College Students' GPA: Using a Large Dataset

Ya-Wen (Melissa) Liang[1, *], Don Jones[1] and Rebecca A. Robles-Pina[2]

[1]Department of Educational Leadership and Counseling, Texas A&M University-Kingsville, MSC 223, 700 University Blvd., Kingsville, TX 78363

[2]Department of Counselor Education, Sam Houston State University, 1932 Bobby K. Marks Drive, Huntsville, TX 77340.

*Email: ya-wen.liang@tamuk.edu

Abstract

College students' Grade Point Average (GPA) reflected their academic performance and dedications. Anxiety and parent education appeared to affect college students' performance and motivations on academic success. The GPA of college students from a large university was investigated in this research study. Through literature review, we explored stigmas affecting college students' GPA. The theory of stereotypical threat proposed by Awad (2007) was adopted as the theoretical framework for this research. The participants of this research included 1,122 first-year college students in a southern state. The instruments of Learning and Study Strategies Inventory and Paired Samples T-Test were used to analyze students' anxiety levels. The Pearson Product Moment Correlation was used to detect the relationship between parents' education levels and their college children's GPA.

Keywords: GPA, stigmas, anxiety, parent education, college students

1 Introduction

Attending college appears to be stressful for most students (Hartman, Waseeleski, Whatley, 2017). Researchers noted that it is important for educators and administrators to investigate factors influencing students' academic success and well-being (Rosenthal, Levy, London, & Lewis, 2016). Ethnic stigmas and parent influences often affect college students' academic achievements (Greenberger, Lessard, Chen, & Farruggia, 2008). Parent education levels and expectations would influence their college children's academic performance (Palbusa & Gauvain, 2017; Spera, Wentzel, & Matto, 2009). Because of diverse cultural norms, White, Hispanic, African American, and Asian students tend to define academic success differently (Jaret & Reitzes, 2009). Negative stereotypes often increase college students' anxiety, which would hinder their academic performance (Goff & Steele, 2008; Shih, Bonam, Sanchez, & Peck, 2007; Talkovsky & Norton, 2015). Students of diverse ethnic groups would experience diverse levels of anxiety and adopt different behaviors to cope with anxiety and racial issues (Rosenthal, et al., 2016).

2 Literature Review

The United States Department of Education has invested significant budget on college education; therefore, it is crucial that researchers investigate factors affecting college students' performance (Letkiewicz, Lim, Bartholomae, Fox, & Montalto, 2014; Palbusa & Gauvain, 2017). The majority of first-year college students start their higher education with positive expectations to complete degrees; however, many face challenges and give up college degrees (Boyraz, Granda, Baker, Tidwell, & Waits, 2016; Zhang & Smith, 2015). When students can manage course loads, they tend to pass examinations and achieve academic success (Kleijn, Ploeg, & Topman 1994). According to Stewart, Hun, and JoHyun (2015), the higher Grade Point Average (GPA) first-semester college students can earn, the more persist they will pursue future academic success.

2.1 Ethnic Identity

Ethnicity often influences an individuals' identity (Shih et al., 2007). African American students tend to perform well in athletics (Pinel, Warner, & Chua, 2005). African American students often feel very proud of the college identity (Jaret & Reitzes, 2009). Caucasian students tend to pay less attentions on ethnic identity compared to other ethnic groups in White dominated colleges (Jaret & Reitzes, 2009). It is possible that Caucasian students experience less identity threats in mainstream society. Most Asian students prioritize prestige of their majors and future occupations over satisfaction of their majors, and Caucasian students often value satisfaction when selecting colleges and majors (Dundes, Cho, & Kwak, 2009). As a result of ethnic identity influences, the first generation Asian immigrants tend to value a high GPA, and Caucasian students often favor participating in student organizations and enjoying college life (Edman & Brazil, 2009).

2.2 Gender and Racial Influences

Gender roles often influence female college students' pursuit of science, technology, engineering, and mathematics as their majors (Morganson, Jones, & Major, 2010). According to Hamilton (2013), female students tend to have higher graduation rates compared to males, and African American college students often have lower graduation rates compared to Caucasian and Asian students. According to Eckberg (2015), non-White students tend to experience higher levels of anxiety than Caucasian college students. Asian students tend to achieve higher levels of education, and Caucasian students often achieve higher GPA (Tran & Birman, 2010). Hispanic students often struggle with cultural congruity, and African American students tend to experience racial discrimination (Edman & Brazil, 2009; Levin, Van Laar, & Foote, 2006).

2.3 Negative Stereotype of Identity and Gender

Pinel et al., (2005) noted that ethnic stigmas would impair students' academic performance, self-esteem, and well-being. Bown and Lee (2005) identified following stigmas among college students: (a) African American students and Hispanic students are less intelligent compared to Caucasian students; (b) Caucasians are not good at athletics compared to African Americans; and (c) female students do not perform well compared to male students in mathematics. Cheryan, Davies, Plaut, and Steele (2009) noted that masculine stereotypes hamper women's interests in computer science. The ethnic stigmas and gender biases would negatively affect an individual's identity, confidence, academic performance, college major, and career choice (Bown & Lee, 2005; Levin et al., 2006).

2.4 Parental Aspirations and Influences

Researchers noted that first-year college students can better overcome transitional challenges and achieve degree completions when they receive advice, emotional support, resources, and financial assistance from their parents (Hamilton, 2013; Palbusa & Gauvain, 2017). According to Spera et al. (2009), parents with higher education or educational aspirations tend to influence their children in pursuing higher education. Asian parents often have higher expectations toward their children's completion of college degrees (Spera et al., 2009). Based on the reports of first-year college students, they perceived higher effectiveness of assistance from mothers compared to fathers in supporting their education (Zhang & Smith, 2015). Dundes et al. (2009) noted that Asian parents often value career income for their college children's selections of majors, and Caucasian parents often emphasize satisfaction of careers for their college children's selections of majors. Because of collectivistic values and cultural backgrounds, Asian students tend to compromise with their parents' expectations toward their college major selections (Dundes et al., 2009). Parent influences tend to affect college students' motivations of academic achievements (Greenberger et al., 2008).

2.5 Test Anxiety

Rajiah and Saravanan (2014) described test anxiety as a state anxiety that can stimulate motivations and provoke psychological distress. Researchers noted that test anxiety would negatively affect college students' GPA and academic performance (Talib & Sansgiry, 2012). According to Talib and Sansgiry (2012), 39% of students with low test anxiety might fail a course when 60% of students with high test anxiety tend to fail a course. Educators are encouraged to develop strategies to help students overcome test anxiety for the purpose of enhancing academic performance (Talib & Sansgiry, 2012).

2.6 Stereotype Threats and General Anxiety

Researchers proposed that racial and gender stereotype threats often increase individuals' anxiety and distancing toward other ethnic groups and learning environments (Cheryan et al., 2009; Goff & Steele, 2008). As anxiety increases, individuals' stereotypes tend to negatively affect their interactions with others (Goff & Steele, 2008). Individuals' negative racial identities and stigmas often provoke their anxiety and stereotype threats and further affect their performance (Shih et al., 2007). According to Awad (2007), stereotype threats arise when individuals are treated with stereotypes. Individuals with high academic expectations tend to perceive stereotype threats because of the desire and pressure to perform well (Awad, 2007). Minority students' anxiety tends to increase as the academic year progresses (Cole, Matheson, & Anisman, 2007). It is possible that students tend to experience anxiety when grade due dates are approaching. It is also possible that predictions of later performance associated with ethnic minority threats would trigger anxiety (Cole et al., 2007).

3 Purpose of the Study

Researchers advocated the importance to investigate factors affecting college students' GPA (Hamilton, 2013; Hartman et al., 2017; Kleijn et al., 1994; Tibbetts et al., 2016). Some researchers noted that anxiety and parent influence play crucial roles in affecting college students' GPA (Hamilton, 2013; Palbusa & Gauvain, 2017; Saw, Berenbaum, & Okazaki, 2013; Talib & Sansgiry, 2012). We examined parent education levels and pre-test and post-test anxiety after an intervention on mentoring first-year college students' end-of-year GPA. This was done with a hope that researchers and educators can use the results of this research to develop strategies to enhance college students' GPA.

4 Theoretical Framework

Goff and Steele (2008) suggested that researchers explored stereotypical threats for explaining how stigmas would affect students' learning process and academic success. Stereotype threats arise when individuals are anxious about being judged or treated negatively (Goff & Steele, 2008). Awad (2007) defined stereotype threats as a type of social-psychological anxiety which occurs when individuals perceive negative stereotypes. Awad (2007) noted that stereotype threats would provoke individuals' anxiety. Awad (2007) further noted that individuals who identify themselves with academic success tend to be most affected by stereotype threats. We adopted the theory of stereotypical threat as the theoretical framework.

5 Methods and Procedures

Fowler and Chanmugam (2007) noted that quantitative research allows researchers to analyze and facilitate effective interventions. A quantitative research design was employed through using the dataset of the Institutional Research and Analysis department from an university in a southern state. Institutional Review Board permission was acquired prior to the investigation of this research. The dataset did not contain any identifications of participants. All participants' responses were kept anonymous and confidential. The information had all been coded to protect participants. Original sources were offered from the university departments, registrar's office, and instructors. All participants' responses were kept anonymous and confidential. Educational and counseling implications were included in

the study for educators, counselors, college students, and parents of college students to better help college students overcome negative predictors such as ethnic stigmas, gender stigmas, and parent education levels. The research questions included: (a) What is the relationship between fathers' and mothers' education levels on their college children's GPA, and (b) Is there a difference between college students' pre-test and post-test anxiety levels?

5.1 Participants

The participants included 1,122 out of 1,329 first-year college students with 617 female and 505 male students in a southern state. No participant identified himself or herself as lesbian, gay, bisexual, transgender, or multiracial. We excluded the participants of 13 Native Americans because the small number was under-represented for data analysis. The small data of eight international students were combined into the group of Asian because most international students of this research were from Asian. The participants were composed of 656 Caucasians, 280 African Americans, 161 Hispanics, and 25 Asians.

5.2 Instruments

The Learning and Study Strategies Inventory-2 (LASSI-2) was used to analyze the data (Weinstein & Palmer, 2002). The reliability and validity of this instrument as well as the independent variables and dependent variable were investigated. More information including the purpose of test, dataset, variables, codes, LASSI-2, anxiety, reliability, and validity were discussed below.

5.2.1 Purpose of Test

The LASSI-2 was adopted to investigate students' pre-test and post-test anxiety. The Pearson Product Moment Correlation was employed to analyze the correlation between the fathers' and mothers' education levels and their college children's GPA. The paired samples t-test was employed to contrast the mean of college students' pre-test to post-test anxiety.

5.2.2 LASSI-2

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy do Weinstein and Palmer (2002) identified the LASSI-2 as a learning and study strategy assessment. The LASSI-2 includes 10 scales and 80 items, which can assess students' strategic learning including skills, will, self-regulation, covert thoughts, overt thoughts, attitudes, motivations, beliefs, and behaviors. A low score of the LASSI-2 scale indicates the student with high anxiety that is associated with academic performance (Griffin, MacKewn, Moser, & VanVuren, 2012). According to Weinstein and Palmer (2002), factors that were examined in the LASSI-2 significantly associated with successful learning and educational interventions in college settings. The LASSI-2 can be used to assess (a) students' pre-test and post-test anxiety, (b) students' attitudes, motivations, and achievements, (c) degrees of successful

interventions, (d) counseling outcomes, and (e) learning programs (Weinstein & Palmer, 2002).

5.2.3 Reliability and Validity

The LASSI-2 was employed to examine participants' pre-test and post-test anxiety levels. The alpha coefficients of reliability regarding the anxiety scale consisting of eight questions ranged from .848 to .870 making it reliable enough to use for this data analysis. Evidence for content validity was provided by submitting the items developed to experts in the field and pilot testing the instrument (Weinstein & Palmer, 2002).

5.2.4 Variables

Independent variables of the Pearson Product Moment Correlation were defined as fathers' and mothers' education levels. The dependent variable was defined as college students' GPA. The two variables used in the paired samples t-test were students' pre-test and post-test anxiety.

5.2.5 Anxiety

Cole et al. (2007) noted that students' anxiety levels tend to increase as academic years progress. Anxiety levels are increased by predictions of later performance associated with ethnic minority threats (Cole et al., 2007). Students with high academic expectations tend to have high anxiety, which affects GPA (Awad, 2007).

6 Data Analysis and Results

The results of first-year college students' GPA is shown in Figure 1. The parents' education levels is listed in Table 1. The results indicated most parents (343 fathers and 348 mothers) of the participants had high school diplomas or GEDs and 296 fathers and 325 mothers attended colleges (see Table 1). Few parents (10 fathers and seven mothers) received associate or two-year degrees (see Table 1). The research results indicated no significant relationship between parents' education levels and their college children's GPA because $p > .05$ (see Table 2 and Figure 1). However, there was a medium to strong positive correlation ($r = .48$) at the significant 0.01 level (2-tailed) between the father's and mother's education levels (see Table 2). The results indicated that parents' education levels did not influence their college children's GPA.

Based on the results of the paired sample T-test, there was a significant difference ($t (1121) = -23.23, p < .01$) (see Table 3) and a strong positive correlation ($r = .61$) between the pre-test anxiety (M = 22.59, SD = 7.56) and post-test anxiety (M = 27.17, SD = 7.42). The results indicated that students scored higher on the post-test compared to the pre-test. A high score on the LASSI-2 scale indicated students with low test anxiety (Griffin et al., 2012). Based on the results, students' anxiety levels dropped in the post-test.

7 Discussions and Conclusion

The results of this research study indicated no significance between parents' education levels and their college students' GPA (see Table 2). It is possible that parents' education levels have little influence on first-year college students' GPA because most of these students do not live with parents and would be influenced by their peers or dorm mates. It is also possible that after first-year college students receive their end-of-year GPA, they would return to their parents to share their success, challenges, and financial needs.

Weinstein and Palmer (2002) noted that attitudes, beliefs, and motivations would influence anxiety levels of college students and affect their learning strategies. Students' anxiety is associated with academic achievement, successful interventions, and learning strategies (Weinstein & Palmer, 2002). Based on the results of LASSI-2, participants had lower anxiety on the post-test compared to the pre-test anxiety. This indicated that students met their expectations on the examination and educational interventions helped students achieve academic performance.

Based on results of the study, participants' anxiety dropped after examinations. The results brought a light to educators and counselors that receiving educational assistance and achieving academic performance helped students lower test anxiety. Educational interventions successfully reduced students' anxiety. Educators and counselors can help students confront their anxiety, explore their identity treats, and seek tangible resources to alleviate students' anxiety and promote academic success (Tibbetts et al., 2016).

8 Implications

Educators own a crucial role to promote students' academic success (Bembenutty, 2007). Educators are encouraged to explore motivations that stimulate students to conquer stigmas and negative influences. School counselors are recommended to offer screening assessments to help college students explore and manage test anxiety and psychological distress so as to achieve academic goals (Boyraz et al., 2016; Rajiah & Saravanan, 2014). School administrators and counselors can explore how parent' expectations and social economic status affect college students' achieving a good standing of GPA.

9 Limitations

The results of this research study was limited on the data of first-year college students. It is possible that parent education levels might show different effects on graduate students compared to first-year college students. Test anxiety of first-year college students might differ from sophomore, junior, and senior college students. Investing test anxiety on different years of college students would generate different results.

Fig. 1. GPA, Gender, and Ethnicity
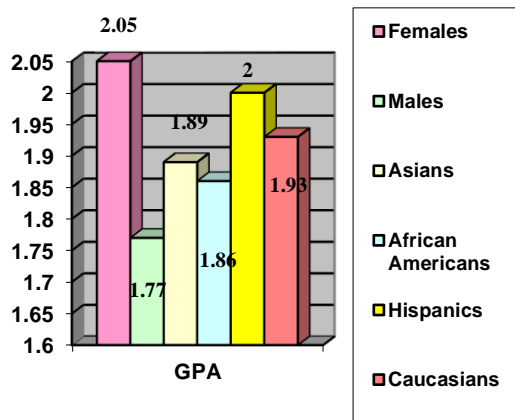
Table 1. Frequency of Parent's Education Level

Parent's Education Level	Father	Mother
No high school	49	56
Some high school, no diploma	158	113
High school diploma, GED, or recognized home school	343	348
Some college, but no degree/certification	296	325
Associates/two-year degree	10	7
Bachelor's/four-year degree	188	218
Graduate/professional degree	78	55
Total	1122	1122

Table 2. Pearson Correlation – Parent's Education Levels and Their College Children's GPA

Parent's Education Levels		M	SD	GAP	Father's Education	Mother's Education
Mother's Education	r	5.57	2.529	-0.34	0.467**	1
	p			0.257	0.000	
	n	1122	1122	1122	1122	1122
Father's Education	r	5.58	2.738	0.25	1	0.476**
	p			0.401		0.000
	n	1122	1122	1122	1122	1122

Note: **. Correlation is significant at the 0.01 level (2-tailed).

Table 3. Paired Samples T-test – Pair 1: Pre and Post Anxiety LASSI Score

	M	n	SD	95% CI Lower	Upper	t	df	r	p
Pair 1	-4.575		6.597	-4.961	-4.188	-23.228	1121	0.612	0.00
Pre-Anxiety	22.59	1122	7.560						
Post-Anxiety	27.17	1122	7.418						

References

Awad, G. H. (2007). The role of racial identity, academic self-concept, and self-esteem in the prediction of academic outcomes for African American students. *Journal of Black Psychology*, *33*(2), 188-207.

Bembenutty, H. (2007). Self-regulation of learning and academic delay of gratification among Korean college students. *Journal of Advanced Academics*, *18*(4), 586-616.

Boyraz, G., Granda, R., Baker, C., Tidwell, L., & Waits, J. (2016). Posttraumatic stress, effort regulation, and academic outcomes among college students: A longitudinal study. *Journal of Counseling Psychology*, *63*(4), 475-486. doi:10.1037/cou0000102

Brown, R. P., & Lee, M. N. (2005). Stigma consciousness and the race gap in college academic achievement. *Self & Identity*, *4*(2), 149-157. doi:10.1080/13576500444000227

Cheryan, S., Davies, P. G., Plaut, V. C., & Steele, C. M. (2009). Ambient belonging: How stereotypical cues impact gender participation in computer science. *Journal of Personality & Social Psychology*, *97*(6), 1045-1060.

Cole, B., Matheson, K., & Anisman, H. (2007). The moderating role of ethnic identity and social support on relations between well-being and academic performance. *Journal of Applied Social Psychology*, *37*(3), 592-615. doi:10.1111/j.1559-1816.2007.00176.x

Dundes, L., Cho, E., & Kwak, S. (2009). The duty to succeed: honor versus happiness in college and career choices of East Asian students in the United States. *Pastoral Care in Education*, *27*(2), 135-156. doi:10.1080/02643940902898960

Eckberg, D. A. (2015). Race and research methods anxiety in an undergraduate sample: The potential effects of self-perception. *Journal of Classroom Interaction*, *50*(2), 145-155.

Edman, J. L., & Brazil, B. (2009). Perceptions of campus climate, academic efficacy and academic success among community college students: an ethnic comparison. *Social Psychology of Education*, *12*(3), 371-383. doi:10.1007/s11218-008-9082-y

Fowler, D. N., & Chanmugam, A. (2007). A critical review of quantitative analyses of children exposed to domestic violence: Lessons for practice and research. *Brief Treatment and Crisis Intervention*, *7*(4), 322-344. doi:10.1093/brief-treatment/mhm019

Goff, P. A., & Steele, C. M. (2008). The space between us: Stereotype threat and distance in interracial contexts. *Journal of Personality and Social Psychology*, *94*(1), 91-107. doi:10.1037/0022-3514.94.1.91

Greenberger, E., Lessard, J., Chen, C., & Farruggia, S. (2008). Self-entitled college students: Contributions of personality, parenting, and motivational factors. *Journal of Youth & Adolescence*, *37*(10), 1193-1204. doi:10.1007/s10964-008-9284-9

Griffin, R., MacKewn, A., Moser, E., & VanVuren, K. W. (2012). Do learning and study skills affect academic performance? – An empirical investigation. *Contemporary Issues in Education Research*, *5*(2), 109-116.

Hamilton, L. (2013). More is more or more is less? Parental financial investments during college. *American Sociological Review*, *78*(1), 70-95.

Hartman, S. D., Waseeleski, D. T., & Whatley, M. A. (2017). Just breathe: The effects of emotional dysregulation and test anxiety o GPA. *College Student Journal*, *51*(1), 142-150.

Jaret, C., & Reitzes, D. C. (2009). Currents in a stream: College student identities and ethnic identities and their relationship with self-esteem, efficacy, and grade point average in an urban university. *Social Science Quarterly*, *90*(2), 345-367. doi:10.1111/j.1540-6237.2009.00621.x

Kleijn, W., Ploeg, H., & Topman, R. (1994). Cognition, study habits, test anxiety, and academic performance. Psychological Reports, 75, 1219-1226. doi: 10.2466/pr0.1994.75.3.1219

Letkiewicz, J., Lim, H., Bartholomae, S., Fox, J., & Montalto, C. (2014). The path to graduation: Factors predicting on-time graduation rates. *Journal of College Student Retention: Research, Theory & Practice*, *16*(3), 351-371.

Levin, S., Van Laar, C., & Foote, W. (2006). Ethnic segregation and perceived discrimination in college: Mutual influences and effects on social and academic life. *Journal of Applied Social Psychology*, *36*(6), 1471-1501. doi:10.1111/j.0021-9029.2006.00068.x

Morganson, V. J., Jones, M. P., & Major, D. A. (2010). Understanding women's underrepresentation in science, technology, engineering, and mathematics: The role of social coping. *Career Development Quarterly*, *59*(2), 169-179.

Palbusa, J. A., & Gauvain, M. (2017). Parent–student communication about college and freshman grades in first-generation and non–first-generation students. *Journal of College Student Development*, *58*(1), 107-112. doi:10.1353/csd.2017.0007

Pinel, E. C., Warner, L. R., & Chua, P. (2005). Getting there is only half the battle: Stigma consciousness and maintaining diversity in higher education. *Journal of Social Issues*, *61*(3), 481-506. doi:10.1111/j.1540-4560.2005.00417.x

Rajiah, K., & Saravanan, C. (2014). The effectiveness of psychoeducation and systematic desensitization to reduce test anxiety among first-year pharmacy students. *American Journal of Pharmaceutical Education*, *78*(9), 1-7.

Rosenthal, L., Levy, S. R., London, B., & Lewis, M. A. (2016). Polyculturalism among undergraduates at diverse universities: Associations through intergroup anxiety with academic and alcohol outcomes. *Analyses of Social Issues & Public Policy*, *16*(1), 193-226. doi:10.1111/asap.12121

Saw, A., Berenbaum, H., & Okazaki, S. (2013). Influences of personal standards and perceived parental expectations on worry for Asian American and White American college students. *Anxiety, Stress & Coping: An International Journal*, *26*(2), 187-202. doi:10.1080/10615806.2012.668536

Shih, M., Bonam, C., Sanchez, D., & Peck, C. (2007). The social construction of race: Biracial identity and vulnerability to stereotypes. *Cultural Diversity and Ethnic Minority Psychology*, *13*(2), 125-133. doi:10.1037/1099-9809.13.2.125

Spera, C., Wentzel, K. R., & Matto, H. C. (2009). Parental aspirations for their children's educational attainment: Relations to ethnicity, parental education, children's academic performance, and parental perceptions of school climate. *Journal of Youth & Adolescence*, *38*(8), 1140-1152. doi:10.1007/s10964-008-9314-7

Stewart, S., Lim, D. H., & Kim, J. H. (2015). Factors influencing college persistence for first-time students. *Journal of Developmental Education*, *38*(3), 12-20.

Talib, N., & Sansgiry, S. S. (2012). Determinants of academic performance of university students. *Pakistan Journal of Psychological Research*, *27*(2), 265-278.

Talkovsky, A. M., & Norton, P. J. (2015). Anxiety sensitivity across four ethnoracial groups in an undergraduate sample. *Cognitive Behaviour Therapy*, *44*(1), 33-43. doi:10.1080/16506073.2014.953568

Tibbetts, Y., Harackiewicz, J., Canning, E., Boston, J., Priniski, S., & Hyde, J. (2016). Affirming independence: exploring mechanisms underlying a values affirmation intervention for first-generation students. *Journal of Personality & Social Psychology*, *110*(5), 635-659. doi:10.1037/pspa0000049

Tran, N., & Birman, D. (2010). Questioning the model minority: Studies of Asian American academic performance. *Asian American Journal of Psychology*, *1*(2), 106-118. doi:10.1037/a001996559

Weinstein, C. E., & Palmer, D. R. (2002). *LASSI user's manual learning and study strategies inventory* (2nd ed.). Clearwater, FL: H&H Publishing Company, Inc.

Zhang, P., & Smith, W. (2015). The transition from high school to college: Parents' and students' perceptions of parents' helpfulness. *Virginia Social Science Journal*, *50*31-39.