation–introjected); and "Honestly, I don't know, I really feel that I am wasting my time in school" (amotivation). Responses for these items were solicited using a 7-point Likert-type response format ranging from (1) *Does not correspond at all* to (7) *Corresponds exactly*. Previous internal reliability estimates for the subscales have ranged from .62 to .86 (Cokley, Bernard, Cunningham, & Motoike, 2001; Vallerand et al., 1992, 1993). The obtained Cronbach alphas in this study were: amotivation ( $\alpha = .79$ ,  $M = 1.93$ ,  $SD = 1.25$ ), extrinsic motivation–external regulation ( $\alpha = .77$ ,  $M = 6.40$ ,  $SD = .96$ ), extrinsic motivation–introjected ( $\alpha = .79$ ,  $M = 5.69$ ,  $SD = 1.23$ ), extrinsic motivation–identified ( $\alpha = .77$ ,  $M = 6.28$ ,  $SD = .98$ ), intrinsic motivation to know ( $\alpha = .84$ ,  $M = 5.42$ ,  $SD = 1.27$ ), intrinsic motivation toward accomplishment ( $\alpha = .79$ ,  $M = 5.04$ ,  $SD = 1.34$ ), and intrinsic motivation to experience stimulation ( $\alpha = .82$ ,  $M = 3.86$ ,  $SD = 1.41$ ).

### *Adjustment*

The SACQ is 67 items and measures student adjustment to college across four subscales including academic adjustment (24 items that measure success at coping with educational demands, e.g., "I have been keeping up to date on my academic work"), social adjustment (20 items that measure success at coping with interpersonal/societal demands, e.g., "I feel that I fit in well as part of the college environment"), personal-emotional adjustment (15 items that measure psychological and physical wellness, e.g., "Being on my own and taking responsibility for myself has not been easy"), and institutional attachment (15 items that measure satisfaction with the college experience and specific college attended, e.g., "I wish I were at another college or university"). Responses were solicited using a 9-point Likert-type response format

ranging from (1) *Doesn't apply to me at all* to (9) *Applies very closely to me*. Previous internal reliability estimates for the subscales have ranged from .85 to .89 (Cooper & Robinson, 1988; Taylor & Pastor, 2007). The obtained Cronbach alphas in this study were: academic adjustment ( $\alpha = .86$ ,  $M = 6.27$ ,  $SD = 1.03$ ), social adjustment ( $\alpha = .88$ ,  $M = 6.29$ ,  $SD = 1.23$ ), personal-emotional adjustment ( $\alpha = .85$ ,  $M = 5.84$ ,  $SD = 1.40$ ), and institutional attachment ( $\alpha = .85$ ,  $M = 6.93$ ,  $SD = 1.33$ ).

## Results

Because multiple variable sets were measured continuously (bullying, adjustment, motivation), two canonical correlations were computed to control the inflation of experimentwise error (Thompson, 2000) and collectively test the hypotheses. Structure coefficients that reached the .45 level were interpreted (Sherry & Henson, 2005). The first canonical correlation examined the effects of high school bullying on first-semester students' motivation to attend college. Results of this test, which accounted for 27% of the variance, revealed one significant function (Wilks's  $\Lambda = .73$ ;  $F(28, 491.78) = 1.57$ ,  $p < .05$ ). The results of this function, including structure coefficients, squared structure coefficients, and redundancy coefficients

**Table 1** Canonical Solution for High School Bullying Predicting First-Semester Motivation in College

| Variables  | Function                |                                      |
|--|-------------------------|--------------------------------------|
|  | (R <sub>c</sub> = .381) |                                      |
|  | <i>r<sub>s</sub></i>    | <i>r<sub>s</sub><sup>2</sup></i> (%) |
| Set 1: High School Bullying                      |                         |                                      |
| Relational-Verbal Bullying                       | <b>.401</b>             | 16.08                                |
| Cyberbullying                                    | <b>.905</b>             | 81.90                                |
| Physical Bullying                                | <b>.594</b>             | 35.28                                |
| Culture-Based Bullying                           | <b>.646</b>             | 41.73                                |
| Redundancy Coefficient                           | (.437)                  |                                      |
| Set 2: First-Semester Motivation for College     |                         |                                      |
| Intrinsic Motivation (to know)                   | -.315                   | 9.92                                 |
| Intrinsic Motivation (toward accomplishment)     | .051                    | 0.26                                 |
| Intrinsic Motivation (to experience stimulation) | -.157                   | 2.46                                 |
| Extrinsic Motivation (identified)                | -.617                   | 38.07                                |
| Extrinsic Motivation (introjected)               | -.235                   | 5.52                                 |
| Extrinsic Motivation (external regulation)       | -.652                   | 42.51                                |
| Amotivation                                      | <b>.586</b>             | 34.34                                |
| Redundancy Coefficient                           | (.028)                  |                                      |

Note. Wilks's  $\Lambda = .73$ ;  $F(28, 491.78) = 1.57$ ,  $p < .05$ .  $r_s$  = structure coefficient;  $r_s^2$  = squared structure coefficient. Structure coefficients greater than .45 were interpreted.

are available in Table 1. This function ( $R_c = .381$ ;  $R_c^2 = .145$ ) revealed that first-year students who reported more bullying in high school (relational-verbal bullying, cyberbullying, physical bullying, culture-based bullying) experienced less extrinsic motivation to attend college (identified, external regulation) and reported more amotivation.

The second canonical correlation examined the effects of high school bullying on first-semester students' adjustment to college. Results of this test, which accounted for 24% of the variance, revealed two significant functions (Wilks's  $\Lambda = .76$ ;  $F(16, 355.02) = 2.08$ ,  $p < .01$ ). The results of these functions, including structure coefficients, squared structure coefficients, redundancy coefficients, and communality coefficients are available in Table 2. The first function ( $R_c = .342$ ,  $R_c^2 = .117$ ) revealed that first-year students who reported more bullying in high school (relational-verbal bullying, cyberbullying, physical bullying, culture-based bullying) were less adjusted to college overall (academic adjustment, social adjustment, personal-emotional adjustment, institutional attachment). The second function ( $R_c = .303$ ,  $R_c^2 = .092$ ), which accounted for variance remaining after the first function was extracted, revealed that when first-year students reported more relational-verbal bullying in high school, but less cyberbullying, they reported less academic adjustment and personal-emotional adjustment.

**Table 2** Canonical Solution for High School Bullying Predicting First-Semester College Student Adjustment

| Variables                                   | Function 1     |             | Function 2     |             | $h^2$        |
|---|----------------|-------------|----------------|-------------|--------------|
|   | $(R_c = .342)$ |             | $(R_c = .303)$ |             |              |
|   | $r_s$          | $r_s^2$ (%) | $r_s$          | $r_s^2$ (%) |              |
| Set 1: High School Bullying                 |                |             |                |             |              |
| Relational-Verbal Bullying                  | <b>.521</b>    | 27.14       | <b>.466</b>    | 21.72       | <b>48.86</b> |
| Cyberbullying                               | <b>.728</b>    | 53.00       | <b>-.476</b>   | 22.66       | <b>75.66</b> |
| Physical Bullying                           | <b>.598</b>    | 35.76       | .145           | 2.10        | 37.86        |
| Culture-Based Bullying                      | <b>.940</b>    | 88.36       | .263           | 6.92        | <b>95.28</b> |
| Redundancy Coefficient                      | (.511)         |             | (.133)         |             |              |
| Set 2: First-Semester Adjustment to College |                |             |                |             |              |
| Academic Adjustment                         | <b>-.725</b>   | 52.56       | <b>-.611</b>   | 37.33       | <b>89.89</b> |
| Social Adjustment                           | <b>-.626</b>   | 39.19       | .027           | 0.07        | 39.26        |
| Personal-Emotional Adjustment               | <b>-.582</b>   | 33.87       | <b>-.529</b>   | 27.98       | <b>61.85</b> |
| Institutional Attachment                    | <b>-.913</b>   | 83.36       | .132           | 1.74        | <b>85.10</b> |
| Redundancy Coefficient                      | (.061)         |             | (.015)         |             |              |

Note. Wilks's  $\Lambda = .76$ ;  $F(16, 355.02) = 2.08$ ,  $p < .01$ .  $r_s$  = structure coefficient;  $r_s^2$  = squared structure coefficient. Structure coefficients greater than .45 were interpreted. Communality coefficients ( $h^2$ ) greater than 45% are in bold.

## Discussion

The purpose of this study was to examine the effects of high school bullying on undergraduate students' motivation to attend college and adjustment during the first semester of college. The findings suggest that students who reported more bullying in high school enter college with more motivational and adjustment issues during their first semester, which lends general support to our hypotheses that bullying in high school has lasting effects into college. Specifically, when students experienced relational-verbal bullying, cyberbullying, physical bullying, and culture-based bullying in high school, they were generally amotivated and had less extrinsic motivation (identified, external regulation) to attend college.

Recall that amotivation to attend college occurs when students lack the drive and intent needed to pursue educational activities because they feel incompetent or unqualified and perceive their actions to be dictated by forces beyond their control (Ryan & Deci, 2000b). It is likely, then, at the mercy of bullies, students' views of social relations and their educational experiences are tainted because they feel incompetent and lack control over their own success in school. Due to a growing trend in the United States (Renn & Reason, 2013), many students feel obligated or pressured to attend college after high school but may lack motivation for attending. Our results suggest that victims of bullying may follow this trend of attending college, but do so with little to no motivation, which further reinforces the negative experiences these students will continue to encounter during their college education (Adams & Lawrence, 2011).

When students reported more victimization in high school, they reported a lack of extrinsic motivation (identified, external regulation) about attending college. These students failed to perceive college as a positive end state (i.e., means to career) and perceived less value or reward in attending college. It is probable that, based on their victimizing experiences, students bullied in high school associate educational environments with interpersonal mistreatment. In turn, their dissatisfying relationships and mistreatment in high school may devalue the perceived worth of being around others in working environments. As Reeve (2002) noted, "Because students want satisfying interpersonal relationships and because they want to obtain esteemed positions in the social hierarchy, they voluntarily learn and internalize their culture's rules, skills, and values" (p. 195). However, it appears that students who were victimized more in high school fail to see this value as they cannot forget the negative social events they experienced; in other words, they lack extrinsic motivation to pursue career opportunities afforded by college. These collective effects of bullying on motivation are consistent with previous research. As Vallerand (1997) stated, "Motivation is not only an intrapersonal phenomenon, but also a social phenomenon . . . as other people can have a powerful impact on our motivation" (p. 277).

The results of this study also suggest that when students experience more relational-verbal bullying, cyberbullying, physical bullying, and culture-based bullying in high school, they report more problems with academic adjustment, social adjustment, personal-emotional adjustment and institutional attachment during

the first month of college. Interestingly, in the second function of canonical solution, the results revealed that relational-verbal bullying, in the absence of cyberbullying, was related inversely to academic and personal-emotional adjustment only. This finding may imply that direct forms of bullying, such as relational-verbal bullying, are more predictive of students' adjustment issues, whereas cyberbullying, an indirect form of bullying that includes flaming, denigration, impersonations, outing/trickery, and exclusion/ostracism (Kowalski, Limber, & Agatston, 2012), may have less consequences for transferring to college as it is not done face to face. Cyberbullying may have less lingering effects in college because it is not communicated via daily face-to-face interactions at school like physical or relational-verbal bullying.

Overall, there are two possible interpretations for our set of findings. The first interpretation is that bullying experiences in high school may shape first-semester college students' ideas about education. When high school students are victimized, they form negative emotions and cognitions about their education and hold a pessimistic view about school (Oprinas & Horne, 2012). Coupled with the potential fear of being bullied again in college, this pessimistic view about high school may keep students amotivated and hinder their adjustment to college during the first semester. Amotivation and a lack of adjustment may be further reinforced as bullied students have trouble forming new peer relationships (Jantzer et al., 2006), and existing social support from friends and family is distant when students depart for college (Renn & Reason, 2013). This interpretation is supported by Schafer et al. (2004) who discovered that bullying in school has long-term effects into adulthood because it creates low self-esteem and trust issues with others. The findings of the current study may mirror these lasting effects.

The second interpretation is that bullying in high school may actually continue to occur in college; if so, keeping students amotivated and creating difficulty in adjusting to college life. Chapell et al. (2004) found that students who were bullied in elementary school tend to also be bullied in high school, and students who were bullied in high school also report being bullied in college. Similarly, Adams and Lawrence (2011) found that previous victimization experiences continue into college. Therefore, it is possible that new first-semester students who experienced victimization in high school may also be bullied during their transition to college. Similarly, the same characteristics that bullies use to victimize these individuals may still be present in college. For instance, meta-analytic findings from over 30 years of literature suggest that the typical victim lacks adequate social skills and tends to be isolated from peers (Cook, Williams, Guerra, Kim, & Sadek, 2010). This possibility would also explain why victims of high school bullying continue to have adjustment problems and remain amotivated in college.

Whether the effects of high school bullying on college motivation and adjustment are explained by victims' lingering and pessimistic views of schooling, or perhaps the continuation of more bullying into college, this study's results found that bullying in high school negatively affects college students' first semester. The idea that college students may get to "start over" in college and escape their victimization experiences from high school was unsupported in our study. Bullying effects do linger. Although

many universities attempt to make the college transition easy for students through various programs (see Conley et al., 2013), administrators need to recognize that bullying plays a role in students' motivation and adjustment during college and should consider how to fulfill students' basic psychological needs (autonomy, competence, relatedness) to encourage academic achievement (Diseth, Danielsen, & Samdal, 2012). Self-determination theory suggests that meeting these basic psychological needs allows students to be fulfilled by their educational experiences, thus better equipping them to adjust to and enjoy their educational experiences. Therefore, if students' basic needs were initially denied in their high school experiences, it may be even more important to ensure that their needs are being met in college to increase their motivation and help with adjustment problems (Deci et al., 1991).

Like any study, the current study has limitations. The main limitation is that we only surveyed students who made it to college. Research suggests that students who are bullied are much more likely to drop out of high school (Cornell, Gregory, Huang, & Fan, 2013); consequently, these students cannot attend college. Moreover, it is likely that students who experienced very severe forms of bullying in high school chose not to further their education in college. Therefore, our findings are likely diminished after considering attrition from high school. Another limitation was that motivation and adjustment were not measured longitudinally. It is possible that college does allow some victims to recover from previous bullying experiences in a new educational setting (Schafer et al., 2004). Since we collected cross-sectional data during the first month of college, the effects of high school bullying may have dissipated over time as some victims formed new peer relationships and gained social support throughout the semester. The cross-sectional data do not allow for causality to be determined, but it is possible that participants who had adjustment and motivation issues in high school still have these issues in college, which may encourage victimization. Additionally, the retrospective nature of the data and the time that had elapsed between high school and college could be a limitation.

Future researchers should continue to examine the effects that previous bullying experiences have on adolescents as they transition into adulthood. They should also examine student bullying in relationships that are understudied (e.g., coaches/student athletes, professors/students, students/bus drivers, etc.). Although a significant amount of research has been conducted on student bullying to date, there are many unexplored bullying situations that remain because bullying can happen in any school-related context.

Bullying has long-lasting effects and is linked to retention and success in college. Academic institutions should raise student awareness about the negative consequences of bullying and should provide resources for students to ease their transition from high school to college. Although eliminating high school bullying is ideal, promoting a scholastic culture where bullying is not acceptable and providing support for those who have been bullied should afford victims better educational experiences, help them stay motivated to attend college, and aid them in their first-semester adjustment.



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