The Role of Social Support on Academic Buoyancy and Academic Stress

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Stress, which occurs when an individual perceives that he or she lacks the capacity to handle environmental demands, is a prevalent issue for many Americans (Cohen, Janicki-Deverts, & Miller, 2007). Over the past decade, levels of stress have risen in the United States, and its costs are both physiological and economic (American Institute of Stress [AIS], 2014). Stress has been linked to numerous issues, such as difficulty sleeping and overeating, and it increases the risk of heart disease, heart attacks, and strokes (AIS, 2014). Physiological effects of stress are a reality for many Americans, and the majority of visits to doctor's offices are due to stress-related ailments (AIS, 2014). Each year, stress-related ailments cost the country $300 billion in medical bills and lost productivity (AIS, 2014).

As a population, college students are particularly vulnerable to stress, whether it is academic, social, or personal (Ross, Niebling, & Heckert, 1999). While the literature on stress is extensive, academic stress is a newer and more nuanced area of study. Wilks (2008) defines academic stress as "the product of a combination of academic related demands that exceed the adaptive resources available to an individual" (p. 107). Academic stress is common among undergraduates and has negative consequences similar to those of general stress (Feld & Shusterman, 2015). In addition to physiological effects, academic stress can interfere with academic performance, which can be especially harmful considering the increasingly competitive job market and emphasis on undergraduate academics (Elias, Ping, & Abdullah, 2011).

Academic Stress. College students commonly experience academic stress, apprehension resulting from scholastic demands. Generally, students experience moderate levels of academic stress in response to challenges in the academic realm (Wilks, 2008). A stressor is any factor that

generates stress and can be a physical, psychosocial, or psychological event (Payne, Hahn & Lucas, 2012). Physical stressors refer to environmental elements, such as noise, temperature, and lighting, that can impact an individual's demeanor or performance. Interpersonal interactions that influence an individual's behavior are psychosocial stressors (Kahn, Wolfe, Quinn, Snock, & Rosenthal, 1964). Psychological stressors are erratic interpretations of situations that can have emotional and behavioral effects (Ellis, 1971). Kohn and Frazer (1986) created the most recent scale measuring academic stress, the Academic Stress Scale, and rated the significance of academic stressors. They found that physical stressors such as classroom lighting and temperature are less afflictive to students than psychological and psychosocial stressors (Kohn & Frazer, 1986). Final grades, excessive homework, term papers, examinations, and studying for examinations are the most strenuous stressors for college students (Kohn & Frazer, 1986).

The experience of stress depends on the individual and his or her perception of stressors. Although the experience of some acute stress is adaptive, chronic stress can be harmful. High levels of academic stress can be detrimental to students' physical and mental health. College students with high stress levels and those who encounter a greater number of stressful life events are at high risk of experiencing physical illness (Rawson, Bloomer, & Kendall, 1999; Zaleski, Levey-Thors, & Schiaffino, 1998). High levels of academic stress are also associated with poor academic performance due in part to mental and physical health problems, ultimately maintaining a cycle of academic stress and jeopardized health (Elias et al., 2011; Haines, Norris, & Kashy, 1996). Academic stress can also have a negative effect on students' resiliency, which plays an important role in combatting stress. Wilks (2008) found that academic stress was inversely associated to resilience in social work students who faced the stress of their studies and of helping others. As social work students reported higher levels of academic stress, they

exhibited lower levels of resilience. With lower levels of resilience, students are less equipped to handle stressful situations in an educational setting.

Academic Buoyancy. Academic buoyancy reflects students' everyday academic resilience. Martin (2008) introduced the construct of academic buoyancy to represent the ability to prevail when faced with challenges in everyday academic life. Although academic buoyancy is a useful predictor of academic resilience, the two represent distinct constructs (Martin, 2013). Many studies investigating resilience in an academic setting define the construct broadly as the ability to reach normal development amid more serious threats (Hart & Heaver, 2013; Consoli, Delucio, Noriega, & Llamas, 2015). Whereas academic resilience measures student response to more extreme adversity, academic buoyancy measures student response to common academic challenges. Martin (2008) developed the construct of academic buoyancy to measure student ability to overcome challenges that are common in academic life. He found that academic buoyancy had a direct effect on low-level negative outcomes, such as anxiety and failure avoidance, and predicted them more effectively than academic resilience (Martin, 2013). Major negative outcomes, self-handicapping and disengagement, were better predicted by academic resilience than academic buoyancy (Martin, 2013). Self-handicapping involves hindering one's performance to protect perceived competence (Schwinger, Wirthwein, Lemmer, & Steinmayr, 2014) while disengagement refers to withdrawing from academic disciplines altogether (De Castella & Byrne, 2015). Studies investigating resiliency in an academic context tend to study populations facing extreme adversity, such as individuals with low SES, individuals diagnosed with mental illness, and minority groups (Yeh et al., 2015; Wilmshurst & Wilmshurst, 2011; Consoli et al., 2015).

Academic buoyancy reflects student ability to overcome academic setbacks that are common in an educational setting, such as final grades, excessive homework, and forgotten assignments. Academically buoyant students experience certain benefits that students low in academic buoyancy do not. Students with high levels of academic buoyancy experience less anxiety, perform better on examinations, and experience fewer symptoms of stress than students with low levels of academic buoyancy (Putwain, Connors, Symes, & Douglas-Osborn, 2012; Putwain, Daly, Chamerlain, & Sadreddini, 2015). They also tend to exhibit higher levels of self-efficacy, planning behaviors, control, composure, and commitment than students with low levels of academic buoyancy (Martin & Marsh, 2006). Academic buoyancy negatively predicts anxiety, emotional instability, uncertain control, and neuroticism (Martin, 2013).

Academically buoyant individuals have the ability to overcome setbacks resulting from academic stressors. According to Lazarus' (1978) transaction-based model of stress, an individual's response to stressful situations differs with regard to his or her vulnerability. Academically buoyant students are less vulnerable to academic stressors than academically in-buoyant students and therefore experience fewer of the unfavorable results of stress.

Social Support. The relationship between social interaction and stress has consistently been a topic of research. Some interpersonal relations actually generate interpersonal stress, leading to negative ramifications, such as depression (Rudolph, Hammen, Burge, Lindberg, Herzberg, & Daley, 2000). Supportive interactions, however, serve as protective factors against stressors (Wilks, 2008). Responses to stressors depend on the individuals' resources and social support serves as a critical resource. Social support has been defined as "support accessible to an individual through social ties to other individuals, groups, and the larger community" (Lin, Simeone, Ensel, & Kuo, 1979, p. 109). It has been found to protect against the effects of stress in

adolescents, college students, and adults (Levitt, Guacci Franco, & Levit, 1993; Dzulkifli & Yasin, 2009; Cohen & Wills, 1985). These findings support the buffering hypothesis which suggests that strong social relationships protect individuals from the harmful consequences of stress (Cassel, 1976).

The protective influence of social support extends to psychological health. Social support has been found to attenuate the effects of stress (Schmeelk-Cone & Zimmerman, 2003). College students who perceived higher levels of social support experienced fewer psychological problems than students who perceived low levels of social support; specifically, they presented with fewer symptoms of anxiety and depression (Dzulkifli et al., 2009). Thorsteinsson, Ryan, & Sveinbjornsdottir (2013) found that low levels of social support are directly associated with depression. Research has found that social support also yields physiological benefits, minimizing the effect of stressful situations on cardiovascular reactivity and decreasing the risk of mortality (Thorsteinsson, James, Douglas, & Omodei, 2011; House, Landis, & Umberson, 1988).

Wilks (2008) identified social support as a protective factor for resilience amid academic stress. Although the social work student population perceived similar levels of social support from family and friends, only social support from friends moderated the relationship between academic stress and resilience (Wilks, 2008). Antonucci (1985) suggests that support from friends is more effective at reducing stress than support from family members because relationships with friends are optional rather than obligatory. Antonucci (1985) theorizes that family members are expected to provide assistance, whereas support from friends is voluntary, therefore more rewarding.

Social support can be categorized into two types: emotional and instrumental social support, both of which describe positive social interactions. Emotional social support refers to

the display of care, love or trust in a comforting manner. Expressions of caring, concern, empathy, and sympathy are core tenants of emotional social support (Cutrona & Shur, 1994). One can provide emotional social support by simply listening to an individual or showing genuine interest in his or her life. Cancer patients have indicated that humor, celebration of milestones, and close friendships served as the most valuable forms of emotional social support (Wong, Ma, Ma, Brown, Davis, & Apolinsky, 2014). Emotional support is the most commonly reported type of social support (Clone & DeHart, 2014). Instrumental social support refers to behaviors that directly assist an individual, such as helping someone to study for an examination by quizzing them. Instrumental support involves tangible assistance, while emotional support does not.

A larger body of research exists for emotional social support than for instrumental social support. Both types of support have been shown to have positive effects for the recipient, although the research on emotional social support has more consistent findings than that on instrumental social support. Emotional social support has been correlated with life satisfaction and both emotional and instrumental social support served as buffers for depressive symptoms in a student population (Wan, Jaccard, & Ramey, 1996). Dunkel-Schetter (1984) found that cancer patients valued emotional support more than instrumental support. Morelli, Lee, Arnn, & Zaki (2015) found that provider well-being was consistently predicted by emotional social support, but not instrumental social support. Often, emotional social support and instrumental support are provided simultaneously, although each type of social support can also be provided independently (Morelli et al., 2015). Providers of social support only experienced heightened well-being when offering instrumental social support if they provided emotional social support

simultaneously. This finding speaks to the importance of social support, not only for the recipients but also for the providers.

The Current Study

The current study examined the association between academic stress and academic buoyancy with social support as a moderator. A moderation model was used because it was predicted that social support would affect the nature of the relationship between academic stress and academic buoyancy. Previous research has not investigated which type of social support is most effective in promoting academic buoyancy for the recipient. Beyond identifying social support as a protective factor, the current study hypothesized that emotional social support would be a more significant protective factor of academic buoyancy than instrumental social support. By understanding the roles of differing types of social support in protecting academic buoyancy, students can better understand how to effectively support their peers.

As Figure 1 and Figure 2 show, the predictor variable in this study was academic stress and the moderator variables were emotional and instrumental social support. The outcome variable was academic buoyancy. It was predicted that higher levels of academic stress would be associated with lower levels of academic buoyancy. Once the variance of academic stress was taken into account, it was hypothesized that higher levels of social support would be associated with higher levels of academic buoyancy. It was predicted that social support would moderate the association between academic stress and academic buoyancy once the main effects of academic stress and social support were taken into account. Specifically, higher levels of academic stress would be significantly associated with lower levels of academic buoyancy at low levels of social support, but higher levels of academic stress would be significantly associated with higher levels of academic buoyancy at high levels of social support. It was predicted that

the moderation effect of emotional social support on the association between academic stress and academic buoyancy would be more robust than those of instrumental support.

Method

Participants

Undergraduate students at a small, liberal arts university in the southeast participated in the current study ($N = 67$). All participants were between 18 and 22 years old, of generally good health, and taking a full academic course-load at the time of participation. Fifty-one females and 16 males participated. Participants were recruited through word of mouth, posters on campus, notices on a school-wide email, and introductory psychology courses, some of which may have offered extra credit for participation.

Procedure

Participants were brought into a university classroom and seated in spaces with informed consent papers (Appendix A). They were not seated directly next to each other. As many as eight participants were allowed to complete the study in one assessment session. After each participant read and signed both informed consent papers, the researcher collected one of the informed consent sheets and asked the participant to keep the second for his or her records. The researcher distributed the Academic Stress Scale (ASS; Kohn & Frazer, 1986) (Appendix B), the Perceived Social Support – Friend Scale (PSS-Fr; Procadino & Heller, 1983) (Appendix C), and the Academic Buoyancy Scale (ABS; Martin & Marsh, 2008) (Appendix D). Participants completed each paper-and-pencil scale individually in the aforementioned order. Upon completion of the scales, each participant answered demographic questions (Appendix E). Each participant was orally debriefed on the nature of the study and given a sheet of paper explaining the study's

purpose (Appendix F). The study took each participant between ten and fifteen minutes to complete.

Measures

Academic Stress. A modified version of the Academic Stress Scale (ASS; Kohn & Frazer, 1986) was used to measure academic stress. Academic stress involves student perception of pressures in an academic realm. The original ASS is a 35-item self-report scale designed to measure academic stress in a college population. Participants marked how stressful they found each academic stressor on a 10-point Likert scale ranging from *0-not stressful* to *9-extremely stressful*. Item samples include the following: "Final grades"; "Excessive homework"; and "Forgotten assignments." Item responses were added and subsequently averaged. Higher scores indicated higher levels of academic stress. The original ASS has high internal consistency (α = .92; Wilks, 2008). The modified version of ASS that was used in the current study is a 41-item measure. Six items were added to better describe the experience of current college students (e.g. "Navigating student online systems (e.g. Sakai, WebAdvisor, Box)"; "Group work dynamic (e.g. scheduling, dividing responsibilities)"; and "Competitive academic atmosphere"). Analyses showed that the updated measure had excellent internal consistency in the current study's sample (α = .93).

Social Support. In the current study, social support was measured using the Perceived Social Support – Friend Scale (PSS-Fr; Procadino & Heller, 1983). The PSS-Fr is a 20-item self-report scale that was developed for college students. Items fall into two subscales; emotional social support and instrumental social support. Emotional social support involves providing another individual with empathy while instrumental social support involves helping an individual to solve his or her problems. The PSS-Fr measured the extent to which an individual perceived

that his or her friends provided both types of social support. Item examples included the following: “I have a deep sharing relationship with a number of friends”; “I rely on my friends for emotional support”; and “I’ve recently gotten a good idea about how to do something from a friend.” Participants responded *yes, no,* or *I don’t know* to each item. *No* answers on questions 2, 6, 7, 15, 18, and 20 were scored as +1. The remaining items answered *yes* were also scored +1. All items marked *I don’t know* were scored as zero. Items were averaged to calculate subscale scores for emotional and instrumental support. Higher scores indicated higher levels of perceived social support. The measure was found to have good internal consistency (α = .90) in the current sample.

Academic Buoyancy. The Academic Buoyancy Scale (ABS; Martin & Marsh, 2008) was used to measure academic buoyancy, a students’ ability to overcome academic setbacks that are common in a school setting. The scale consisted of 4 items (e.g. “I don't let a bad grade affect my confidence”; “I’m good at dealing with setbacks (e.g. bad mark, negative feedback on my work)”; “I don’t let stress get on top of me”; and “I think I’m good at dealing with schoolwork pressures”). Participants rated the items on a 7-point Likert scale ranging from *1-strongly disagree* to *7-strongly agree*. A high score on the ABS indicated a high level of academic buoyancy. A total score was calculated by summing the participant’s response to each of the four items. The scale has good internal consistency (α = .80) in this sample.

Results

Descriptive statistics were conducted for the primary study variables of academic stress, social support, emotional social support, instrumental social support, and academic buoyancy (Table 1). Bivariate correlations were performed to investigate the associations among academic

stress, social support, emotional social support, instrumental social support, and academic buoyancy. The results of these analyses are shown in a correlation matrix (Table 2). Academic stress was significantly, negatively correlated with academic buoyancy (Table 2), $r = 0.29$, $p = .02$. There was no significant correlation between social support and academic buoyancy, $r = -0.01$, $p = .96$. Emotional social support was not significantly correlated with academic buoyancy, $r = -0.02$, $p = .92$. Instrumental social support was not significantly correlated with academic buoyancy, $r = -.11$, $p = .42$.

To test the role of emotional social support as a moderator of the association between academic stress and academic buoyancy, a hierarchical multiple regression analysis was performed (Table 3). In the first step, academic stress approached accounting for a significant portion of the variance in academic buoyancy, $\Delta R^2 = .056$, $\beta = -.24$, $p = .055$. In the second step, emotional social support also did not account for a significant portion of the variance in academic buoyancy, $\Delta R^2 = .003$, $\beta = -.058$, $p = .63$. In the final step, the interaction between academic stress and emotional social support did not account for a significant portion of the variance in academic buoyancy, $\Delta R^2 = .033$, $\beta = .19$, $p = .14$.

To test the moderation effect of instrumental social support, a hierarchical multiple regression analysis was performed (Table 4). In the first step, academic stress approached accounting for a significant portion of the variance in academic buoyancy, $\Delta R^2 = .056$, $\beta = -.24$, $p = .055$. In the second step, instrumental social support did not account for a significant portion of the variance in academic buoyancy, $\Delta R^2 = .002$, $\beta = -.04$, $p = .75$. In the final step, the interaction between academic stress and instrumental social support did not account for a significant portion of the variance in academic buoyancy, $\Delta R^2 = .028$, $\beta = .19$, $p = .17$.

Discussion

As expected, and in support of the first hypothesis, higher levels of academic stress were weakly associated with lower levels of academic buoyancy. While previous research has not investigated the association between academic stress and academic buoyancy, the current study's support of its first hypothesis replicates past research on resilience. Academic resilience measures student response to extreme adversity while academic buoyancy measures student response to common academic challenges. Previous studies have found that academic stress was negatively correlated with resilience, a finding that is supported by the results of the present study (Cheng & Catling, 2015; Wilks, 2008). As students feel more stressed, they perceive that they are less equipped to deal with academic setbacks. Future research could further explore potential mechanisms behind the association between academic stress and academic buoyancy.

This finding could be interpreted as emphasizing the importance of lessening college students' academic stress as a means of promoting academic buoyancy. Reducing academic stress can be seen as especially important considering the negative implications for students with low levels of academic buoyancy. Students with low levels of academic buoyancy perform more poorly on examinations and have lower levels of self-efficacy than students with high levels of academic buoyancy (Martin & Marsh, 2016; Putwain et al., 2015). With lower levels of academic buoyancy, students are less equipped to handle the stressful situations they will encounter in an educational setting, perpetuating a harmful cycle. However, it can also be suggested that experiences of stress are necessary to build resources that support buoyancy. Without the experience of any academic stress, students might have difficulty acquiring the skills required to handle academic and other stressors. Future research could further investigate these

theories to identify ideal levels of academic stress for promoting academic buoyancy among college students.

Other results of the current study differ from those of previous research. The current study found no support for the second hypothesis that social support would be negatively correlated with academic stress, while previous literature consistently finds that social support is associated with lower levels of stress (Levitt, Guacci Franco, & Levit, 1993; Dzulkifli & Yasin, 2009). The current study found that neither emotional social support nor instrumental social support significantly moderated the association between academic stress and academic buoyancy, failing to support the third hypothesis and thus failing to support the finding from Wilks (2008) that social support from friends moderates the association between academic stress and resilience.

Failure to replicate this finding could be due to differences between the population that Wilks (2008) studied and the current study's population. Wilks (2008) investigated the role of social support among social work graduate students. In addition to the pressure of academics, social work students deal with the stress of helping disadvantaged individuals. The current study's population consisted of undergraduate students at a competitive university. It is expected that students in the current sample did not experience the same levels of stress from helping others as the students in Wilks (2008) did. In the current study, it would have been interesting to collect information on students' major area of study, and how this impacted their levels of academic stress and academic buoyancy.

The lack of support for the second and third hypotheses could be due to a number of factors. The present study found high levels of social support among participants with a relatively small standard deviation. The PSS-Fr, which measured perceived social support from

friends, allowed participants to answer *yes*, *no*, or *I don't know*. The limited answer choices may not have accurately captured participants' perceived levels of social support. Future studies using the PSS-Fr may benefit from using a Likert scale, allowing for a more nuanced measure of participants' levels of perceived social support.

Additionally, participants may have selectively disclosed or suppressed information on the self-report measures. This reporting bias may have been particularly salient on the PSS-Fr. Many of the participants had a personal relationship with the researcher which may have affected the honesty of their answers regarding perceptions of social support from friends. Despite reading about confidentiality in the informed consent, participants may have felt uncomfortable disclosing feelings about their inadequate friendships in a study for a researcher whom they considered a friend.

Another limitation to the present study is its use of a convenience sample that heavily favored females. The present study failed to recruit its ideal number of participants, falling short by nine participants. Based on previous studies investigating relationships between similar variables, a power analysis found that the ideal number of participants was 76. It is possible that the current study failed to detect a significant effect because of a lack of statistical power.

A strength of the present study is its use of standardized measures that were internally consistent with high Cronbach's alphas, increasing internal validity. The measures used were developed for use in an undergraduate population similar to the current study's sample. Additionally, the current study expands the literature on the relatively new construct of academic buoyancy. It further establishes the construct as a reliable measure to be used in an undergraduate sample that faces common academic challenges.

The researcher also updated the Academic Stress Scale (ASS; Kohn & Frazer, 1986) to make the measure more relevant to current college students, serving as a strength of the present study. Three of the greatest sources of stress for students- "internet issues interfering with homework completion," "competitive academic atmosphere," and "outside stressors that impact schoolwork"- were added to the ASS to better describe the experience of current college students. Participants' high ratings of these added stressors suggest that the modified version of the ASS that was developed for and used in the current study is relevant to current undergraduate students.

According to the updated scale, final grades, examinations, term papers, excessive homework, and outside stressors that impact schoolwork were the greatest sources of stress for students. In keeping with Kohn and Frazer's study (1986), results show that physical stressors such as classroom lighting and temperature tend to be less afflictive to students than psychological and psychosocial stressors. The only physical stressor that students rated as considerably stressful was "internet issues that interfere with homework completion." Despite the potentially distracting nature of the internet, it plays an integral role in college students' education and homework completion, and as such can be a great source of stress for students.

The results bear implications on university faculty and administrators. "Unclear assignments" and "internet issues interfering with homework completion" were among the highest stressors. Students have little control over these two stressors, yet feel considerably distressed by them. Professors could limit the stress of unclear assignments by covering assignment expectations both in class and on the syllabus. The administration could reduce the stress of internet issues interfering with homework by ensuring that on-campus internet is

reliable. By encouraging a less stressful environment, professors and the administration would in turn be promoting academic buoyancy.

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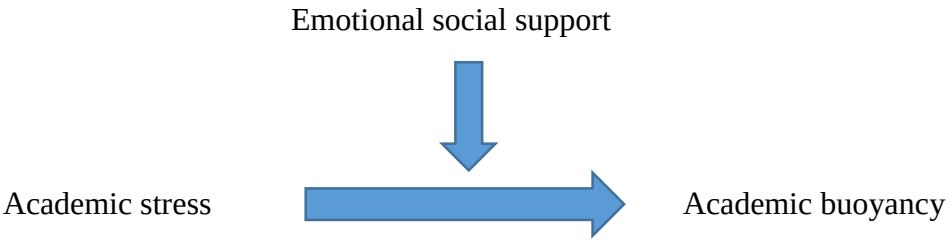


Figure 1. The first model tested in the study in which the predictor variable is academic stress, the moderator variable is emotional social support, and the outcome variable is academic buoyancy.

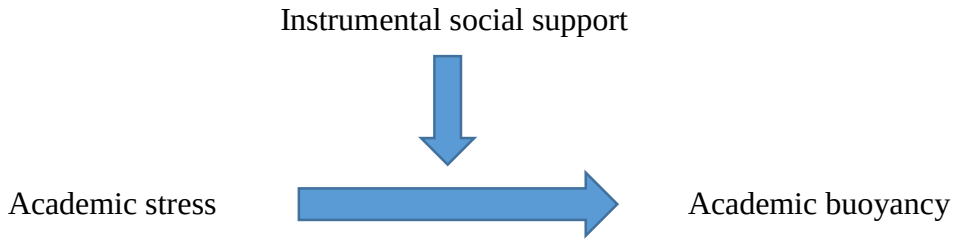


Figure 2. The second model tested in the study in which the predictor variable is academic stress, the moderator variable is instrumental social support, and the outcome variable is academic buoyancy.

Table 1

Descriptive statistics for academic stress, social support, emotional social support, instrumental social support, and academic buoyancy (N = 67)

	M	*SD*	Range	α
Academic Stress	4.49	1.07	0-9	.93
Social Support	18.09	3.41	10-20	.90
Emotional Social Support	.87	.18	0-1	-
Instrumental Social Support	.92	.22	0-1	-
Academic Buoyancy	16.40	4.38	7-25	.80

Note. The PSS-Fr was scored by summing participants' responses to each item. However, because the emotional and instrumental social support subscales did not have the same number of items, for this table a mean answer score was calculated rather than summing the items on each of the subscales.

Table 2

Correlations between academic stress, total social support, emotional social support, instrumental social support, and academic buoyancy (*N* = 67)

	1.	2.	3.	4.	5.
1. Academic stress	-	-	-	-	-
2. Social support	0.06	-	-	-	-
3. Emotional Social Support	0.01	-	-	-	-
4. Instrumental Social Support	0.18	-	-	-	-
5. Academic buoyancy	-.029*	-0.009	-0.017	-0.11	-

*$p < .05$.

Table 3

Results from Hierarchical Regression Analysis Predicting Academic Buoyancy (*N = 67*)

	R	*B*	β	*p*	ΔR^2
Step 1: Academic stress	.24	-1.03	-.24	.055	.056
Step 2: Emotional social support	.24	-.26	-.058	.63	.003
Step 3: Academic stress × ESS	.30	.91	.19	.14	.033

Note. ESS stands for emotional social support.

*$p < .05$.

Table 4

Results from Hierarchical Regression Analysis Predicting Academic Buoyancy (*N = 67*)

Variable	*R*	*B*	β	*p*	ΔR^2
Step 1: Academic stress	.24	-1.03	-.24	.055	.056
Step 2: Instrumental social support	.24	-.17	-.04	.75	.002
Step 3: Academic stress × ISS	.29	.85	.19	.17	.028

Note. ISS stands for emotional social support.

*$p < .05$.

Appendix A
CONSENT TO PARTICIPATE IN HUMAN RESEARCH PROJECT
Washington and Lee University
Student Stress and Buoyancy
Caroline Brady, (917) 545-9420, Psychology 473

You have been asked to participate in a research study at Washington and Lee University. The purpose of this study, in terms of your participation, as well as any expected risks and benefits should be explained to you before you sign this form and give your consent to participate.

Purpose: The purpose is to examine academic stress in a college population. You will be asked to complete three paper-and-pencil questionnaires in one sitting. The study is expected to take under 15 minutes to complete.

Expected Risks and Benefits: Although the risks associated with participation are minimal, it is possible that you could experience slight discomfort about disclosing personal information, or you could experience boredom. This study will not directly benefit participants, however, extra credit may be available for certain courses.

Confidentiality: Any information derived from this research project which personally identifies you will not be voluntarily released or disclosed without your separate consent, except as specifically required by law. The completed questionnaires will not include your name, and will be identifiable only by a four-digit code. All information will be stored on a password-protected computer and destroyed within six months of completion of the study.

Participation in research is entirely voluntary. You may refuse to participate or may withdraw from participation at any time without penalty. The investigator may withdraw you from participation at his/her professional discretion. If, during the course of the study, significant new information becomes available, which may relate to your willingness to continue to participate, this information will be provided to you by the investigator.

If at any time you have questions regarding this research or your participation in it, you should contact the investigator, Caroline Brady, at bradyc16@mail.wlu.edu or (917) 545-9420.
If you have questions regarding the conduct of this research, or if you wish to discuss your rights as a research participant, you may contact the chair of the Institutional Review Board for Research with Human Subjects, Bryan Price, at bprice@wlu.edu or 458-8316.

You must be 18 years of age or older and taking a full academic course-load to participate in this study. If you are not 18 years or older or are not taking a full academic course-load, please inform the researcher now.

You will be given a copy of this consent form to keep.

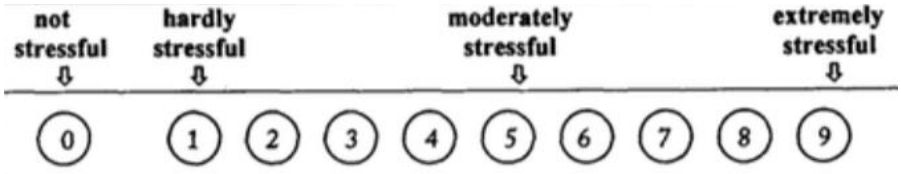
I consent to participate in this study.

_____ _____
Signature of Participant (age 18 and older) Date

_____ _____
Signature of Investigator Date

Appendix B
Academic Stress Scale
ASS; Kohn & Frazer, 1986

The following statements refer to stress-causing issues and events that occur for students during the course of a semester. Mark the number that best describes how stressful each stressor is for you.



	Not stressful									Extremely Stressful
Final grades	0	1	2	3	4	5	6	7	8	9
Excessive homework	0	1	2	3	4	5	6	7	8	9
Term Papers	0	1	2	3	4	5	6	7	8	9
Examinations	0	1	2	3	4	5	6	7	8	9
Studying for examinations	0	1	2	3	4	5	6	7	8	9
Class speaking	0	1	2	3	4	5	6	7	8	9
Waiting for graded tests	0	1	2	3	4	5	6	7	8	9
Fast-paced lectures	0	1	2	3	4	5	6	7	8	9
Pop quizzes	0	1	2	3	4	5	6	7	8	9
Forgotten assignments	0	1	2	3	4	5	6	7	8	9
Incomplete assignments	0	1	2	3	4	5	6	7	8	9
Unclear assignments	0	1	2	3	4	5	6	7	8	9
Completing assignments last minute	0	1	2	3	4	5	6	7	8	9
Unprepared to respond to questions in class	0	1	2	3	4	5	6	7	8	9
	Not stressful									Extremely Stressful
Announced quizzes	0	1	2	3	4	5	6	7	8	9
Studied wrong material	0	1	2	3	4	5	6	7	8	9
Incorrect answers in class	0	1	2	3	4	5	6	7	8	9
Missing class	0	1	2	3	4	5	6	7	8	9
Buying text books	0	1	2	3	4	5	6	7	8	9
Learning new skills	0	1	2	3	4	5	6	7	8	9
Unclear course objectives	0	1	2	3	4	5	6	7	8	9
Hot classrooms	0	1	2	3	4	5	6	7	8	9
Lectures not in your native language	0	1	2	3	4	5	6	7	8	9

	Not stressful									Extremely Stressful
Boring classes	0	1	2	3	4	5	6	7	8	9
Attending wrong class	0	1	2	3	4	5	6	7	8	9
Late dismissals of class	0	1	2	3	4	5	6	7	8	9
Cold classrooms	0	1	2	3	4	5	6	7	8	9
Arriving late for class	0	1	2	3	4	5	6	7	8	9
Forgetting pencil/pen	0	1	2	3	4	5	6	7	8	9
Note-taking in class	0	1	2	3	4	5	6	7	8	9
Noisy classroom	0	1	2	3	4	5	6	7	8	9
Irrelevant classes toward major	0	1	2	3	4	5	6	7	8	9
Crowded classes	0	1	2	3	4	5	6	7	8	9
Classes without open discussion	0	1	2	3	4	5	6	7	8	9
Evaluating classmates' work	0	1	2	3	4	5	6	7	8	9
Group work dynamic (e.g. scheduling, dividing responsibilities)	0	1	2	3	4	5	6	7	8	9
Poor classroom lighting	0	1	2	3	4	5	6	7	8	9
Navigating online systems (e.g. Sakai, WebAdvisor, Box)	0	1	2	3	4	5	6	7	8	9
Internet issues interfering with homework completion	0	1	2	3	4	5	6	7	8	9
Competitive academic atmosphere	0	1	2	3	4	5	6	7	8	9
Outside stressors that impact schoolwork (e.g. extra-curricular commitments, roommate problems)	0	1	2	3	4	5	6	7	8	9

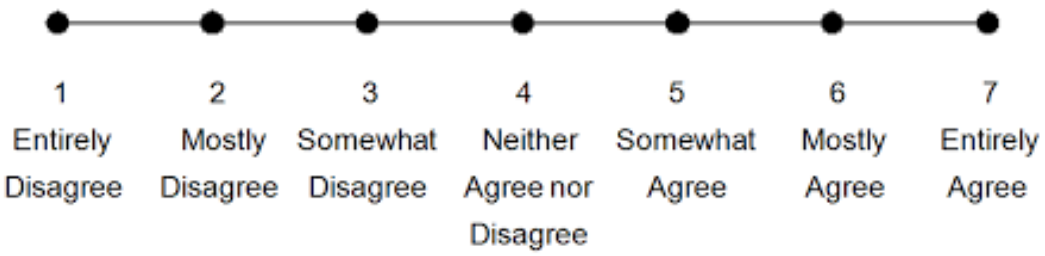
Appendix C
Perceived Social Support – Friend Scale
PSS-Fr: Procadino & Heller, 1983

The statements which follow refer to feelings and experiences which occur to most people at one time or another in their relationship with *friends.* For each statement there are three possible answers: Yes, no, and don't know. Please mark the answer you choose for each item with regards to your group of friends.

1.	My friends give me the moral support I need	Yes	No	Don't know
2.	Most other people are closer to their friends than I am	Yes	No	Don't know
3.	My friends enjoy hearing about what I think	Yes	No	Don't know
4.	When I confide in the friends who are closest to me, I get the idea that it makes them uncomfortable	Yes	No	Don't know
5.	I rely on my friends for emotional support	Yes	No	Don't know
6.	If I felt that one of more of my friends were upset with me, I'd just keep it to myself	Yes	No	Don't know
7.	I feel that I'm on the fringe in my circle of friends	Yes	No	Don't know
8.	There is a friend that I could go to if I were just feeling down, without feeling funny about it later	Yes	No	Don't know
9.	My friends and I are very open about what we think about things	Yes	No	Don't know
10.	My friends are sensitive to my personal needs	Yes	No	Don't know
11.	My friends come to me for emotional support.	Yes	No	Don't know
12.	My friends are good at helping me solve problems	Yes	No	Don't know
13.	I have a deep sharing relationship with a number of friends	Yes	No	Don't know
14.	My friends get good ideas about how to do things or make things from me	Yes	No	Don't know
15.	When I confide in friends, it makes me feel uncomfortable	Yes	No	Don't know
16.	My friends seek me out for companionship	Yes	No	Don't know
17.	I think that my friends feel that I'm good at helping them solve problems	Yes	No	Don't know
18.	I don't have a relationship with a friend that is as intimate as other people's relationships with friends	Yes	No	Don't know
19.	I've recently gotten a good idea about how to do something from a friend	Yes	No	Don't know
20.	I wish my friends were much different	Yes	No	Don't know

Appendix D
The Academic Buoyancy Scale
ABS; Martin & Marsh, 2008

The statements that follow refer to feelings and experiences that can occur in an academic setting. Please mark the number that best describes how much you agree or disagree with the statement's description of your experiences.



1.	I don't let a bad grade affect my confidence.	1	2	3	4	5	6	7
2.	I'm good at dealing with setbacks (e.g. bad mark, negative feedback on my work).	1	2	3	4	5	6	7
3.	I don't let stress get on top of me.	1	2	3	4	5	6	7
4.	I think I'm good at dealing with schoolwork pressures.	1	2	3	4	5	6	7

Appendix E
Demographic Information

1) What is your gender?
    a. Female
    b. Male

2) What year do you plan to graduate from Washington and Lee?
    a. 2019
    b. 2018
    c. 2017
    d. 2016

Appendix F

Debriefing Statement

Thank you for your participation. The current study was examining the association between academic stress, academic buoyancy, and social support. College students commonly experience academic stress, mental tension that arises in an educational setting. Peer support has been shown to decrease stress among college students. This social support can be shown in two key ways, through displays of care and direct assistance to individuals. The current study investigated which type of social support is most effective at promoting academic buoyancy, a student's ability to persevere when faced with academic challenges.

Do you have any questions about the study? If yes, please contact Caroline Brady at bradyc16@mail.wlu.edu.

Please do not tell your friends about the true nature of this study until the end of the 2016 Winter term. Thank you again for your participation in this study.