

A LONGITUDINAL EXAMINATION OF STUDY ABROAD: STUDENT CHARACTERISTICS AND PSYCHOLOGICAL HEALTH ASSOCIATIONS

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The present study examined traits associated with studying abroad and how study abroad is related to psychological health in a sample of 612 college students over their first three years of college. Individuals who were female, a Fraternity/Sorority member, a non-STEM major, and who had high sensation seeking were more likely to study abroad. While abroad, students reported less stress and depression, and higher positive affect than students who were not abroad and compared to before and after going abroad. Results suggest that study abroad has psychological benefits; however, not all students have the same likelihood/ability to participate.

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Studying abroad is becoming increasingly popular with American students. According to the Institute of International Education's (2016) Open Doors Report, more than 310,000 students studied abroad during the 2014 - 2015 academic year, an over 100% increase from the number of study abroad students fifteen years ago. Those 310,000 students reflect approximately 10% of students nationally who study abroad before they graduate. In an investigation including over 6,000 students who studied abroad in college, studying abroad was reported as the college experience with the single largest impact on students' lives overall (Paige, Fry, Stallman, Josić, & Jon, 2009). In addition, it has been suggested that study abroad could be an important retention factor for universities (Metzger, 2006). Europe is the most popular study abroad destination, consistently hosting over 50% of American study abroad students. The most common places to study abroad in Europe are the United Kingdom, Italy, Spain, and France (NAFSA: Association of International Educators, 2015). The present study aimed to examine the traits associated with studying abroad and how study abroad is related to psychological health.

Traits Associated with Studying Abroad

There are certain demographic and background characteristics that are associated with studying abroad. For example, it has been consistently documented that students who study abroad are more likely to be women and Caucasian (Institute of International Education, 2015; Salisbury, Paulsen, & Pascarella, 2011). Students studying humanities were more likely to study abroad than students studying engineering (Luo & Jamieson-Drake, 2015; Stroud, 2010). In contrast, STEM majors have been found to be less likely to study abroad (Niehaus & Inkelas, 2016). Furthermore, membership in a Fraternity/Sorority Organization, time spent socializing with friends, an eagerness to improve understanding of other cultures,

and higher household incomes were all associated with a higher chance of studying abroad (Luo & Jamieson-Drake, 2015).

Evidence indicates that college students who study abroad also have personality differences from students who choose not to study abroad (Greischel, Noack & Neyer, 2016; Luo & Jamieson-Drake, 2015; Niehoff, Petersdotter & Freund, 2017). For instance, students who study abroad tend to be higher in extraversion, agreeableness, and openness, and lower in neuroticism than students who do not study abroad (Greischel et al., 2016; Niehoff et al., 2017). Students who studied abroad have also been found to be higher in sensation-seeking (Schroth & McCormack, 2000). Similarly, Marcantonio, Angelone and Sledjeski (2016) found that prior to studying abroad, students in their sample engaged in risky behaviors, which predicted risky behavior while abroad. Evidence also indicates that prior drinking habits predict problematic drinking habits while abroad, and that students drink significantly more alcohol while they are studying abroad than at home (Pedersen, Skidmore, & Aresi, 2014).

The decision to study abroad is affected by many factors (Wintre, Kandasamy, Chavoshi, & Wright, 2015). Students most commonly report that they study abroad for a new experience, to learn about other cultures, and to travel (Stone & Petrick, 2013; Wintre et al., 2015). Stone and Petrick (2013) highlight the importance of travel during study abroad, arguing in their review of the literature that independent travel plays a large role in individual growth and the development of other life skills while abroad. Similarly, another study found that students report studying abroad to enhance their cultural skills, to become more educated about specific fields, and to socialize (Kitsantas, 2004). Notably, while students report that family, friends, and professors suggested studying abroad, most students did not feel pressured to study abroad; their decision was self-motivated (Wintre et al., 2015).

Despite the overwhelming reasons students choose to study abroad and the consistent increase of students studying abroad, today's statistics indicate that the majority of students in the United States do not study abroad (Institute of International Education, 2015). Academic inflexibility and financial status serve as primary limitations in the ability to study abroad (Luo & Jamieson-Drake, 2015). While students with lower parental incomes are less likely to study abroad, they are not less likely to display interest in studying abroad, demonstrating the obstacle that income plays in participating in an abroad experience (Luo & Jamieson-Drake, 2015).

Studying Abroad and Psychological Functioning

Upon returning from studying abroad, students report a "bittersweet" experience. Many students report being excited and happy to return home, while others report feeling alienated and depressed (Kartoshkina, 2015). There are mixed findings regarding the effects of studying abroad on social relationships. For example, Wielkiewicz and Turkowski (2010) found that studying abroad did not interfere with social relationships; however, Greischel and colleagues (2016) found that students studying abroad had significant fluctuations in their social networks. While abroad, students gained international friends but lost touch with national friends, and they lost many of their international friendships upon returning home. In addition, some studies have found that stress levels increase due to difficulty adjusting back to the academic environment and American culture (Kartoshkina, 2015; Wielkiewicz & Turkowski, 2010). Culture shock, immersion of a new and unfamiliar culture, is common when returning home from abroad, with students experiencing more culture shock relative to how long they spent abroad (Wielkiewicz & Turkowski, 2010). Coded interviews reveal that many students return from abroad and demonstrate culture shock through criticism

of American culture and values, stating that Americans focus too much on monetary success and consumer culture (Kartoshkina, 2015).

While culture shock and skepticism sometimes lead to a difficult adjustment, it can be argued that this realistic view of American culture is a goal, not a consequence, of studying abroad. After an abroad experience, students are typically able to knowledgeably compare and contrast the two countries' cultures (Wielkiewicz & Turkowski, 2010). Similarly, Engberg (2013) found that after studying abroad, students experienced growth in global perspective taking, particularly in the domain of intercultural knowledge. As part of students' evolved worldview, they also learn to challenge stereotypes, engage in global politics, develop cross-cultural competence, experience increased openness, and increased creativity (Maddux & Galinsky, 2009; Stone & Petrick, 2013; Zimmerman & Neyer, 2013).

Studying abroad has also been shown to enhance personal growth. For example, Petersdotter, Niehoff, and Freund (2017) found that participating in a study abroad program was associated with higher levels of self-efficacy, the belief in one's ability to succeed. Students with higher self-efficacy tend to see immersion in a new culture not as a threatening experience, but rather, an exciting challenge and an opportunity to learn (Petersdotter et al., 2017). Furthermore, increases in self-confidence and independence have been related to independent travel experiences while studying abroad (Stone & Petrick, 2013). Similarly, Gieser (2015) found that students had greater self-awareness, particularly in the areas of racial/ethnic identity after studying abroad. Kortegast and Boisfontaine (2015) discovered that students need opportunities to digest and create meaning from their experiences after abroad but that those opportunities are currently limited in many institutions.

The Present Study

Most studies in the current literature only examine study abroad populations in one university setting, limiting their greater generalizability (Kartoshkina, 2015; Luo & Jamieson-Drake, 2015; Marcantonio et al., 2016; Niehoff et al., 2017; Petersdotter et al., 2017; Wintre et al., 2015). Current research has focused largely on students' readiness and qualities prior to studying abroad as well as their adjustment home after studying abroad (Kartoshkina, 2015; Luo & Jamieson-Drake, 2015; Niehoff et al., 2017; Wielkiewicz & Turkowski, 2010). However, few studies have focused specifically on measuring variables of interest in students during their experiences studying abroad, and directly comparing them to a group of students not studying abroad.

Additionally, while previous research has examined personality characteristics associated with studying abroad, there is still much unknown about other factors as predictors of participation in a study abroad program (Greischel et al., 2016; Luo & Jamieson-Drake, 2015; Niehoff et al., 2017). There is also currently no literature explicitly examining differences in stress, depression, and positive affect between students studying abroad and not studying abroad.

The present study used a three-year longitudinal study design to address the gaps in the literature through three specific aims. The first aim was to examine the characteristics that predict whether students study abroad. The second aim was to identify the reasons why students study abroad or not study abroad. The third aim was to examine how studying abroad is related to students' stress, depression, and positive affect before, during, and after going abroad compared to students who did not go abroad.

Method

Participants

Approximately 953 students from four southeastern colleges originally voluntarily elected to participate in a longitudinal study

on college student stress and resilience. Inclusion criteria were as follows: 18 years of age and in the class of 2018. However, due to attrition, 612 students were used in our analyses. Of these students, 70.9% were women. Our sample identified as 58.6% Caucasian, 17.0% Asian American/Asian, 10.8% African American, 9.7% Multiracial/Biracial, 2.5% Mexican American/Chicano/Other Latino, and 1.4% other race/ethnicity. Approximately 40.4% of our sample studied abroad sometime over the third year of college. Participants were abroad either in the fall ($n = 150$) the spring ($n = 55$), for the year ($n = 9$), or planned on going abroad the summer after their third year ($n = 33$).

Procedure

All enrolled students at each institution received an email inviting them to complete a survey for this study. Students completed one-hour surveys via Qualtrics one to two months before they attended college and during October and April of their first, second, and third year of college. October was selected because that timing indicates their level of adjustment after college has been underway a month or two. April was selected because that timing gives a sense of how students are functioning at the end of the year. For the present study, we focused on select background variables and measures completed in spring of the second year (T1), fall of the third year (T2), and spring of the third year (T3). Students were paid \$20 for completion of each survey and received a bonus of \$25 if they completed the fall and spring survey in a given year. This project was approved by the Institutional Review Board at each of the four institutions.

Measures

Background. Participants completed demographic information about their gender, race/ethnicity, whether or not they were involved in a Fraternity/Sorority organization, and what major they declared. Majors were divided into STEM majors (e.g.,

Biology, Computer Science) and non-STEM majors (e.g., History, Social Sciences).

Study abroad information. Participants indicated whether or not they studied abroad, or planned to study abroad, during their third year of college. Subsequently, they were then asked nine follow-up questions about factors informing their decisions to study abroad (e.g., "To experience cultural immersion") or to not study abroad (e.g., "I was not interested in study abroad or study away"). Participants indicated how much each reason motivated their decision about participation in study abroad or study away on a scale from 1 (*not at all*) to 5 (*very much*).

Personality. Two measures of personality were administered prior to the students' first year of college. The Big Five Inventory (John, Donahue & Kentle, 1991) is a 44-item measure of personality with eight items assessing extraversion (e.g. "Is talkative"), nine items assessing agreeableness (e.g. "Is helpful and unselfish with others"), nine items assessing conscientiousness (e.g. "Does a thorough job"), eight items assessing neuroticism (e.g. "Is depressed, blue"), and ten items assessing openness (e.g. "Is original, comes up with new ideas"). Participants indicated how much the statement described them on a scale of 1 (*strongly disagree*) to 5 (*strongly agree*). A mean score was calculated for each subscale. The Cronbach's alpha for the Big Five was .78 to .87 across subscales, demonstrating high and consistent reliability. The Brief Sensation-Seeking Scale (Stephenson, Hoyle, Palmgreen, & Slater, 2003) is a 4-item measure of risk-taking preferences. Participants rated statements (e.g. "I would like to explore strange places") are on a scale of 1 (*not at all like me*) to 5 (*very much like me*), and a mean score was calculated. The Cronbach's alpha for this scale was .80, demonstrating high reliability.

Perceived stress. The Perceived Stress Scale (Cohen, Kamarck & Mermelstein, 1983) is a 10-item questionnaire that assesses how overwhelmed participants per-

ceived themselves to be in the past month. Participants indicated how often they thought or felt a certain way (e.g. "In the last month, how often have you been upset because of something that happened unexpectedly?") on a scale from 0 (*never*) to 4 (*very often*). A sum score was calculated. The present study focused on scores from three time points: spring of second year, fall of third year, and spring of third year. The Cronbach's alpha for this scale was .86 to .87 across time points, demonstrating high and consistent reliability.

Depression. The depression subscale of the Symptom-Check List-90-R (Derogatis, 1994) is a 12-item measure assessing feelings of depression. Participants indicated how bothered or distressed they felt in the past month (e.g. "Feeling low in energy or slowed down") on a scale from 0 (*not at all*) to 4 (*extremely*). A total score was calculated. The present study focused on scores from three time points: spring of second year, fall of third year, and spring of third year. The Cronbach's alpha for this scale was .93 across time points, demonstrating high reliability.

Positive affect. The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) is a 21-item measure that assesses positive and negative emotions that individuals felt over the last week. We only used the positive affect subscale for the present study since we used a clinical measure of depression for negative affect. Participants indicated the extent they felt a positive emotion (e.g., relaxed) in the past week from 1 (*very slightly*) to 5 (*extremely*), and an average score was conducted. The present study focused on scores from three time points: spring of second year, fall of third year, and spring of third year. The Cronbach's alpha for this scale was .86 to .87 across time points, demonstrating high reliability.

Statistical Analysis

A logistic regression was conducted to determine if nine variables predicted

whether individuals were 0 (not abroad) or 1 (abroad). We included gender (0 = men, 1 = women), Fraternity/Sorority (0 = Not part of Fraternity/Sorority, 1 = Part of Fraternity/Sorority), Major (0 = Not STEM, 1 = STEM), and the average score of the six personality scales in the regression as predictors.

Three 2 x 3 Repeated Measures ANOVAs were conducted to assess the effect of study abroad status (abroad in the fall or not abroad) and time (spring of second year/T1, fall of third year/T2, and spring of third year/T3) on stress, depression, and positive affect. Participants who were abroad in the spring ($n = 55$) or abroad for the year ($n = 9$) were excluded from those analyses in order to solely compare students who were abroad in the fall with students who were not abroad in the fall and to ensure that everyone in the spring was not abroad for an accurate comparison. In addition, students who planned on not going abroad until the summer after third year ($n = 33$) were coded as "not abroad." Therefore, a total of 150 students were coded as abroad in the fall and 357 students were coded as not abroad at all time points. Although the group sample sizes are unequal, none of the ANOVA assumptions were violated. Bonferroni post-hoc tests were conducted for significant interactions, and an alpha level of .05 was used. Analyses were performed in SPSS.

Results

Descriptive statistics were conducted on all variables (Table 1). Students reported moderate levels of extraversion and neuroticism and high levels of agreeableness, conscientiousness, openness, and sensation seeking. In terms of mood, students reported high levels of stress, low to moderate levels of depression and moderate levels of positive affect. In addition, correlations revealed that personality and psychological variables were associated with one another in the expected directions (Table 2).

Table 1. *Descriptive Statistics*

	<i>M</i> (<i>SD</i>)	Possible Range
Extraversion	3.13 (.77)	1 - 5
Agreeableness	3.76 (.63)	1 - 5
Conscientiousness	3.62 (.62)	1 - 5
Neuroticism	2.94 (.73)	1 - 5
Openness	3.48 (.59)	1 - 5
Sensation-Seeking	3.40 (.89)	1 - 5
Perceived Stress	18.19 (7.13)	0 - 40
Depression	14.73 (10.32)	0 - 48
Positive Affect	2.91 (.76)	1 - 5

Aim #1: Who Goes Abroad?

Descriptive statistics and logistic regression results of the nine predictors by study abroad status are in Table 3. The binary logistic regression was significant, $X^2(9) = 44.86$, $p < .001$, Nagelkerke Pseudo $R^2 = .13$. Women were more likely to go abroad than men. Students involved in Fraternity/Sorority organizations were more likely to go abroad than students who were not involved. STEM majors were less likely to go abroad than non-STEM majors. The Big Five personality traits did not predict whether students went abroad. However, students who were higher in sensation seeking were more likely to go abroad.

We could not examine race through the regression due to some groups having small sample sizes. However, we found that 46.9% ($n = 168$) of Caucasians, 23.1% ($n = 24$) of Asian American/Asians, 28.8% ($n = 19$) of African Americans, 52.5% ($n = 31$) of Multiracial/Biracial students, 40% ($n = 6$) of Mexican American/Chicano/Other Latino students, and 33.3% ($n = 3$) of students with other race/ethnicities studied abroad.

Table 2. *Correlations*

	1	2	3	4	5	6	7	8	9
1. Extraversion	–								
2. Agreeableness	.13*	–							
3. Conscientiousness	.06	.45*	–						
4. Neuroticism	-.22*	-.29*	-.19*	–					
5. Openness	.12*	.19*	.13*	-.06	–				
6. Sensation-Seeking	.21*	-.01	-.10	-.10	.22*	–			
7. Perceived Stress	-.05	-.15*	-.18*	.38*	.03	.01	–		
8. Depression	-.08	-.10	-.17*	.39*	.08	.07	.70*	–	
9. Positive Affect	.12	.20*	.15*	-.33*	.04	-.01	-.54*	-.43*	–

Note. * Bonferroni adjusted $p < .001$.

Table 3. *Logistic Regression by Abroad Status*

Predictors	Abroad ($n = 249$)	Not Abroad ($n = 363$)	OR	p
Women	$n = 199$ (79.9%)	$n = 235$ (64.7%)	2.22	.001*
Greek Organizations	$n = 116$ (46.6%)	$n = 110$ (30.3%)	1.70	.011*
STEM Major	$n = 71$ (28.5%)	$n = 144$ (39.7%)	0.56	.005*
Extraversion	$M(SD) = 3.25(0.88)$	$M(SD) = 3.06(0.76)$	1.10	.49
Agreeableness	$M(SD) = 3.85(0.66)$	$M(SD) = 3.76(0.62)$.99	.99
Conscientiousness	$M(SD) = 3.74(0.60)$	$M(SD) = 3.64(0.63)$	1.34	.11
Neuroticism	$M(SD) = 2.91(0.77)$	$M(SD) = 2.95(0.76)$.94	.68
Openness	$M(SD) = 3.53(0.58)$	$M(SD) = 3.46(0.59)$.97	.84
Sensation-Seeking	$M(SD) = 3.49(0.91)$	$M(SD) = 3.32(0.91)$	1.35	.014*

Note. OR = Odds ratio * $p < .05$.

Aim #2: Why Do Students Study Abroad or Not Study Abroad?

Table 4 presents reasons indicated by participants that informed their decisions to study abroad or to not study abroad. Traveling was the highest reported reason to study abroad, followed closely by a desire to experience cultural immersion and to have a break from life at the student's university. The top reason to not study abroad was that it would interfere with individuals' course of study in college. Additionally, financial reasons and interference with student's involvement in organizations informed students' decisions to not study abroad.

Aim #3: Do Levels of Stress, Depression, and Positive Affect Vary Based on Study Abroad Status and Time?

Perceived stress. A 2 x 3 Repeated-Measures ANOVA examined the effect of study abroad status in the fall and time on stress. There was a significant interaction

between study abroad status and time, $F(2, 896) = 26.23, p < .001$, partial $\eta^2 = .055$ (Figure 1). Bonferroni post-hoc analyses showed that individuals who were abroad had significantly less stress when they were abroad (T2) than before they went abroad ($p < .001$) and after they came back from abroad ($p < .001$). At T2, students who were abroad had significantly less stress than students who did not study abroad ($p = .003$). However, there were no significant differences among the non-study abroad group and time points.

Depression. A 2 x 3 Repeated-Measures ANOVA examined the effect of study abroad status in the fall and time on depression. There was a significant interaction between study abroad status and time, $F(2, 898) = 4.86, p = .008$, partial $\eta^2 = .011$ (Figure 2). Bonferroni post-hoc analyses showed that individuals who were abroad had significantly less depression when they were abroad (T2) than before they went

Table 4. *Reasons to Study Abroad and to Not Study Abroad*

Study Abroad		Did Not Study Abroad	
Reasons	<i>M(SD)</i>	Reasons	<i>M(SD)</i>
To travel	4.62 (0.77)	It would interfere with my course of study at my university	3.48 (1.57)
To experience cultural immersion	4.21 (1.14)	Financial reasons	2.33 (1.53)
For a break from life at my university	4.08 (1.22)	It would interfere with clubs, activities and/or organizations at my university	2.24 (1.50)
To meet new people	3.98 (1.14)	I was not interested in studying abroad or studying away	2.14 (1.41)
To support my future academic and/or career plans	3.68 (1.36)	Social reasons	1.96 (1.26)
To support by course of study at my university	3.60 (1.42)	My university does not offer study abroad programs of interest	1.79 (1.26)
To develop foreign language proficiency	2.48 (1.70)	It would interfere with my involvement with athletics	1.55 (1.20)

Note. 1 = Not at all to 5 = Very much.

abroad ($p = .007$) and after they came back from abroad ($p = .004$). At T2, students who were abroad had significantly less depression than students who did not study abroad ($p = .041$). However, there were no significant differences among the non-study abroad group and time points.

Positive affect. A 2 x 3 Repeated-Measures ANOVA examined the effect of study abroad status in the fall and time on positive affect. There was a significant interaction between study abroad status and time, $F(2, 858) = 11.46, p < .001$, partial $\eta^2 = .026$ (Figure 3). Bonferroni post-hoc analyses showed that individuals who were abroad had significantly more positive affect when they were abroad (T2) than before they went abroad ($p = .001$) and after they came back from abroad ($p < .001$). At T2, students who were abroad had significant-

ly more positive affect than students who did not study abroad ($p = .002$). However, there were no significant differences among the non-study abroad group and time points.

Discussion

The purpose of the study was to investigate predictors of students who study abroad, why students study abroad or not study abroad, and examine if levels of stress, depression, and positive affect change as a result of study abroad status and time. Our findings indicate that being female, being a member of a Fraternity/Sorority, being a non-STEM major, and having higher sensation-seeking scores were all predictors of students' participation in a study abroad program. Traveling, cultural immersion, and a break from student life at the university were reported as compelling reasons to study abroad, while coursework and financ-

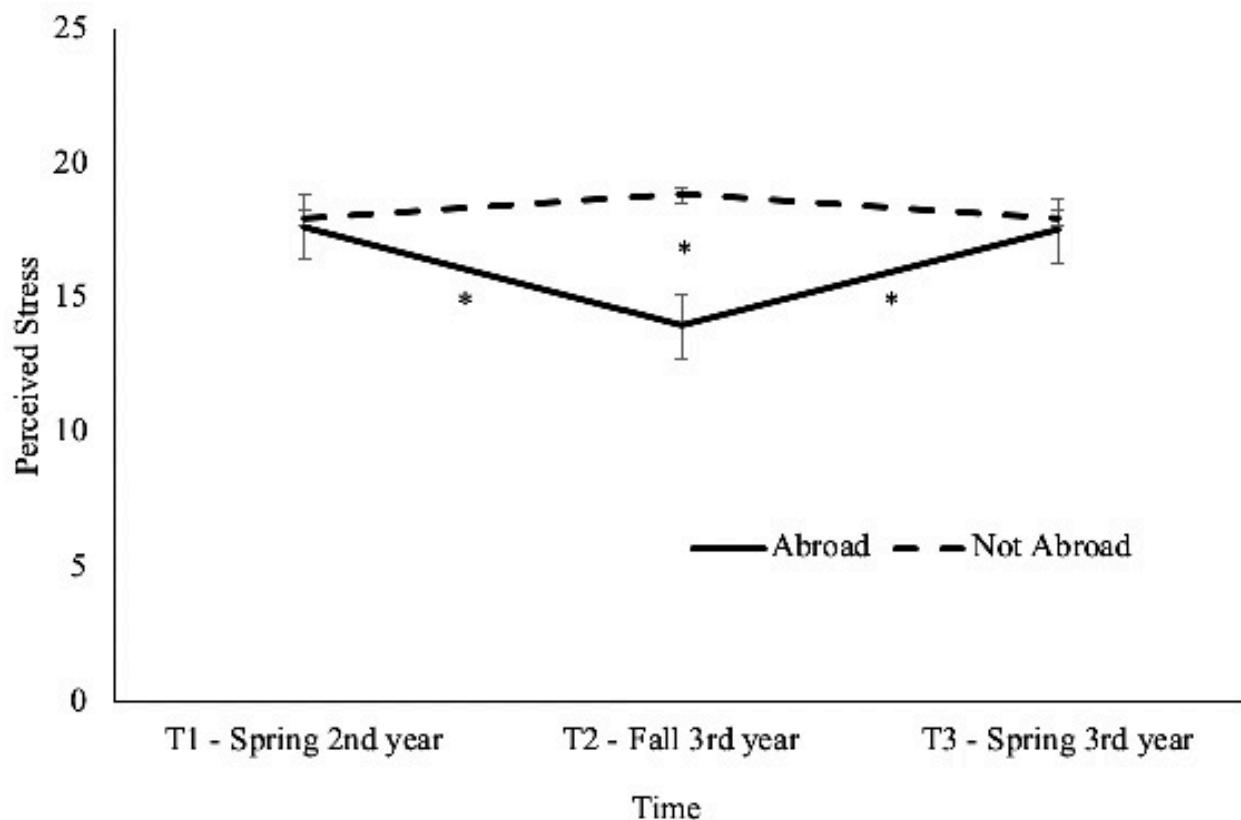


Figure 1. Perceived stress scores by time and study abroad status * $p < .01$

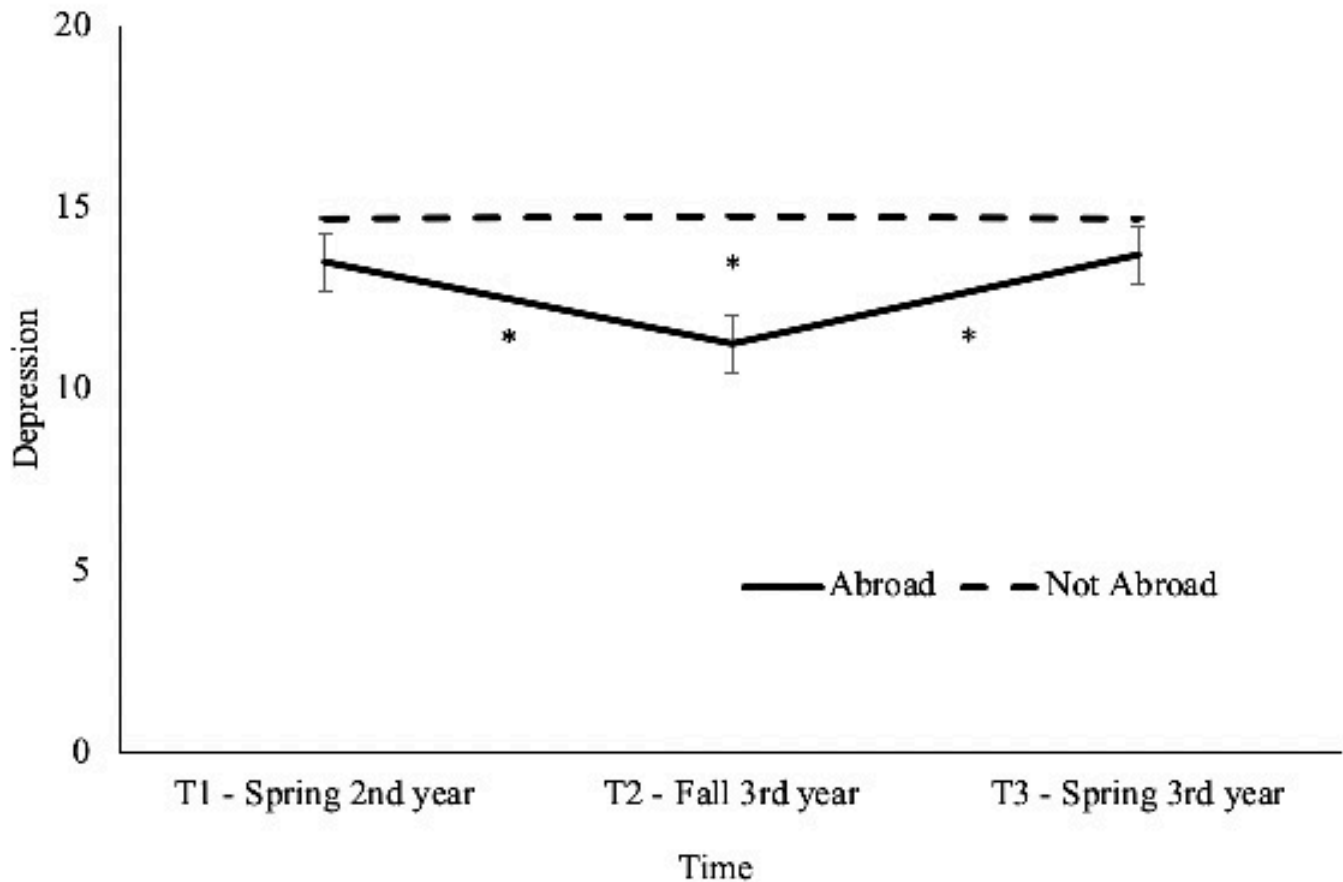


Figure 2. Depression scores by time and study abroad status * $p < .01$

es were reported as reasons to not study abroad. Analyses suggest the psychological benefits of studying abroad, including decreased stress and depression and increased positive affect while abroad compared to before and after the study abroad experience, and compared to students not abroad.

Traits Associated with Studying Abroad

Consistent with previous literature, gender and Fraternity/Sorority membership were both predictors of student's participation in a study abroad program (Institute of International Education, 2015; Luo & Jamieson-Drake, 2015). It has been suggested that men are less likely to want to leave their peer groups on campus and generally do not view study abroad as necessary to reach their long-term goals (Strauss, 2015).

In addition, our finding that non-STEM majors were more likely to go abroad aligns with previous literature that has found that humanities majors were more likely to study abroad than their peers studying engineering (Luo & Jamieson-Drake, 2015; Stroud, 2010). This may be in part due to the increased structure and stricter sequence of classes that STEM majors typically need to follow in order to complete their requirements (Stroud, 2010).

Surprisingly, our study did not find any of the Big Five personality traits to be predictors of study abroad. This inconsistency with previous research (Greischel et al., 2016; Niehoff et al., 2017) is likely due to a ceiling and floor effect for some of those variables; our sample overall displayed high levels of agreeableness and openness and low levels of neuroticism. That said, we found that stu-

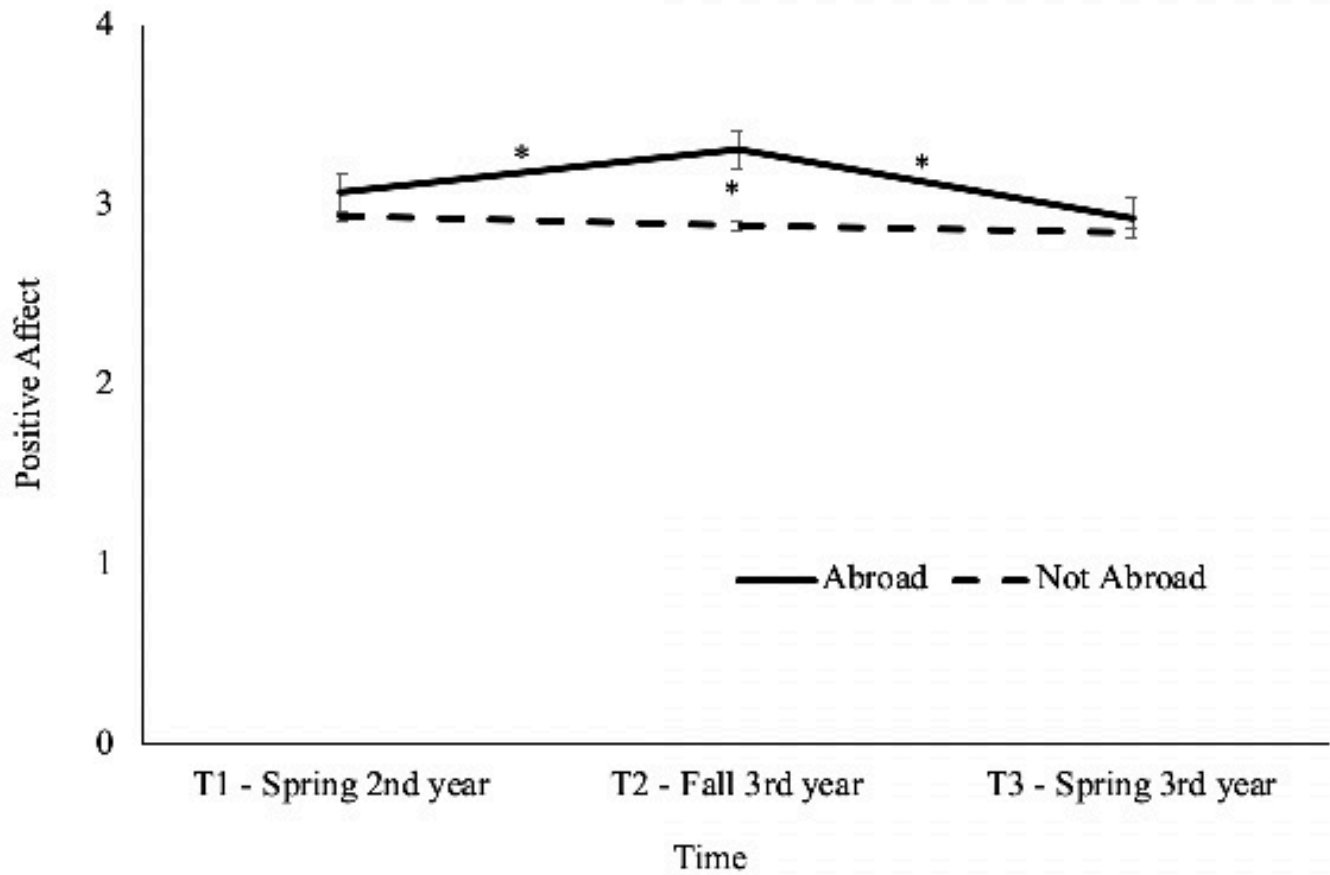


Figure 3. Positive affect scores by time and study abroad status * $p < .01$

dents who were higher in sensation seeking were more likely to go abroad, which aligns with previous research (Schroth & McCormack, 2000). In addition, this result follows from the finding that students who study abroad have been found to engage in riskier behavior prior to and during abroad, specifically risky drinking and sexual behavior (Marcantonio et al., 2016; Pedersen et al., 2014). This finding may suggest that students with high sensation seeking display more confidence to take on the risks of studying abroad than peers with lower sensation seeking.

We found that traveling was the most compelling reason to study abroad. Traveling is an experience that can increase independence, self-confidence, and offer other educational benefits (Stone & Petrick, 2013). Students also report a desire to im-

merse themselves in the abroad country's culture and to have a "break of life" at the university. In our sample, most students (65%) studied abroad during fall of their third year, which is about the time when students might want to try something new.

The top reason informing a decision to not study abroad was interference with students' course of study. This also aligns with our finding and previous research about STEM and non-STEM majors (Niehaus & Inkelas, 2016). Students studying STEM disciplines tend to be less likely to study abroad due to a perception of academic inflexibility and stress to complete course requirements (Stroud, 2010). The second most reported reason informing a decision to not study abroad was financial reasons, consistent with research indicating that students with higher incomes are more likely to

study abroad (Luo & Jamieson-Drake, 2015). While many forms of financial aid are available to help pay for a study abroad program (NAFSA: Association of International Educators, 2014), in reality, the cost of studying abroad is almost always more than the program's advertised price. Students also must budget money for personal spending, sight-seeing, travel, and potential emergencies. Ultimately, these costs can greatly increase the price of the program, emphasizing the importance of growing financial support for students to study abroad.

Study Abroad and Psychological Functioning

We found that students who studied abroad during fall of their third year reported lower levels of stress and depression and higher positive affect while studying abroad than the spring before they went abroad and the spring after returning from abroad. Furthermore, during fall of the third year, students abroad reported less stress and depression than students who were not abroad. There was not a difference in stress between the fall and spring semester for students who did not go abroad; therefore, the difference is attributable to studying abroad rather than to semester. One reason for this finding could be that study abroad serves as a break from the stress at the home university. For example, Hurst, Baranik and Daniel (2013) identify relationships as the top stressor in college students, followed by lack of resources and academics. Studying abroad may allow students to have some distance from complicated relationships at home. They also may have fewer extracurricular commitments, and instead, have more time and resources to put towards travelling and sightseeing. While abroad, many students report an easier academic environment (Cook, 2012), which could also reduce stress. In addition, study abroad programs may reduce depression and increase positive affect by providing opportunities for students to gain independence, presenting students with various

socializing opportunities to develop new relationships, and providing a supportive staff to offer guidance and support.

Another reason stress and depression may have decreased while abroad could have been due to changes in self-efficacy. Petersdotter and colleagues (2017) found higher self-efficacy in students during and after studying abroad. Moreover, previous research has identified that lower stress and depression are associated with increases in self-efficacy (Saleh, Camart & Romo, 2017). Perhaps having everyday experiences in a foreign country, such as navigating a new city, communicating in a foreign language, or making new friends are all challenges students studying abroad face and overcome, which could have bolstered perceived self-efficacy and lowered stress and depression.

Upon returning home from studying abroad, we found that stress and depression increased and positive affect decreased compared to when students were studying abroad. This pattern is consistent with studies that have shown students experience difficulties adjusting after returning from abroad (Kartoshkina, 2015; Wielkiewicz & Turkowski, 2010). Notably, though, while stress and depression increased and positive affect decreased from when students were abroad, they did not exceed their pre-abroad levels. It is unclear if self-efficacy was also reduced when returning from abroad or if there is another mechanism at place; therefore, this question should be explored in future research.

Limitations

Nonetheless, it is important that the limitations of the present study are taken into account when interpreting the results. Our sample likely has a selection bias. For example, our participants had relatively high levels of agreeableness and conscientiousness, which is not representative of all college students. Additionally, the present study only examines students at four southeastern private universities, and the major-

ity of our sample were women and Caucasian, limiting the overall generalizability. We also do not know the socioeconomic status or other demographics of this sample that could have affected ability to study abroad. With the goal of creating a more heterogeneous study abroad population, future studies should investigate why some students are more likely to study abroad than others. This research would inform strategies to diversify the students participating in study abroad programs.

In addition, the present study relies on self-report data. While participants are prompted to respond honestly, data may be affected by social desirability. Further, we do not know where students studied abroad. Evidence indicates that college students associate culture shock and difficulty adjusting with language and environmental differences in the new country, suggesting that students studying in Westernized countries would experience less culture shock than students who studied abroad in India, for example (Goldstein & Keller, 2015). Nationally, though, most students study abroad in tourist-friendly European countries (NAFSA: Association of International Educators, 2015). Another limitation is that the present study only assesses stress, depression, and positive affect at one post-abroad time point several months after they went abroad. Future studies should assess participants right before and right after they go abroad to obtain a more fine-grained picture of their adjustment. In addition, research indicates that studying abroad has a large impact on students' lives (Paige et al., 2009). How exactly this "impact" manifests itself, however, is unknown.

Due to the design of the present study, study abroad status is not isolated as the distinguishing factor between groups. In other words, since an experimental design was not used and study abroad status was not randomly assigned, we cannot infer causation. Due to ethical guidelines and available resources, study abroad status cannot be assigned to participants, and the

present study's findings should be interpreted within this context.

Conclusions

Results reveal that not all students have the same likelihood of studying abroad. They also highlight the reasons why students study abroad and some of the barriers that could be addressed to allow students to study abroad. Most notably, we found that while abroad, students have lower stress and depression and higher positive affect than before and after going abroad and compared to students who did not go abroad. Our results have many important implications. We encourage increasing education and funding in order to provide more access to diverse groups of students. Additionally, we recommend that academic advisors communicate with advisees early and often about the potential of studying abroad, so that coursework and stress about scheduling does not restrict one's ability to participate in a study abroad program. Advisors could also communicate with students about the psychological benefits of studying abroad. Furthermore, colleges could capitalize on the benefits of student travel by offering more local excursions. In fact, one study found that psychological benefits such as increased emotional resilience can occur after trips as short as two weeks long (Mapp, 2012). Particularly today, when national levels of stress and psychological disorders among college students are so high (Saleh et al., 2017), it appears that studying abroad could be a needed respite for students.

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