

# Gratitude, Burnout, and Sport Satisfaction Among College Student-Athletes: The Mediating Role of Perceived Social Support

Nicole T. Gabana, Jesse A. Steinfeldt,  
Y. Joel Wong, and Y. Barry Chung  
Indiana University

The present study explored the relationships among gratitude, sport satisfaction, athlete burnout, and perceived social support among college student-athletes in the United States. Participants ( $N = 293$ ) from 16 different types of sports at 8 NCAA Division I and III institutions were surveyed. Results indicated gratitude was negatively correlated with burnout and positively correlated with sport satisfaction, suggesting that athletes who reported more general gratitude also experienced lower levels of burnout and greater levels of satisfaction with their college sport experience. Perceived social support was found to be a mediator in both relationships. Limitations and implications for research and practice are discussed.

**Keywords:** positive psychology, well-being, gratefulness, mental health

The field of positive psychology has been primarily concerned with what it means to live a “good life” (Seligman & Csikszentmihalyi, 2000) while finding ways to promote optimal human functioning. Researchers in positive psychology have found that cultivating gratitude, hope, or humor can enhance overall life satisfaction and subjective well-being (Proyer, Ruch, & Buschor, 2013). Gratitude, specifically, has been highly correlated with satisfaction with life (SWL; Park, Peterson, & Seligman, 2004) and well-being (Wood, Froh, & Geraghty, 2010). The importance of studying the concept of gratitude within the sport domain, specifically among college student-athletes, rests on previous research, which has found that feeling grateful and expressing gratitude is associated with a number of physical and mental health benefits. The purpose of the study was to examine the relationship between gratitude and other variables related to the college athletic experience, namely, sport satisfaction, athlete burnout, and perceived social support among U.S.

---

Gabana, Steinfeldt, Wong, and Chung are with the Dept. of Counseling and Educational Psychology, Indiana University, Bloomington, IN. Address author correspondence to Nicole Gabana at [nicolegabana@gmail.com](mailto:nicolegabana@gmail.com)

college student-athletes. In this paper, we discuss the recent research on gratitude to demonstrate why studying and cultivating gratitude has the potential to benefit student-athletes. Implications for both athletic retention rates and student-athlete mental health and well-being are discussed.

## Gratitude and Athlete Well-being

Gratitude can be defined as a recognition of the value of a benefit or that one has received a valuable benefit from others (Lambert, Graham, & Fincham, 2009). Interventions that aim to increase gratitude have been shown to produce emotional and interpersonal benefits. Emmons and McCullough (2003) found that participants who completed gratitude writing assignments for 10 weeks exhibited higher levels of positive affect and prosocial motivation to help and support others. Wood, Joseph, and Maltby (2008) found that gratitude uniquely predicted SWL beyond the Big Five facets of personality. In a later study by Wood, Joseph, and Maltby (2009), researchers identified that gratitude uniquely contributed to predicting psychological well-being after controlling for the Big Five facets. These findings demonstrate the importance of considering gratitude as a significant, distinctive factor related to subjective well-being and satisfaction.

Gratitude among the athletic population has recently been examined by researchers in Taiwan (Chen, 2013; Chen & Kee, 2008). Chen and Kee (2008) conducted the first known empirical study examining the relationship between gratitude and athlete well-being. Chen and Kee argued that since recent research in positive psychology suggests that gratitude plays a role in promoting physical and psychological well-being, this mechanism should be examined among athletic populations as well. Researchers explored the relationship between gratitude and well-being among Taiwanese high school athletes and found that dispositional gratitude positively predicted team satisfaction and life satisfaction, and negatively predicted athlete burnout (Chen & Kee, 2008).

## Gratitude and Satisfaction

McCullough, Emmons, and Tsang (2002) found that being grateful was positively correlated with life satisfaction, positive affect, happiness, optimism, and hope. Conversely, gratitude was negatively correlated with anxiety, depression, and negative affect. Froh, Sefick, and Emmons (2008) examined the relationship between gratitude and subjective well-being in an adolescent population. Researchers found that a gratitude intervention such as counting blessings was correlated with optimism, life satisfaction, and decreased negative affect. Specifically, a strong relationship between gratitude and satisfaction in the school context was reported (Froh et al., 2008). The idea that the relationship between gratitude and satisfaction can be context specific suggests that cultivating gratitude in a given domain may increase satisfaction in that domain.

The National Collegiate Athletic Association GOALS Study (Growth, Opportunities, Aspirations and Learning of Students in College) places an emphasis on evaluating student-athlete satisfaction through their assessment of the well-being

and experiences of student-athletes in a number of realms—for example, athletics, academic, social, and mental health (NCAA, 2016). In their report, the NCAA stated that “college campuses have generally seen an increase in the number of students experiencing mental health issues such as anxiety and depression. The 2015 GOALS data highlights similar concerns among student-athletes, with about 30% self-reporting that they have been intractably overwhelmed during the past month” (NCAA, 2016, p. 4). Since gratitude has been linked to lower levels of depression and anxiety (McCullough et al., 2002), it is worthwhile to examine how gratitude functions for the athletic population.

Given the correlation between gratitude and life satisfaction, it seems possible that similar relationships would emerge in a specific context such as sport—that is, the level of satisfaction related to one’s sport experience may be associated with how grateful one feels in general. As discussed above, high levels of gratitude and life satisfaction hold benefits for general well-being. Chen (2013) found that gratitude predicted team satisfaction among Taiwanese high school athletes, and that perceived social support was a mediator in this relationship. Since college athletes in the United States spend such a large portion of their college experience within their respective sport environment (up to 20 hr per week in season; up to 8 hr per week out of season; the National Collegiate Athletic Association [NCAA], 2009), it is worthwhile to examine the importance of sport satisfaction as it is related to student-athlete mental health and well-being.

## Perceived Social Support

Wood et al. (2010) purported various possible mechanisms of the influence of gratitude on well-being. The first was a schematic hypothesis, which stated that people with higher levels of gratitude generally appraise receiving help as valuable, costly to provide, and offered altruistically. Ungrateful people, in contrast, may interpret others’ intentions and behaviors as negative (e.g., low value, low cost, self-serving). These negative cognitive schemas can be evidence of maladaptive emotional traits or disorders. Wood et al. (2010) also discussed the connection between gratitude and perceived social support in relation to coping. When in need, grateful people are more likely to pursue and use available resources because they perceive social networks as supportive. Thus, gratitude fosters positive coping skills and can reduce stress. Therefore, it is important to examine one’s perceptions of help, or perceived social support, when exploring the mechanisms by which gratitude may affect well-being.

Included in the NCAA 2015 GOALS Study was a section titled “Campus and Team Environment,” which sought to evaluate student-athlete perceptions of their relationships with parents, coaches, teammates, faculty, and staff, as well as their overall sense of belonging at their college and on their team (NCAA, 2016). Social support has been identified as a significant resource related to student-athlete constructs such as burnout, self-confidence, and performance (Freeman, Coffee, & Rees, 2011). Freeman et al. (2011) defined *perceived available support* as “one’s potential access to social support and is a support recipient’s subjective judgment that friends, family, team-mates, and coaches would provide assistance if needed” (pp. 54–55). In 2013, Chen conducted a second study on the relationship between gratitude and adolescent athletes’ well-being, in which possible mediators were also examined.

Chen's sample consisted of 291 Taiwanese high school athletes, and similar findings to Chen and Kee's (2008) study emerged—gratitude was positively correlated with athlete well-being. In addition, perceived coach and teammate social support partially mediated this relationship. More research is needed to understand how these variables interact with one another among college athletes in the United States.

These findings have implications for future researchers and sport psychologists. Chen (2013) suggested that the mediation model of gratitude, perceived social support, and athlete well-being reflects the broaden-and-build theory of Fredrickson (2004). That is, "gratitude can broaden an individual's momentary thought-action repertoires to acknowledge and pay attention to benefits obtained from others and thus build more social resources to achieve goals or overcome future hardship" (Chen, 2013, p. 275). Gratitude may not only produce greater interpersonal effects for college athletes (among coaches and teammates), but it could potentially also have an impact on goal attainment and performance. Previous researchers have found that people who express more gratitude to their relationship partner perceive higher communal strength (Lambert, Clark, Durtschi, Finchman, & Graham, 2010). This implies that increasing gratitude has the potential to improve team relations, build team cohesion, and increase perceived social support, thereby generating better athlete well-being.

## Athlete Burnout

The GOALS report also noted that about one-third of college athletes are "struggling to find energy for other tasks because of the physical demands of their sport" and "one-quarter reported being exhausted from the mental demands of their sport" (NCAA, 2016, para. 12). The characteristics described by student-athlete participants in the GOALS report resemble those associated with the concept of athlete burnout as defined by Raedeke and Smith (2001), which includes dimensions of emotional and physical exhaustion, reduced sense of accomplishment, and devaluation of the sport experience. Burnout within the sport context is an issue where gratitude may be used as a preventative strategy. Sport-specific gratitude has been found to be inversely related to athlete burnout (Chen & Kee, 2008). In a study on how gratitude relates to burnout and job satisfaction, Lanham, Rye, Rimskey, and Weill (2012) found that workplace-specific gratitude predicted levels of emotional exhaustion, depersonalization, and job satisfaction among mental health professionals in the United States. The association between gratitude and occupational burnout may parallel the relationship of gratitude and athlete burnout, but this relationship has not yet been tested among athletes in the United States, or in the college athletic domain. Therefore, more research is needed in this area.

## Addressing Limitations of Previous Research

Chen and Kee (2008) identified several directions for future research in examining gratitude in the sport context. First, their study was conducted with a high school population; therefore, research is needed to explore gratitude among college athletes. Second, their study was conducted in Taiwan, which is considered to have a collectivistic culture. Kee, Tsai, and Chen (2008) found that traditional collectivist values in Taiwanese high school athletes promoted prosocial behaviors,

specifically gratitude. Kee et al. suggested that culture be taken into consideration when examining the relationship between gratitude and student-athlete well-being. Future research is needed to examine whether gratitude has a relationship to athlete well-being in an individualistic culture such as that of the United States.

Chen (2013) suggested that future studies include indicators of both well-being and ill-being, the latter being a deficiency in mental health or happiness. Therefore, the current study used both sport satisfaction (well-being) and athlete burnout (ill-being) scales to gather substantive measurement data. Furthermore, this topic of study is valuable to the literature because of its implications for the establishment of sport culture, environment, and sport psychology interventions. Since gratitude has been shown to have a significant correlation with athlete well-being (Chen, 2013; Chen & Kee, 2008), integrating gratitude into the team culture may have benefits such as increased satisfaction with one's sport experience, a higher perception of social support available from coaches and/or teammates, and a lower likelihood for athlete burnout. Sport psychologists may begin to consider using gratitude interventions in their repertoire in order to promote student-athlete well-being.

Exploring constructs that relate to athlete satisfaction, burnout, social support, and general well-being is vital to the sport psychology literature because it will increase researchers' and practitioners' understanding of factors that may relate to or influence the college athletic experience. If there is a connection between a construct such as gratitude and other psychological aspects related to the student-athlete experience (e.g., satisfaction, burnout, social support), this may be used to design interventions focused on that particular construct. Exploring the concept of gratitude, which has been associated with a number of psychological and physical benefits and which will be discussed in the next section, has the potential to inform new prevention or treatment programs that seek to increase the overall well-being and experience of the college athlete.

## Aims and Research Questions

The purpose of this study was to examine the relationship among gratitude, sport satisfaction, athlete burnout, and perceived social support among college student-athletes in the United States. It is necessary to explore how these variables relate to one another, and by which means they function to produce benefits for student-athletes. Perceived social support was also examined as a possible mediator in the relationships between gratitude, satisfaction, and burnout based on the findings of Chen (2013). Our study addressed the following two research questions: (1) Is there a relationship between gratitude, sport satisfaction, and athlete burnout among college student-athletes in the United States?; and (2) If such a relationship exists, is perceived social support a mediator in the given sample?

## Method

### Participants

Participants consisted of 293 male ( $n = 107$ ) and female ( $n = 186$ ) varsity athletes from eight NCAA Division I ( $n = 261$ ) and Division III ( $n = 32$ ) colleges and universities in the Midwest, Northeast, and South United States. This was a convenience

sample based on the primary researcher's personal and geographical accessibility to college athletics teams and coaches. Participants ranged in age from 17 to 23 years ( $M_{\text{age}} = 19.63$  years;  $SD = 1.26$  years) and indicated that they were African-American/Black (4.1%), Asian/Asian-American (2.7%), Caucasian/White (87.4%), Hispanic or Latina/o (1.7%), and Multiracial (4.1%) student-athletes. There were 88 freshmen, 81 sophomores, 67 juniors, 56 seniors, and 1 graduate student who participated in the study. Participants self-identified as heterosexual or straight ( $n = 279$ ), gay or lesbian ( $n = 9$ ), or bisexual ( $n = 5$ ). A variety of varsity college athletics teams (19) and sport types (16) were represented in the sample: wrestling ( $n = 21$ ), tennis ( $n = 9$ ), swimming ( $n = 43$ ), water polo ( $n = 12$ ), golf ( $n = 13$ ), softball ( $n = 22$ ), rowing ( $n = 49$ ), basketball ( $n = 20$ ), baseball ( $n = 21$ ), field hockey ( $n = 16$ ), volleyball ( $n = 7$ ), track and field/cross-country ( $n = 38$ ), gymnastics ( $n = 5$ ), football ( $n = 5$ ), soccer ( $n = 10$ ), and ice hockey ( $n = 2$ ). The average number of years participants reported playing their sport over their lifetime was 10 years ( $SD = 4$  years). Twenty-five percent of participants indicated being under full athletic scholarship; 35% indicated partial scholarship; 3% indicated academic scholarship (partial or full); and 37% had no scholarship. Eighty-one percent of athletes reported being spiritual (e.g., believing in a higher power), while 19% did not identify themselves as spiritual. Fifty-eight percent of athletes considered themselves to be religious (e.g., attending services), while the remaining 42% did not identify themselves as religious. Some athletes were in their main competitive season ( $n = 124$ ), while others were out of season during survey administration ( $n = 169$ ). Fifteen percent of participants were currently suffering from an injury that prevented them from playing and/or practicing.

## Measurement

**Gratitude.** The Gratitude Questionnaire-Six (GQ-6; McCullough et al., 2002) was used to measure dispositional gratitude among participants. The GQ-6 consists of six items related to the expression and experience of appreciation and gratefulness in daily life, and uses a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). A sample item is "I have so much in life to be thankful for." Scores on the GQ-6 are calculated by first reverse-scoring items 3 and 6, then summing items 1–6 using the reversed scores for items 3 and 6. High total scores on the GQ-6 indicate greater dispositional gratitude, while low scores indicate lesser dispositional gratitude. The GQ-6 was found to be correlated with other measures of gratitude such as the Gratitude Adjective Checklist (GAC; McCullough et al., 2002), which indicated a Pearson  $r$  of .75. Previous studies have found this measure to be psychometrically valid and reliable (e.g., Froh et al., 2011; McCullough, Tsang, & Emmons, 2004; Watkins, Scheer, Ovnicek, & Kolts, 2006). The alpha for the current sample was .85.

**Sport Satisfaction.** With permission from the researchers, an adaptation of the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) was used to assess sport satisfaction. The original SWLS demonstrated favorable psychometric properties such as high internal consistency and high temporal reliability, as well as moderate to high correlations with other subjective well-being measures (Diener et al., 1985). A sample SWLS item is "In most ways my life is



close to ideal.” In the adapted version, the term “life” was replaced with “college sport experience” to make the scale specific to the athletic domain, yielding “In most ways my college sport experience is close to ideal.” For the purpose of this study, the adapted sport-specific SWLS will be referred to as the Satisfaction with Sport Scale (SWSS). The format of the scale remained the same as the SWLS—a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Using Diener’s (2006) scoring model for the SWLS, scores of the SWSS were calculated by summing the scores of the aggregate items. Total scores ranging from 30 to 35 constitute a very high score, and indicate that one is highly satisfied with one’s college sport experience. Total scores ranging from 25 to 29 indicate a high score, meaning that one likes their college sport experience and feels that things are mostly good. Scores in the 20–24 range constitute an average score, suggesting a general satisfaction, but having some areas where one would like to see improvement in one’s college sport experience. Scores in the 15–19 range indicate that one is slightly below average in satisfaction of their college sport experience. Scores ranging from 10 to 14 constitute an overall dissatisfaction with the college sport experience. And total scores ranging from 5 to 9 indicate that one is extremely unhappy with one’s college sport experience. Our aim was to assess student-athletes’ global satisfaction of the college sport experience; therefore, using a modified version of the SWLS designed to measure global life satisfaction seemed appropriate for the purposes of this study, as well as for the college-age population.

**Burnout.** The Athlete Burnout Questionnaire (ABQ; Raedeke & Smith, 2001) was used to measure individual levels of burnout among student-athletes. The ABQ consists of 15 items on a 5-point Likert scale ranging from 1 (*almost never*) to 5 (*almost always*). Raedeke and Smith (2001) identified three dimensions of athlete burnout using exploratory factor analysis. These dimensions included emotional and physical exhaustion (E), reduced sense of accomplishment (RA), and devaluation of sport (D). The ABQ is composed of 15 items, with 5 items corresponding to each of the three dimensions. A sample item from the E subscale is “I feel overly tired from my sport participation.” A sample item from the RA subscale is “I am not achieving much in my sport.” A sample item from the D subscale is “I’m not into my sport like I used to be.” Scores are calculated for each subscale by summing scores together after items 1 and 14 have been reverse-scored. Low scores on items in the E subscale indicate higher levels of athlete burnout related to the emotional/physical exhaustion dimension. Low scores on the RA subscale are associated with greater levels of burnout in regard to feeling unaccomplished within the sport domain. Low scores on the D subscale indicate higher levels of burnout related to the athlete not valuing their current sport experience. This measure was found to be valid and reliable among college-age athletes. ABQ subscales were low to moderately correlated with trait anxiety ( $r = .14$  to  $.46$ ) and amotivation ( $r = .31$  to  $.64$ ), while being moderate to highly correlated with commitment ( $r = -.37$  to  $-.76$ ) and enjoyment ( $r = -.40$  to  $-.61$ ). Researchers found good test-retest reliability for all three subscales: E ( $R = .92$ ), RA ( $R = .86$ ), and D ( $R = .92$ ; Raedeke & Smith, 2001). The alpha for the current sample was .85.

**Perceived Social Support.** The Perceived Available Support in Sport Questionnaire (PASS-Q; Freeman et al., 2011) was used to assess perceived social support among student-athletes. The PASS-Q was developed to address concerns that

measures of perceived social support should be population and context specific (Freeman et al., 2011). This measure focuses on the emotional, esteem, informational, and tangible support that athletes feel is available to them, and items are equally distributed among these four subscales. The PASS-Q consists of 16 items on a 5-point Likert scale ranging from 0 (*not at all*) to 4 (*extremely*). Four items are included for each of the four subscales, totaling 16 items in all. The PASS-Q instructions state, “If needed, to what extent would someone . . .” with sample items including “always be there for you” (emotional support), “enhance your self-esteem” (esteem support), “give you tactical advice” (informational support), and “help with travel to training and matches” (tangible support). Subscale scores are calculated by summing the four respective items in that subscale, then averaging the total score. A higher average on the emotional support subscale indicates that the athlete perceives a greater amount of comfort, security, and sense of feeling cared for and loved. A higher average on the esteem support subscale implies that a person feels their self-esteem or sense of competence is often bolstered by others. A higher average on the informational support subscale indicates a feeling that one often receives feedback and guidance from others. Finally, a high average on the tangible support subscale implies that the athlete feels provided with a lot of concrete instrumental assistance (Cutrona & Russell, 1990). High levels on the PASS-Q have been correlated with lower levels of athlete burnout and higher levels of self-confidence (Freeman et al., 2011). Internal validity (Cronbach’s  $\alpha = .69$  to  $.87$ ) and test-retest reliabilities ( $.73$  to  $.84$ ) were psychometrically sound. Moderate ( $r = .40, p < .05$ ) to high ( $r = .84, p < .05$ ) correlations were observed between perceived available support dimensions. The four-dimensional structure of this scale has been validated to assess perceived available support within the sport domain; researchers reported that all four dimensions of the PASS-Q demonstrated good model fits (Freeman et al., 2011). The alpha for the current sample was  $.85$ .

## Procedure

Upon approval from the university’s Institutional Review Board, we contacted coaches of college varsity athletics programs in the Midwest, Northeast, and South of the United States to request permission for their athletes to participate in the study.

**Online Data Collection.** For online recruitment, a survey link was sent to college coaches through a secure online database. The coaches then forwarded the link to their student-athletes via e-mail. To be eligible to complete the survey, participants were first presented information about the study, including potential risks and benefits, and were asked to complete an informed consent item. After giving informed consent, athletes could then proceed with submitting their survey responses. The survey contained a demographic questionnaire, the GQ-6, SWSS, ABQ, and PASS-Q. Survey items were listed consecutively. Once participants completed the survey, they clicked “SUBMIT” at the bottom of the webpage, which submitted all data as complete.

**In-Person Data Collection.** With the intent of increasing participant response rate, in-person data collection was used in cases where we had geographical access to college coaches and teams. This decision was made after consulting with local coaches, who anticipated that more athletes would complete the survey if it was



given in person, with allotted time to complete it before or after practice. With coaches' permission, paper surveys (identical to their online versions) were distributed to student-athletes. In some cases, participants brought electronic tablets (i.e., iPads) to the meeting and had the option of completing the survey online via the secure database. At some schools, both forms of the survey were used. Overall, approximately 50% of the surveys were taken online and 50% were administered in person. For cases in which the primary researcher served as the team's sport psychology consultant, athletes were sent the online survey link via the coach, and it was reiterated that participation was completely voluntary and anonymous. This was to prevent a possible power dynamic between the primary researcher and student-athletes, and to limit responder bias. Hard-copy survey data were entered into a secure computer system and combined with the online survey data. Completed paper copies of the survey were kept by the primary researcher in a secure location.

Three-hundred and seventeen college athletes originally completed the survey, either online or in person; however, 24 participants were later excluded from data analysis due to missing data. Both online and paper survey data remained anonymous.

## Statistical Analyses

One-way analysis of variance (ANOVA) tests were conducted among dependent variables: gratitude, sport satisfaction, athlete burnout, and perceived social support. Correlational analyses (Pearson  $r$ ) were conducted to examine these differences in detail. Bias-corrected bootstrapping with a regression analysis was used to test the mediation model—that is, whether perceived social support in sport mediated the relationship between gratitude, sport satisfaction, and burnout. Bias-corrected bootstrapping has been shown to be one of the best methods for testing mediation effects because it has low Type I and Type II error and high statistical power (95% confidence interval,  $p < .05$ ; Hayes, 2009). SPSS (Version 22) was the statistical software used to conduct these analyses. An alpha less than .05 was used for indication of statistical significance.

## Results

Addressing Research Question 1, Pearson ( $r$ ) correlations among variables are reported in Table 1. A significant relationship was found between gratitude and sport satisfaction ( $r = .14$ ,  $p = .02$ ). Gratitude was significantly negatively correlated with athlete burnout ( $r = -.14$ ,  $p = .02$ ) and significantly positively correlated with perceived social support ( $r = .24$ ,  $p = .00$ ). The devaluation of sport subscale of the ABQ was most significantly correlated with gratitude ( $r = -.13$ ,  $p = .03$ ), while all four subscales of the PASS-Q were significantly correlated with gratitude at the  $p = .00$  level (emotional,  $r = .29$ ; esteem,  $r = .18$ ; informational,  $r = .18$ ; tangible,  $r = .24$ ). All three subscales of the ABQ were significantly negatively correlated with sport satisfaction at the  $p = .00$  level (ABQ-RA,  $r = -.66$ ; ABQ-E,  $r = -.21$ ; ABQ-DS,  $r = -.46$ ), and all four subscales of the PASS-Q were significantly positively correlated with sport satisfaction at the  $p = .00$  level (emotional,  $r = .50$ ; esteem,  $r = .49$ ; informational,  $r = .47$ ; tangible,  $r = .51$ ). Results also revealed a significant negative relationship between total aggregated scores of athlete burnout and perceived social support ( $r = -.48$ ,  $p = .00$ ).

**Table 1 Pearson (*r*) Correlations Among Measures of Gratitude (GQ-6), Sport Satisfaction (SWSS), Athlete Burnout (ABQ), and Perceived Social Support in Sport (PASS-Q)**

		GQ-6	SWSS	ABQ	PASS-Q
GQ-6	Pearson <i>r</i>	1	.14*	-.14*	.24**
SWSS	Pearson <i>r</i>	.14**	1	-.52**	.53**
ABQ	Pearson <i>r</i>	-.14*	-.52**	1	-.48**
PASS-Q	Pearson <i>r</i>	.24**	.53**	-.48**	1

\*Correlation is significant at the  $p < .05$  level. \*\*Correlation is significant at the  $p < .01$  level.

In regard to Research Question 2, the results of bias-corrected bootstrapping revealed that perceived available social support in sport significantly mediated the relationship between gratitude and sport satisfaction (standardized effect = .30,  $p = .01$ , 95% CI [.15, .52]). Results specifically indicated that the tangible support subscale of the PASS-Q completely mediated the relationship between gratitude and sport satisfaction (standardized effect = .14,  $p = .00$ , 95% CI [.02, .34]). Other subscales of the PASS-Q were not found to have a significant mediation effect on sport satisfaction (see Table 2). Perceived social support was also found to be a significant mediator in the relationship between gratitude and athlete burnout (standardized effect = -.44,  $p = .00$ , 95% CI [-.77, -.22]). Specifically, the informational support subscale was shown to be a significant mediator between gratitude and the reduced sense of accomplishment (standardized effect = -.05,  $p = .04$ , 95% CI [-.11, -.01]) and sport devaluation (standardized effect = -.07,  $p = .01$ , 95% CI [-.16, -.01]) subscales of the ABQ. None of the subscales on the PASS-Q produced significant mediation effects for the emotional/physical exhaustion subscale of the ABQ (see Table 2). Lastly, esteem support was a significant mediator in the relationship between gratitude and the reduced sense of accomplishment subscale of the ABQ (standardized effect = -.08,  $p = .01$ , 95% CI [-.25, -.01]). We tested alternative models, examining whether gratitude mediated the relationship between perceived social support and sport satisfaction, and/or perceived social support and athlete burnout. The two alternative models were not significant, providing additional support for the hypothesized model. Standardized effects,  $p$  values, and confidence intervals for all mediation analyses are reported in Table 2.

## Discussion

In this study, two research questions were addressed: (1) Is there a relationship between gratitude, sport satisfaction, and athlete burnout among college student-athletes in the United States?; and (2) If such a relationship exists, is perceived social support a mediator in the given sample? Results provide further evidence of the importance of studying the concept of gratitude among athletic populations. Gratitude is associated not only with higher levels of sport satisfaction and perceived social support among college student-athletes in the United States but also with lower levels of athlete burnout. These findings are in congruence with former

**Table 2** Mediation Effects, *p* Values, and Confidence Intervals Among the GQ-6, PASS-Q, SWSS, and ABQ Produced by the Bias-Corrected Bootstrapping Analyses

Mediation model	Effect	<i>p</i>	CI
GQ-6 → PASS-Q total → SWSS			
PASS-Q**	.30	.01**	[.15, .52]
GQ-6 → PASS-Q subscales → SWSS			
PASSQ_EM	.13	.10	[−.04, .32]
PASSQ_ES	.02	.75	[−.11, .18]
PASSQ_IS	.04	.22	[−.04, .14]
PASSQ_TS**	.14	.01**	[.02, .34]
GQ-6 → PASS-Q total → ABQ total			
PASS-Q**	.44	.00**	[−.77, −.22]
GQ-6 → PASS-Q subscales → ABQ-E subscale			
PASSQ_EM	−.11	.08	[−.27, .01]
PASSQ_ES	−.02	.71	[−.15, .06]
PASSQ_IS	−.02	.46	[−.11, .04]
PASSQ_TS	.05	.25	[−.03, .16]
GQ-6 → PASS-Q subscales → ABQ-RA subscale			
PASSQ_EM	−.00	.95	[−.12, .10]
PASSQ_ES**	−.08	.01**	[−.25, −.01]
PASSQ_IS*	−.05	.04*	[−.11, −.01]
PASSQ_TS	−.03	.45	[−.11, .03]
GQ-6 → PASS-Q subscales → ABQ-D subscale			
PASSQ_EM	−.06	.31	[−.19, .05]
PASSQ_ES	−.04	.25	[−.18, .03]
PASSQ_IS**	−.07	.01**	[−.16, −.01]
PASSQ_TS	.01	.79	[−.07, .09]

*Note.* GQ-6 = Gratitude Questionnaire-6; PASS-Q = Perceived Available Social Support in Sport Questionnaire (Subscales: PASSQ\_EM = emotional support; PASSQ\_ES = esteem support; PASSQ\_IS = informational support; PASSQ\_TS = tangible support); ABQ = Athlete Burnout Questionnaire (Subscales: ABQ-E = emotional/physical exhaustion; ABQ-RA = reduced sense of accomplishment; ABQ-D = devaluation of sport).

\*Mediation effect is significant at the *p* < .05 level. \*\*Mediation effect is significant at the *p* < .01 level.

studies that have explored gratitude among Taiwanese high school student-athletes, which found that gratitude was positively associated with life satisfaction, team satisfaction, and negatively correlated with athlete burnout (Chen, 2013; Chen & Kee, 2008). In the discussion of findings, it should be noted that the correlations

produced were in the small to moderate range. Results will be discussed in light of the effect sizes for each relationship in the following sections.

## Relationships Among Gratitude, Sport Satisfaction, and Athlete Burnout

Findings indicate a significant relationship between college athletes' levels of gratitude and overall satisfaction with their college sport experience. According to Cohen's guidelines, the relationship between gratitude and sport satisfaction produced a small effect size. Significant results suggest that the more grateful athletes feel, the more satisfied they feel with their sport experience, and vice versa. Gratitude is often considered a trait characteristic (McCullough et al., 2002), implying that athletes with this trait may do better in areas such as life and/or satisfaction. It should be noted that the gratitude measure used in the current study (i.e., GQ-6) assesses for "felt" gratitude and does not necessarily account for "expressed" gratitude. Therefore, it is unclear how practicing acts of gratitude might further influence levels of sport satisfaction in comparison with feelings of gratitude. Since our current study used correlation analyses that are nondirective, we will discuss the hypothesized mediation model in the next section to further investigate the relationship between dispositional gratitude and sport satisfaction.

We also found a significant inverse relationship between gratitude and athlete burnout, in that athletes who reported higher levels of gratitude were less likely to experience symptoms of burnout in their respective sport. It should be noted that, although significant, the correlation between gratitude and athlete burnout was in the small range according to Cohen's guidelines. Specifically, the sport devaluation subscale of the ABQ had the strongest correlation with gratitude, in that the more grateful an athlete reported feeling, the more the athlete valued their sport experience. This finding suggests that gratitude may be a potential preventative method against burnout, specifically against the devaluation of sport that a burned-out athlete may experience. Since effect sizes were small, these variables should be explored in future studies to test whether a larger sample size would yield more information concerning these relationships.

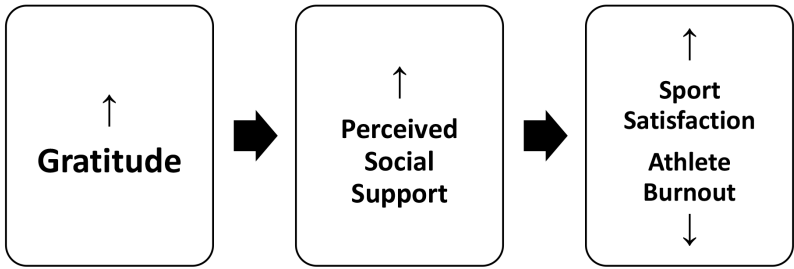
Previous research has found that people with a higher tendency to feel grateful reported being happier and less stressed (Emmons & McCullough, 2003; Kashdan, Uswatte, & Julian, 2006). Athlete burnout, which is characterized partially by elements of emotional and physical stress, may be reduced by efforts to cultivate an attitude of gratitude. For example, rather than focusing on how stressful it is to wake up for an early morning practice, one might use this as an opportunity to appreciate a supportive teammate who is always making the team laugh even when everyone is tired. Gratitude can function as a reframing mechanism, by shifting one's focus from a negative to a positive; this may in turn act to counter symptoms of burnout among college athletes. In addition to *feeling* or *thinking* from a grateful perspective, *expressing* gratitude has been shown to produce positive effects, such as valuing others and increased levels of optimism (McCullough et al., 2002). Since we have demonstrated that there are benefits of increased feelings of gratitude among student-athletes, it would be worth exploring ways by which to increase said gratitude. Further research is needed to deduce whether gratitude interventions (purposeful exercises that aim to cultivate and express gratitude)

could further enhance an athlete’s sport satisfaction and reduce negative symptoms such as burnout. Thus, future studies should explore how levels of gratitude can be enhanced through applied strategies (i.e., gratitude interventions) to foster optimal mental health and well-being among college student-athletes.

**The Mediating Role of Perceived Social Support**

In response to our second research question, we found that the hypothesized mediation model of perceived social support was maintained in both relationships between gratitude and sport satisfaction, and gratitude and athlete burnout (Figure 1). Specifically, the tangible support subscale of the PASS-Q completely mediated the relationship between gratitude and sport satisfaction. This finding has implications for sport psychologists and coaches alike. Tangible support consists of concrete instrumental assistance (Freeman et al., 2011); therefore, maximizing accessible support resources such as sport psychology services for student-athletes may help enhance their satisfaction with the college sport experience. Perceived social support also mediated the relationship between gratitude and athlete burnout in that those who had higher levels of gratitude perceived more social support available to them; therefore, they were less susceptible to burnout. Specifically, the informational support subscale of the PASS-Q produced the most significant effects in the mediation between gratitude and the reduced sense of accomplishment and sport devaluation subscales of the ABQ. Informational support consists of others providing guidance and/or advice (Freeman et al., 2011); therefore, coaches may seek to maximize positive encouragement and clear, constructive feedback to help reduce levels of burnout in student-athletes.

Similarly, esteem support was shown to be a significant mediator in the relationship between gratitude and the reduced sense of accomplishment dimension of athlete burnout. Esteem support refers to boosting an athlete’s self-esteem or sense of competence (Freeman et al., 2011). Understandably, high levels of gratitude may bolster an athlete’s sense of accomplishment if proper esteem support is in place within the athlete’s sport environment. Interestingly, the emotional support subscale of the PASS-Q was not found to be a mediator between gratitude and measures of well-being in the current study. One possible explanation for this finding is



**Figure 1** — Theoretical model for perceived social support in sport as a mediator in the relationships between gratitude and sport satisfaction, and gratitude and athlete burnout in college student-athletes.

that while emotional support certainly contributes to one's subjective well-being, perhaps it is less critical to sport satisfaction and burnout. Given the practical and performance-oriented nature of sports, tangible, informational, and esteem support may outweigh the significance of emotional support as a mechanism by which gratitude impacts athletes' level of satisfaction and burnout. It should be noted that apart from the mediation effect, the emotional support subscale demonstrated the most significant correlation with gratitude as compared to the other three PASS-Q dimensions. This suggests that the more grateful an athlete feels, the more emotional support they perceive available to them, and vice versa. However, in regards to mediation, emotional support does not appear to mediate the relationship among gratitude, sport satisfaction, and athlete burnout.

The findings suggest that gratitude can be the starting point whereby student-athletes become more perceptive and aware of the social support around them. Bringing attention to the meaningful aspects of their college sport experience (i.e., practicing gratitude) may increase their perception of support available, thereby increasing satisfaction and decreasing burnout. Results support the research of Chen (2013), who found perceived social support to be a mediator between gratitude and athlete well-being. While Chen (2013) sampled adolescent athletes in Taiwan, we sought to examine this research question within the college athletic population in the United States. We interpret these findings as an indication that increasing athletes' levels of gratitude may be one way to enhance student-athlete well-being from the ground up, and suggest that future researchers examine the effects of gratitude interventions on perceived social support in sport, as well as levels of sport satisfaction and burnout in college athletes. Researchers have found that interventions that inspire participants to contemplate gratitude toward people, things, or moments have the potential to enhance well-being, satisfaction, and self-esteem (Rash, Matsuba, & Prkachin, 2011). For example, writing down "3 good things" every day for a week, making a gratitude list, and writing a gratitude letter are empirically supported gratitude interventions that have demonstrated positive effects on well-being (Seligman, Steen, Park, & Peterson, 2005). In the section on practical implications, we will further discuss how gratitude interventions may be implemented with student-athletes, based on the findings of the current study.

## Limitations

A caveat of these research findings is that correlations among gratitude, sport satisfaction, and athlete burnout, although significant, were small according to Cohen's guidelines. Since, to our knowledge, the concept of gratitude has not yet been empirically explored with college athletes in the United States, more research on this concept is needed to deduce more substantial claims about the usefulness of gratitude interventions among college athletes.

Another potential limitation is that participants were recruited by convenience sampling using both online and in-person survey methods. The researcher recruited many participants by first contacting coaches of athletics teams. Nineteen of the coaches contacted either sent out the online survey link or invited the primary researcher to administer paper surveys in person. However, the authors of the present study did not collect data related to what percentage of online surveys sent out were completed, due to the anonymous and voluntary nature of the web link. It can be



estimated that of the 19 teams surveyed, the number of athletes who completed the survey on each team varied greatly, from approximately 10 to 100%. This could limit the potential generalizability of the results. Since in-person survey administration was often conducted in conjunction with the coaches (i.e., the researcher sought permission of the coach; the coach then sent the athletes the online survey link or invited the researcher to distribute the paper survey to the team), this may have contributed to response bias—that is, athletes may have been inclined to answer survey questions in a way that would seem favorable to their coaches. In a similar fashion, there were two teams for which the primary researcher served as the team sport psychology consultant. Although in these cases the athletes were sent the online survey link via the coach to minimize the dual relationship (i.e., consultant and researcher), it is possible that responder bias may have slightly impacted the results. Although there were no significant differences in scores between these two teams and the other teams surveyed, we would like to acknowledge this potential limitation in the current study.

While a variety of college institutions and sports were represented, particular team culture or climate may have impacted athlete responses. In addition, athletes at the NCAA Division II level were not represented in the current sample. As is the case in all self-report measures, there is also a possibility that participants' self-evaluation of variables such as burnout and perceived social support may not have aligned with others' perception of the available resources or characteristics. Another possible limitation was that the level of the student-athlete's skills within his or her own team was not assessed. Factors such as playing time and starting status were not considered, and may have had an effect on participants' gratitude, satisfaction, perceived social support, or degree of burnout. It is also likely that other factors unaccounted for in the current study contribute to the relationships among gratitude, sport satisfaction, athlete burnout, and perceived social support.

## Practical Implications

The findings of the current study present reasonable considerations and implications for sport psychology researchers and practitioners. Sport psychologists may consider monitoring levels of gratitude, sport satisfaction, athlete burnout, and perceived social support to assess the team climate. Based on the findings, we suggest that it may be helpful to encourage student-athletes to cultivate gratitude in their lives, because of its positive effects on sports-related domains of their lives. Participants' SWSS, ABQ, and PASS-Q scores varied significantly, depending on sport type; yet, overall, the mediation model (gratitude → perceived social support → sport satisfaction/athlete burnout) remained significant, implying that in this study, the model demonstrated continuity across sports and individual teams. Given the relationship between gratitude and satisfaction in the college athletic domain, there remains the possibility that interventions seeking to cultivate gratitude could increase student-athletes' satisfaction of their college sport experience.

Student-athletes who face the cessation of their college athletic participation are often asked to complete exit interviews before departure. Exit interview data, including satisfaction levels reported by graduating college athletes, have the potential to influence future decisions made internally by the respective institution's athletic department ranging from a "minimal" to "great" extent (Iannotta, 2015).

Satisfaction and burnout may also influence student-athlete retention rates, not only in their respective sport participation but in college in general. Student-athletes who identify strongly with their athlete role (i.e., high athletic identity) may be at risk for being more negatively affected by dissatisfaction or burnout within the sport context (Melendez, 2010). Melendez (2010) recommended a multidimensional approach to improving college student-athlete retention rates in order to foster a “well-rounded experience” (p. 358), including a balance of academic, athletic, personal-emotional, and developmental pursuits to create a more positive experience for college athletes. Cultivating gratitude may be one way to increase satisfaction and lessen the detrimental physical, emotional, and psychological effects of burnout, contributing positively to the overall college student-athlete experience. Athletes who are more satisfied and less burned-out may also be less likely to quit, and/or more likely to see their college career to full term.

Research has shown that providing athletes with appropriate social support in regard to their specific stressors can benefit performance (Rees & Hardy, 2004). Sport psychologists and coaches may consider utilizing gratitude interventions to enhance athletes’ levels of perceived social support, thereby strengthening the ability of gratitude to increase sport satisfaction and decrease burnout (i.e., mediation effect). Gratitude intervention research has found that making a gratitude list, keeping a gratitude journal, and writing letters of gratitude to others have elicited positive effects in participants, such as decreased depression, increased happiness, greater life satisfaction, and increased willingness to provide support for others (Emmons & McCullough, 2003; Geraghty, Wood, & Hyland, 2010; Seligman et al., 2005). Given the association between gratitude, satisfaction, and burnout within the sport context, implementing gratitude interventions with college athletes may foster a more grateful mindset. It is possible that expressing gratitude may also impact the athlete’s perception of available social support. Cultivating gratitude more often and more purposefully through semistructured interventions may be a way to help athletes maintain perspective, focus on the positive, and cope with the physical and mental stressors present within the competitive college athletic domain.

## Recommendations for Future Research

As this study was successful in gathering data from a variety of sports across genders, future studies may seek to narrow the focus to increasing the sample size within one gender or one sport. Studies examining gender differences in gratitude have yielded mixed results; one study found that adolescent boys derive more social benefits from gratitude than do girls (Froh, Yurkewicz, & Kashdan, 2009). Another found that women exhibited higher overall trait gratitude than did men, and men were less likely to express gratitude or derive benefits from gratitude expression (Kashdan, Mishra, Breen, & Froh, 2009). Studying gender differences related to athlete gratitude is important because sport psychologists should be thinking critically about team characteristics such as gender, sport type, competition level, or team climate when implementing specific interventions. For example, female athletes may respond better to gratitude interventions than male athletes. Future studies should explore gender differences in gratitude and compare the outcomes of student-athlete gratitude interventions to see if variations between college men

and women exist. Another recommendation might be to evaluate coaches' levels of gratitude, and see if this correlates with respective student-athletes' gratitude levels. Doing so would shed light on whether gratitude is modeled and transferred by the coaches. If gratitude is encouraged and practiced within the team culture, this might provide insight into how it functions in regard to the variables of sport satisfaction, athlete burnout, and perceived social support.

In the discussion section, it was noted that the GQ-6 measure of dispositional gratitude does not particularly account for *practiced* gratitude, but rather, that it assesses trait gratitude, which can be described as general feelings of gratitude. Future studies should explore whether acts of gratitude (e.g., writing a thank-you letter) enhance the relationships among gratitude, sport satisfaction, perceived social support, and burnout among college athletes. Future studies are also needed to test whether gratitude interventions have the potential to elicit positive mental health and well-being outcomes for college student-athletes in the United States. Since gratitude interventions have been shown to increase levels of satisfaction in specific domains (Geraghty et al., 2010), implementing gratitude interventions with college athletes may help to prevent or reduce sport dissatisfaction and/or burnout over the course of the student's college athletic career. Studies examining the interaction between gratitude and demographic factors such as class year, gender, sport type, religiosity, or division level would also provide further insight concerning to whom gratitude can be most beneficial. Many religions promote gratitude as part of their practice (Emmons & Crumpler, 2000), and religiosity has been correlated with prosocial behaviors such as gratitude expression (Li & Chow, 2015). Exploring these relationships among student-athletes may be another direction for future investigation. Any research exploring potential moderators and additional mediators of gratitude among athletes would also be a valuable contribution to the literature.

## Conclusion

In this study, we aimed to explore the relationships among gratitude, sport satisfaction, athlete burnout, and perceived social support. We found that gratitude is a dispositional trait that may help athletes perceive more available social support within the sport context. This, in turn, may affect college student-athletes' overall satisfaction with their college sport experience, potentially resulting in higher levels of satisfaction and lower levels of burnout. There is merit in testing the implementation of gratitude interventions among the college student-athlete population for both applied and research purposes. Additional studies should examine whether gratitude interventions can be effective in producing positive outcomes with college athletic populations in the United States on measures of sport satisfaction, burnout, and perceived social support. Specifically, future researchers should seek to understand how gratitude affects student-athlete mental health and well-being, and when and for whom gratitude interventions are most effective within the sport context.

## References

- Chen, L.H. (2013). Gratitude and adolescent athletes' well-being: The multiple mediating roles of perceived social support from coaches and teammates. *Social Indicators Research*, 114, 273–285. doi:10.1007/s11205-012-0145-2

- Chen, L.H., & Kee, Y.H. (2008). Gratitude and adolescent athletes' well-being. *Social Indicators Research*, 89, 361–373. doi:10.1007/s11205-008-9237-4
- Cutrona, C.E., & Russell, D.W. (1990). Type of social support and specific stress: Toward a theory of optimal matching. In B.R. Sarason, I.G. Sarason, & G.R. Pierce (Eds.), *Social support: An interactional view* (pp. 319–366). New York: Wiley.
- Diener, E. (February 13, 2006). Understanding scores on the Satisfaction with Life Scale. Retrieved from: <http://internal.psychology.illinois.edu/~ediener/Documents/Understanding%20SWLS%20Scores.pdf>
- Diener, E., Emmons, R.A., Larsen, R.J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49, 71–75. PubMed doi:10.1207/s15327752jpa4901\_13
- Emmons, R.A., & Crumpler, C.A. (2000). Gratitude as a human strength: Appraising the evidence. *Journal of Social and Clinical Psychology*, 19, 56–69. doi:10.1521/jscp.2000.19.1.56
- Emmons, R.A., & McCullough, M.E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology*, 84, 377–389. PubMed doi:10.1037/0022-3514.84.2.377
- Fredrickson, B.L. (2004). The broaden-and-build theory of positive emotions. *Philosophical Transactions of the Royal Society of London, Series B, Biological Sciences*, 359, 1367–1377. PubMed doi:10.1098/rstb.2004.1512
- Freeman, P., Coffee, P., & Rees, T. (2011). The PASS-Q: The Perceived Available Support in Sport Questionnaire. *Journal of Sport & Exercise Psychology*, 33, 54–74. PubMed doi:10.1123/jsep.33.1.54
- Froh, J.J., Fan, J., Emmons, R.A., Bono, G., Huebner, E.S., & Watkins, P. (2011). Measuring gratitude in youth: Assessing the psychometric properties of adult gratitude scales in children and adolescents. *Psychological Assessment*, 23, 311–324. PubMed doi:10.1037/a0021590
- Froh, J.J., Sefick, W.J., & Emmons, R.A. (2008). Counting blessings in early adolescents: An experimental study of gratitude and subjective well-being. *Journal of School Psychology*, 46, 213–233. PubMed doi:10.1016/j.jsp.2007.03.005
- Froh, J.J., Yurkewicz, C., & Kashdan, T.B. (2009). Gratitude and subjective well-being in early adolescence: Examining gender differences. *Journal of Adolescence*, 32, 633–650. PubMed doi:10.1016/j.adolescence.2008.06.006
- Geraghty, A.W.A., Wood, A.M., & Hyland, M.E. (2010). Attrition from self-directed interventions: Investigating the relationship between psychological predictors, intervention content and dropout from a body dissatisfaction intervention. *Social Science & Medicine*, 71, 30–37. PubMed doi:10.1016/j.socscimed.2010.03.007
- Hayes, A.F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, 76, 408–420. doi:10.1080/03637750903310360
- Iannotta, S.J. (2015). An analysis of current practices for NCAA Division I-FBS student-athlete exit interviews (Master's thesis). Retrieved from ProQuest. (1597446)
- Kashdan, T.B., Mishra, A., Breen, W.E., & Froh, J.J. (2009). Gender differences in gratitude: Examining appraisals, narratives, the willingness to express emotions, and changes in psychological needs. *Journal of Personality*, 77(3), 691–730. PubMed doi:10.1111/j.1467-6494.2009.00562.x
- Kashdan, T.B., Uswatte, G., & Julian, T. (2006). Gratitude and hedonic and eudaimonic well-being in Vietnam war veterans. *Behaviour Research and Therapy*, 44, 177–199. PubMed doi:10.1016/j.brat.2005.01.005
- Kee, Y.H., Tsai, Y., & Chen, L.H. (2008). Relationships between being traditional and sense of gratitude among Taiwanese high school athletes. *Psychological Reports*, 102, 920–926. PubMed doi:10.2466/pr0.102.3.920-926

- Lambert, N.M., Clark, M.S., Durtschi, J., Fincham, F.D., & Graham, S.M. (2010). Benefits of expressing gratitude: Expressing gratitude to a partner changes one's view of the relationship. *Psychological Science*, 21, 574–580. PubMed doi:10.1177/0956797610364003
- Lambert, N.M., Graham, S.M., & Fincham, F.D. (2009). A prototype analysis of gratitude: Varieties of gratitude experiences. *Personality and Social Psychology Bulletin*, 35, 1193–1207. PubMed doi:10.1177/0146167209338071
- Lanham, M.E., Rye, M.S., Rimsky, L.S., & Weill, S.R. (2012). How gratitude relates to burnout and job satisfaction in mental health professionals. *Journal of Mental Health Counseling*, 34, 341–354. doi:10.17744/mehc.34.4.w35q80w11kqpqn26
- Li, K., & Chow, W. (2015). Religiosity/spirituality and prosocial behaviors among Chinese Christian adolescents: The mediating role of values and gratitude. *Psychology of Religion and Spirituality*, 7, 150–161. doi:10.1037/a0038294
- McCullough, M.E., Emmons, R.A., & Tsang, J.A. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology*, 82, 112–127. PubMed doi:10.1037/0022-3514.82.1.112
- McCullough, M.E., Tsang, J.A., & Emmons, R.A. (2004). Gratitude in intermediate affective terrain: Links of grateful moods to individual differences and daily emotional experience. *Journal of Personality and Social Psychology*, 86, 295–309. PubMed doi:10.1037/0022-3514.86.2.295
- Melendez, M.C. (2010). Psychosocial influences on college adjustment in Division I student-athletes: The role of athletic identity. *Journal of College Student Retention*, 11, 345–361. doi:10.2190/CS.11.3.c
- National Collegiate Athletic Association. (2009, May). Defining countable athletically related activities. Retrieved from <http://www.ncaa.org/sites/default/files/Charts.pdf>
- National Collegiate Athletic Association. (2016, January). NCAA GOALS study of the student-athlete experience. Retrieved from [https://www.ncaa.org/sites/default/files/GOALS\\_2015\\_summary\\_jan2016\\_final\\_20160627.pdf](https://www.ncaa.org/sites/default/files/GOALS_2015_summary_jan2016_final_20160627.pdf)
- Park, N., Peterson, C., & Seligman, M.E.P. (2004). Strengths of character and well-being. *Journal of Social and Clinical Psychology*, 23, 603–619. doi:10.1521/jscp.23.5.603.50748
- Proyer, R.T., Ruch, W., & Buschor, C. (2013). Testing strengths-based interventions: A preliminary study on the effectiveness of a program targeting curiosity, gratitude, hope, humor, and zest for enhancing life satisfaction. *Journal of Happiness Studies*, 14, 275–292. doi:10.1007/s10902-012-9331-9
- Raedeke, T.D., & Smith, A.L. (2001). Development and preliminary validation of an athlete burnout measure. *Journal of Sport & Exercise Psychology*, 23, 281–306.
- Rash, J.A., Matsuba, M.K., Prkachin, K.M. (2011). Gratitude and well-being: Who benefits the most from a gratitude intervention? *Applied Psychology: Health and Well-Being*, 3, 350–369. doi:10.1111/j.1758-0854.2011.01058.x
- Rees, T., & Hardy, L. (2004). Matching social support with stressors: Effects on factors underlying performance in tennis. *Psychology of Sport and Exercise*, 5, 319–337. doi:10.1016/S1469-0292(03)00018-9
- Seligman, M.E.P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55, 5–14. PubMed doi:10.1037/0003-066X.55.1.5
- Seligman, M.E.P., Steen, T.A., Park, N., & Peterson, C. (2005). Positive psychology progress: Empirical validation of interventions. *American Psychologist*, 60, 410–421. PubMed doi:10.1037/0003-066X.60.5.410
- Watkins, P.C., Scheer, J., Ovnicek, M., & Kolts, R. (2006). The debt of gratitude: Dissociating gratitude and indebtedness. *Cognition and Emotion*, 20, 217–241. doi:10.1080/02699930500172291
- Wood, A.M., Froh, J.J., & Geraghty, A.W.A. (2010). Gratitude and well-being: A review and theoretical integration. *Clinical Psychology Review*, 30, 890–905. PubMed doi:10.1016/j.cpr.2010.03.005

- Wood, A.M., Joseph, S., & Maltby, J. (2008). Gratitude uniquely predicts satisfaction with life: Incremental validity above the domains and facets of the five factor model. *Personality and Individual Differences*, 45, 49–54. doi:10.1016/j.paid.2008.02.019
- Wood, A.M., Joseph, S., & Maltby, J. (2009). Gratitude predicts psychological well-being above the Big Five facets. *Personality and Individual Differences*, 46, 443–447. doi:10.1016/j.paid.2008.11.012