STRESS, SOCIAL SUPPORT, SELF-EFFICACY, AND PERFORMANCE FOR COLLEGIATE STUDENT-ATHLETES: AN APPLICATION OF THE STRESS-BUFFERING MODEL

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ABSTRACT

The stress-buffering model was used as a framework to explore the ways in which perceptions of social support are related to student-athletes’ stress, self-efficacy, and performance in their academic and athletic lives. Ninety-seven student-athletes were asked to complete a survey that measured these constructs with regard to a specific academic and athletic event. Results showed a significant negative relationship between stress and self-efficacy in an academic context and a significant positive relationship between self-efficacy and performance in both an academic and athletic context. Received social support was not significantly related to self-efficacy. The overall results showed moderate support for the stress-buffering model. Future research should explore the harmful and beneficial effects of stress for SAs, whether received or perceived availability of social support is helpful to SAs, and where social support rests in the stress-coping process.
TABLE OF CONTENTS

Acknowledgments .................................................................................................................. ii
Abstract .................................................................................................................................. iii
List of Tables ......................................................................................................................... v
List of Figures ....................................................................................................................... vi
List of Appendices ............................................................................................................... vii

Chapter 1: Introduction ......................................................................................................... 1
  Student-Athlete Stressors .................................................................................................... 3
  Stress-Buffering Model ..................................................................................................... 7
  Social Support Types ....................................................................................................... 14

Chapter 2: Method ................................................................................................................ 17
  Participants ......................................................................................................................... 17
  Procedures ........................................................................................................................ 17
  Instrumentation ................................................................................................................ 18
    Academic and Athletic Event Information ..................................................................... 18
    Academic and Athletic Event Importance Scale .......................................................... 20
    Academic and Athletic Stress Scale ............................................................................... 20
    Academic and Athletic Social Support Scale ............................................................... 21
    Academic and Athletic Self-Efficacy Scale .................................................................. 23
    Academic and Athletic Performance Scale .................................................................. 24

Chapter 3: Results .................................................................................................................. 25
  Stress and Self-Efficacy .................................................................................................... 25
  Social Support and Self-Efficacy ..................................................................................... 25
  Self-Efficacy and Performance ......................................................................................... 26
  Social Support Types and Self-Efficacy .......................................................................... 26

Chapter 4: Discussion ............................................................................................................ 27
  Harmful and Beneficial Effects of Stress ......................................................................... 27
  Receiving Social Support ................................................................................................. 29
  Performance Factors ....................................................................................................... 30
  Social Support Diversity ................................................................................................ 31
  Implications ..................................................................................................................... 32
  Limitations ...................................................................................................................... 33
  Directions for Future Research ...................................................................................... 35
  Conclusion ....................................................................................................................... 36

Figure I ................................................................................................................................... 38
Table I ................................................................................................................................. 39
Table II ............................................................................................................................... 40
Appendices ......................................................................................................................... 41
References ............................................................................................................................ 57
LIST OF TABLES

Table I. .................................................................................................................................38

Table II. ...............................................................................................................................39
LIST OF FIGURES

Figure I ..............................................................................................................................................40
LIST OF APPENDICES

APPENDIX A: Study Information ........................................................................41
APPENDIX B: Academic Event Questions .........................................................42
APPENDIX C: Athletic Event Questions ...............................................................43
APPENDIX D: Academic Event Importance Scale .............................................44
APPENDIX E: Athletic Event Importance Scale ...............................................45
APPENDIX F: Academic Stress Scale ...............................................................46
APPENDIX G: Athletic Stress Scale .................................................................47
APPENDIX H: Academic Social Support Scale ................................................48
APPENDIX I: Athletic Social Support Scale ......................................................50
APPENDIX J: Academic Self-Efficacy Scale .......................................................52
APPENDIX K: Athletic Self-Efficacy Scale .........................................................53
APPENDIX L: Academic Performance Scale ....................................................54
APPENDIX M: Athletic Performance Scale .......................................................55
APPENDIX N: Demographic Items ..................................................................56
CHAPTER 1
INTRODUCTION

Stress can emerge from many different life areas including family, friends, work, and the self. There is diversity in stress in that some forms are tolerable (even beneficial) while other forms of stress may be harmful (Fisher, 1984). If harmful stress is left unmanaged, it may grow to substantial levels and cause damage (Holohan & Moos, 1985). The negative effects of stress have been linked to many psychological and physical consequences such as emotional exhaustion (Ramirez, Graham, Richards, Cull, & Gregory, 1996), hypertension, migraine headaches, allergies, and sexual dysfunction (Cobb, 1976).

Because there are different types of stress, it is an individual’s meaning and interpretation that gives stress its value (Fisher, 1984). Before an individual seeks to manage a stressful situation, one has to evaluate whether he/she perceives something to be stressful. The appraisal (evaluative perception) of a stressor puts a negative or positive value to stress. Antonovsky (1979) defined a stressor as a demand from an internal or external environment that interrupts an individual’s homeostasis, which can only be appeased by a non-automatic response. In other words, stressors may be perceived as threatening environmental stimuli that require cognitive effort and for which an individual does not have a readily available coping response.

Stress can be defined as a combination of the stressor and the reactivity to it (Cobb, 1976). Stress is experienced to the extent that a stressor is present, that a stressor is perceived as demanding, and the individual reacts to the stressor. Because appraisal of the stressor can vary according to the perceiver, the way one responds to a stressor may
also vary from individual to individual. To help illustrate the difference between stressor appraisal and stress outcomes, an example is provided.

Imagine two athletes were told to exceed expectations in performance during a last training session before team selection. One athlete appraises the news as a burden: “I am so tired, there is no way I can improve my performance.” The second athlete welcomes the challenge: “I am glad I am still in the running, even though I am tired, I will push harder to show them I can do it.” The two athletes were exposed to the same potential stressor, yet one appraised the news to be burdensome while the other did not. The potential stressor only became threatening for the individual who evaluated it to be harmful.

Stress appears in most facets of life and there are certain stages of life that produce more stress than others. Entry into college is a time in a person’s life when there are new experiences and potential stressors. College years are an opportunity for students to grow, learn, and be comfortable in their own skin (Pinola, 2011). Sun, Buys, Stewart, and Shum (2011) suggested that during university studies, a student may experience life changes and stress that may have a considerable harmful impact on emotional well-being and could lead to unhealthy behaviors. A sub-set of the college population who experiences stress from two core areas is student-athletes (SAs). SAs are “men and women who are enrolled in a college or university and who participate in intercollegiate sports at Division I, II, or III National Collegiate Athletic Association-member institutions” (Howard-Hamilton & Watt, 2001, p. 2).

Potentially harmful stress may occur from the dual role that SAs experience. Research has not adequately addressed the way in which SAs cope with perceived
harmful stress and the support that can be provided to SAs as they manage their stresses (Kristiansen & Roberts, 2010), despite the many calls to do so (Bianco & Eklund, 2001; Rees & Hardy, 2000; Sarason, Sarason, & Pierce, 1990). To address this gap in the literature, a main goal of this study is to investigate how social support relates to SAs who are experiencing negative stress. Toward this goal, first, I discuss potential academic and athletic stressors for SAs. Second, I discuss how the stress-buffering model and social support are intertwined. Third, I discuss the types of social support that may be relevant to the stress coping responses of SAs.

**Student-Athlete Stressors**

SAs may experience pressures and demands from multiple areas. Some sources of stress may be generated from academic demands and athletic demands. First, SAs may experience culture shock during their first year of college. Culture shock “is a multifaceted experience resulting from the stress associated with entering a new culture” (Neupliep, 2006, p. 416). For example, individuals who move out of state or to a new country may have difficulties in finding familiar food, getting used to a different climate, and generally experiencing a new culture. Similar to culture shock, new collegiate SAs experience athletic-culture shock. High school athletes transitioning to an intercollegiate level of play experience more athletic commitment and multiple struggles (Jordan & Denson, 1990). Experiencing a higher level of training intensity, higher performance expectations, and greater academic expectations are just a few types of stressors that are generated from athletic-culture shock (Giacobbi et al., 2004).

Second, SAs may experience role conflict in balancing their two roles: being a student, and being an athlete. The two roles may present pressures within SAs such as
running late for practice after an exam. The authority figure for each role (professor and coach) may have competing expectations such as class or practice commitment. A SA may feel stressed in making the decision to either drop a class or miss a practice while hoping one authority understands his or her decision. The challenge of balancing the two roles could present SAs with a struggle in the development of their sense of identity. An individual’s sense of identity is influenced by positive and negative reinforcement from one’s surroundings (Watt & Moore, 2001). The more time spent in sport and the attention one receives from successful and unsuccessful behaviors during a game can influence a SA’s sense of identity (Harris, 1993). This may benefit SAs in a way that shapes their positive self-image through successful athletic acts; however, if a SA perceives oneself to be valued only in one area, he or she may suffer emotionally (Burke, 1993).

Third, stereotyping is a source of stress that affects SAs. SAs are stereotyped as academically unqualified, less prepared, unintelligent, less motivated, and socially impotent (Burke, 1993; Horton, 2009; Watt & Moore, 2001). The “dumb jock” or “all brawn, no brains” stereotype is perpetuated by the media and can also be seen in magazines and other literature (Burke; Watt & Moore). Regardless of the accuracy or inaccuracy of the stereotype, the treatment of SAs in a classroom is affected. Fellow classmates may be hesitant to work with a SA who travels during the semester and may have little confidence in a SA’s academic work ethic. Professors, too, are made aware of a SA’s role at the beginning of a semester and may be wary of academic competence and dedication to schoolwork. In contrast to popular belief, the average SA is academically competent. Although high earning revenue sports, such as football and basketball, have
records for academic problems (Lapchick, 1989), the SA population overall do just as well, if not better, academically compared to non-athlete students (Whitley, 1999). This makes sense; the discipline, leadership, and persistence through years of athletic training are also applicable in the classroom (Jordan & Denson, 1900).

A fourth source of stress is eligibility pressure (Horton, 2009). The National Collegiate Athletic Association (NCAA) requires SAs to maintain a passing level in their academics to be allowed to play in their sport. Pressure to maintain eligibility does not only emerge from self-goals but also from coaches, athletic advisors, and family expectations.

A fifth source of stress may come from athletic scholarship pressures. Not all SAs are awarded scholarships, but an impressive 145,000 SAs receive a partial or full athletic scholarship, which amounts to about two billion dollars in scholarship monies alone (National Collegiate Athletic Association, 2011). Those fortunate SAs who have scholarships awarded to them also have the pressure to perform to keep or increase scholarship funds. To put this in perspective, take for example, an international student whose sole purpose in moving to another country is to obtain a collegiate degree through an athletic scholarship. If that particular international SA becomes ineligible, a suspension is put on his or her participation and by losing scholarship monies the SA may be forced to return to his or her homeland and loses the opportunity to obtain a degree and valuable sporting experience.

A sixth source of stress is performance anxiety. Those SAs who participate in sports that attract large audiences have increased performance pressures as family, friends, classmates, faculty, coaches, teammates, and even local communities are capable
of watching and critiquing performances (Thelin, 1994). Although academic grades are supposed to be kept confidential, high profile SAs who are benched or suspended are vulnerable to criticism because of assumed poor academic performance. SAs may experience shame or embarrassment if this occurs, adding extra pressure to perform well academically and athletically.

A seventh source of stress is the need to continually and successfully manage impressions. Universities athletic departments strongly encourage SAs to maintain a respectful status on and off the field as athletes are perceived as role models (Barnett, 1993). Athletes (including SAs) are highly visible through media. Young children in particular admire athletes through media coverage and are likely to imitate behaviors (Barnett). As an influential individual to spectators and receiving pressure from the public, it is important for SAs to continually and successfully manage impressions.

An eighth source of stress for SAs is time constraints. SAs spend the majority of their time outside of the classroom preparing for and participating in athletic and academic events such as practice, games, traveling, and rehabilitation, and studying. Such time constraints limit SAs recuperation and decompression. Traveling during the semester is an example of how SA’s time is limited. Many SAs are fortunate to travel on a university budget and it becomes readily apparent that time management is essential. SAs need to be proactive in the traveling process, as exams and assignments may need to be completed before traveling. Returning home, SAs combat jet lag, physical, and mental exhaustion when catching up on schoolwork.

To recap, SAs experience multiple stressors. These sources of stress include, but are not limited to culture/athletic shock, role conflict, stereotypes, eligibility pressures,
scholarship pressures, performance anxiety, managing impressions successfully, and time constraints. The stressors mentioned above probably do not occur independently. It is possible that an accumulation of stressors can cause an intensified effect. These facts notwithstanding, being a SA has benefits. For example, participating on an athletic team integrates one into a large social network with many potential opportunities for future endeavors. Also, athletic participation is linked to good well-being, self-esteem, and health (Zimbalist, 1999). The life skills gained from participating in a competitive athletic setting include self-discipline, motivation, and teamwork skills (Harris, 1993), yet, there is equally no doubt that SAs experience stress and must find ways to cope with their stress.

**Stress-Buffering Model**

A common method to managing stress is receiving social support. Social support refers to the help an individual receives from others to meet basic needs (Cutrona, 1996). There are two common perspectives that help explain stress coping strategies through social support. First, the stress and coping perspective proposes that social support contributes to the health of an individual by protecting him/her from adverse effects of stress (Cohen, Underwood, & Gottlieb, 2000). Second, the appraisal perspective of stress coping assumes that perceived available support and communication to social networks will influence the appraisals of stressful situations that may buffer the negative effects of stress on health outcomes (Cohen et al.). Each perspective provides insight into how an individual reacts during stressful events and provides a rationale for stress and social support models.
Two prevailing models that are widely used in the stress and social support literature are the main-effect model and the stress-buffering model. Each has been found to be useful to explain how social support helps individuals under stress. The main-effect model hypothesizes that social support is related to well-being by providing an overall beneficial effect (Cohen & Wills, 1985).

The stress-buffering model can be depicted in five steps (see Figure I). First, a potentially stressful event must take place (Cohen et al., 2000; Cohen & Wills, 1985). For SAs, there are various potentially stressful events that can occur. For example, a potential stressful event could be an important exam on the horizon or a meeting with the doctor about a sport injury. Second, an individual appraises (evaluates) the demands of the potentially stressful event and whether he or she has the capabilities to handle the potentially stressful event (Cohen et al.; Cohen & Wills). At this stage, if an individual does not appraise the potentially stressful event as demanding or perceives to have the capability to handle the event, then stress will not occur and progress through the stages will stop. However, if the potentially stressful event is appraised as demanding and he or she does not feel capable to handle the event, then the third stage in the process occurs; stress is perceived (Cohen et al.; Cohen & Wills). Fourth, individuals may respond to stress with negative psychological and physiological responses (Cohen et al.; Cohen & Wills). For example, individuals who are stressed may produce negative responses such as thinking they cannot handle the situation (psychological) and/or not take care of his or her body (physiological). Fifth, negative outcomes (such as illness or disease) may occur (Cohen et al.; Cohen & Wills).
Social support is hypothesized to influence the five step process at two points (Cohen et al., 2000; Cohen & McKay, 1984; Cohen & Wills, 1985; Gore, 1981). First, social support may influence the second stage of the process; the appraisal stage (Cohen et al.; Cohen & Wills). Social support can alleviate the stressful event and reactions to it by minimizing the threat or preventing stress appraisal (Cohen & Wills).

Second, social support influences the fourth stage of the stress-buffering model; cognitive and physiological responses (Cohen et al., 2000; Cohen & Wills; 1985; Gore, 1981; House, 1981). Social support can address the cognitive and physiological responses to the stressor by decreasing or eliminating the negative response, producing a solution to the problem, promoting healthy behaviors, and/or encouraging individuals to reappraise the stressful event (Cohen et al.; Cohen & Wills).

As the stress-buffering model predicts, social support can mitigate some of the negative psychological and physiological responses of stress (Cohen et al., 2000; Cohen & Wills, 1985). One type of psychological response is self-efficacy. According to Bandura (1994), perceived self-efficacy refers to “people’s beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives” (p. 1). Bandura (1977) argued that when individuals experience strong self-efficacy, they expend more effort and persist longer during difficult experiences. For SAs, self-efficacy may play an important role in one’s academic and athletic performance during stressful times. While experiencing stress, SAs with low levels of self-efficacy are less likely to expend effort and persist academically and athletically. One way to boost self-efficacy levels is through social support (Regehr, Hill, Knott, & Sault, 2003).
For example, Regehr et al. (2003) compared new firefighters to experienced firefighters and assessed their perception of received social support, self-efficacy, and stress and depression symptoms. In this study, social support was explained as the overall feeling of being supported and valued. Participants were asked to rate their received support from spouses, friends, family, colleagues, union and employers. The experienced firefighters who reported receiving little social support also reported lower levels of self-efficacy compared to new firefighters who reported receiving a lot of social support and reported higher levels of self-efficacy. In addition, experienced firefighters with low self-efficacy levels also reported more symptoms of traumatic stress and depression compared to new firefighters who reported higher levels of self-efficacy and fewer symptoms of traumatic stress and depression.

Rees, Mitchell, Evans, and Hardy (2010) assessed injured high-performance (national and international players) and low-performance (college, recreational, and local league players) athletes. Participants gave reports of their available social support from friends, family members, teammates, coaches, and medical staff and the type of support they received. Results showed that receiving social support in the form of feeling loved and cared for, boosts in self-esteem, receiving advice or guidance, and receiving concrete instrumental assistance helped athletes’ psychological recovery from injuries. The relationship between stressors (e.g., stress from slow rehabilitation progress) and psychological responses (e.g., feeling devastated) was reduced for those athletes that reported higher levels of perceived social support than those athletes who reported low levels of perceived available social support. Thus, social support helped injured athletes
by reducing the stress associated with a sport injury and helped athletes feel more confident in their recovery capabilities.

Zourbanos et al., (2010) studied club or regional level, national level, and international level athletes and found a relationship between the way coaches communicate to athletes and athlete self-talk. Self-talk is defined as the “multidimensional phenomenon concerned with athletes’ verbalizations that are addressed to themselves” (Hardy, Hall, & Hardy, 2005, p. 905). Participants gave reports of their received social support from their coach over the last month. Results showed a positive relationship between athlete’s reports of received social support from a coach in the form of encouragement, caring, and technical advice and athlete positive self-talk. Also, a negative relationship was found between athletes’ reports of receiving social support from a coach and negative self-talk. Thus, this research found that when athletes perceived a variety of social support forms from a coach, they had a heightened sense of athletic capability.

Gearity and Murray (2010) investigated the relationship between coaching style and psychological effects on athletes. Gearity and Murray asked athletes to report on past experiences with poor coaching and found that athletes reported feeling uncared for and less able to cope with sport pressures. The study found five themes of athlete experiences of being poorly coached: poor teaching, uncaring, unfair, inhibiting athletes’ mental skills, and less athlete coping. Gearity and Murray also found that the more athletes thought that their coaches used negative verbal and nonverbal messages when communicating, the less capable athletes felt about their athletic skills.
Taken as a whole, past studies have provided multiple findings suggesting a variety of social support types can enhance individuals’ coping abilities during stressful situations (Gearity & Murray; 2010; Regehr et al., 2003; Zourbanos et al., 2010). This is consistent with the stress-buffering model as researchers have demonstrated that the social support one receives from various social resources may buffer the negative psychological responses of stress, including boosting an individual’s level of self-efficacy (Gearity & Murray; Rees et al., 2010; Regehr et al.). According to this model, by feeling capable, individuals are able to manage stressful events and this can also produce positive outcomes such as performing well.

Not all forms of stress negatively affect self-efficacy and performance. In fact, some forms of stress may be beneficial to a SA such as boosting adrenaline before an important game. The reversal theory (Martin, 1985) predicts that stress severity and frequency can benefit individual’s behavior and mentality. However, there is a limit to the beneficial effects of stress. Optimal arousal theorists (Hebb, 1955) argue that there is a maximal point to which performance on a task may improve with an increase in arousal, beyond that an arousal increase may inhibit performance. This is comparable to the Yerkes-Dodson law, which argues that performance may increase with stress (or arousal), but only up to a point (Yerkes & Dodson, 1908). When the perceived levels of stress become too high and the beneficial effect of stress reaches the maximal point, performance may decrease (Yerkes & Dodson). However, it is possible that SAs may not be aware of the stressors that are influencing them. Although SAs may be experiencing multiple stressors, a low or non-existent level of awareness for the demands may protect SAs from harm.
Comparably, social support may not always be beneficial. Sometimes, social support may be burdensome for an individual who does not require or want supportive messages or behaviors. Depending on who is giving the social support (Dakof & Taylor, 1990) and what type of support is given (Lehman, Ellard, & Wortman, 1986), it may be taxing on an individual to receive support.

Keeping these facts in mind, the stress-buffering model posits that social support can mitigate stress, but, as the Yerkes-Dodson law argues, not all stress is harmful. According to the Yerkes-Dodson law, there is an inverted u-shaped relationship between stress and performance such that low or high stress may negatively affect performance, whereas moderate stress may enhance performance. SAs may experience harmful stress from the accumulation of multiple stressors including stereotypes, performance anxiety, role conflict, and time constraints. For this reason, only a narrow section of the curvilinear pattern between stress and performance will be investigated for this study. In this narrow section we would expect to see a negative linear relationship between stress and performance. If SAs are highly stressed, it may affect them psychologically such as experiencing lower levels of self-efficacy related to their academics and athletics. There are a myriad of supportive behaviors social ties can provide, such as producing a solution to the problem, promoting healthy behaviors, and encouraging SAs to reappraise the stressful event. The various forms of social support may buffer the harmful psychological responses of stress via self-efficacy boosting (Cohen et al., 2000; Cohen & Wills, 1985). For this study, only the received socially supportive messages and behaviors that are perceived as beneficial are investigated. If social support does boost levels of self-efficacy, SAs may be more likely to experience better academic and athletic
performance outcomes during stressful times. Social support and its buffering effects on responses and outcomes have been researched in the field of sport (Rees et al., 2010), but not as it relates to SAs. Therefore, the following hypotheses are offered:

H1: There will be a negative linear relationship between SAs’ reported academic stress and reported academic self-efficacy.

H2: There will be a negative linear relationship between SAs’ reported athletic stress and reported athletic self-efficacy.

H3: There will be a positive linear relationship between SAs’ reports of received academic social support and reported academic self-efficacy.

H4: There will be a positive linear relationship between SAs’ reports of received athletic social support and reported athletic self-efficacy.

H5: There will be a positive linear relationship between SAs’ reported academic self-efficacy and academic performance.

H6: There will be a positive linear relationship between SAs’ reported athletic self-efficacy and athletic performance.

Social Support Types

To fully understand the stress coping processes of SAs, the associations between the specific types of social support and specific types of stressors is necessary (Barerra & Ainlay, 1983). Researchers have found a set of five core social support dimensions, which are emotional, esteem, informational, tangible, and network support (Cutrona & Russel, 1990). In their review, Cutrona and Russel found these five core social support dimensions from studies conducted through 1974-1985. They defined emotional support as being able to turn to others to feel cared for. Esteem support was defined as receiving
boosts in self-esteem. Information support was reflected as the advice and guidance one receives to help solve a problem. Tangible support was defined as the concrete assistance such as receiving money or any instrumental aid. Last, they defined network support as feeling part of group.

Cohen et al. (2000), too, reviewed the social support literature and found five supportive dimensions: emotional, informational, instrumental, companionship, and validation support. The definition for emotional, informational, instrumental, and companionship support are identical to the emotional, informational, tangible, and network dimensions defined by Cutrona and Russel (1990), respectively. Cohen et al. did not include esteem support as its own dimension but included it in the emotional support dimension. Cohen et al. explained validation support as providing the recipient with confirming information that one’s own behavior is normal and appropriate.

Given these common types of social support and that SAs are experiencing stressors from both an academic and athletic setting, it is useful to examine which types of social support may have a more profound impact on increasing self-efficacy. For example, a SA who needs help studying for an exam may not require tangible support, but may benefit from informational support from a tutor. Or SAs who are stressed about an upcoming game may not want informational support, but may benefit from esteem support. Additionally, multiple types of support may be applicable to a particular stressor. For example, an injured SA may need tangible support to help cover medical costs, informational support to help with rehabilitation, and emotional support to provide the SA with feelings of love and care. Given that no research has investigated the
relationships between types of social support and academic and athletic self-efficacy, the following research questions are posited:

RQ1: Which specific types of reported social support SAs receive are most strongly related to SAs’ reports of academic self-efficacy?

RQ2: Which specific types of reported social support SAs receive are most strongly related to SAs’ reports of athletic self-efficacy?
CHAPTER 2

METHOD

Participants

Participants consisted of 97 undergraduate student-athletes at a large pacific university. Participants ranged in age from 17 to 25 years, with an average age of 20 years ($M = 19.88, SD = 1.50$). There were 42 males (43%) and 55 females (57%) participants. Participants were Caucasian ($n = 53, 55$%), African American ($n = 6, 6$%), Pacific Islander ($n = 6, 6$%), Filipino ($n = 5, 5$%), Japanese ($n = 5, 5$%), Chinese ($n = 3, 3$%), American Indian ($n = 3, 3$%), and mixed ($n = 16, 16$%). Participants competed in swimming ($n = 43, 44$%), volleyball ($n = 19, 20$%), water polo ($n = 18, 19$%), basketball ($n = 14, 14$%), and diving ($n = 3, 3$%), and reported that they played for an average of 11 years in their sport ($M = 10.77$ years, $SD = 3.8$).

Procedure

Before the survey was handed out, the director of student-athlete development’s approval was gained. Head coaches and assistant coaches for teams that were in season were contacted by the researcher through email to coordinate a time to survey the SAs after an afternoon or night practice. The researcher reiterated to the student-athletes that the survey was voluntary. As an incentive, pizza was provided to participants who took part in the survey. The survey took between 15-30 minutes. Those SAs who ate pizza ($n = 95$) were asked to write their name on a separate sheet of paper, as per the request of the compliance director in the athletics department. Student-athletes have a limited number of free meals that can be provided to them (according to the NCAA regulations),
as such, records of who ate pizza were kept. The names were not linked to any information the participants provided in this study.

The first page of the survey contained a study information sheet (see Appendix A). Participants were then asked to fill out both an academic and an athletic section in the survey. Approximately half of the participants received the academic section first and the other half received the athletic section first ($n = 52$ received the academic section first; $n = 45$ received the athletic section first). Participants were asked to recall one major and recent academic event (e.g., exam or assignment) and one major and recent athletic event (e.g., game or practice) when filling out surveys items.

First, participants responded to multiple questions regarding their academic and athletic event before responding to scaled items. Second, participants completed survey items in retrospect of each specific event regarding their stress levels, received social support, self-efficacy levels, and performance levels at the time of the event. Third, participants responded to demographic measures and additional sport background information (i.e., age, grade point average, gender, year in school, ethnicity/race, sport, and years played in sport). In consideration of the fatigue SAs may feel after practice, most of the survey measures were reduced in quantity so as not to be overly burdensome to the participants. Survey items were chosen to the extent that they relate to both an academic and athletic setting.

**Instrumentation** (see Table 1 for means and standard deviations)

**Event information.** To focus on a specific context before any scales were completed, participants were asked various questions relating to the specific academic and athletic event (see Appendix B & C). The academic event information questions
asked respondents to write the academic event on the survey, to write what class the event was for, to report whether the class was a required or elective course, to report how many days ago it occurred, to report the grade achieved on that particular academic event, and to report the percentage the academic event was worth to the overall grade.

Participants identified various academic events, such as a final exam or paper assignment. Participants reported on a total of 39 different classes, with the most popular class being identified as Economics ($n = 7$) followed by English ($n = 6$). Seventy-eight participants reported that the class was a required course. The average time that had elapsed since the academic event was 25 days ($SD = 25$ days). The most frequent grade reported was a B ($n = 22$), followed by an A ($n = 20$). Last, the average percentage the academic event was worth to the overall class grade was reported as 28% ($SD = 21$%).

The athletic event information questions asked respondents to write in the athletic event on the survey, to report how many days ago it occurred, to report the result of the game if the event was a game, to report whether he or she was on scholarship at the time of the athletic event, and to report if the game/practice accounted for any team points. In collegiate athletics, teams accumulate points as a result of their win/loss/draw ratio, which determines conference participation at the end of the season.

Participants identified various athletic events, such as a last home game or their most recent practice session. The average time that had elapsed since the athletic event was 22 days ($SD = 34$ days). Twenty-five participants reported that the result of the athletic event was a loss, and 15 participants reported a win (52 participants reported the result was not applicable). Thirty-two participants were on full scholarship, followed by 38 participants on partial scholarship, and 27 participants on no scholarship at the time of
the athletic event. Last, 42 participants reported no team points were counted for the event, followed by 34 participants reported the event did account for team points, and 21 participants reported he or she was not sure the event accounted for team points.

**Event importance scales.** To assess the importance of the exam/assignment or game/practice, three Likert-type scaled items were created. The items were anchored from 1 (*strongly disagree*) to 5 (*strongly agree*). Sample items from the academic and athletic event importance scale were: “I considered that exam/assignment to be very important” and “I considered that game/practice to be very important”, respectively (see Appendix D & E). The overall average for the academic event importance scale was 3.99 (*SD* = .75) and the overall average for the athletic event importance scale was 3.67 (*SD* = .80). The alpha reliability for academic event importance scale was *α* = .84 and the alpha reliability for the athletic event importance scale was *α* = .68.

**Stress scales.** An abbreviated version of the student-life stress inventory (Gadzella, 2001) was used to assess academic and athletic stress. The original 51 item scale included two sections: “stressors” and “reactions to stressors.” As this study is only investigating stressors, items that were chosen came from the “stressor” section. From the 23-item “stressor” section, seven items were ultimately selected because they addressed stressors that were adaptable in both an academic and athletic setting. For example, an item was adapted from “I have experienced daily hassles which affected me in reaching my goals” to “I was experiencing daily hassles which affected me in reaching my academic goals” and “I was experiencing daily hassles which affected me in reaching my athletic goals” (see Appendix F & G). Both the academic and athletic scales were anchored from 1 (*never*) to 5 (*most of the time*). The overall average for the academic
stress scale was 3.06 (SD = .77) and the overall average for the athletic stress scale was 3.67 (SD = .80). The alpha reliability for academic stress scale was α = .80 and the alpha reliability for the athletic stress scale was α = .75.

**Social support scales.** A multidimensional measure of received social support was needed for this study. To provide this, the Inventory of Socially Supportive Behaviors (ISSB) was used to assess received social support (Barrera & Ainlay, 1983). Barrera and Ainlay conducted a preliminary factor analysis on the original 40 items resulting in a total of 36 items. The factor analysis grouped items into four sections: 13 items on directive guidance (e.g., “Gave you some information on how to do something”), 11 items on nondirective counseling (e.g., “Told you that he/she feels very close to you”), three items on positive social interaction (e.g., “Joked and kidded to try to cheer you up”), and nine items on tangible assistance (e.g., “Provided you with a place to stay”).

The entire scale was not used because the ISSB factor analysis produced low factor loadings on multiple items including the three positive social interaction items. The low factor loading items were removed for the present study. The tangible items were not relevant to the specific academic and athletic events in question and were also removed for the present study. As such, a 17-item scale was used in the current research. Originally, the ISSB scale called for participants to rate each item’s frequency over the past month from 1 (not at all) to 5 (about every day). In this study, participants were asked to think back to their exam/assignment and game/practice and report on the social support they received at that time. Items were prefaced with “Around the time of your last exam/assignment or game/practice, to what extent did you have someone who…”
The items were measured on a scale from 1 (not at all) to 5 (a lot). As participants were instructed to complete the items in retrospect of their academic or athletic event, the original wording of the ISSB items will stay the same (see Appendix J & K).

To supplement the ISSB, three additional tangible support items from Rees and Hardy’s athletic social support scale and two new tangible support items were added to the social support scales. For the Rees and Hardy’s items, the basic structure of each item was retained, except for the addition of wording to reflect the specific academic or athletic event. For example, an original item was adapted from “who helps you with tasks on competition days” to “Helped you with tasks on the day of you exam or when your assignment was due” and “Helped you with tasks on the competition day or practice.” The two new tangible support items reflected a general form of tangible support. For example, a new tangible support item was “gave you something (e.g., money, lunch).”

The overall average for the academic directive guidance social support scale was 2.83 ($SD = .86$). The overall average for the academic non-directive guidance social support scale was 2.91 ($SD = 1.06$). The overall average for the academic tangible social support scale was 2.68 ($SD = .92$). The alpha reliability for the academic directive guidance social support scale was $\alpha = .91$, the alpha reliability for the academic nondirective counseling social support scale was $\alpha = .90$, and the alpha reliability for all five items in the academic social support tangible scale was $\alpha = .79$.

The overall average for the athletic directive guidance social support scale was 3.40 ($SD = .86$). The overall average for the athletic non-directive guidance social support scale was 2.93 ($SD = 1.01$). The overall average for the athletic tangible social support scale was 3.35 ($SD = 1.06$).
support scale was 3.21 \((SD = .91)\). The alpha reliability for the athletic directive guidance social support scale was \(\alpha = .92\), the alpha reliability for the athletic nondirective counseling social support scale was \(\alpha = .89\), and the alpha reliability for all five items in the athletic social support tangible scale was \(\alpha = .77\).

**Self-efficacy scales.** Self-efficacy was measured using Chen, Gully, and Eden’s (2001) new general self-efficacy scale (NGSE). Chen et al. created the scale to measure general self-efficacy which is an individual’s feeling of capableness across an array of contexts (Chen et al.). The scale was chosen to assess self-efficacy in both an academic and athletic context. The measure consisted of eight items using 5-point Likert-type scales, anchored from 1 \((strongly disagree)\) to 5 \((strongly agree)\), with items scored so that higher scores indicate greater levels of self-efficacy.

Seven items were adapted to reflect the academic and athletic components. For example, an original item was adapted from “When facing difficult tasks, I am certain I will accomplish them” to “When facing the exam or assignment, I was certain that I would achieve a good grade” and “When facing the game or practice, I was certain that I would perform well.” One original item remained the same for the academic and athletic self-efficacy scales. The item was: “I believed I could achieve most of the goals that I have set for myself” (see Appendix L & M).

The overall average for the academic self-efficacy scale was 3.76 \((SD = .71)\). The overall average for the athletic self-efficacy scale was 3.83 \((SD = .65)\). The alpha reliability for the academic self-efficacy scale was \(\alpha = .90\) and the alpha reliability for the athletic self-efficacy scale was \(\alpha = .86\).
**Performance scales.** Academic and athletic performance was measured using Rees and Hardy’s (2004) two performance scales: flow and feeling flat. Rees and Hardy defined flow as the peak performance and experiences that all performers strive to achieve. Rees and Hardy defined feeling flat as the negative performance that athletes hope to avoid.

The entire scale, consisting of eight items (four items for flow, four items for feeling flat), was used and contained anchors from 0 (*not at all*) to 3 (*a lot*). Items were prefaced with either “Looking back on my performance in my last important exam or assignment…” or “Looking back on my performance in my last important game or practice…,” as relevant. As the original performance measures were created for athletes, the basic structure of each item was retained, except for the addition of wording to reflect the specific academic or athletic event. For example, an item reflecting an academic context was “My performance was consistent throughout the exam or assignment” and an item reflecting an athletic context was “My performance was consistent throughout the game or practice” (see Appendix N & O).

The overall average for the academic performance scale was 1.75 ($SD = .58$). The overall average for the athletic performance scale was 1.99 ($SD = .57$). The alpha reliability for the academic performance scale was $\alpha = .80$. The alpha reliability for the athletic performance scale was $\alpha = .80$. 
CHAPTER 3

RESULTS

Stress and Self-Efficacy

Hypotheses 1 and 2 predicted a negative relationship between SAs’ reports of stress and reports of self-efficacy in an academic and athletic context. As predicted in Hypothesis 1, results revealed a significant negative correlation between SAs’ academic stress and academic self-efficacy, \( r(95) = -.28, p = .01 \) (see Table 2). Opposite to the prediction of Hypothesis 2, results revealed a significant positive correlation between athletic stress and athletic self-efficacy, \( r(95) = .33, p < .001 \) (see Table 2). SAs’ reports of academic stress were negatively associated with SAs’ reports of feeling capable academically. In contrast, SAs’ reports of athletic stress were positively associated with SAs’ reports of feeling capable athletically.

Social Support and Self-Efficacy

Hypotheses 3 and 4 predicted a positive relationship between SAs’ reports of received social support and reports of self-efficacy in an academic and athletic context. No significant correlation was found between reports of academic social support and reports of academic self-efficacy, \( r(95) = .12, p = .24, r(95) = .19, p = .06, r(95) = .07, p = .52 \), for directive guidance, non-directive guidance, and tangible assistance respectively (see Table 2). No significant correlation was found between reports of athletic social support and reports of athletic self-efficacy, \( r(95) = .06, p = .60, r(95) = -.05, p = .60, r(95) = .05, p = .61 \), for directive guidance, non-directive guidance, and tangible assistance respectively (see Table 2).
Self-Efficacy and Performance

Hypotheses 5 and 6 predicted a positive relationship between SAs’ reports of self-efficacy and performance in an academic and athletic context. As predicted, results revealed a significant positive correlation between SAs’ reports of academic self-efficacy and reports of academic performance, \( r(95) = .56, p < .001 \), and a significant positive correlation between SAs’ reports of athletic self-efficacy and reports of athletic performance, \( r(95) = .48, p < .001 \) (see Table 2). SAs’ reports of academic self-efficacy were positively associated with SAs’ reports of academic performance. SAs’ reports of athletic self-efficacy were positively associated with SAs’ reports of athletic performance.

Social Support Types and Self-Efficacy

Research Questions 1 and 2 asked which type of social support received is most strongly related to SAs’ reports of self-efficacy in an academic and athletic context. A regression analysis was used to assess these questions. The findings showed that social support did not explain a significant portion of variance in self-efficacy levels in an academic and athletic context, \( R^2 = .05, F(1, 93) = 1.58, p = .20 \), \( R^2 = .01, F(1, 93) = .31, p = .82 \), respectively. Results indicated that no type of social support was predictive of self-efficacy in an academic or athletic context.
CHAPTER 4
DISCUSSION

Prior to this study, limited information was known concerning SAs experiences of stress, social support, self-efficacy, and performance in an academic and athletic context. To explore the relationships among these constructs, the stress-buffering model was used. The stress-buffering model predicts five stages of the stress-coping experience (Cohen & Wills, 1985). In this study, only the last three stages were investigated; perceived stress, psychological and/or physiological responses, and response outcomes.

According to the stress-buffering model, after an event is appraised as stressful, individuals will experience psychological and physiological responses. After the responses, the last stage of the stress-buffering model predicts certain outcomes to occur. In this study, self-efficacy was used to measure one psychological response and performance on a specific academic or athletic event was used to measure one outcome. Proponents of the stress-buffering model also posit that social support may influence the psychological or physiological responses to the stressful event. In this study, three types of social support were used to measure social support. To test the stress-buffering model, the relationship between stress and self-efficacy, social support and self-efficacy, and self-efficacy and performance in both an academic and athletic context were investigated.

Harmful and Beneficial Effects of Stress

The stress-buffering model links stress and psychological and physiological responses. To test the relationship between these two stages, a negative correlation between stress and self-efficacy in an academic and athletic context was predicted. Indeed, SAs reports of academic stress were negatively correlated with SAs reports of
academic self-efficacy. Those SAs who reported a lot of academic stress also reported feeling less capable in their academic studies. Interestingly and in contrast to the prediction, SAs’ reports of athletic stress were positively correlated with SAs’ reports of athletic self-efficacy. SAs who reported experiencing a lot of athletic stress also reported feeling more capable in their sport. During an athletic event, instead of feeling less capable when stressed it may be that more athletic stress is beneficial for athletic performance. The results provide mixed support for the stress-buffering model.

One explanation to the mixed findings above is the point to which stress becomes harmful to performance may be higher in an athletic setting compared to an academic setting. Theorists of the Yerkes-Dodson law speculate that stress is beneficial but only up to a point at which stress becomes harmful to an individual (Yerkes & Dodson, 1908). Considering the results in the present study, it may be that the point at which stress becomes harmful is contextually based such that the threshold between stress and self-efficacy differs academically and athletically.

Another possible explanation to the mixed findings between stress and self-efficacy in an academic and athletic context is the differentiation between stress experiences in each context. For example, in an athletic setting it may be that the stresses experienced by SAs during practice or competition boosts adrenaline levels. With an increase in adrenaline, more physical effort can be exerted into practice. More physical effort may elicit better performance, thus making SAs feel more capable. In contrast, the academic stresses experienced by SAs may hinder mental ability. Poor mental ability may induce poor performance, thus making SAs feel incapable.
Comparing the frequency of celebrated athletic and academic achievements, SAs are not as commended for their academic performances and are unlikely to be guided into difficult academic pursuits. SAs are constantly supported in their athletics whether they do well or poorly, consequently reinforcing perceptions of high athletic efficacy and importance. Conversely, the feedback in academics might be received only periodically or solely when SAs are doing poorly, reinforcing perceptions of poor academic efficacy and importance. Unknowingly, SAs may be implicitly told that their athletic endeavors are more important than their academics, making SAs feel less capable in school.

Regular feedback received in sport is a constant reminder to perform well as opposed to periodic academic feedback. In this study, SAs reports of athletic stress and self-efficacy may be reflected in the abundant feedback received from an athletic figure. When SAs receive regular feedback in sport, they may feel a stronger sense of control over their capabilities. The constant pressure to perform well may increase efforts in an athletic setting and in turn, increase feelings of capability in a sport setting. Contrary, little feedback in an academic setting may communicate to SAs that their academic achievements are not as important. Unlike in sports, SAs may not be pushed in academically challenging ways and not be as equipped to deal with academic stress and feel less capable in school.

**Receiving Social Support**

The theorists of the stress-buffering model argue that social support influences psychological and physiological responses (Cohen et al., 2000). To test this connection, a positive relationship between SAs’ reports of social support and self-efficacy in an academic and athletic context was predicted. Surprisingly, no support was found for
either hypothesis. With no support for the relationship between social support and self-efficacy, it is clear that other constructs are affecting self-efficacy. Two constructs that may influence how capable an individual feels are self-esteem and previous experience. Individuals with low self-esteem have a low evaluation of oneself (Verderber, Verderber, & Sellnow, 2011). SAs who have low self-esteem are less likely to feel capable in their classes and sport. Likewise, previous experience may also influence self-efficacy. If a SA has eight years of experience within a particular sport, it is likely he or she will feel athletically capable compared to a SA who has one year of experience within a particular sport.

Distinguishing between perceived and received social support may also provide insight into the lack of relationship between social support and self-efficacy for SAs. In this study, SAs were asked to report on received social support rather than perceived availability of support. Perceived availability of social support has been found to be a stronger predictor for coping effectiveness rather than reports of received social support (Antonucci & Israel, 1986; Sandler & Barrera, 1984; Wethington & Kessler, 1986). In this study, there may be scarce support provided to SAs to result in a large enough effect on coping. Or, unsolicited support may have served as a stressor because SAs might have faced the dilemma of stopping the supporter or disengaging from the support that was not originally requested. SAs may benefit from the mere knowledge that support is available to them rather than receiving support.

**Performance Factors**

The stress-buffering model links psychological and physiological responses to outcomes. To test the relationship between these two stages, a positive relationship
between SAs’ reports of self-efficacy and performance in an academic and athletic setting was predicted. As predicted, SAs reports of feeling capable were positively related to SAs reports of performance. This finding is consistent with the social learning theory. The main component of Bandura’s social learning theory (Bandura, 1977; Bandura, 1982) is self-efficacy, which is an individual’s judgment of one’s own ability to meet the demands of a given situation. In this study, a SAs judgment of one’s own ability in an academic and athletic setting has been found to positively influence performance.

**Social Support Diversity**

As the stress-buffering model suggests, there are different types of social support (Cohen & Hoberman, 1983). To seek further understanding of social support and its beneficial effects within the stress-buffering model framework, a positive relationship between different types of social support and self-efficacy in an academic and athletic context was assessed. The different kinds of social support (i.e., directional support in the form or information and guidance, nondirective guidance in the form of love and comfort, and tangible support in the form of material support) were not significantly predictive of self-efficacy. It may be that there are other forms of social support that are not being tapped into. For example, the social support items in the survey may not have reflected the exact type of support SAs received at the time of the academic or athletic event but that is not to say that SAs did not receive any social support. For example, during an athletic event a SA may have received negative support from a coach such as “You call that fast! Do it again, I know you can run faster than that!”

In addition, SAs may have perceived a lot of available support at the time of the event, but during that time support was not received or needed. For example, a SA may
have perceived that he or she had a lot of available support but it was not needed for that specific event. Moreover, there may have been times when social support was provided to a SA and was perceived as helpful, but was not perceived as needed.

Implications

The present study opens doors for research exploring SAs’ experiences of stress, social support, self-efficacy, and performance both academically and athletically. First, the results of the present study have applied value in that it provides information to supportive parties about how SAs cope with the stressors of school and sport. For example, the results of the present study show that academic stress was associated with academic self-efficacy in such a way that the more academic stress SAs reported, the less capable they reported feeling in school. In this study, considering academic stress is detrimental to academic self-efficacy, supportive parties should provide social support by highlighting SAs academic capabilities to reduce SAs academic stress and increase their academic self-efficacy. In contrast, the results of the present study show that athletic stress was associated with athletic self-efficacy in such a way that the more athletic stress SAs reported, the more capable they reported feeling in their sport. This result implies that SAs may be able to endure stress a little more in an athletic setting. Supportive parties can then push SAs hard during athletic events but this has to be tempered to avoid harming the SA. Additionally, the results of the present study show that self-efficacy does relate to performance in both an academic and athletic setting. Socially supportive parties of SAs should emphasize SAs efforts and capability if looking to enhance performance.
A second implication to the current study is the theoretical validation for the links between the stages in the stress-buffering model. In the model, stress and self-efficacy are linked. The Yerkes-Dodson law (Yerkes & Dodson, 1908) can be used to explain the relationship between stress and self-efficacy. According to the Yerkes-Dodson law, stress is beneficial but only up to a point at which it becomes harmful. In this study, a lot of academic stress negatively affected self-efficacy, but in an athletic setting stress enhanced self-efficacy. The finding in each setting adheres to the Yerkes-Dodson law as each context differentiates between how stress can be both beneficial and harmful.

The stress-buffering model also links self-efficacy to performance. The social learning theory can be used to explain the relationship between these two constructs. A main element of the social learning theory is self-efficacy, which is predictive of performance (Bandura, 1977). It was found in both an academic and athletic setting that when SAs feel more capable in a given situation, they would perform better.

A third implication to the study is the suggestion for augmentation to the stress-buffering model. Taken as a whole, the stress-buffering model has a negative overtone. The model predicts how stress is harmful to individuals and that social support can buffer the stress coping process. However, in this study, athletic stress was found to benefit SAs in an athletic setting and social support was not found to relate to self-efficacy. Researchers should be cautious of the stress-buffering model when using it in research as other components or arguments may be applicable to the stress coping process.

**Limitations**

There are several limitations to the current study. One limitation of the study is the validity of the participants’ recollection. In this study, participants were asked to fill
out survey items with regard to a major and most recent academic and athletic event. There is potential error in the participants’ responses and researchers should be cautious of this when interpreting results. For example, a SA may over or under report the amount of social support received at the time of the specific event. To improve the validity of self-report data, it would be beneficial to have SAs fill out the survey right after a major academic or athletic event. For example, a short survey conducted after five practices would yield higher validity of responses. Even better, receiving data right before and after a major academic or athletic event could provide a more detailed report of the stress coping response.

A second limitation to the current study is how social support was measured. In addition to self-report data, future studies may want to ask the provider of the support whether the support was provided and/or accepted. Asking the supportive parties of the SAs to report their quantity and quality of support may give way to important information regarding the beneficial and possibly hurtful effects of social support.

A third limitation to the current study is the types of social support that were measured. By considering only received beneficial social support, other forms of support may have been left out. For example, negative support may also have been provided to SAs, but it was not measured in this study. Moreover, support that sits outside the three types of support measured in this study (directive, non-directive, and tangible) was not addressed. For example, network support is the type of support that enhances feelings of being part of a group (Cutrona & Russel, 1990). To address this limitation, future studies could provide open ended questions for SAs to report any other types of received support that were not included in the measure.
The sample of SAs that were investigated is another limitation to the current study. In this study, only five out of the fourteen sports at the university were investigated. With a limited number of sports analyzed, generalizing the findings to the larger population of SAs is suspect. The types of teams investigated may also alter the findings. It is largely unknown how the stress coping experiences of individual sports fluctuate from team sports. Team and individual sport participants were not controlled for any of the present statistical analysis but may prove to influence the findings.

**Directions for Future Research**

There are several directions for future research in this study. Perhaps the most interesting finding in the study is the opposite relationship between stress and self-efficacy in an academic and athletic setting. In this study, stress was negatively correlated with self-efficacy in an academic setting but was positively correlated with self-efficacy in an athletic setting. Future research should seek to understand the harmful and beneficial effects of stress. Specifically, future research should investigate how athletic stress is experienced by SAs and what components of athletic stress benefit SAs in sport. Given the positive relationship between stress and self-efficacy in an athletic setting in this study, a deeper understanding of how stress relates to self-efficacy and performance may help SAs improve their performance and stress coping responses.

A second and equally curious finding in the present study is the lack of support for the beneficial effects of received social support. Past research has attempted to distinguish between received and perceived social support (Antonucci & Israel, 1986; Sandler & Barrera, 1984; Wethington & Kessler, 1986), yet it is still unclear which is more beneficial. Given that no form of received social support related to self-efficacy in
this study, future researcher should investigate the extent to which received social support starts becoming beneficial to SAs if at all.

A third direction for future research should explore the stress coping experiences of individual sports (e.g., swimming and diving) versus team sports (e.g., volleyball and water polo). In a team sport, the type of support received from teammates and the performance of a team may influence a SAs feeling of capability. Dissimilarly, an individual sport athlete may receive different types of support and may feel in competition with other members of the same sport. It is unclear in previous research whether engaging in a team or individual sport, an athlete would be better equipped to deal with stress.

A last direction for future research should examine how SAs various roles are influencing each other. Two core roles for SAs are their role as a student and as an athlete. To test if the two roles are affecting each other, researchers may want to survey SAs stress coping experiences academically and athletically at one point in time. That is, SAs would need to report on their stress coping experiences of a recent one-week period or day so analysis of the measure is valid. In this study, participants were asked to report on any major and recent academic or athletic event but the events did not necessarily occur at the same time.

**Conclusion**

Overall, the present study extends interpersonal and athlete-oriented research on sport communication. The findings make several contributions to the study of SAs in and out of a sport setting. In this study, perceptions of stress were related to self-efficacy negatively in an academic setting and perceptions of stress were related to self-efficacy
positively in an athletic setting. The mixed finding suggests augmentation to the stress-buffering model. In contrast to the overtone of the stress-buffering model, stress was not harmful to SAs but beneficial in an athletic setting. Future research assessing SAs stress coping experiences should further investigate how stress is perceived and received and influences SAs in both an academic and athletic setting.
Table 1. Means, Standard Deviations, and Ranges

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Table 2. Correlations

Summary of Intercorrelations for Scores on the Academic Stress (Stress_Aca), Athletic Stress (Stress_Ath), Academic Self-Efficacy (SE_Aca), Athletic Self-Efficacy (SE_Ath), Academic Social Support (SS1_Aca, SS2_Aca, SS3_Aca), Athletic Social Support (SS1_Ath, SS2_Ath, SS3_Ath), Academic Performance (Perf_Aca), and Athletic Performance (Perf_Ath), N = 97.

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</tr>
<tr>
<td>5. SS1_Aca</td>
<td>.14</td>
<td>.17</td>
<td>.12</td>
<td>.27**</td>
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<tr>
<td>6. SS2_Aca</td>
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<td>7. SS3_Aca</td>
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<td>.38**</td>
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<tr>
<td>8. SS1_Ath</td>
<td>-.03</td>
<td>.31**</td>
<td>.14</td>
<td>.06</td>
<td>.35</td>
<td>.26*</td>
<td>.21*</td>
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</tr>
<tr>
<td>9. SS2_Ath</td>
<td>.08</td>
<td>.05</td>
<td>.12</td>
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<td>.08</td>
<td>.69*</td>
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<td>.28**</td>
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<td>.07</td>
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<td>.22</td>
<td>.17</td>
<td>.25*</td>
<td>.49**</td>
<td>.27**</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>11. Perf_Aca</td>
<td>-.39**</td>
<td>.20</td>
<td>.56**</td>
<td>.10</td>
<td>.06</td>
<td>.04</td>
<td>-.10</td>
<td>.21*</td>
<td>-.11</td>
<td>.17</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>12. Perf_Ath</td>
<td>-.25*</td>
<td>.20*</td>
<td>.05</td>
<td>.48**</td>
<td>.21*</td>
<td>.01</td>
<td>1.67</td>
<td>.11</td>
<td>-.09</td>
<td>.17</td>
<td>.25*</td>
<td>---</td>
</tr>
</tbody>
</table>

* p < .05. ** p < .01.

Note. SS1 labels refer to the directive guidance items for social support. SS2 labels refer to the nondirective guidance items for social support. SS3 labels refer to the tangible items for social support.
Figure I.

The Stress-Buffering Model

Cohen, Underwood, and Gottlieb, 2000

Potential Stressful Event → Perceived Availability of Social Support → Perceived Stress → Negative Psychological &/or Physiological Responses → Negative Outcomes

Potential Stressful Event → Appraisal of Demands and Capabilities → Perceived Stress → Negative Psychological &/or Physiological Responses → Negative Outcomes
APPENDIX A

Study Information on Communication Practices of Student-Athletes

This study is being conducted by: Lisa van Raalte, and advised by Amy Hubbard, University of Hawaii at Manoa – Department of Communicology.

You are invited to be in a research study looking at student-athletes and their communicative practices. We ask that you read this information sheet and ask any questions to the researcher Lisa van Raalte before you agree to participate in this study.

Background Information:
The purpose of this study is to explore the stress a student-athlete may be experiencing and how the stress affects them. Additionally, the type of support a student-athlete receives will be investigated. Participation will consist of answering questions on a survey and this should take no longer than 45 minutes. Approximately 100 student-athletes will participate in this study. As compensation for participation, you will be provided with pizza.

Risks and Benefits of Being in the Study:
There are no risks or benefits to participating in the study.

Confidentiality:
Student-Athletes who eat pizza must list their name on a separate sheet of paper. This is a requirement of the Athletics Department at the University of Hawaii at Manoa. Your name will not be linked to any information you provide on the survey. The records of this study will be kept private. At no time in the survey will your name be asked. Any information you provide will not be linked to you in any way. Any report that may be published, based on this research, will not include information that will make it possible to identify you. Research records will be stored securely and only the researcher will have access to the records.

Voluntary Nature of the Study:
Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of Hawaii at Manoa. If you decide to participate, you are free to withdraw at any time.

Contacts and Questions:
The researcher conducting this study is Lisa van Raalte. If you have questions, you are encouraged to contact her at raalte@hawaii.edu. If you have any questions or concerns regarding rights or injury in the study and would like to talk to someone other than the researcher, you are encouraged to contact the Committee on Human Studies, 1960 East-West Road, BIOMED Building, Room B-104, Honolulu, Hawai‘i, 96822, 808-956-5007, uhirb@hawaii.edu. Please keep this page for your records.

By responding to the items in the survey you freely agree to participate in this study.
APPENDIX B

Academic Event Questions

1. What was the last major exam or assignment you had?

EVENT:

2. What class was it for?

CLASS:

3. Was the class an elective or required course?
   a. Elective
   b. Required

4. About how long ago did the exam/assignment take place in DAYS?

   DAYS AGO:

5. What grade did you get on that exam/assignment?

   GRADE:

6. From 0-100%, what was the exam/assignment worth to your overall grade in that class?

   PERCENTAGE:
APPENDIX C

Athletic Event Questions

1. What was the last major game or practice you participated in? (e.g., last home game, afternoon practice).

   EVENT:

2. About how long ago did the game/practice take place in DAYS?

   DAYS AGO:

3. If your event was a GAME, what was the result?
   a. Win
   b. Loss
   c. Draw
   d. N/A

4. At the time of the game/practice, were you on scholarship?
   a. Yes, full scholarship
   b. Yes, partial scholarship
   c. No

5. Did the game/practice account for any team points?
   a. Yes
   b. No
   c. Not sure
## APPENDIX D

### Academic Event Importance Scale

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The exam/assignment accounted for a big portion of my overall grade in that class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. I considered that exam/assignment to be very important.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. My performance on that exam/assignment had a large effect on my grade in the class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
## APPENDIX E

### Athletic Event Importance Scale

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The game/practice accounted for a big portion of my team’s future success.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. I considered that game/practice to be very important.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. My performance in that game/practice had a large effect on my team’s success.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
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</table>
### APPENDIX F

**Academic Stress Scale**

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I was experiencing daily hassles which affected me in reaching my academic goals.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>I was experiencing a lack of sources (money, books, etc.).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>I was experiencing frustrations due to the development of my academic abilities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>I was experiencing pressures due to deadlines (papers due, exams coming up, etc.).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>I was experiencing pressures due to an overload (attempting too many things at one time).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>I was experiencing pressures due to interpersonal relationships (professors, classmates, family and/or friends, expectations, work responsibilities).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>I had a tendency to procrastinate (put things off that had to be done).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
### APPENDIX G

#### Athletic Stress Scale

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I was experiencing daily hassles which affected me in reaching my athletic goals.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2.</td>
<td>I was experiencing a lack of sources (money, workout gear, etc.).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3.</td>
<td>I was experiencing frustrations due to the progress of my athletic abilities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4.</td>
<td>I was experiencing pressures as a result of athletic competition.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5.</td>
<td>I felt I must make progress in my athletic skills and abilities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6.</td>
<td>I was experiencing pressures due to interpersonal relationships (coaches, teammates, family and/or friends, athletic expectations, sport responsibilities).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7.</td>
<td>I had a tendency to procrastinate (put things off that had to be done).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
## APPENDIX H

**Academic Social Support Scale**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Gave you some information on how to do something?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2.</td>
<td>Helped you understand why you didn’t do something well?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3.</td>
<td>Suggested some action you should take?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4.</td>
<td>Gave you feedback on how you were doing without saying it was good or bad?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5.</td>
<td>Made it clear what was expected of you?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6.</td>
<td>Gave you some information to help you understand a situation you were in?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7.</td>
<td>Checked back with you to see if you followed the advice you were given?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8.</td>
<td>Taught you how to do something?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9.</td>
<td>Told you who you should see for assistance?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10.</td>
<td>Told you what to expect in a situation that was about to happen?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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</tbody>
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<th>Seldom</th>
<th>Sometimes</th>
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<th>Frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Told you that he/she feels very close to you?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2.</td>
<td>Let you know that he/she will always be around if you need assistance?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3.</td>
<td>Told you that you are OK just the way you are?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
4. Expressed interest and concern in your well-being?

1. Gave you study materials to help you with your exam/assignment?

<table>
<thead>
<tr>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

5. Comforted you by showing you some physical affection?

2. Helped you with tasks on the day of your exam or when your assignment was due?

<table>
<thead>
<tr>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Frequently</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

6. Told you that he/she would keep the things that you talk about private?

3. Helped you with tasks as you prepared for the exam/assignment?

<table>
<thead>
<tr>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Frequently</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

7. Was right there with you (physically) around the time of the exam/assignment?

4. Did something for you (e.g., car ride)?

<table>
<thead>
<tr>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
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</tr>
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<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

5. Gave you something (e.g., money, lunch)?

<table>
<thead>
<tr>
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<th>Sometimes</th>
<th>Often</th>
<th>Frequently</th>
</tr>
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<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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</table>
# APPENDIX I

## Athletic Social Support Scale

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Never</th>
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</thead>
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<tr>
<td>1</td>
<td>Gave you some information on how to do something?</td>
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<td>4</td>
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<tr>
<td>2</td>
<td>Helped you understand why you didn’t do something well?</td>
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<td>4</td>
<td>5</td>
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<td>Suggested some action you should take?</td>
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<tr>
<td>7</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
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<td>Taught you how to do something?</td>
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<td>5</td>
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<td>Told you who you should see for assistance?</td>
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</tr>
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<td>Told you what to expect in a situation that was about to happen?</td>
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<table>
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<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Told you that he/she feels very close to you?</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>2</td>
<td>Let you know that he/she will always be around if you need assistance?</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Told you that you are OK just the way you are?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
4. Expressed interest and concern in your well-being?  
   1  2  3  4  5

5. Comforted you by showing you some physical affection?  
   1  2  3  4  5

6. Told you that he/she would keep the things that you talk about private?  
   1  2  3  4  5

7. Was right there with you (physically) around the time of the game/practice?  
   1  2  3  4  5

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gave you practice drills before the start of the game or during practice?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Helped you with tasks on the competition day or practice?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Helped you with tasks as you prepared for the game/practice?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Did something for you (e.g., car ride)?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Gave you something (e.g., money, lunch)?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
# APPENDIX J

## Academic Self-Efficacy Scale

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I believed that I would achieve most of the goals that I had set for myself.</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. When facing the exam/assignment, I was certain that I would achieve a good grade.</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. I believed that obtaining good grades were important.</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. I believed I could succeed at most any academic endeavor to which I set my mind.</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. I believed I could successfully overcome many challenges in that exam/assignment.</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. I was confident that I could perform effectively on school work.</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. I thought I did well on that exam/assignment compared to other people.</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. Even when things were tough, I believed I could achieve a good grade on that exam/assignment.</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
## APPENDIX K

### Athletic Self-Efficacy Scale

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>1.</td>
<td>I believed that I would achieve most of the goals that I had set for myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2.</td>
<td>When facing the game or practice, I was certain that I would perform well.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3.</td>
<td>I believed that performing well was important.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4.</td>
<td>I believed I could succeed at most any athletic endeavor to which I set my mind.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5.</td>
<td>I believed I could successfully overcome many challenges in that game/practice.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6.</td>
<td>I was confident that I could perform effectively in my sport.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7.</td>
<td>I thought I did well in that game/practice compared to other people.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8.</td>
<td>Even when things were tough, I could perform well in that game/practice.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
**APPENDIX L**

*Academic Performance Scale*

<table>
<thead>
<tr>
<th></th>
<th>P</th>
<th>Q</th>
<th>R</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I stayed focused but relaxed.</td>
<td>Not at all</td>
<td>A little</td>
<td>Somewhat</td>
<td>A lot</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. I felt good.</td>
<td>Not at all</td>
<td>A little</td>
<td>Somewhat</td>
<td>A lot</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. I kept my mind on the exam/assignment.</td>
<td>Not at all</td>
<td>A little</td>
<td>Somewhat</td>
<td>A lot</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. I kept a consistent performance standard.</td>
<td>Not at all</td>
<td>A little</td>
<td>Somewhat</td>
<td>A lot</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. I felt sluggish.</td>
<td>Not at all</td>
<td>A little</td>
<td>Somewhat</td>
<td>A lot</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6. I felt mentally tired.</td>
<td>Not at all</td>
<td>A little</td>
<td>Somewhat</td>
<td>A lot</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7. I felt lively.</td>
<td>Not at all</td>
<td>A little</td>
<td>Somewhat</td>
<td>A lot</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8. My mind was slow moving.</td>
<td>Not at all</td>
<td>A little</td>
<td>Somewhat</td>
<td>A lot</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
## APPENDIX M

### Athletic Performance Scale

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>Somewhat</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I stayed focused but relaxed.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. I felt good.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. I kept my mind on the game/practice.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. I kept a consistent performance standard.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. I felt sluggish.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6. I felt mentally tired.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7. I felt lively.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8. I felt slow.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
APPENDIX N

Demographics

1. What is your age?

2. What is your GPA?

3. What is your gender?
   a. Male                     b. Female

4. What year in school are you?
   a. Freshman                d. Senior
   b. Sophomore              e. Graduate
   c. Junior                  f. N/A

5. What ethnicity/race do you best identify with?
   a. Caucasian              g. American Indian
   b. Japanese                h. Filipino
   c. Chinese                 i. African American
   d. Korean                  j. Mixed
   e. Hispanic                k. Other
   f. Pacific Islander

6. What sport do you play?
   a. Baseball                i. Swimming
   b. Basketball              j. Diving
   c. Cheerleading            k. Tennis
   d. Cross Country            l. Track & Field
   e. Football               m. Volleyball
   f. Golf                   n. Water Polo
   g. Sailing                  o. Other
   h. Softball

7. On average, how many years have you played in your sport?
REFERENCES


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Pierce (Eds.), *Social support: An interactional view* (pp. 319-366). Oxford, England: J. Wiley & Sons


doi:10.1080/10413209008406425


doi:10.1108/09654281111108544


