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Can Good Come From Bad? An Examination of Adversarial Growth in Division I NCAA Athletes

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The purpose of this study was to examine adversarial growth in a sample of Division I NCAA athletes. Male and female athletes ($n = 214$) from three universities completed the Posttraumatic Growth Inventory from the perspective of an adversity experienced as a college athlete. The athletes reported positive change at low to moderate levels resulting from their most difficult adversity, and indicated the most improvement in personal strength. Female athletes reported greater spiritual growth, as well as more of a change in their ability to relate to others than their male counterparts. Of the three types of adversities analyzed (i.e., time demands, injury, and the mental and physical stress of sport), athletes who reported time demands as their most difficult adversity exhibited more appreciation for life than athletes who cited the mental and physical stress of sport. These findings are consistent with studies of growth in college student nonathletes (e.g., Anderson & Lopez-Baez, 2008; 2011), and support the notion that college is a pivotal time for personal development (Chickering & Reisser, 1993). Practitioners are advised to consider the potential for adversarial growth in the athletes with whom they work so that they may be able to recognize and facilitate the growth process.

Keywords: stress, coping, growth, resilience

College is a turbulent time for young adults. Students face challenges such as living independently for the first time, making new friends, and deciding on an academic major (Towbes & Cohen, 1996). In addition to larger stressors (e.g., moving away from home), students also commonly report a number of minor hassles such as transportation, financial burdens, and interpersonal conflicts (Staats, Cosmar, & Kaffenberger, 2007). In a recent study of almost 900 college students, 93% reported at least occasionally experiencing self-imposed stressors (e.g., wanting to be loved by all), 55.3% reported at least occasionally experiencing pressures (e.g.,

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deadlines), and 52.7% reported at least occasionally experiencing conflicts (e.g., pursuing a goal with both positive and negative alternatives; Hamaideh, 2011). The consequences of stress for college students can be serious, including decreased academic performance, sleep difficulties, substance abuse, and illness (Broman, 2005; Dusslier, Dunn, Wang, Shelley, & Whalen, 2005; Pritchard & Wilson, 2003).

Intercollegiate student-athletes are a subgroup of students who frequently face adverse conditions. The professionalization of college sports may increase the risk of sport burnout, defined as “a physical, emotional, and social withdrawal from a formerly enjoyable sport activity” (Gould & Whitley, 2009, p. 18). Student-athletes in one study reported more stress due to responsibilities, lack of sleep, and heavy demands from extracurricular activities than nonathletes (Wilson & Pritchard, 2005). Further, athletes must navigate sport-specific stressors such as high training demands, relationships with coaches and teammates, and balancing academics and athletics (Giacobbi, Lynn, Wetherington, Jenkins, Bodendorf, & Langley, 2004). Kimball and Freysinger (2003) interviewed 14 male and female intercollegiate athletes to explore sources of stress in student-athletes. The interviews revealed sources such as a lack of self-determination, coaches and teammates, social inequality, gender stereotypes, a lack of a sense of competence, and a lack of social support. Overall, the student-athletes interpreted sport as both a source of stress and a buffer against stress.

Theoretical Framework

Although researchers have historically been concerned with the negative consequences of stress and adversity, a growing number are interested in the potential for positive outcomes. *Adversarial growth* refers to the positive psychosocial changes that can be attributed to adverse life circumstances (Linley & Joseph, 2004). Individuals who have achieved growth from adversity often note changes in one or more of the following dimensions: (a) an increased ability to relate to others (e.g., having a closer relationship with a family member), (b) the realization of new possibilities (e.g., pursuing a new job opportunity), (c) an increase in spirituality (e.g., feeling closer to God), (d) an increase in personal strength (e.g., feeling more prepared to face life challenges), and (e) a greater appreciation for life (e.g., more grateful for the simple things in life) (Tedeschi & Calhoun, 1996). Such changes have been noted in individuals suffering adversities ranging from relationship problems (e.g., Park, Cohen, & Murch, 1996) to cancer (e.g., Dunn, Occhipinti, Campbell, Ferguson, & Chambers, 2011).

College students experience emotional, interpersonal, and identity development that might allow them to recognize the benefits of life challenges and adversities (Milam, Ritt-Olson, & Unger, 2004). Chickering and Reisser (1993) proposed seven vectors of development that occur in college student: (a) developing competence, (b) managing emotions, (c) moving through autonomy toward interdependence, (d) developing mature interpersonal relationships, (e) establishing identity, (f) developing purpose, and (g) developing integrity. The seven vectors seem to share much in common with the domains of growth previously described, and support the notion that college has the potential to be a growth enhancing experience for students.

Relatively few studies have focused on adversarial growth in the context of college life. Anderson and Lopez-Baez (2008) surveyed 347 college students about

perceived positive changes that occurred over the previous semester. The students reported a small to moderate degree of growth, with females reporting slightly more growth than their male counterparts. Anderson and Lopez-Baez (2011) found similar results in a follow-up investigation. The students in this second study attributed their growth to a variety of typical college stressors (e.g., preparing to leave friends, searching for a job, and a college course). These findings indicate that common college stressors can be a source of positive growth for students.

Adversarial Growth in Athletes

Recent research has focused on adversarial growth in the context of sport participation. Interviews with 10 college-aged athletes who had sustained significant injuries resulted in causal networks indicating the process of perceiving benefits related to injury onset, rehabilitation, and return to competition (Wadey, Evans, Evans, & Mitchell, 2011). For example, participants noted that while experiencing an injury was incapacitating, the event led to mobilizing social support resulting in the benefit of having a stronger social network. The athletes noted that the rehabilitation process resulted in an inability to train and compete, giving them the chance to assist their coach, and develop better tactical/technical awareness. Other qualitative studies support the idea that sport provides a vehicle to help athletes realize personal growth in a variety of domains (e.g., Galli & Vealey, 2008; Galli & Reel, 2012; Podlog & Eklund, 2006; Udry, Gould, Bridges, & Beck, 1997). However, it is less clear whether growth occurs more in certain domains, or whether the type of adversity experienced (e.g., injury vs. academic demands) has any influence.

Despite evidence for adversarial growth both in college students and in athletes, no studies have examined growth in the context of intercollegiate sport. Female swimmers in one study viewed the struggles of transitioning into intercollegiate sport as an opportunity for growth (Giacobbi et al., 2004). Indeed, females may be particularly likely to experience growth from adversity. A recent meta-analysis of 70 studies on adversities ranging from cancer to bereavement revealed moderate differences in growth between women and men (i.e., women reported more growth than men; Vishnevsky, Cann, Calhoun, Tedeschi, & Demakis, 2010). Thus, there is evidence that at least some intercollegiate athletes recognize the potential benefits that can come from the challenges of life as a student-athlete. Preliminary evidence of growth attributable to intercollegiate sport participation may serve as a starting point for more in-depth investigations, and inform the work of coaches, advisors, and psychologists who work with student-athletes.

Therefore, the purpose of this study was to examine adversarial growth in a sample of Division I NCAA athletes. The following research questions were explored:

- RQ1: Do Division I student-athletes report growth in response to their most difficult intercollegiate sport adversity, and if so, which subdomains of growth are most apparent?
- RQ2: Are there differences in growth by type of adversity?
- RQ3: Are there gender differences between male and female college athletes in overall growth, or any of the subdomains of growth?

Method

Participants

Athletes ($N = 214$, M age = 20.79, $SD = 1.55$) from three large public universities in the Mountain West region of the United States participated in the study. All three universities were members of the NCAA Division I. The sample included more females ($n = 150$) than males ($n = 64$), and participants self-identified most often as Caucasian ($n = 180$), followed by "Other" ($n = 13$), African American ($n = 5$), Asian American ($n = 5$), Hispanic ($n = 4$), Polynesian ($n = 6$), and Native American ($n = 1$). The athletes represented a variety of sports, including track and field ($n = 62$), cross-country ($n = 24$), basketball ($n = 24$), baseball ($n = 21$), softball ($n = 19$), gymnastics ($n = 15$), soccer ($n = 14$), tennis ($n = 13$), swimming ($n = 9$), skiing ($n = 9$), volleyball ($n = 3$), wrestling ($n = 3$), golf ($n = 1$), and diving ($n = 1$).

Measures

Participants provided demographic information including their date of birth, gender, race, and primary current sport. Participants were then asked to indicate the most difficult sport adversity that they had experienced during their college athletic career. The adversities identified by student-athletes represented six disparate types of stressors: (a) mental and physical stress of sport (e.g., "pitching in stressful situations") ($n = 111$), (b) sport injury (e.g., "herniated disc in back") ($n = 41$), (c) time demands (e.g., "balancing time for my sport and my personal life") ($n = 30$), (d) interpersonal issues (e.g., "the fear of disappointing my coach") ($n = 17$), (e) personal struggles (e.g., "paying rent") ($n = 10$), and (f) other adversities that were too infrequent for separate categorization ($n = 5$). Due to the small number of athletes who reported adversities categorized in 'd,' 'e,' and 'f,' these types were not included in the subsequent data analysis.

Tedeschi and Calhoun's (1996) Posttraumatic Growth Inventory (PTGI) was used to measure adversarial growth. Although the PTGI was designed based on individuals' experiences with traumatic life events (e.g., death of a loved one, disease), researchers have recently suggested that the instrument is also suitable to measure growth in individuals who have not necessarily experienced a severe trauma (Anderson & Lopez-Baez, 2008; 2011). Further, the psychometric properties of the PTGI have been subjected to more scrutiny than any other measure of growth (e.g., Anderson & Lopez-Baez, 2008; Brunet, McDonough, Hadd, Crocker, and Sabiston, 2010; Linley, Andrews, and Joseph, 2007). Finally, in a pilot test for the current study, feedback from 10 intercollegiate athletes indicated that the items on the PTGI were less confusing and more applicable to their experiences than questions on other growth scales.

The PTGI contains 21 Likert-type items measured on a scale from 0 (I did not experience this change as a result of my stressful event) to 5 (I experienced this change to a very great degree as a result of my stressful event). Athletes answered items relative to their most difficult sport adversity as a college athlete. The items were summed and divided by the total number of items to form a total PTGI score. A higher total score indicates that the individual perceives more positive change as a result of their most difficult college sport stressor, whereas a lower total score indicates that the individual perceives less positive change as a result of their most

difficult college sport stressor. In addition to a total score, the PTGI contains five subscales aligned with the domains of growth previously mentioned. The five subscales are: (a) relating to others (e.g., “I better accept needing others”), (b) new possibilities (e.g., “I developed new interests”), (c) personal strength (e.g., “I know better that I can handle difficulties”), (d) spiritual change (e.g., “I have a stronger religious faith”), and (e) appreciation of life (e.g., “I can better appreciate each day”). The same procedure used to calculate the total PTGI score was used to calculate each subscale score. A higher subscale score indicated perceptions of more positive change on that particular dimension of growth.

Tedeschi and Calhoun (1996) tested the reliability and validity of the PTGI in a sample of college students. Adequate internal consistency was found for the total PTGI ($\alpha = .90$), as well as for each subscale ($\alpha = .67-.85$). Internal consistency for the overall PTGI in the current study was .94, and the subscale alpha coefficients ranged from .76 to .90. PTGI scores were positively correlated with the Extraversion, Openness to Experience, Agreeableness, and Conscientiousness subscales of the NEO Personality Inventory. Test-retest reliability of the PTGI and its subscales over two months were mostly acceptable ($r = .65$ to $r = .74$), with the exception of ‘personal strength’ ($r = .37$) and ‘appreciation of life’ ($r = .47$) (Tedeschi & Calhoun, 1996). Confirmatory factor analysis results from multiple studies support the five factor structure of the PTGI (see Sheikh & Marotta, 2005; Taku, Cann, Calhoun, & Tedeschi, 2008).

Procedure

After receiving approval from the Institutional Review Board, the principal investigator administered surveys to individuals, small groups, and teams in a face-to-face setting (e.g., team physicals). The researcher stressed the importance of answering each question as honestly as possible, and of completing the questionnaires individually. The researcher ensured participants that all of their answers would remain confidential, and the participants signed a statement of informed consent before completing the questionnaires. The entire process took approximately 10–15 minutes per participant.

Results

All analyses were conducted using SPSS version 18.0. Box plots, histograms, and frequency tables were inspected for outliers, missing data, and nonnormality for the total PTGI and its subscales. Four outliers were identified on the personal strength subscale. Upon further inspection of each case, the responses were deemed legitimate and retained for analysis. Only eight PTGI data points were missing across the 214 participants. Mean imputation based on each participant’s subscale mean was conducted to replace these missing values (Newton & Rudestam, 1999). Significant Shapiro-Wilk tests ($< .05$) for the total PTGI score and all PTGI subscale scores indicated a lack of normality. Lumley, Diehr, Emerson, and Chen (2002) argued that parametric tests remain robust in the face of nonnormality when there are at least 30 cases per condition. Thus, due to their superior statistical power, parametric tests were used to answer the research questions.

To answer the first research question (i.e., Do Division I student-athletes report growth in response to their most difficult intercollegiate sport adversity, and if so,

which subdomains of growth are most apparent?), frequencies, means, and standard deviations were calculated for the PTGI items and subscales. See Table 1 for frequency information on each PTGI item. Average scores on the subscales of the PTGI ranged from 2.40 (spiritual change) to 3.34 (personal strength). See Table 2 for means and standard deviations on the PTGI and its subscales.

A series of one-sample *t* tests using the midpoint of the PTGI (i.e., 2.5) as the test value were conducted to assess whether the PTGI subscale scores obtained in this study were significantly higher than average. A Bonferroni correction was used to adjust for Type I error inflation, which resulted in statistical significance being accepted at $p < .01$ (.05/5). The student-athletes' scores on the appreciation for

Table 1 Frequencies for PTGI Items ($N = 214$)

PTGI Item	% No change to small change	% Moderate change to very great change
I changed my priorities about what is important in life.	37.4	62.6
I have a greater appreciation for the value of my own life.	32.7	67.3
I developed new interests.	55.6	44.4
I have a greater feeling of self-reliance.	31.3	68.7
I have a better understanding of spiritual matters.	47.2	52.8
I more clearly see that I can count on people in times of trouble.	31.8	68.2
I established a new path for my life.	55.1	44.9
I have a greater sense of closeness with others.	40.7	59.3
I am more willing to express my emotions.	48.6	51.4
I know better that I can handle difficulties.	17.3	82.7
I am able to do better things with my life.	33.6	66.4
I am better able to accept the way things work out.	22.4	77.6
I can better appreciate each day.	35.5	64.5
New opportunities are available which wouldn't have been otherwise.	45.1	54.9
I have more compassion for others.	41.6	58.4
I put more effort into my relationships.	41.1	58.9
I am more likely to try to change Things which need changing.	22.0	78.0
I have a stronger religious faith.	54.7	43.3
I discovered that I'm stronger than I thought I was.	20.1	79.9
I learned a great deal about how wonderful people are.	45.8	54.2
I better accept needing others.	37.9	62.1

Note. % no change to small change = PTGI Item score of 0–2.

% moderate change to very great change = PTGI Item score of 3–5.

Table 2 Means and Standard Deviations for Student-Athletes on the PTGI (N = 214)

	Gender				Type of Adversity							
	Total Sample		Male (n = 64)		Female (n = 150)		Mental and Physical Stress of Sport (n = 111)		Time Demands (n = 30)		Sport Injury (n = 41)	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
PTGI Subscales												
Spiritual Change	2.40	1.75	1.80	1.63	2.66	1.74	2.11	1.68	2.97	1.61	2.94	1.68
New Possibilities	2.64	1.17	2.53	1.16	2.69	1.17	2.43	1.15	3.25	.92	2.62	1.28
Relating to Others	2.69	1.23	2.34	1.21	2.84	1.21	2.50	1.19	3.18	1.10	2.92	1.36
Appreciation For Life	2.84	1.27	2.72	1.25	2.88	1.28	2.53	1.20	3.37	1.13	2.99	1.41
Personal Strength	3.34	1.02	3.29	1.04	3.36	1.02	3.21	1.06	3.80	.72	3.30	1.04

Note. PTGI—Posttraumatic Growth Inventory.

Total—Total PTGI average score (range = 0–5).

Spiritual Change—Spiritual Change subscale average score (range = 0–5).

New Possibilities—New Possibilities subscale average score (range = 0–5).

Relating to Others—Relating to Others subscale average score (range = 0–5).

Appreciation for Life—Appreciation for Life subscale average score (range = 0–5).

Personal Strength—Personal Strength subscale average score (range = 0–5).

life subscale ($M = 2.84$) were significantly different from the test value, $t(213) = 3.87, p < .001, d = .27$. Further, scores on the personal strength subscale ($M = 3.34$) were significantly different than the test value, $t(213) = 11.96, p < .001, d = .82$.

Finally, a one-way repeated-measures ANOVA was used to compare mean differences across the five dimensions of growth. A Bonferroni correction was used to adjust for Type I error inflation, which resulted in statistical significance being accepted at $p < .005 (.05/10)$. A repeated-measures ANOVA with a Greenhouse-Geisser correction determined that adversarial growth differed significantly by dimension, $F(3.006, 213) = 35.35, p < .001$. Post hoc tests revealed that student-athletes reported significantly more growth on the dimension of appreciation for life ($M = 2.84, SD = 1.27$) than on the dimension of spiritual change ($M = 2.40, SD = 1.75$). Further, the student-athletes reported more growth on the dimension of personal strength ($M = 3.34, SD = 1.02$) than all other dimensions of growth.

Type of Adversity

A one-way MANOVA with type of adversity as the independent variable and the five PTGI subscale scores as the dependent variables was employed to answer the second research question (i.e., Are there differences in overall growth, or any of the subdomains of growth, by type of adversity?) A Bonferroni correction was used to correct for Type I error inflation, which resulted in statistical significance being accepted at $p < .01 (.05/5)$. Tukey's HSD post hoc test was employed to examine specific differences between groups. A one-way MANOVA revealed a significant multivariate main effect for type of adversity, Wilks's $\Lambda = .883, F(10, 350), p < .05$, partial eta squared = .06. The univariate main effects were examined with separate ANOVAs. Significant univariate main effects for type of adversity were obtained for the spiritual change subscale of the PTGI, $F(2, 181) = 5.40, p = .005$, partial eta squared = .06, and the appreciation for life subscale of the PTGI, $F(2, 181) = 6.24, p = .002$, partial eta squared = .07. Specifically, those who reported their most difficult adversity as being related to time demands reported significantly more growth on the appreciation for life subscale ($M = 3.37, SD = 1.13$) than those who reported their most difficult adversity as being related to the mental and physical stress of sport ($M = 2.53, SD = 1.20$).

Gender Differences

To answer the third research question (i.e., Are there gender differences between male and female college athletes in growth?), a one-way MANOVA with gender as the independent variable and the five PTGI subscale scores as the dependent variables was conducted. A Bonferroni correction was again used to adjust for Type I error inflation. A significant multivariate main effect for gender was revealed, Wilks's $\Lambda = .921, F(5, 208) = 3.57, p < .01$, partial eta squared = .08. The univariate main effects were examined with separate ANOVAs. Significant univariate main effects for gender were obtained for the spiritual change subscale of the PTGI, $F(1, 213) = 11.26, p = .001$, partial eta squared = .05, and the relating to others subscale of the PTGI, $F(1, 213) = 7.79, p = .006$, partial eta squared = .04. Specifically, women reported more spiritual change ($M = 2.66, SD = 1.74$) than men ($M = 1.80, SD = 1.63$), and a stronger ability to relate to others ($M = 2.84, SD = 1.21$) than men ($M = 2.34, SD = 1.21$).

Discussion

The purpose of this study was to examine adversarial growth in a sample of Division I intercollegiate male and female athletes. As suggested by the swimmers in Giacobbi et al.'s (2004) investigation, student-athletes were able to identify benefits that emerged from experiencing the challenges associated with being an intercollegiate athlete. Although the intensity of growth scores measured by the PTGI were lower in these athletes compared with other study populations (e.g., cancer survivors), the amount of overall growth reported by the athletes was meaningful. The PTGI scores of the student-athletes in this study match closely to those of college students in two previous studies (Anderson & Lopez-Baez, 2008; Anderson & Lopez-Baez, 2011).

Athletes' scored the highest on the personal strength domain of growth. The personal strength subscale reflects the tendency to feel mentally stronger, more resilient, more self-confident, and more self-reliant than before an adversity. Such positive changes underscore the role that college plays in fostering competence, emotional regulation, and autonomy among students and student-athletes (Chickering & Reisser, 1993). The demands and adversities inherent within intercollegiate sport participation (e.g., injury, time demands) further contribute to the development of student-athletes during the college experience. Another explanation for increases in personal strength relate to the ideology that athletes must be "mentally tough" and able to effectively cope with failure and adversity.

With respect to the third research question, women reported more growth than men in the domains of relating to others and spiritual change. These results support previous findings of growth gender differences in college students and other populations (e.g., Tedeschi & Calhoun, 1996; Milam et al., 2004), and may reflect the tendency for women to turn to coping strategies such as connecting with religion and seeking emotional social support more often than men in times of stress (Thoits, 1991; Vishnevsky et al., 2010). Moreover, men may be less likely than women to admit that they experienced growth because sharing such feelings has been perceived to be emasculating (Meth & Pasick, 1990; Vishnevsky, 2010). This stereotypical belief related to emotional expression may be especially prominent in the "hypermasculine" world of male sports.

Of the three types of adversities with a sufficient sample size (i.e., time demands, injury, and the mental and physical stress of sport), athletes who noted time demands as their most difficult adversity scored significantly higher on appreciation for life than athletes who noted the mental and physical stress of sport. The cognitive appraisals and coping strategies that underlie adversities are likely stronger indicators of growth than the adversities themselves (Linley & Joseph, 2004; Park & Fenster, 2004). Specifically, cognitive appraisals of control, and the use of problem-focused coping strategies (e.g., planning) have been shown to lead to more growth (Park, Cohen, & Murch, 1996; Scignaro, Barni, & Magrin, 2011). It may be that time demands result in ways of appraising and coping that tend to enhance growth for athletes. As compared with the mental and physical stress of sport, student-athletes may have perceived a greater sense of control over their time demands, and have been more likely to cope with the stress of time demands using problem-focused strategies such as creating a time schedule and seeking information on how to avoid time conflicts.

It would be a mistake to ignore the possible negative outcomes that the student-athletes in this study may have experienced due to their adversity (e.g., sport

burnout). The mental and physical stress of sport is indicative of what Gould and colleagues (Gould, Tuffey, Udry, & Loehr, 1997) referred to as the two different “strains” of athlete burnout (i.e., burnout due to physical demands, and burnout due to lack of autonomy). As many of the athletes in the study had been participating in their sport for several years, feelings of burnout could have served to attenuate realizations of growth. Although burnout was not measured in the current study, it should serve as a key variable in future studies.

Limitations and Future Directions

Despite the insights gained regarding adversarial growth among student-athletes, there were several limitations. First, males were largely underrepresented (less than 30% of the sample) in the overall sample. Given the apparent differences that exist between males and females in their readiness to experience growth, the results may have produced different outcomes with balanced numbers of male and female athletes. Further, given the known link between appraisals, coping, and growth, it would have been informative to include valid and reliable scales such as Peacock and Wong’s (1990) Stress Appraisal Measure, and Carver, Scheier, and Weintraub’s (1989) COPE inventory to measure these constructs. Finally, the cross-sectional design of the current study, although useful for gaining an initial understanding of growth in intercollegiate athletes, did not allow for an assessment of change across time in the athletes.

In light of the findings from the present investigation, several recommendations can be made for future research on adversarial growth in student-athletes. As previously noted, the mental and physical stress of sport may result in burnout rather than growth. It would be interesting to examine the predictive power of mental and physical stressors for burnout, as well as whether growth and burnout are mutually exclusive outcomes of chronic stress and adversity. Longitudinal and prospective designs must be adopted to truly evaluate the extent to which individuals have changed from before a given stressor. Recently proposed theories of growth, such as Joseph and Linley’s (2005) organismic valuing theory or Tedeschi and Calhoun’s (2004) functional descriptive model, should be adopted to guide such studies. As previously suggested, other theoretically relevant variables such as coping should be measured along with growth to test more complex relationships, and explain more of the variance in growth. Growth should be used as a possible predictor for other desirable outcomes such as positive well-being and subjective well-being (Diener, Lucas, & Oishi, 2002; Ryff, 1989).

The measurement of growth is another area that requires further attention. We question whether self-report measures of growth are indicative of actual growth, or some combination of social desirability, self-enhancement, and positive reappraisal. Some evidence suggests that individuals are often poor judges of how they were before the occurrence of a given event, and tend to derogate their “former” selves (McFarland & Alvaro, 2000). A more intriguing possibility is that many individuals, and perhaps especially competitive athletes, are socialized to believe that rising up from their struggles and being better than before is the “American way” (Frazier & Kaler, 2006). The use of mixed-methods designs that incorporate quantitative survey data (e.g., PTGI) with qualitative interview data would add credibility to athletes’ reports of growth. Informant reports, in which teammates, coaches, friends, and/or family are asked to independently judge the growth of

study participants is another intriguing possibility for confirming growth (Park & Lechner, 2006). Qualitative investigations of adversarial growth in athletes may lead to the development of growth measures pertaining to specific contexts such as intercollegiate sport participation.

Practical Implications

The findings of this study provide some insights for practitioners who work with intercollegiate athletes. First, the results suggest that many student-athletes perceive at least some psychosocial growth due to the challenges inherent to intercollegiate athletics. Thus, professionals should recognize the potential for both negative *and* positive consequences of adversities for athletes. Unless practitioners are aware of the possibility of growth, they will be ineffective in supporting the growth process. One way to help facilitate the growth process may be to ask athletes to reflect on adversities that they have faced in the past, and any positive benefits that may have come from these experiences. Journaling can be another effective method for helping athletes make sense of and grow from adversity. When individuals reflectively write about their thoughts and feelings related to a stressor they may be more likely to recognize positive changes (Ullrich & Lutgendorf, 2002).

The time demands associated with sport participation appears to be a particularly opportune time for growth. Given prior evidence that growth is more likely to occur when individuals engage in problem-focused coping strategies, professionals are advised to support student-athletes' use of effective time management and stress management practices. Alternatively, the mental and physical stress of sport seems less likely to lead to growth, and may even lead to burnout. Educational workshops for both athletes and coaches on proper training, rest, nutrition, and stress management, combined with tactics aimed at raising athletes' awareness of their capacity for growth from adversity, may create an environment conducive to growth for student-athletes. Finally, practitioners should be more intentional in their efforts to recognize and foster growth in male student-athletes, as men may be less likely than women to manage adverse experiences in ways that lead to growth.

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