

## COLLEGE STUDENT SUCCESS: CONQUERING STEREOTYPED EXPECTATIONS WITH PERCEIVED SOCIAL SUPPORT

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### ABSTRACT

The present study explores the relationship of academic success with basic psychological needs (i.e., autonomy, competence, and relatedness) and perceived social support of friends, family, and instructors. These components are examined in the context of historically underrepresented (i.e., generational status, ethnicity, and gender) college students versus those in traditional majority groups. This assessment of perceived social support is essential to creating beneficial and supportive environments for all students. Results indicate a relation between motivation and group identities; concurrently, instructor support has the greatest impact on academic success. Institutions often neglect to emphasize the importance of connections among students and faculty. Our research suggests that significant focus should be placed on increasing promotion of instructor support and resources.

Keywords: perceived social support; student success; basic psychological needs; first-generation; academic motivation

### INTRODUCTION

#### *Social Support and College Adjustment*

Perceptions of the American higher education landscape are infiltrated with contradictory information. Historically underrepresented groups are often bombarded with negative impressions and expectations which facilitate failure; however, achievement is possible if they possess knowledge of tactics for success and support structures when entering higher education. Successful adjustment to college mandates the mastery of skills beyond basic essentials for coursework completion. In fact, the transition to college for most freshmen requires social adaptation, as well as substantial academic and personal restructuring, which can be tremendously stressful. High school graduates must shift from courses that contain accountability checks to an environment of increased workload and less explicit instruction. This may weaken motivation and lend to a perceived lack of personal relevance (Eccles & Midgley, 1989; Jang, 2008). While students are proximally and/or emotionally distanced from usual sources of social support, new avenues of assistance are available to provide opportunities for student success and academic achievement. In particular, minority groups (i.e., ethnic background, generational status, and gender) are perceived to be less capable of adjusting to the college environment; establishing effective support systems may be integral to counteracting negative stereotypes and, hence, reducing potential risk(s) for dropping out (Bui, 2002).

Establishing support systems (i.e., social and academic) in conjunction with interactions among staff, peers, and leaders on campus is central to Tinto's (1975, 2007) theory. Through this framework of integrating students more deeply into their academic environments, not just the classrooms, instructors/mentors can better assist first year student retention and success. Tinto (2007) posits that though institutions may know why students leave,

their reasons for staying are just as important and are often not direct opposites for departure reasons. Thus examining support systems of successful students versus those who struggle is vital in determining where university faculty and staff should focus their efforts.

Barrera (1986) distinguished between received support (i.e., actual support) and perceived support (i.e., the belief that social support exists). Interestingly, perceived social support only slightly related to support received (Sarason, Shearin, Pierce, & Sarason, 1987). Wethington and Kessler (1986) found that perceived support is more important than received support in regard to adjustment. Other research has shown perceived social support predicts psychosocial adjustment (Dubow, Tisak, Causey, Hryshko, & Reid, 1991; Halamandaris & Power, 1999; Rahat & Ilhan, 2016), reduces ill effects related to a lack of social support (e.g., risk of suicide, loneliness, and physical illnesses, Coyne & Downey, 1991; Cornwell, 2003; Wright, King & Rosenberg, 2014; Gautam, 2016), and buffers the negative impact of stress on adjustment (Çivitci, 2015; Gutman, Sameroff, & Eccles, 2002; Sandler, Wolchik, Braver, & Fogas, 1991; Wills, Blechman, & McNamara, 1996). Overall, the social network enhances general well-being.

Social support includes social assets, resources, or associations that provide individuals with aid, advice, approval, comfort, or assistance (Cobb, 1976). A social network enables one to feel esteemed. The values of an individual's social network (i.e., family, teachers, and peers) mold personal perceptions of learning and development. Favorable and unfavorable experiences with these people can lead to diverse views on education and differing capacities to adjust in academic settings. Availability of support results in feelings of safety within the educational domain, while perceived lack of support may inhibit secure adjustment (Vedder, Boekaerts, & Seegers, 2005). Students' recognition of their connections (actual and perceived) is essential.

Perceived social support is related to various aspects of functioning and well-being. It predicts psychosocial adjustment (Dubow, Tisak, Causey, Hryshko, & Reid, 1991; Halamandaris & Power, 1999; Sheets & Mohr, 2009) including minimizing the risks of suicide, loneliness, and physical illnesses (Cornwell, 2003; Coyne & Downey, 1991; Hefner & Eisenberg, 2009; Wang & Castañeda-Sound, 2008; Wright, et. al., 2014). Awareness of support also buffers the negative influence of stress on adjustment (Bernardon, Babb, Hakim-Larson, & Gragg 2011; Gutman, Sameroff, & Eccles, 2002; Sandler, Wolchik, Braver, & Fogas, 1991; Wills, Blechman, & McNamara, 1996). Each of the aforementioned variables impact university students, particularly, college freshmen.

Wethington and Kessler (1986) theorize that perception of support is essential for incoming freshman to build effective coping skills in day-to-day life. When students feel they possess a solid support system, these individuals are more likely to initiate self-directed coping strategies, gain a sense of life competency, and access social support as needed. Concurrently, peers perceiving limited support resources struggle because they do not experience the same social 'safety net'. The current project seeks to examine academic motivation and achievement linked to perceived social support for all students, primarily evaluating this dynamic via ethnic background, generational status, and gender; historically underrepresented groups are often viewed as having a social disadvantage on college campuses leading to academic burdens.

### ***Demographic Variables in Perceived Social Support and Academic Success***

Evaluating diverse backgrounds (i.e., ethnicity, gender, and first-generation status) of incoming freshmen provides insight regarding student adjustment. First-generation students are described as those whose parents did not attend college, while non-first-generation students have at least one parent with postsecondary education experience. Often, first-generation students differ significantly by ethnicity, experience higher levels of 'culture shock', and have parents who are less involved in the college process (Brown & Burkhardt, 1999; Choy, Horn, Nunez, & Chen, 2000; Fallon, 1997; Hossler, Schmit, & Vesper, 1999; Inman & Mayes, 1999; Ramos-Sanchez & Nichols, 2007; Riehl, 1994; Terenzini, Springer, Yaeger, Pasarella, & Nora, 1996; Williams & Ferrari, 2015). Previous research indicates that these students face more obstacles than non-first-generation students.

Background characteristics contribute to lower retention rates among first-generation college students. For example, Choy (2001) found that first-generation college students are significantly more likely to leave a four-year university prior to their second year than peers. Ishitani (2006) stated fewer of these individuals were expected to complete college and be less successful than non-first-generation students. Furthermore, McCarron and Inkelas (2006) found the majority (62.1%) of first-generation college students did not attain their original educational aspirations within eight years. Comparatively, only a small percentage (28.4%) of non-first-generation students failed to achieve their goals.

Gender differences significantly impact psychological adjustment among first-generation undergraduates. Traditionally, academia has been a male dominated environment, and female undergraduates report greater distress compared to their male counterparts (Misra, McKean, West, & Russo, 2000). Despite having greater perceptions of social support, college women face more depressive symptoms and less life satisfaction (Jenkins, Belanger, Londoño Connally, Boals, & Durón, 2013). Regarding psychological well-being variables (i.e., mood, social relationships, and subjective well-being), first-generation women are significantly disadvantaged in comparison to first-generation men. Therefore, first-generation women may require supplemental coping strategies.

An extensive review of generational status conveyed differences across family involvement, ethnic group, and socioeconomic status (SES). Previous research verifies first-generation students have less parental involvement and face more obstacles than their peers (Brown & Burkhardt, 1999; Choy et al., 2000; Fallon, 1997; Hossler et al., 1999; Inman & Mayes, 1999; Ramos-Sanchez & Nichols, 2007; Riehl, 1994; Terenzini et al., 1996; Blackwell & Pinder, 2014). The effects of generational status may also be compounded within ethnic minority groups. For instance, Bui (2002) revealed that first-generation students are more likely to be of an ethnic minority (i.e., primarily Asian and Latinos with a small percentage represented by Black students). These first-generation individuals typically pursue degrees to financially support their extended families after graduation, gain respect/status, and honor their family.

To further examine familial impact, McCarron and Inkelas (2006) investigated the role of parental involvement in educational endeavors for first-generation versus non-first-generation college students. Based on the National Education Longitudinal Study (NELS), familiarity with maneuvering college life may be deficient among first-generation students. In essence, a lack of experience and knowledge is correlated with SES. Results revealed the largest percentage of first-generation students occurred in the lowest SES quartile and consisted primarily of minority ethnicities compared to the non-first-generation sample, which was significantly represented in the highest SES quartile. Interestingly, despite low SES barriers, parental involvement (i.e., discussions about school issues and encouragement toward education) best predicted aspirations of non-first-generation students. In contrast, first-generation college students' perceptions of good grades, and other external influences, correlated with optimal educational ambitions.

Other research indicates the aspirational differences between first- and non-first-generation college students link to perceptions of family support. Dennis, Phinney, and Chuateco (2005) supported the above findings through focus groups. Results demonstrated that first-generation college students believe their families can be emotionally supportive (e.g., encouraging, praising, reinforcing, etc.); however, they did not consider their families to be instrumentally supportive (e.g., providing funding, academic guidance, prior impressions, etc.) in relation to college adjustment.

Further investigations by Dennis et al. (2005) examined the absence of perceived social support in minority, first-generation college students. When a student requires guidance through funding issues, campus life choices, and motivational struggles, parents with educational experience are recognized as a viable resource; these adults convey the value of higher education and provide helpful insight. Without this source, individuals view peers (who often possess the same amount of knowledge) to be more competent at supporting them in the academic domain. Previous research indicates that family and peer support combine to set non-first-generation students at a distinct advantage (Brown & Burkhardt, 1999; Choy et al., 2000; Fallon, 1997; Hossler et al., 1999; Inman & Mayes, 1999; Ramos-Sanchez & Nichols, 2007; Riehl, 1994; Terenzini et al., 1996; Williams & Ferrari, 2015).

Family support is a vital element of academic achievement and graduation, particularly, for historically underrepresented individuals (Brown & Robinson Kurpius, 1997; Cauce, Reid, Landesman, & Gonzalez, 1990; Endecavage, 2000; Gloria & Rodriguez, 2000; Griffin, 1991; Harris & Molock, 2000; Kidwell, 1994; LaFramboise, Berman, & Sohi, 1994; Lango, 1995; Portes, 1998; Steinberg, Lamborn, Dornbush, & Darling, 1992). Grade point average (GPA) reflects these differences in the academic setting. In earlier studies, White students have higher GPAs than Non-White students (Gutman, Sameroff, & Eccles, 2002; Perrakis, 2008). This is attributed to a collection of multiple risk factors instead of any one specific reason. Students' background and family life, including low SES, single-parent households, and number of children in the household impacts GPA. Yet, these detrimental influences can be counterbalanced with positive factors such as home-life consistency, discipline, and perceived social support.

In addition to family support, college adjustment appears to be enhanced when students form relationships with peers from similar ethnic backgrounds. Research conveys that these friendships increase the comfort level of African American and Latino students, thus, enhancing matriculation rates (Fiske, 1988; Gloria & Robinson

Kurpius, 1996) and reducing considerations of withdrawal from undergraduate programs (DeFour & Hirsch, 1990). Success may be due, in part, to support garnered from sharing a unique membership of a specific ethnic group (Gloria, Robinson, Kurpius, Hamilton, & Willson, 1999; Utsey, Ponterotto, Reynolds, & Cancelli, 2000; Gummadam, Pittman & Ioffe, 2016).

Along with family and peer support, professors can also play a significant role in the adjustment and success of college students in the university setting. Within and outside the classroom, instructors are a pivotal source available for all students. Yet, Johnson and Johnson (1989) reviewed 106 studies to find that peer social support was more important than instructor support in regard to academic achievement and psychosocial adjustment. Once Ghaith (2003) expanded Johnson and Johnson's study, findings actually reveal a more significant effect for instructor support.

Clifton, Perry, Stubbs, and Roberts (2004) illustrated increased interaction with professors significantly improved students' psychosocial dispositions and grades; these interactions with professors promoted academic control and coping strategies. Moreover, the type of interaction within the classroom impacted student performance. Analysis showed that collaborating with other students improved overall performance. This research suggests teaching through student-centered cooperative learning methods, when cognitive demands are neither too high nor low, improves students' sense of academic control and coping strategies. Consequently, such a pedagogical environment would increase students' GPAs, which in turn may increase rates of graduation.

In general, family, peers, and faculty are sources of support that fulfill the basic psychological needs (i.e., autonomy, competence, and relatedness; Deci & Ryan, 1985, 2002); however, demographic differences lead to individualized experiences and expectations of social support. Perceptions of social support vary depending on students' unique backgrounds, present situations, and available opportunities. Individuals must decide where, when, how, and from whom they seek support; students may have a pool of resources from whom they obtain social support and then make decisions about who can best fulfill their basic needs in specific circumstances.

#### ***Self-Determination Theory: Academic Support, Basic Psychological Needs, and Motivation***

While backgrounds and social support play crucial roles in collegiate success, the present study evaluated inherent factors for academic motivation and psychological well-being. Previously, the interplay between motivation (i.e., intrinsic, extrinsic, and amotivation) and demographic elements, regarding social support, has been underemphasized. Deci and Ryan's Self-Determination Theory (SDT; 1985, 2002) is an optimal framework for investigating these variables. SDT contends that motivation and functioning are enhanced through satisfaction of an individual's basic psychological needs: competence, relatedness, and autonomy (Deci & Ryan, 2002). When individuals experience greater need satisfaction, they move along the SDT continuum of motivation thus strengthening their intrinsic academic drive (Deci & Ryan 1985; Deci, Vallerand, Pelletier, & Ryan, 1991; Levesque, Copeland, Patti, & Deci, 2010; Niemiec, & Ryan, 2009; Young-Jones, Levesque-Bristol, & Cara, 2014). Intrinsic motivation is defined by the inherent desire to accomplish a task. Conversely, extrinsic motivation occurs with limited need satisfaction and encompasses the engagement of activities as a means to an end. When these needs are thwarted, amotivation occurs.

Research suggests that perceived support may contribute to intrinsic and self-determined extrinsic motivation within the collegiate setting (Chao, 2012; Vedder et al., 2005). Regrettably, deficient social support, in any form, results in basic psychological need thwarting within the educational domain. Legault, Green-Demers, and Pelletier (2006) discovered that insufficient perceptions of social support were associated with academic amotivation among high school students; parallel assumptions can be made in university domains. Findings promote the theoretical construct that perceived social support from both family and peers contribute to students' needs for autonomy, competence, and relatedness, in turn, bolstering academic motivation (Stice, Regan, & Randall, 2004).

Each of the three basic psychological needs have the potential to augment social support. Competence refers to the perception of mastering new techniques and skills to overcome obstacles. Instructors play a prominent role in assisting students with satisfying, or thwarting, this basic need. Deci and Ryan (2002) found that educators contribute to competence by providing information and valuable feedback necessary to promote academic motivation through individual meetings, classroom interactions, and/or course structural climate. Instructors can present challenging material in a manner which enables successful application and boosts competence. Outside the classroom, assisting students with exam preparation or group activities may reinforce this sense of competence. Likewise, if courses are designed to evoke and encourage participation, this allows students to contribute successfully and witness positive achievements.

Relatedness is feeling connected to and/or respected by other individuals. This basic psychological need derives from an extensive web of teachers, peers, and friends. The campus community is an optimal environment for networking to occur. Professors have the capacity to enhance social connection both within and outside of the classroom; this involvement is essential for fulfillment of relatedness. Similarly, relatedness is influenced by meaningful advisory affiliations. Furthermore, students' personal perceptions of school are connected with peer influence. Relationships with friends impact student perceptions of belongingness and relatedness. Overall, individuals must feel linked to each other; this is why undergraduates yearn for social support from a variety of sources.

The third need, autonomy, is obtained by producing meaningful decisions without coercion. In academia, this begins with families encouraging students to develop educational values and pursue a degree of their choice (Lewinsohn, Roberts, Seeley, Rohde, Gotlib & Hops 1994; Misra, Crist & Burant, 2003). Peer and instructor support for various preferences, and ensuing life processes, also solidifies autonomy. Additionally, professors may create autonomous environments by permitting students to elicit discretion when making judgments or selecting between options within academic settings; edifying guidance throughout the learning process strengthens this basic need.

Conclusively, educational research from SDT asserts that intrinsic motivation is fostered in environments where basic psychological needs are satisfied from a variety of sources (Deci & Ryan 1985; Deci, Vallerand, Pelletier, & Ryan, 1991; Levesque, Copeland, Pattie, & Deci, 2010; Young-Jones, Levesque-Bristol, & Cara 2014). In academia, peers, instructors, and other supportive individuals on campus (i.e., academic advisors, adjunct faculty, mentors, practicum supervisors, etc.) are instrumental in enhancing basic needs success. As these needs are met and bolstered, students can enjoy eudemonia in academic life (Deci & Ryan, 1985; Deci, Vallerand, Pelletier, & Ryan, 1991).

### ***Present Study***

Determining social support factors that allow first-generation and minority students a successful transition to collegiate expectations are essential. Perceived social support is associated with enhanced levels of student adjustment within a college environment through feelings of security which, in turn, leads to better academic outcomes; meanwhile, the perceived lack of support can inhibit secure college transitions (Chao, 2012; Vedder, Boekaerts, & Seegers, 2005). Students from varying backgrounds may express perceptions of social support (or its absence) differently. These deviations potentially explain differences of academic success across a diverse college student population.

Based on Self-Determination Theory (SDT; Deci & Ryan, 1985, 2002) of motivation, the current investigation examined three demographic categories (i.e., ethnic identification, generational status, and gender) in relation to perceived social support (i.e., family, friends, and instructors). This study expands the body of literature by illuminating how perceived social support increases academic motivation and, therefore, positively impacts educational outcomes. In particular, the interrelationship between perceived social support, GPA, and academic motivation was examined to ascertain variations in student performance.

## **METHOD**

### ***Participants***

Participants included 454 college students (134 male, 317 female, 3 unreported) recruited from a regional university in the southwest. The majority of students were full-time (n = 353), but many part-time (n = 93) students participated as well. Ages ranged from 17 to 54 years. Juniors (n = 226) and seniors (n = 126) were the most common respondents, with sophomores (n = 65), freshmen (n = 33), and unclassified (n = 1) comprising less of the sample. Among respondents, 271 identified themselves as European American, 96 as African American, 43 as Hispanic American, 10 as Asian American, and 34 as other categories. Over half of the sample were classified as first-generation college students (n = 231) while the remaining had at least one parent that attended college (n = 217), unreported (n = 2), or data was entered incorrectly (n = 4).

### ***Instruments***

To assess motivation and perceptions of support, researchers utilized two multidimensional scales: the Academic Motivation Scale (AMS; Vallerand, Blais, Brière, & Pelletier, 1989) and a revised Multi-Dimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988). Permission was received from the MSPSS authors to remove 'significant other' terminology and replace it with instructor support. In addition, participants completed a basic demographic form with self-reported GPA, generational status, ethnic group identification, and gender items.

The AMS assesses five types of academic motivation (four items each). Using a 7-point scale (1 = not at all, 7 = exactly), participants noted the extent to which they pursue their education out of intrinsic motivation (IM), identified regulation (IDR), introjected regulation (INR), external regulation (ER), or amotivation (AM). From these dimensions, a Self-Determination Index (SDI) was obtained using the following formula  $(((IM/3) \times 2) + (IDR) - ((INR + ER)/2) - (AM \times 2))$ , from Vallerand's (2001) recommendations, which is a validated method commonly used to evaluate self-determined motivation. The students' SDI is a relational measure of satisfaction within the three basic psychological needs. Higher scores indicate intrinsic motivation, and lower/negative scores represent extrinsic or amotivation on the AMS. Example questions from the AMS include items that represent extrinsic motivation 'Because with only a high-school degree I would not find a high-paying job later on', intrinsic motivation 'Because I experience pleasure and satisfaction while learning new things', and amotivation 'Honestly, I don't know; I really feel that I am wasting my time in school'.

Three sources of social support employed subscales of the altered Multi-Dimensional Perceived Social Support Scale: family, friends, and instructors. Using a 7-point scale similar to the AMS (1 = very strongly disagree, 7 = very strongly agree), participants specified which sources they accessed most often and how strong they perceived the support. Higher scores on the MSPSS equate to an increased perception of support from family, friends, or instructors. Sample items include statements regarding family 'I get the emotional help and support I need from my family', friends 'I can count on my friends when things go wrong', and instructors 'There is an instructor who is around when I am in need'.

## RESULTS

The data set was screened for missing responses and outliers. Since the focus was academic outcomes, 71 cases were deleted for lacking university GPA. Additionally, 99 were omitted for missing more than 50% of their responses. Outliers were identified employing Mahalanobis ( $X^2(5) = 15.09$ ), Cook's (.011), and Leverage (.086) criteria. Seven were voided for surpassing two of the three cutoff values. The final sample ( $N = 277$ ) met all assumptions for normality, linearity, and homoscedasticity.

### Means Comparisons

A new variable was calculated for cultural identity. Three categories were created: White (European American;  $n = 234$ ), Non-White (African American and Hispanic;  $n = 93$ ), and Other ( $n = 21$ ). Random sampling generated equal groupings of the White ( $n = 99$ ) and Non-White categories. All assumptions were met after the sampling procedure. Significance tests were restricted with Bonferroni's adjustment for six tests ( $p < .01$ ). Independent t-tests evaluated differences between these two groups for GPA, SDI, and both the summation scores and subscale scores for the MSPSS. Significant differences were discovered in GPA [ $t(191) = 3.11, p = .002, d = .45$ ] and the MSPSS summation score [ $t(191) = 1.82, p = .05, d = .05$ ], with Whites scoring higher than Non-Whites on both measures (See Table 1 or Figure 1).

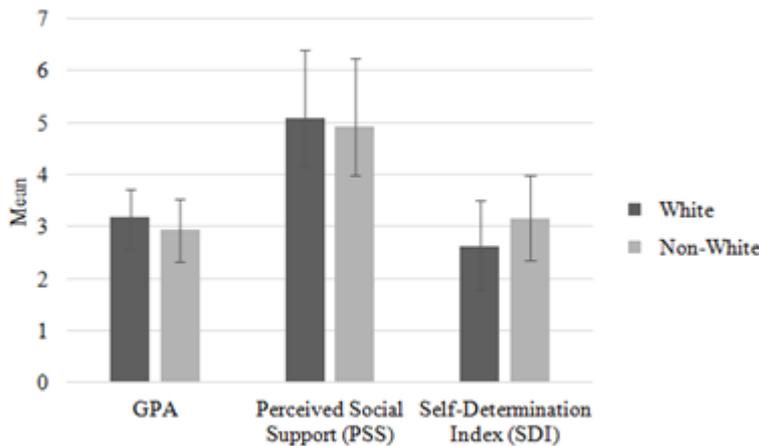
**Table 1:** Means and standard deviations by demographic status.

Item	<i>M</i>	<i>SD</i>
Group		
GPA		
White	3.18	.53
Non-White	2.93	.60
Instructor (MSPSS)		
White	3.60	1.56
Non-White	3.23	1.70
Friend (MSPSS)		
White	5.88	1.44
Non-White	5.84	1.42
Males	5.57	1.54
Females	6.06	1.29
Family (MSPSS)		
White	5.72	1.22
Non-White	5.50	1.44
Males	5.31	1.38
Females	5.86	1.34
Summation Score (MSPSS)		
White	5.08	1.31
Non-White	4.92	.92
SDI		

White	2.61	.90
Non-White	3.17	.82
First-Generation	3.92	.73
Non First-Generation	1.41	.96
Males	-1.1696	.96
Females	1.14	.75

*Note.* This table only includes Ms and SDs from variables determined to be significantly different ( $p < .05$ ) across groups.

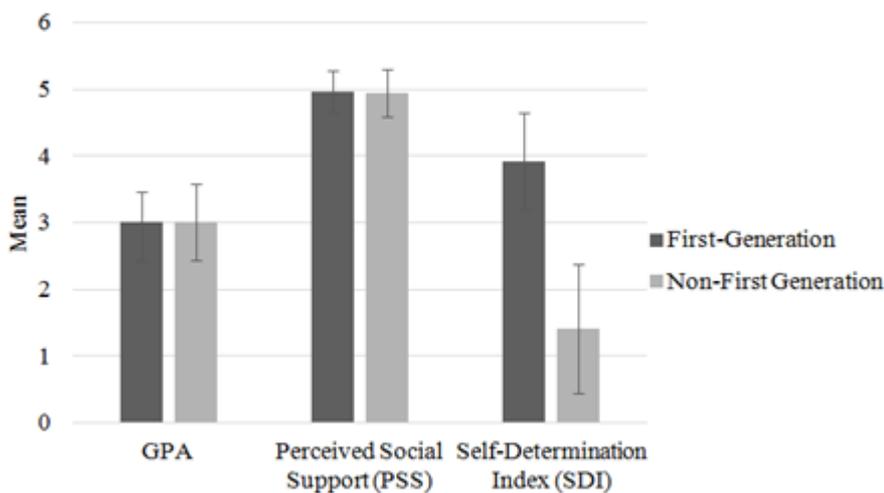
**Figure 1.** Means comparison by ethnic group.



*Note:* Error bars represent  $\pm$  one standard deviation.

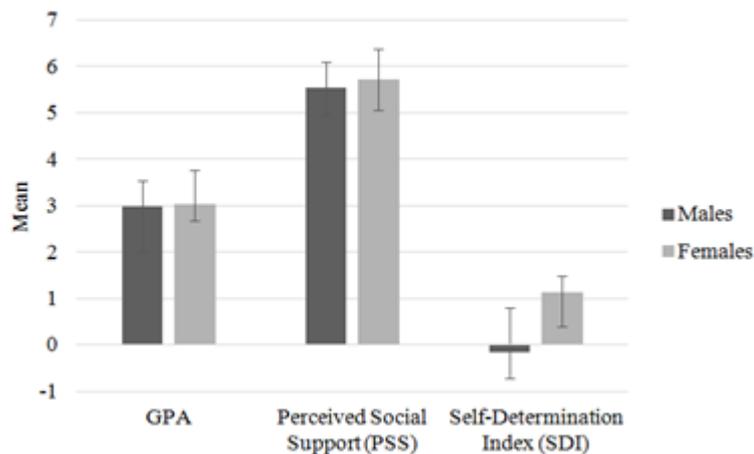
Additional t-tests were utilized to measure differences between students reporting as First-Generation and Non-First-Generation. The same dependent variables were evaluated (GPA, SDI, MSPSS summation, MSPSS subscales). Only the SDI scores were significantly different; First-Generation attendees scored higher on this measure of motivation [ $t(272) = 2.41, p = .02, d = .29$ ]. After Bonferroni's correction this test was no longer significant (See Table 1 or Figure 2). To assess gender differences, a random sampling of Females was generated to create equal groups (Males:  $n = 94$ ; Females:  $n = 100$ ). T-tests uncovered a significant difference in means on the friend and family subscales of the MSPSS and in the SDI scores; Females scored higher on all three variables (See Table 1 or Figure 3). All significance tests were restricted with Bonferroni's adjustment for six tests ( $p < .01$ ).

**Figure 2.** Means comparison by generational status.



*Note:* Error bars represent  $\pm$  one standard deviation.

Figure 3. Means comparison by gender.



Note: Error bars represent  $\pm$  one standard deviation.

A 2 (gender) X 2 (ethnicity) X 3 (GPA,SDI, MSPSS) multivariate ANOVA was used to investigate interaction effects. All interactions were non-significant: GPA [ $F(3,110) = .000, p = .997, \eta^2 = .000$ ], SDI [ $F(3, 110) = .040, p = .798, \eta^2 = .000$ ], MSPSS [ $F(3, 110) = 2.78, p = .11, \eta^2 = .02$ ]. Nevertheless, there were main effects for both gender and ethnicity on GPA [gender:  $F(3, 110) = 5.98, p = .007, \eta^2 = .06$ ; ethnicity:  $F(3, 110) = 4.44, p = .038, \eta^2 = .04$ ]. Females, overall, reported higher GPAs than Males (Mdiff = .247, SE = .10), and Whites reported higher GPAs than Non-Whites (Mdiff = .214, SE = .10). There was also a main effect of gender on the participants' total perceived support score [ $F(3, 110) = 10.88, p < .001, \eta^2 = .08$ ] with Females outscoring Males (Mdiff = .506, SE = .15). Gender exhibited a main effect for the SDI measure [ $F(3, 110) = 11.77, p < .001, \eta^2 = .09$ ], with Females once again outscoring Males in academic motivation (Mdiff = 1.29, SE = .27; See Figure 3). All significance tests were restricted accordingly with Bonferroni's adjustment ( $p < .02$ ).

### Predictor Modeling

For the entire sample, a multiple linear regression was applied to estimate a predictor model for GPA. Participant age, SDI score, summation score of the MSPSS scale, and three MSPSS subscales (family, friend, and instructor) were entered as independent variables. The overall model was significant [ $F(6, 257) = .01, p = .950, R^2 = .188$ ], with SDI [ $\beta = .275, t(257) = 4.80, p < .001, pr^2 = .08$ ], instructor subscale [ $\beta = .185, t(257) = 3.56, p < .001, pr^2 = .04$ ], and age [ $\beta = .188, t(257) = 3.31, p = .001, pr^2 = .04$ ] as positive predictors of GPA. However, the MSPSS summation score [ $\beta = -.121, t(257) = -2.15, p = .031, pr^2 = .02$ ] was a negative predictor of GPA, and both friend [ $\beta = -.076, t(257) = -1.26, p = .21, pr^2 = .01$ ] and family subscales [ $\beta = .118, t(267) = 1.92, p = .06, pr^2 = .04$ ] were non-significant.

Similar regression analysis uncovered GPA predictors according to ethnic group with participant age, SDI, and summation score of the MSPSS as independent variables. Surprisingly, the model was only significant in the White category [ $F(3,54) = 3.75, p = .016, R^2 = .172$ ] but not the Non-White category [ $F(3, 33) = 1.85, p = .206, R^2 = .078$ ]. In addition, SDI was the only significant positive predictor of GPA for White students [ $\beta = .337, t(54) = 2.67, p = .01, pr^2 = .12$ ]. When these predictors were evaluated by gender, the model was only significant for Males [ $F(3, 53) = 2.87, p = .045, R^2 = .140$ ] but not for Females [ $F(3, 53) = 1.18, p = .328, R^2 = .062$ ]. Again, SDI was the only significant predictor for GPA explaining over 30% of variance in grades for Male participants [ $\beta = .292, t(53) = 2.26, p = .028, pr^2 = .09$ ].

### CONCLUSION

The current investigation examined dynamics of ethnicity, gender, and generational status differences in relation to perceived social support (i.e., family, friends, or instructors) within the Self-Determination Theory (SDT; Deci & Ryan, 1985, 2002) of motivation. At the same time, predictors of academic success, as measured by GPA, were evaluated. This project aimed to establish how perceived social support can enhance academic motivation and positively impact educational outcomes across college students' backgrounds; Tinto's (1975, 2007) idea of integrating students more thoroughly into their academic environments through relationships to promote success and retention was reflected within this goal.

Our study supported previous findings for higher GPAs among White students compared to Non-White students (Gutman, Sameroff, & Eccles, 2002; Perrakis, 2008). Specifically, Whites students and females reported higher

GPA's; in addition, Non-White males claimed the lowest GPA's. We theorize that self-confidence or self-efficacy differences may be attributed to gender and ethnic groups. Society could contribute to gender roles manifesting as a lack of motivation in specific domains or reflect students' upbringing, cultural value systems, and/or family SES.

Females also outscored their male counterparts in academic motivation as exhibited with a main effect for the Self-Determination Index (SDI). Furthermore, while White and Non-White females outscored White males on the SDI, Non-White males performed the worst. This indicates that gender may have a greater influence on academic motivation than ethnicity. Females are more inclined to seek support outside of the classroom, while male students may need encouragement before they are willing to visit a tutor or faculty member after class to garner supplementary assistance (Jenkins et al., 2013). It is possible that males require different types of motivational encouragement not currently provided by the academic community. Future research should explore collegiate environment resources for male students and how/what is lacking.

Expounding on this deficiency, our results exhibited a main effect of gender on total perceived support. Once again, we found that females outscored males. These implications may suggest that male students do not feel as socially supported as female counterparts or communicate this need as openly. Yet, the results held true only for White students; no significant findings existed between Non-White males or Non-White females for overall MSPSS scores. A reasonable explanation for the unexpected similarities between Non-White males and Non-White females connects with friends, family, and other individuals of similar backgrounds fulfilling and creating a bond to provide social interconnectivity for marginalized students (Misra et al.; Sheets & Mohr, 2009).

In regard to psychological well-being variables (i.e., mood, social relationships, and subjective well-being), first-generation women are more inclined to seek assistance from friends and family when necessary which would appear to reduce or eliminate depressive symptoms and increase life satisfaction. These results seem to refute previous conclusions of females experiencing more negative psychological indicators and less contentment with life than their male counterparts (Jenkins et al., 2013). Furthermore, supplemental coping strategies demonstrate that females may actually be more advantaged regarding MSPSS and SDI.

### ***First-Generation Status***

Secondary analysis compared first-generation students to non-first-generation students for examination of differences in academic success (i.e., GPA), academic motivation (i.e., SDI), and/or perceived social support (i.e., MSPSS). Interestingly, only SDI scores revealed significant differences with first-generation students scoring higher in academic motivation. Results from this sample led us to theorize that factors beyond parental education contribute to motivation at the collegiate level. While previous research attests that first-generation students have less parental involvement and face more difficulties than their non-first-generation counterparts (Brown & Burkhardt, 1999; Choy et al., 2000; Fallon, 1997; Hossler et al., 1999; Inman & Mayes, 1999; Ramos-Sanchez & Nichols, 2007; Riehl, 1994; Terenzini et al., 1996; Williams & Ferrari, 2015), it is plausible that parents of first-generation students demonstrate coping mechanisms to surmount these obstacles by exhibiting a strong work ethic (Blackwell & Pinder, 2014). Combined, these studies demonstrate that diligence, study habits, and use of resources were all predictive of academic success. For students in our sample, first-generation status may be a motivating factor itself as students attempt to overcome generational barriers to achieve an increased socioeconomic status.

As stated earlier, parental involvement is the best predictor of aspirations for non-first-generation students; for first-generation students, perceptions of good grades and other external influences correlated with ideal educational outcomes. According to Dennis, Phinney, and Chuateco (2005), non-first-generation students possess the distinct advantage of having an instrumentally supportive familial system (e.g., providing funding, academic guidance, prior perceptions) who experienced the trials and tribulations associated with attaining higher education. They [non-first-generation students] may receive advice regarding issues that parents of first-generation students cannot offer because they are not familiar or cannot empathize with the exact struggles. However, these first-generation students acknowledge their families can be emotionally supportive (e.g., encouraging, praising, reinforcing) when relating to college adjustment. An examination of social support displayed congruent findings to Wang and Castañeda-Sound (2008) with no significant statistical differences between first-generation and non-first-generation MSPSS scores. We believe this is a reflection of all students, despite generational status, requiring encouragement and assistance upon entering college. However, when gender is combined with generation status, differences are revealed in motivation and family/friend domains of perceived social support. Females scored higher on all three variables than their male counterparts. This could be attributed to expectations that females are more social and open with emotional and social trials than their

male cohorts. Generally, if students are not directly asking questions or seeking help, assumptions are made that they either do not require or desire assistance.

### ***Predictors of Academic Success (GPA)***

When these same variables (SDI and MSPSS) were evaluated as predictors of GPA by gender, the overall model was only significant for males. Academic motivation was the sole significant predictor for GPA accounting for over 30% of the variance in grades for male participants. It is necessary to note GPA fluctuations may result from faulty memory, impression management, and/or self-report. Future research should focus on specifics within the male student population, other than academic motivation, to investigate why females excel more consistently. Being aware of stereotypical influences can help re-shape teaching and outreach guidelines.

In predicting GPA for ethnic background, the model was only significant for the White category. Age, SDI, and MSPSS summation scores were not significant for the Non-White group; SDI was the only significant positive predictor of GPA for White students. We believe the three predictors vary on a cultural basis and may elucidate why SDI was the only significant positive predictor for White students. Regardless, comparisons in the current study conveyed that gender differences overshadowed the impact of ethnic identification influences for academic motivation and success.

Instructor support may establish a prominent component of academic success for all groups. Positive predictors for GPA included instructor support, age, and SDI. This implies that students reported better GPAs when they felt supported by their instructors and were motivated. Nevertheless, the MSPSS summation score was a negative predictor of GPA, and both the friend and family subscales were non-significant. Though you would expect a positive relationship between higher GPAs and increased support, our sample reported lower GPAs when they experienced enhanced support from friends and family; perhaps non-collegiate avenues detract from use of educational resources. Thus, support of friends and family did not have an equivalent influence on GPA compared to instructor support. These findings oppose the stereotype that both non-first-generation and Non-White students are at a disadvantage. Both marginalized groups have equal access to instructors and demonstrate similar perceptions of support from this resource.

### **LIMITATIONS AND FUTURE RESEARCH**

Within the current study, several variables could account for the gender and ethnic group differences in GPA. Academic success includes inherent biases through self-report measures; in addition, GPA calculations of success are not always indicative of true achievement and potential. Another limitation occurred due to high correlations between the family and friends category on the social support scale. This measurement was chosen to investigate students' use of potential sources of social support, and it allowed choice for support by family, friends, or instructors. We believe the item wording may not create a definite distinction between friends and family. Regardless, perceived support from family and friends may significantly impact student ability to adjust in a new environment.

Despite results for familial and peer support, when viewed from the perspective of academic success, little doubt exists regarding the instructor's role. The present results support Wethington and Kessler's (1986) notion that perceived support, regardless of the source type, is imperative for student adjustment and academic achievement. When students receive actual support, data indicates they are far more likely to move along the self-determination index toward intrinsic motivation resulting in enhanced success within the educational arena (Levesque et al., 2010; Niemiec & Ryan, 2009).

Future research should focus on increasing instructor support. Instructors perform a pivotal, though overlooked, role in the academic success of students. These individuals are often viewed solely as conveyors of course information. Our research suggests that their impact extends beyond the four walls of the classroom. The combination of factors within an academic environment (i.e., group dynamics, teaching paradigms, and student autonomy/competence/relatedness) can enhance positive student-teacher rapport and thus result in an increased likelihood for students to seek instructor(s) assistance/insight. When professors utilize a variety of methods, they bolster basic need satisfaction in the classroom; options for exploration include individual guidance, written feedback, verbal communication, presentation of challenging material, and creation of a classroom climate to increase autonomy, competence, and relatedness.

Research on instructor support should expand to incorporate explicit variables regarding both first-and non-first-generation college students. Typically, first-generation students are thought to be at a distinct disadvantage (Brown & Burkhardt, 1999; Choy et al., 2000; Fallon, 1997; Hossler et al., 1999; Inman & Mayes, 1999; Ramos-Sanchez & Nichols, 2007; Riehl, 1994; Terenzini et al., 1996). Further research regarding support for

generational status is essential to determining the origin of perceived lack of evidence for this stereotype. A combination of factors might lead to the gap being closed. One justification is that individual motivation can override barriers, both real or imagined, regardless of status. Furthermore, various programs currently in place to help first-generation college students may indeed benefit their academic navigation. Social support could be more important for some groups than others, but every student benefits from a variety of support sources regardless of their gender, ethnic group, or SES status.

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