MORE THAN JUST PARENTS:
THE IMPORTANCE OF SIBLINGS AS SUPPORTIVE
OTHERS DURING THE TRANSITION TO COLLEGE

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Previous research has explored ways parents and peers serve as support for college students. Additionally, parental and peer support have been identified as protective factors for college dropout. However, few studies examine ways in which sibling relationships can be supportive for college students during this transition, and potentially serve as a protective factor for college dropout. The purpose of this study was to examine sibling support for college students. This study also examined sibling support for first-generation college students as well as students who are from non-intact families, both of whom are at higher risk for dropping out of college. The current study utilized a one-time online survey of undergraduate students at Kent State University (n = 290). Independent samples t-tests, Pearson correlations, and linear regression analyses were used to examine potential associations between sibling support (emotional and academic) and academic outcomes (GPA, academic aspirations, academic expectations). Sibling support (emotional and academic) did not differ based on generation status or family composition. Results indicated that sibling support (emotional), but no academic sibling support, was positively associated with GPA. Neither academic or emotional sibling support were related to students’ academic aspirations or expectations. The associations between support and academic outcomes did not differ based on generation status or family composition.
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TABLE OF CONTENTS

ACKNOWLEDGMENTS ........................................................................................................ iii

LIST OF TABLES .................................................................................................................... vii

CHAPTER

I. INTRODUCTION AND STATEMENT OF PROBLEM .................................................. 1
   Research Questions ........................................................................................................ 5

II. LITERATURE REVIEW .................................................................................................. 7
   College Stressors ........................................................................................................... 8
       Interpersonal Stressors and Mental Health ................................................................. 9
       Financial Stressors ..................................................................................................... 10
       Academic Stressors .................................................................................................. 10
   At-Risk Populations ........................................................................................................ 11
       First-Generation College Students (FGCS) ............................................................... 11
       Students from Non-Intact Families .......................................................................... 14
   Social Support as a Buffer of College-Related Stress .................................................. 17
       Peer Support ............................................................................................................ 18
       Parental/Caregiver Support ..................................................................................... 19
       Sibling Support ......................................................................................................... 19
   Current Study Research Questions and Hypotheses .................................................... 22

III. METHODOLOGY ........................................................................................................... 31
   Sample .......................................................................................................................... 31
   Procedure ...................................................................................................................... 33
   Measures ....................................................................................................................... 33
       Sociodemographic Characteristics ........................................................................ 34
       Academic Aspirations and Academic Expectations ................................................. 35
       Sibling Support – Emotional (SS-EM) .................................................................. 35
       Sibling Support – Academic (SS-AC) .................................................................... 36
   Data Analysis ................................................................................................................ 37

IV. RESULTS ........................................................................................................................ 38
   Research Question 1 ...................................................................................................... 40
   Research Question 2 ...................................................................................................... 40
   Research Question 3 ...................................................................................................... 41
<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Means (SD) of Sibling Support-Emotional and Sibling Support-Academic for Non-First-Generation College Students (Non-FGCS) and First-Generation College Students (FGCS)</td>
<td>42</td>
</tr>
<tr>
<td>3. Means (SD) of GPA, Academic Expectations, and Academic Aspirations for Non-First-Generation College Students (Non-FGCS) and First-Generation College Students (FGCS)</td>
<td>42</td>
</tr>
<tr>
<td>4. Means (SD) of Sibling Support-Emotional and Sibling Support-Academic for Students from Intact and Non-Intact Family Status</td>
<td>43</td>
</tr>
<tr>
<td>5. Means (SD) of GPA, Academic Expectations, and Academic Aspirations for Students from Intact and Non-Intact Family Status</td>
<td>43</td>
</tr>
<tr>
<td>6. Multiple Linear Regression Models for Sibling Support (Emotional and Academic) Differing by Generation Status (FGCS and Non-FGCS)</td>
<td>46</td>
</tr>
<tr>
<td>7. Multiple Linear Regression Models for Sibling Support (Emotional and Academic) Differing by Family Composition (NIFS and Non-NIFS)</td>
<td>49</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION AND STATEMENT OF PROBLEM

Between 2001 and 2011, the college enrollment rate increased by 32%, resulting in 20.1 million individuals seeking a postsecondary degree (Kena et al., 2014). Obtaining a postsecondary degree provides one with the ability to achieve positive personal gains, such as greater income. Those with postsecondary degrees are more likely to have higher median salaries compared to those with only a high school degree (Kena et al., 2014). Additionally, research indicates that higher educational attainment is associated with positive health outcomes (Cutler & Lleras-Muney, 2010). While completing a postsecondary degree can provide one with opportunity, it does not come without potential struggles. The transition to college can be stressful for some students and bring forth many new changes and challenges for an individual.

College-related stressors may include moving away from home for the first time, as well as potential increases in course-load and resultant academic coursework (e.g., Dixon & Kurpius, 2008; Hicks & Miller, 2006; Larose & Boivin, 1998; Ross, Neibling, & Heckert, 1999). Further, completing a postsecondary degree can take a significant amount of time and financial resources. Students may also have to navigate their way through changing relationships, such as those with parent(s)/caregiver(s), peer relationships, and romantic relationships (Friedlander, Reid, Shupak, & Cribbie, 2007; Hicks & Miller, 2006). For some students, these changes may be overwhelming, resulting in dropout. Students are most likely to drop out within the first two years of college (Yazedjian, Toews, & Navarro, 2009). Additionally, first-generation college
students as well as students from non-intact families experience higher risk for dropping out of college compared to other students (Princiotta, Lippman, Schmitz, Murphey, & Cooper, 2014).

A first-generation college student is conceptualized as an individual whose parents did not attend college (Terry & Billson, 1982). The number of first-generation students attending college is increasing rapidly (Padgett, Johnson, & Pascarella, 2012); yet, research indicates that this population is more likely to drop out of college compared to their peers (Ishianti, 2006). Academic, social, and financial stressors may help to explain why first-generation college students experience higher risk for dropping out (Padgett et al., 2012; Pike & Kuh, 2005). For instance, research suggests that first-generation college students are more likely to have lower grade point averages (GPAs) due to spending fewer hours studying, and may be less prepared for college than their non-first generation counterparts (Adelman, 2009; Choy, 2001; Padgett et al., 2012). Having a low GPA may result in academic probation or expulsion from an institution.

First-generation college students are also more likely to have a difficult time adjusting to college, are less likely to engage in social activities, and spend less time with their peers (Dennis, Phinney, & Chuateco, 2005; Padgett et al., 2012). These students may be less familiar with the college environment, such as the sources of financial assistance to help them cover expenses (Pike & Kuh, 2005).

Another population at risk for college dropout includes students from non-intact families. Students from non-intact families can be conceptualized as “individuals whose parents have divorced, separated or deceased, or whose parents were never married” (Ver
Ploeg, 2002, p. 172). Research suggests that a lack of financial resources contributes to students from non-intact families being at higher risk for dropping out of college (Grissett & Furr, 1994; Turley & Desmond, 2011; Ver Ploeg, 2002). Compared to their counterparts, individuals from non-intact families tend to receive less financial support from their families (Engle & Tinto, 2008). As tuition rates rise, students from non-intact may find it difficult to meet the financial needs of college, ultimately resulting in college dropout (Snyder & Dillow, 2013).

While these barriers exist, there is a significant amount of literature documenting promotive factors that predict college completion. Social support can be understood as the provided resources and connections that are available within one’s social network (Dwyer & Cummings, 2001). Social support has repeatedly been identified as a positive predictor for higher GPA, positive adjustment, and postsecondary completion (e.g., Hollifield & Conger, 2014; Milevsky 2005; Nicpon, Huser, Blanks, Sollenberger, Befort, & Kurpius, 2006; Princiotta et al., 2014). Family systems theory (Cox & Paley, 1997) discusses how during times of transition or change for a family (e.g., attending college), it is important to examine and understand how all members and relationships within the family system may be influenced by that change. While it is important to examine how parent/caregiver-student relationships may change once a student begins college, another important relationship to explore is sibling relationships.

According to Branje, van Lieshout, van Aken, and Haselager (2004), 80% to 90% of individuals have at least one sibling. Although sibling relationships are the longest lasting relationship (Deater-Deckard, Dunn, & Lussier, 2002), and are influential
throughout the lifespan (Cicirelli, 1995; Scharf, Shulman, & Avigad-Sptiz, 2005), little research has focused on how these particular relationships can be a source of support during the transition to college. Sibling relationships are often viewed as a positive relationship across development (Hollifield & Conger, 2014). Research suggests that sibling relationships, particularly during adolescence, can be extremely supportive (Sherman, Lansford, & Volling, 2006; Yeh & Lempers, 2004). Positive sibling relationships during adolescence have been correlated with higher self-esteem (Yeh & Lempers, 2004) and a higher support during stressful life events (Gass, Jenkins, & Dunn, 2007). It is possible that as these relationships serve as support during adolescence, they will also serve as means of support during one’s time in college. During emerging adulthood, individuals are becoming more autonomous, and are perhaps more selective in which relationships are viewed as meaningful (Jensen, Arnett, Feldman, & Cauffman, 2004). It is possible that if the sibling relationship is salient, higher value may be placed on the support and information that these individuals provide for one another. Increased levels of support may then be associated with positive academic outcomes (e.g., higher GPA, higher academic aspirations and academic expectations).

Therefore, the purpose of this study is to examine the importance of sibling support for emerging adults pursuing a postsecondary degree. This study will also examine sibling support among first-generation college students as well as students who are from non-intact families, who are at higher risk for dropping out of college. It is possible that siblings may be able to provide a sense of support that is perhaps less accessible from other family members and friends. It is also possible that if a student
feels supported by their siblings emotionally and academically, they may hold higher academic aspirations (i.e., How far would you like to go in school?) and academic expectations (i.e., How far do you really think you will go in school) for themselves, and may earn higher GPAs.

Therefore, the five research questions that guide this study are as follows:

**Research Questions**

1. Are there differences between first-generation students and non-first-generation students on levels of sibling support (i.e., emotional and academic support), GPA, and academic aspirations and academic expectations?

2. Are there differences between students from non-intact families and intact families on levels of sibling support (i.e., emotional and academic support), GPA, and academic aspirations and academic expectations?

3. Are students who have higher levels of sibling support (i.e., emotional and academic support) more likely to have higher academic aspirations and academic expectations of completing their postsecondary degree, as well as a higher GPA?

4. Does the relationship between sibling support (i.e., emotional and academic support) and academic aspirations and academic expectations differ by generation status (first-generation versus non-first-generation students) when controlling for race/ethnicity, non-intact family status, and year in school?

5. Does the relationship between sibling support (i.e., emotional and academic support) and academic aspirations and academic expectations differ by family
composition (intact family versus non-intact family) when controlling for race/ethnicity, first-generation college students status and year in school?
CHAPTER II
LITERATURE REVIEW

As college can be a stressful time for individuals, it is possible that encountered stress may contribute to college dropout. The Center for the Study of College Retention (2008) reported that nearly half of those who enter postsecondary schooling do not complete their degree. With the dropout rate being so high, it is important to focus on the risk and protective factors that are associated with academic success and dropout to gain insight as to how this problem can be prevented. Research suggests that college dropout is most likely to occur within the first two years of college (Veenstra, 2009; Yazedjian et al., 2009), and attending college brings forth a new set of responsibilities and stressors for students. These stressors may include anxiety and stress related to changing environments, changes in routine, new study habits, managing finances, and changes within interpersonal relationships (Dwyer & Cummings, 2011; Hicks & Miller, 2006). It is possible that these responsibilities may elevate levels of stress for individuals, which may be negatively associated with academic outcomes, or even college dropout. While the literature has explored protective factors associated with dropping out, such as parental support (e.g., Friedlander et al., 2007; Ong, Phinney, & Dennis, 2006; Yazedjian et al., 2006), to date, literature focused on college experiences has largely excluded or ignored sibling relationships as a source of support. Yet, support from siblings may be a key source of protection for many students.

This chapter outlines the various stressors that college students may experience, including interpersonal, financial, and academic stressors. In addition to facing common
college-related stressors, research has identified two unique populations who are at a higher risk for dropping out of college: first-generation college students and students from non-intact families. Therefore, research on these at-risk populations is reviewed to identify the unique stressors that may explain their elevated risk. While support from family and friends during the college experience has been researched extensively (e.g., Dennis et al., 2005; Friedlander et al., 2007; Ong, Phinney, & Dennis, 2006; Pittman & Richmond, 2008), the literature surrounding sibling relationships as a protective factor for college students is limited. The mechanisms by which supportive sibling relationships may serve as a protective factor during adolescence and emerging adulthood will be reviewed, as well as what is known about sibling relationships during adolescence and emerging adulthood.

**College Stressors**

The transition to college can bring forth a great deal of emotion. While it can be a time of joy and newfound independence, college can also bring forth great stress. Given that changes in one’s lifestyle and living arrangements may be occurring, students are now exposed to new environments that they need to successfully adapt to and navigate (Dixon & Kurpius, 2008; Hicks & Miller, 2006; Ross, Neibiling, & Heckert, 1999). A significant number of college students experience moderate to high levels of stress while in college (Abouserie, 1994). College stressors may include adjustment to college lifestyles or housing arrangement changes, one’s ability to manage interpersonal relationship strains related to academic performance pressures, and simply adjusting to
college life (Desselier, Dunn, Wang, Shelley, & Whalen, 2005; Dixon & Kurpius, 2008). Each of these factors is described in depth next.

**Interpersonal Stressors and Mental Health**

During the transition to college, students may experience changes in communication and support with family members (Hicks & Miller, 2006; Nicpon et al., 2006-2007). For some students, patterns of communication may change as they move away from home and are experiencing the first separation from their parents for a significant amount of time (Larose & Boivin, 1998); these changes in communication may be part of the evolving renegotiation of the relationship. When conflicts in these interpersonal relationships arise, it is possible that students will experience higher levels of stress that may ultimately contribute to psychological and physiological health, as well as impact academic outcomes in a negative way (Darling, McWey, Howard, & Olmstead, 2007; Larose & Boivin, 1998; Struthers, Perry, & Menec, 2000).

One’s change in environment (e.g., moving away from home) may also be associated with higher levels of loneliness and anxiety (Larose & Boivin, 1998). Additionally, as individuals between the ages of 14 and 24 are more likely to experience major depression, and one-fourth of college students experience major depression, experienced stress may contribute to these depressive symptoms (Bernet, Merill, Braithwaite, Van Orden, & Jointer, 2007; Pace & Trapp, 1995). It is possible that when these personal stressors are experienced, students may have a difficult time focusing on coursework, and could even perhaps be associated with college dropout.
Financial Stressors

Finances are commonly described as a commons source of stress among college students (Martin, 2012; Ross et al., 1999). According to Snyder and Dillow (2013), the average cost of living for a full-time student in the 2011-12 academic year was approximately $23,066. While this takes into consideration both public and private institutions, as well as costs such as room and board, tuition, and fees, it is clear that receiving a postsecondary education does not come without a high price-tag. Students may also face financial stressors based on the amount of financial aid they are able to receive, as well as if they receive outside assistance (e.g., parent(s)/caregiver(s)) to pay for college. For example, students who come from divorced families often receive less financial help paying for college than students whose parents are not divorced (Martin, 2012; Henretta, Wolf, Van Voorhis, & Soldo, 2012; Ver Ploeg, 2002). Additionally, stressors may include having to pay for school loans, as well as potentially working a job while also fulfilling obligations as a student (Stinebrickner & Stinebrickner, 2003).

Academic Stressors

College students are highly susceptible to stress related to academics (Dwyer & Cummings, 2001; Hicks & Miller, 2006; Struthers et al., 2000). The stress that a college student experiences is very unique compared to those working outside of the college environment. Ross and colleagues (1999) suggest that unlike others in the work force, college students face constant evaluation. Types of evaluation can include exams, assignments, pop quizzes, etc. Consistent and constant evaluation may then bring forth stress for students. Stress surrounding academics may include writing papers, pressure
surrounding preparing and taking exams, and time needed to learn materials (Abouserie, 1994; Kohn & Frazer, 1986; Schafer, 1996). Additionally, high school students are often unaware of the magnitude of differences in coursework experienced in high school versus the coursework at a postsecondary institution (Hicks, 2003). If students are not adequately prepared for these discrepancies in coursework it is possible that these students may feel overwhelmed and stressed upon entering college.

At-Risk Populations

While first and second year students are at higher risk for dropping out (Yazedjian et al., 2009), there are additional populations who are also at greater risk for dropping out of college. First-generation college students and students belonging to non-intact families have been described as being at a higher risk for dropping out of college compared to non-first-generation college students and students from intact families (Princiotta et al., 2014). While there may be aspects of college stress experienced by most college students, it is important to explore how college stressors may uniquely affect these two populations.

First-Generation College Students (FGCS)

First-generation college students (FGCS) are conceptualized by Billson & Terry (1982) as individuals whose parents did not attend college. These individuals are more likely to be persons of color from low socioeconomic status backgrounds (Dennis et al., 2005; Engle & Tinto, 2008). The population of FGCS is growing (Choy, 2001); therefore, it is important to understand what unique college-related stressors they may face since this population is at higher risk for dropping out of college. For instance,
FGCS may be less prepared for college in comparison to non-FGCS, and are less likely to take rigorous coursework during high school (Adelman, 2009; Choy 2001; Pascarella, Pierson, Wolniak, & Terenzini, 2004; Warburton, Bugarin, & Nunez, 2001). This lack of preparedness may mean that students lack successful study skills needed for college success. Additionally, if FGCS take less rigorous coursework in high school, it becomes possible that when these students enter college, the more demanding coursework may create additional stress for them.

In addition to the stress of transitioning to college, one’s family may also be a source of stress for FGCS. Students may look to parent(s)/caregiver(s) as a means of guidance during this transition (Ceja, 2006). However, if parent(s)/caregiver(s) do not have experience with postsecondary education, they may be less likely to understand and assist with college experiences and transitions (e.g., assistance with understanding the application process or earlier college preparatory processes such as taking the Scholastic Aptitude Test (SAT) or the American College Testing (ACT) college readiness assessment). Literature focused on the experiences of FGCS discusses the importance of social capital, which provides students with information surrounding the college environment (Purswell, Yazedjian, & Toews, 2008; Rothon, Goodwin, & Stansfeld, 2012). Social capital specific to higher education has been operationalized as the knowledge of the campus environment and campus values, as well as access to human and financial resources important to college completion (e.g., financial aid, scholarships) (Choy, 2001; McCarron & Inkelas, 2009; Thayer, 2000). Additionally, social capital may include the familiarity of terminology as well as general functioning of a higher
education status. Often, this knowledge is transmitted to students from their parent(s)/caregiver(s) (Ceja, 2006). For FGCS, lack or limited social capital related to higher education can become a barrier for degree attainment. When students have a limited knowledge of the college environment, they may face academic challenges that others do not (McCarron & Inkelas, 2009; Rothon et al., 2012).

While the lack of social capital has the potential to hinder FGCS success, stress from families may also be experienced if one’s family is not supportive of the decision to pursue a postsecondary degree. In fact, FGCS report lower levels of family support towards academics (Choy, 2001; Jenkins, Belanger, Connally, Boals, & Duron, 2013; McCarron & Inkelas, 2006). If families place a lower level of importance on obtaining a college degree, the student may have lower academic aspirations and academic expectations for obtaining that degree. Additionally, if the student feels bound to their family’s needs, it is possible that these needs may also interfere with academic outcomes. Ultimately, less support could contribute to lower GPAs, or increase the likelihood of the student dropping out if success is not experienced. While research has indicated a positive relationship between parent-child relationships and GPA (Yazedjian et al., 2006), it then becomes important for all FGCS to understand how to navigate this relationship transition, and to create a relationship balance beneficial for both students and their parent(s)/caregiver(s).

This lack of support may include a lack of financial resources as well. Family financial stressors, such as low socioeconomic status, can be linked to college retention. As FGCS are more likely to come from low-income families, these students are three
times as likely to drop out of college compared to their peers (Engle & Tinto, 2008; Hoffman, 2003; Inman & Mayes, 1999). These students are also less likely to receive financial assistance from parent(s)/caregiver(s) (Choy, 2001). For these individuals, it is possible that the lack of financial assistance may contribute to stress such as navigating the financial costs of college (Engle & Tinto, 2008).

Just as family relationships may contribute to stress among FGCS, lack of peer support may also serve as a form of stress. FGCS are less likely to engage with their peers on campus (Purswell et al., 2008, Engle & Tinto, 2008). It is possible that FGCS may be unaware of how to become involved socially on campus. Dennis and colleagues (2005) describe that FGCS may lack both personal and social skills, which can contribute to poor academic outcomes. It becomes possible that if FGCS experience lower levels of familial and peer support, they may have lower academic aspirations and expectations to complete their degree, and lower GPAs.

**Students from Non-Intact Families**

Students from non-intact families are conceptualized as “individuals whose parents have divorced, separated or deceased, or whose parents were never married” (Ver Ploeg, 2002, p. 172). Stepfamilies are one of the fastest growing family structures, (Hetherington & Stanley-Hagan, 2000), and there has also been an increase in non-marital births and marital disruption (Ver Ploeg, 2002). For both adolescents and emerging adults, parental divorce can hinder educational attainment, and potentially negatively impact academic outcomes (Case, Lin, & McLanahan, 2001; Martin, 2012; Soria & Linder, 2014; Tillman, 2007; Zill, Morrison, & Coriro, 1993). Adolescents from
non-intact families, particularly students in stepfamilies, on average have lower grades, lower achievement scores, lower rates of school attendance, as well as lower rates of high school completion (Case et al., 2001; Tillman, 2007). For emerging adults, students from non-intact families entering college appear to face both emotional and financial barriers which are discussed next.

Experiencing a family transition, such as divorce or remarriage, may bring forth a lot of stress and anxiety for individuals. Stress theory posits that stressful situations can negatively impact social and psychological outcomes (Tillman, 2007). Additionally, detrimental levels of stress may be encountered when adolescents undergo multiple negative life events (Tillman, 2007). For adolescents, it appears that students from non-intact families fare poorly in academics (e.g., lower GPA) compared to students from intact families. These students are also less likely to persist in college compared to students from intact families (Soria & Linder, 2014). For these individuals who experience divorce during adolescence, it is possible that the impact of divorce will affect them throughout the lifespan (Cherlin, Chase-Lansdale, & McRae, 1998; Soria & Linder, 2014).

The well-being of college students and emerging adults from non-intact families is also impacted on both an emotional and financial level. Compared to their peers, students from divorced families are more likely to experience greater life stress, and display more antisocial behaviors (Short, 2002). Additionally, college students whose parents have divorced (particularly if the divorce is experienced during childhood) are also more likely to experience higher rates of anxiety and depression (Short, 2002; Soria
& Linder, 2014). These individuals may face challenges within their social network systems, as students from non-intact families are more likely to experience difficulty with both family and intimate relationships (Bulduc, Caron, & Logue, 2007; Cartwright, 2006; Ross & Miller, 2009).

As these individuals enter college, lack of financial resources may also be a source of stress, as economic deprivation has been strongly associated with single-family and stepparent households (Ross & Miller, 2009; Tillman, 2007). For students who are from intact families, college entry may occur directly following high school graduation. However, for students from non-intact families, the loss of resources may delay their entrance into college (Case et al., 2001; Ver Ploeg, 2002; Wallerstein & Lewis, 2004). When divorce occurs, often it can be difficult to allocate financial resources. Even when child support is provided, there are often not enough financial resources available to begin saving for college (Ver Ploeg, 2002). Instead, these funds must be used in order to meet daily needs, such as food and shelter. Additionally, allocation of financial resources may also be difficult for students from blended families (Ver Ploeg, 2002). In many cases for divorced families, child support is only required until the child graduates high school, or turns 18 years of age (Ver Ploeg, 2002). Additionally, by law, non-custodial parents are not required to contribute to a child’s college expenses. Even when there are contractual agreements set in which parents agree to help pay for college, these often are still not able to cover the costs of college, given that tuition rates are on the rise and the cost of living for a full-time student is over $23,000 per year (Snyder & Dillow, 2013).
In comparison to students from intact families, students from non-intact families receive less financial support from parent(s)/caregiver(s). Research indicates that single-parent families are less likely to save up for college (Turley & Desmond, 2011). In fact, parent(s)/caregiver(s) who are divorced or separated contribute roughly one-third of college costs in comparison to parents of students from intact families and receive financial support (Grissett & Furr, 1994; Turley & Desmond, 2011). For students from non-intact families, lack of financial resources and unpredictable finances appear to be the main contributors to increased chances of dropping out (Ross & Miller, 2009). Students from non-intact families may rely heavily on financial aid, scholarships, and grants (Grissett & Furr, 1994). While financial aid may be available for students from non-intact families, it is possible that the gap between financial aid and the cost of college may make it difficult for parents to help students pay for college (Turley & Desmond, 2011). It becomes possible that if students from non-intact families perceive they cannot afford college, they may drop out. Additionally, if students from non-intact families do not receive the success in college they anticipated, they may drop out if they feel that they are spending their family’s valuable and limited resources.

**Social Support as a Buffer of College-Related Stress**

Support from family members and peers can serve as a buffer to the stress that college students face on a regular basis. By having a support system to help combat college-related stress, it may be easier for students to adjust to college. This support system may include peer support, parent/familial support, and support from siblings. The literature surrounding sibling support serving as a buffer to college-related stress is
limited; however, research has indicated that sibling relationships can serve as a protective factor during adolescence and emerging adulthood (Milevsky, 2005; Yeh & Lempers, 2004).

**Peer Support**

When individuals experience support from their peers, the transition to college and college adjustment may be impacted positively (Dennis et al., 2005; Pittman & Richmond, 2008). Peer support may positively influence both academic outcomes as well as positively influence one’s emotional well-being. Experienced peer support during adolescence has been found to be a predictor for academic success for college students (Melby, Conger, Fang, Wickrama, & Conger, 2008). When college students experience support from their peers, they are more likely to have greater participation in college, greater college achievement, and are more likely to feel connected to their institution (Fass & Tubman, 2002; Swenson, Nordstrom, & Hiester, 2008).

Peer support may also serve as a predictor for positive college student well-being (Rodriguez, Mira, Meyers, Morris, & Cardoza, 2003). More specifically, social support can decrease levels of anxiety as well as increase self-esteem. When peer support is experienced, students feel less anxiety, and have decreased feelings of loneliness (Larose & Boivin, 1998). This means of support may serve as encouragement for students to not give up on their academic aspirations and expectations of obtaining a postsecondary degree.
Parental/Caregiver Support

Support from family members may also serve as a buffer for college student stress. Increased social support, specifically support from family members, is related to academic achievement and college adjustment outcomes (Friedlander et al., 2007; Ong, Phinney, & Dennis, 2006). More specifically, when strong child and parent/caregiver relationships exist, students are more likely to have positive academic outcomes and are more likely to have higher GPAs (Yazedjian et al., 2009). Likewise, when students felt that they had successfully adapted to the college environment and were supported by their family, students reported decreased stress levels and increased levels of self-esteem (Friedlander et al., 2007). When college students feel supported by their parents, they may find it easier to make connections with others, forming friendships (Mounts, Valentiner, Anderson, & Boswell, 2006; Parade, Leerkes, & Blankson, 2010). When students feel they are supported, they may find it easier to make the college transition, have higher levels of self-esteem, and have a better quality of life (Darling et al., 2007), resulting in positive academic outcomes.

Sibling Support

While there seems to be a significant amount of research surrounding social supports for college-aged students, often only parental/caregiver or peer support is discussed. The literature, however, is limited when exploring other familial relationships in terms of support during college. As sibling relationships may impact one’s daily life, it is important to understand what the literature reports regarding sibling relationships. Below, sibling relationships will be explored from multiple perspectives such as support
and serving as protective factors for adolescents and young adults, how stressful life events can impact sibling relationships, how sibling relationships change across the lifespan, and the influence of sibling relationships during the college transition.

Positive sibling relationships appear to be a predictor for positive peer relationships during adolescence and emerging adulthood, meaning that when positive sibling relationships are in place, young people are more likely to report higher quality friendships (Sherman et al., 2006; Yeh & Lempers, 2004). Likewise, positive sibling relationships during adolescence is a predictor for higher reported self-esteem, and viewed as a protective factor from feelings of loneliness, depressive symptomology, and fewer delinquent behaviors (Yeh & Lempers, 2004). While sibling relationships can be a promotive factor for peer relationships, as well promoting positive psychological health, it is also important to explore how sibling relationships may serve as a protective factor for stressful life events.

Stressful life events may be conceptualized as “accidents, illnesses, legal, marital, family, deaths, permanent separation, disasters, and school” (Gass et al., 2007, p. 169). Research indicates that positive sibling relationships can help buffer these stressful life events, particularly for adolescents (e.g., Abbey & Dallos, 2004; Brody, Stoneman, & McCoy, 1994; Gass et al., 2007; Lamarche, Brendgen, Boivin, Vitaro, & Pérusse, 2006; Riggio, 2001; Widmer & Weiss, 2000).

A stressful life event that siblings may share is parental/caregiver divorce or separation. Even though divorce can be stressful for the family as a whole, other relationships within the family may be influenced as well. Even though these situations
are often described as stressful, siblings often report that sharing this experience brings them closer together (Abbey & Dallos, 2004; Brody et al., 1994; Riggio, 2001; Widmer & Weiss, 2000). The sibling relationship may then serve as a means of mutual support (Sheehan, Darlington, Noller, & Feeneey, 2008). This may help explain supportive sibling relationships, as divorce can be viewed as a “major shared life experience” (Abbey & Dallos, 2004, p. 253). These positive relationships may not only serve as a buffer for stress during adolescence, but carry on into emerging adulthood as well. Therefore, it is possible that students from non-intact families may report higher levels of sibling support than students who are of intact family status, as these shared negative life experiences promote strong, positive sibling relationships.

As sibling relationships serve as a protective factor for negative life events, it is important to explore how sibling relationships may serve as a promotive factor for both psychological and physiological health. It appears that a positive relationship exists between sibling relationships and psychological well-being (Milevsky, 2005). More specifically, when positive sibling relationships exist, individuals are less likely to experience loneliness and depressive symptoms, and are more likely to report greater self-esteem and life-satisfaction (Milevsky, 2005). Likewise, highly conflictual and poor sibling relationships are predictors of depression, as well as physiological health problems such as higher, problematic heart rates (Shortt & Gottman, 1997; Waldinger, Vaillant, & Orav, 2007).

Even though siblings may experience conflict throughout the lifespan, and the relationship may wax and wane over time, it appears that levels of commitment within
the relationship do not change (Ritteneour, Meyers, & Brann, 2007). Even during emerging adulthood and later adulthood, when siblings may spend less time together, siblings still report high levels of warmth and quality within the relationship (Scharf et al., 2005). Siblings often report that over time, a deeper understanding and acceptance of change within the relationship is experienced (Scharf et al., 2005).

As one goes through the lifespan, one may encounter many life transitions. These transitions may be individual, experienced by the family as a whole, or experienced within certain subsystems of the family (Cox & Paley, 1997). One individual level transition that some may encounter is entering college. Therefore, in understanding that siblings can be supportive throughout the lifespan, it is important to explore ways in which the sibling relationship can be supportive for specific and significant life events, such as entering college. It is possible that during this time, positive sibling relationships may be greatly valued. As a means of support, sibling relationships may help promote positive academic outcomes for college students.

**Current Study Research Questions and Hypotheses**

Minimal research has examined relationships between siblings during one’s time at college. As discussed above, the literature surrounding social support for college students tends to focus on support received from peers as well as parental/caregiver support. It appears that when these support systems exist for college students, the transition to college is made easier, and positive academic outcomes are more likely to be experienced.
Family systems theory posits that while the family is viewed as a unit, it is not only important to view that unit as whole, but to also consider the subsystems (e.g., sibling relationships) (Cox & Paley, 1997). Therefore, it is important to explore all possible family relationships. In the context of the college experience, while the literature has explored part of these interrelations by examining the parent/caregiver and emerging adult relationship, sibling relationships have yet to be explored in depth. However, the literature that does exist on sibling support during emerging adulthood suggests that the sibling relationship can serve as a promoter of self-esteem and life satisfaction, and help protect individuals from depressive symptoms and feelings of loneliness (Milevsky, 2005; Waldinger et al., 2007). This research points out that during emerging adulthood, sibling relationships can compensate for lower levels of support from both mothers and fathers. It is possible that this means of support, especially support from family will be critical for college students. More specifically, means of support may be even more critical for populations who are at higher risk for dropping out of college (e.g., FGCS, students from non-intact families).

Based on the premise of family systems theory, it is important to explore other familial relationships, and the potential positive impacts they may have on the transition to college. Cox and Paley (1997) note that within the family systems theory model, “Family relationships not only extend across generations but also to systems outside the family” (Cox & Paley, 1997, p. 258). Therefore, it is possible that positive sibling relationships may extend and help promote positive experiences during college. Additionally, Cox and Paley (1997) explain: “The family system’s relationship with the
environment is reciprocal” (p. 258). Therefore, while it is possible for the sibling relationship to influence one’s experiences, one’s experiences may also influence sibling relationships. Since FGCS and students from non-intact families have been identified as populations at higher risk for facing struggles during their college experience (Jenkins et al., 2013), it is important to see how these struggles may influence their sibling relationships, as well as how their sibling relationships influence their unique struggles.

The current study provides an in-depth exploration of sibling relationships during students’ time in college. More specifically, the current study adds to the literature surrounding sibling relationships during emerging adulthood by examining potential differences in sibling support (i.e., emotional and academic) for FGCS compared to non-FGCS, and students from non-intact families compared to students from intact families. The current study will also add to the existing literature by exploring two dimensions of sibling support: emotional and academic. Emotional support is conceptualized as the support individuals receive regarding various life stressors as well as non-stressful life events (Cohen & Wills, 1985). Emotional support may be experienced when personal relationships are “close, confiding, and satisfying by the respondent” (Slavin & Rainer, 1990, p. 409). Therefore, emotional sibling support will refer to levels of daily support, such as help with problem solving provided by siblings. Previous theories on motivation have addressed how when individuals experience positive, responsive or sensitive interactions, particularly regarding academics, they are more likely to feel supported. In turn, this may be associated with how individuals perform academically (Alfaro, Umana-Taylor, & Bamaca, 2006; Hamre & Pianta, 2005). Therefore, academic sibling support
will refer to levels of support regarding academic/career choices provided by siblings. Lastly, the current study will add to the literature by examining how positive sibling relationships during one’s time in college impacts academic outcomes, specifically, GPA, and academic aspirations and expectations. One’s academic aspirations refer to how far one would like to go in school, while academic expectations refer to how far one actually expects to go in school. Therefore, the current research questions are as follows:

1. Are there differences between first-generation college students (FGCS) and non-first generation college students (non-FGCS) on levels of sibling support (emotional and academic), GPA, and academic aspirations and expectations?

   It is first hypothesized that differences between first-generation and non-first-generation students on reported levels of sibling support (emotional and academic) will exist. More specifically, it is hypothesized that FGCS will report higher emotional support and lower levels of academic sibling support when compared to non-FGCS. As mentioned above, FGCS often report lower parental support towards academics (Choy, 2001; McCarron & Inkelas, 2006). Therefore, it is possible that siblings may consider this a shared, stressful experience between them, and turn to each other as an alternative means of support, or as a mutual support system (Sheehan et al., 2008). When siblings share stressful life events, such as parental divorce, sibling relationships have been shown to become stronger and more meaningful (Abbey & Dallos, 2004; Brody et al., 1994; Riggio, 2001; Widmer & Weiss, 2000). As school experiences are also defined as a stressful life event, it is possible that when this parental academic support is not available,
similar to divorce, when a stressful shared event is experienced, a more positive, strong
sibling relationship may form. This may contribute to the salience of the relationship
during emerging adulthood. Because of this, the relationship and the emotional support
FGCS receive from their siblings may be placed at a higher value. In turn, FGCS may
feel more supported and report higher levels of emotional support compared to non-
FGCS.

Secondly, it is hypothesized that FGCS will report lower levels of academic
sibling support when compared to non-first-generation college students. Even though
siblings may serve as means of emotional support for FGCS, it is possible that the lack of
knowledge surrounding the college experience will lead to individuals feeling less
academic support (McCarron & Inkelas, 2009; Rothon et al., 2012). As a significant life
transition, if siblings do not have the needed information about the college environment
and the changes one may face, siblings may be unable to provide a strong means of
support for these students specific to academics.

Lastly, it is hypothesized that there will be differences between first-generation
college students and non-first-generation college students on GPA, and academic
aspirations and expectations. More specifically, it is hypothesized that FGCS will report
lower GPAs as well as lower academic aspirations and expectations. This difference is
hypothesized to exist as the current literature notes that these students are often less
academically prepared for college, and have less knowledge surrounding the college
environment (e.g., Adelman, 2009; Choy, 2001). This lack of preparation and
knowledge may be associated with poorer academic outcomes for FGCS compared to non-FGCS.

2. Are there differences between students from non-intact families and students from intact families on levels of sibling support (emotional and academic), GPA, and academic aspirations and expectations?

It is first hypothesized that differences between students from non-intact families and students from intact families will exist. More specifically, it is hypothesized that students from non-intact families will report higher levels of emotional and academic support compared to students who are of intact family status. Based on the literature surrounding non-intact families and sibling relationships, it appears that these shared experiences of stress (e.g., divorce) strengthen the sibling relationship (Abbey & Dallos, 2004; Brody et al., 1994; Riggio, 2001; Widmer & Weiss, 2000). These shared experiences and positive sibling relationships may contribute to the salience of the relationship during emerging adulthood. Because of this, the relationship and the support (academic and emotional) they receive from their siblings may be placed at a higher value. In turn, students from non-intact families may feel more supported and report higher levels of support compared to students from intact families.

Second, it is hypothesized that there will be differences between students from non-intact families and students from intact families on reported GPA, and academic aspirations and expectations. More specifically, it is hypothesized that students from non-intact families will report lower GPAs, as well as lower academic aspirations and
expectations. The current literature focusing on social support and academic outcomes suggests that individuals with strong, positive support systems are more likely to encounter more positive academic outcomes (Friedlander et al., 2007; Ong, Phinney, & Dennis, 2006). Students from intact families may have a larger support network than individuals from non-intact families. Because of this difference, these larger support networks may promote students with the encouragement to do well in school and to have not only high aspirations, but high expectations, and report a higher GPA during the college experience as well.

3. Are students who have higher levels of support (i.e., emotional and academic support) more likely to have higher academic aspirations and expectations of completing their postsecondary degree, as well as a higher GPA?

   It is hypothesized that students who report higher levels of sibling support (i.e., emotional and academic support) will also report higher aspirations and expectations of completing a postsecondary degree, as well as report a higher GPA. Just as peer support and parental support have been linked to positive academic outcomes for adolescents (Melby et al., 2008; Ong et al., 2006), it is expected that sibling support encountered during one’s college experience will be associated with higher academic aspirations and expectations as well as higher GPAs.

4. Does the relationship between sibling support (emotional and academic) and GPA, academic aspirations, and educational expectations differ by generation status
(first-generation versus non-first-generation students) when controlling for race/ethnicity and year in school?

It is hypothesized that there will be no difference by generation status (first-generation college student versus non-first-generation college student) on the relationship between sibling support (emotional and academic), GPA, and academic aspirations and expectations. It is hypothesized that when sibling support (emotional and academic) is present, individuals will report higher GPAs, academic aspirations and expectations regardless of generation status. Race/ethnicity as well as year in school reported were used as control variables as prior research has indicated differences between race/ethnicity and academic outcomes (Hamrick & Stage, 2004; Nora, Cabrera, Hagedom, & Pascarella, 1996), and prior academic achievement is a predictor for academic outcomes, specifically GPA (Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008).

5. Does the relationship between sibling support (emotional and academic) and GPA, academic aspirations and expectations differ by family composition (intact family versus non-intact family) when controlling for race/ethnicity and year in school?

It is hypothesized that there will be no difference by family composition (intact family versus non-intact family) in the relationship between sibling support (emotional and academic), GPA, and academic aspirations and academic expectations. It is hypothesized that when sibling support (emotional and academic) is present, individuals will report higher GPAs and academic aspirations and academic expectations, regardless of family composition. Race/ethnicity as well as year in school reported were used as
control variables since prior research has indicated differences between race/ethnicity and academic outcomes (Hamrick & Stage, 2004; Nora, Cabrera, Hagedom, & Pascarella, 1996), and prior academic achievement is a predictor for academic outcomes, specifically GPA (Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008).
CHAPTER III
METHODOLOGY

Sample

Participants included 336 undergraduate students who were recruited from Human Development and Family Studies (HDFS) undergraduate classes at Kent State University. The final analytic sample only included participants with a sibling (N = 290). The resultant analytic sample was predominately female (85.2% female, 14.8% male) and White, non-Latino (85.2% White ethnicity, 7.2% Black ethnicity, 7.6% not White or Black ethnicity). The mean age of the sample was 19.84 years (SD = 1.86). The majority of participants were straight (94.5% straight, 5.5% sexual minority).

On average, participants were in year 2.26 (SD = 1.05) of school (meaning that on average students were enrolled in their second year of taking coursework), taking 14.48 (SD = 2.90) total credit hours in the current semester, and had an average GPA of 3.28 (SD = 0.56). The majority of participants were not HDFS or pre-HDFS majors (65.9% not HDFS or pre-HDFS majors, 34.1% HDFS or pre-HDFS majors). The majority of participants were not HDFS minors (30.3% not HDFS minors, 15.5% HDFS minors, 53.8% minor not applicable or not provided, 0.3% missing). The majority of students were not international students (98.6% not international student, 1.0% yes international student, 0.3% missing).

The average participant family-of-origin income ranged from $50,000 to $74,999. The majority of participants were not first-generation college students (72.8% non-FGCS, 27.2% FGCS). The majority of participants were from intact families (60.7% intact
family status, 38.6% non-intact family status, 0.7% missing). Most participants reported that their parent(s)/caregiver(s) were married or in a civil union (62.1% married or in a civil union, 1.4% unmarried but live together, 6.6% unmarried and live apart, 0.3% separated but live together, 4.5% separated and live apart, 24.8% divorced, 0.3% missing). For participants who reported that their parent(s)/caregiver(s) were separated or divorced, the average age at which the parental/caregiver separation or divorce occurred was 10.20 years old (SD = 5.53). On average, participants reported having 2.3 siblings (SD = 1.43), and participants ranged from having 1 to 10 siblings. Participants were then asked to provide demographic information for up to 10 siblings. Upon providing demographic data, participants were asked to think about the sibling that they felt closest to and to then report on them for the remainder of the survey. The demographic characteristics of the selected sibling are described next. Selected siblings were primarily female (51.4% female, 44.5% male, 0.3% transgender/gender queer, 3.8% missing). On average, selected siblings were 21.50 years old (SD = 5.21). The majority of participants did not live with this sibling (67.2% no, 26.6% yes, 6.2% missing). The majority of selected siblings had attended/or were currently attending college (46.6% yes, 19.7% no, 33.8% missing). Selected siblings were primarily described as full siblings (81.4% full sibling, 13.1% half sibling, 0.7% step sibling, 0.3% adopted sibling, 0.3% related through marriage, 4.1% missing).
Procedure

The study targeted first, second, and third year students, as college dropout is highest during the first years of college. Thus, recruitment efforts were conducted in the lower level, introductory courses in the Human Development and Family Studies (HDFS) program. The PI contacted instructors within the HDFS program to obtain permission to visit each class, discuss the current study, and hand out flyers with a link to the online survey. The PI also contacted students through the Human Development and Family Studies listserv to inform potential participants of the study, as well as provide a link to the survey. Participants were not required to have a sibling; however, those without siblings were excluded from analyses.

Web-based surveys were administered through Qualtrics. Participants were asked to fill out an anonymous web-based survey. Informed consent was obtained before participants were able to begin the survey. If the instructor of record granted extra credit, participants emailed or provided the instructor of record a screenshot of the final “thank you” screen in order to receive the extra credit. The university’s IRB approved the study protocol.

Measures

Participants in this study were asked to complete a survey consisting of a sociodemographics section and two scales. The measures included:
**Sociodemographic Characteristics**

Participants were asked to complete 20 sociodemographic questions. These demographic questions asked participants their age, gender, ethnicity, sexual orientation, and family of origin’s yearly income. Questions regarding one’s education included items pertaining to: international student status, GPA (i.e., What was your GPA during Fall 2014 [Please provide your high school GPA if you are a 1st semester freshman]?), what year in school the participant was currently enrolled in, academic major, academic minor (if applicable), and how many semester hours the participant was currently enrolled in.

Next, participants were asked for information regarding their family history of college attendance and family structure. The first item requests first-generation student status (i.e., Are you a first-generation college student [meaning that you are the first in your family-of-origin to attend college]?). The second question addresses family composition (i.e., Are you from a non-intact family [meaning your parent(s)/caregiver(s) are divorced, separated, were never married, or one of your parents is deceased]?). If they answered yes, a follow-up question asked the participant to describe their parents’ relationship status. Answer selections included: Married or in a civil union/domestic partnership, unmarried but live together, unmarried and live apart, separated but live together, separated and live apart, divorced. If participants reported that their parent(s)/caregiver(s) were separated or divorced, a follow-up question asked participants to report their age when the separation or divorce occurred. The last question in this section asked participants to identify whom they lived with during high school.
Lastly, participants were asked about whether they have siblings. If they did have a sibling, participants were asked to provide basic demographic information about those sibling relationship(s), including the number of siblings, the type of relationship (biological, stepsibling, adopted, etc.), the siblings gender and age, whether or not they lived with their sibling(s) and whether or not their sibling(s) had attended college. Participants were then asked to choose one sibling (if they had more than one sibling) with whom they felt closest. Participants were then instructed to think about this sibling when answering the remainder of the survey.

**Academic Aspirations and Academic Expectations**

This section included two questions that asked participants about their academic aspirations and academic expectations. The first question addressed academic aspirations (i.e., How far would you like to go in school?), and the second addressed academic expectations (i.e., How far do you really think you will go in school?). Response options for these questions ranged from 1 (1 year College, Vocational or Technical School) to 8 (MD, JD, DO, DDS, OR Ph.D.).

**Sibling Support – Emotional (SS-EM)**

This scale was created by modifying the Perceived Sibling Support for Friends (PSS-Fr) (Procidano & Heller, 1983). Originally, this scale included 20 items with three options ranging from yes, no, and don’t know (e.g., My friends give me the moral support I need). Prior studies have found good internal consistency for the original scale (α = .88 - .90) based on a sample of 432 undergraduate college students (Procidano & Heller, 1983). The current study used all 20 items, changing the target of the items from friends
to siblings (e.g., My sibling gives me the moral support I need). The current study asked participants to report on one sibling and scored items on a 6-point scale ranging from 1 (strongly disagree) to 6 (strongly agree), rather than the three options provided in the original scale. Items 2, 6, 7, 18, and 20 were reverse coded and scored accordingly. Mean scores were calculated, with higher scores indicating greater perceived emotional sibling support. Excellent internal consistency was found in the current study (α = .95).

**Sibling Support – Academic (SS-AC)**

A measure of academic sibling support was created by modifying the Career Adapt-Abilities Inventory - Version 2.0 (Porfeli & Savickas, 2012). This scale included 24 items (e.g., Thinking about what my future will be like) rated on a 5-point scale ranging from 1 (not strong) to 5 (strongest) (Porfeli & Savickas, 2012). The original scale included four subscales (concern, control, curiosity, and confidence), but only a composite score was used for the current study. Prior studies have found good internal consistency for the original scale (α = 0.74 – 0.85) (Porfeli & Savickas, 2012). The current study asked participants to report on one sibling on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree) in terms of how much they agreed with the statement, and items were directed toward the sibling (e.g., My sibling encourages me to think about what my future will be like). Mean scores were calculated, with higher scores indicating higher academic sibling support. The current study found excellent internal consistency (α = .98).
Data Analysis

Between group differences on emotional and academic sibling support, GPA, and academic aspirations and academic expectations by first-generation college student status and non-intact family student status were examined by using t-tests (H1 and H2). Associations between the types of sibling support (emotional and academic) and academic outcomes (GPA, academic aspirations and academic expectations) were examined via correlations (H3). Lastly, interactions between sibling support (emotional and academic) and generational status (H4) and family composition (H5) predicting GPA, academic aspirations, and academic expectations were examined using linear regression models and controlled for race/ethnicity, as well as year in school currently enrolled in.
CHAPTER IV

RESULTS

Results for the current study are divided into five sections for each of the five research questions. Descriptive statistics can be found in Table 1. Sibling support-emotional (SS-EM) anchors ranged from 1 (strongly disagree) to 6 (strongly agree). A mean score of 4.40 ($SD = 0.99$) was reported for the SS-EM, suggesting that participants reported moderate to high levels of emotional support from their selected sibling. Sibling support-academic (SS-AC) anchors ranged from 1 (strongly disagree) to 5 (strongly agree). A mean score of 3.80 ($SD = 0.84$) was reported for the SS-AC, indicating that participants reported moderate to high levels of academic support from their selected sibling. Anchors for academic aspirations and academic expectations ranged from 1 (1 year of college, vocational, or technical school) to 8 (MD, JD, DO, DDS, Ed.D, or Ph.D.). A mean score of 5.86 ($SD = 1.25$) was reported for academic aspirations, and a reported mean of 5.48 ($SD = 1.20$) was reported for academic expectations, suggesting that on average, participants would like to pursue some type of graduate degree, and expect to be able to pursue this type of degree as well. Lastly, participants reported a mean grade-point average (GPA) of 3.28 ($SD = 0.56$).
Table 1

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*Note. GPA = Grade-point average.

*p < .05; **p < .01.
Research Question 1

Differences between first-generation college students and non-first-generation college students on levels of sibling support (emotional and academic), GPA, and academic aspirations and expectations were examined using independent samples t-tests. Results indicated that there were no statistically significant differences by generation status (first-generation college student compared to non-first-generation college student) on levels of sibling support (emotional and academic) (see Table 2). Results, however, did indicate a statistically significant difference by generation status (first-generation college student and non-first-generation college student) on GPA. Results indicated that FGCS reported lower GPAs than non-FGCS. No significant differences by generation status and academic aspirations and academic expectations emerged, (see Table 3), such that one’s reported academic aspirations and one’s academic expectations do not differ based on one’s generation status.

Research Question 2

Differences between students from non-intact families and students from intact families on levels of sibling support (emotional and academic), GPA, and academic aspirations and expectations were also examined via independent samples t-tests. Results indicated that there were no statistically significant differences by family status (students from non-intact families compared to students from intact families) on levels of sibling support (emotional and academic) (see Table 4). Additionally, no significant differences
by family status on academic aspirations and expectations, and GPA emerged (see Table 5).

**Research Question 3**

Pearson’s correlation coefficients were used to examine associations between sibling support (emotional and academic) and academic outcomes (GPA, academic aspirations and expectations) (see Table 1 for all correlations). Results indicated a positive statistically significant association between academic sibling support and emotional sibling support ($r = .76, p < .01$). Students who reported higher levels of academic support from siblings also reported higher levels of emotional support from siblings. There were no significant associations between sibling support-emotional (SS-EM) or sibling support-academic (SS-AC) and GPA, academic aspirations, or academic expectations. A strong significant association between academic expectations and academic aspirations was also revealed ($r = .80, p < .01$). Students who reported higher levels of academic aspirations also reported higher academic expectations. A small, but significant association between GPA and academic aspirations emerged ($r = .12, p < .05$), such that students who reported higher grade point averages (GPAs) also reported higher academic aspirations. Finally, a small, but significant association was found between GPA and academic expectations ($r = .14, p < .05$), such that students who reported higher GPAs also reported higher academic expectations.
### Table 2

*Means (SD) of Sibling Support-Emotional and Sibling Support-Academic for Non-First-Generation College Students (Non-FGCS) and First-Generation College Students (FGCS)*

<table>
<thead>
<tr>
<th></th>
<th>Non-FGCS</th>
<th>FGCS</th>
<th>t (df)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sibling Support- Emotional</td>
<td>4.39 (.98)</td>
<td>4.43 (1.02)</td>
<td>-.29 (288)</td>
</tr>
<tr>
<td>Sibling Support- Academic</td>
<td>3.76 (.84)</td>
<td>3.73 (.86)</td>
<td>.27 (288)</td>
</tr>
</tbody>
</table>

### Table 3

*Means (SD) of GPA, Academic Expectations, and Academic Aspirations for Non-First-Generation College Students (Non-FGCS) and First-Generation College Students (FGCS)*

<table>
<thead>
<tr>
<th></th>
<th>Non-FGCS</th>
<th>FGCS</th>
<th>t (df)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA</td>
<td>3.34 (.50)</td>
<td>3.13 (.65)</td>
<td>2.85 (286)*</td>
</tr>
<tr>
<td>Academic Aspirations</td>
<td>5.84 (1.29)</td>
<td>5.90 (1.17)</td>
<td>-.36 (288)</td>
</tr>
<tr>
<td>Academic Expectations</td>
<td>5.51 (1.18)</td>
<td>5.40 (1.22)</td>
<td>.73 (288)</td>
</tr>
</tbody>
</table>

*Note.* GPA = Grade-point average.

* *p < .05.*
### Table 4
**Means (SD) of Sibling Support-Emotional and Sibling Support-Academic for Students from Intact and Non-Intact Family Status**

<table>
<thead>
<tr>
<th></th>
<th>Intact</th>
<th>Non-Intact</th>
<th>t (df)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sibling Support-Emotional</td>
<td>4.37 (.99)</td>
<td>4.46 (.99)</td>
<td>-.70 (286)</td>
</tr>
<tr>
<td>Sibling Support-Academic</td>
<td>3.78 (.79)</td>
<td>3.71 (.92)</td>
<td>.71 (286)</td>
</tr>
</tbody>
</table>

### Table 5
**Means (SD) of GPA, Academic Expectations, and Academic Aspirations for Students from Intact and Non-Intact Family Status**

<table>
<thead>
<tr>
<th></th>
<th>Intact</th>
<th>Non-Intact</th>
<th>t (df)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA</td>
<td>3.32 (.54)</td>
<td>4.45 (.99)</td>
<td>-.70 (286)</td>
</tr>
<tr>
<td>Academic Expectations</td>
<td>5.45 (1.19)</td>
<td>5.55 (1.18)</td>
<td>-.67 (286)</td>
</tr>
<tr>
<td>Academic Aspirations</td>
<td>5.80 (1.24)</td>
<td>5.98 (1.25)</td>
<td>-1.24 (286)</td>
</tr>
</tbody>
</table>

*Note.* GPA = Grade-point average.
Research Question 4

Linear regression was used to examine the direct associations and interactions between FGCS and SS-EM and SS-AC on GPA, academic aspirations, and academic expectations. Race-ethnicity (White, non-Latino as reference group; dichotomized as Black race/ethnicity and neither White nor Black race/ethnicity), and completed year in school were used as control variables. Model 1 examined the direct associations between FGCS, SS-EM, SS-AC, and GPA, academic aspirations, and academic expectations. Outcomes examined separately, model 2 examined the interactions between generation status (first-generation college student compared to non-first-generation college student) and SS-EM on GPA, academic aspirations, and academic expectations. Model 3 examined the interactions between generation status (first-generation college student versus non-first-generation college student) and SS-AC.

GPA

Three statistically significant direct associations emerged for GPA (see Table 6). First, there was a positive association between sibling support-emotional and GPA was revealed ($\beta = .21, p < .05$). Second, identifying as not White or Black was negatively associated with GPA ($\beta = -.14, p < .05$). Lastly, identifying as a FGCS was negatively associated with GPA ($\beta = -.17, p < .01$). No significant direct associations between Black race/ethnicity, year in school, non-intact family status, and sibling support-academic and GPA. No significant interactions between generation status (first-generation college student and non-first-generation college student) and sibling support-emotional or sibling support-academic and GPA were revealed.
**Academic Aspirations**

Only one significant finding emerged for academic aspirations (see Table 6). There was a positive association between identifying as Black and academic aspirations ($\beta = .14, p < .05$) (see Table 6). No direct associations between not White/Black race/ethnicity, year in school, non-intact family status, FGCS, sibling support-emotional, sibling support-academic were revealed. No significant interactions between generation status (first-generation college student and non-first-generation college student) and SS-EM or SS-AC and academic aspirations were revealed.

**Academic Expectations**

No statistically significant associations or interactions emerged for academic expectations (see Table 6).
Table 6
Multiple Linear Regression Models for Sibling Support (Emotional and Academic) Differing by Generation Status (FGCS and Non-FGCS)

<table>
<thead>
<tr>
<th>Variable</th>
<th>GPA</th>
<th>Academic Aspirations</th>
<th>Academic Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model Number</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Black Race/Ethnicity</td>
<td></td>
<td>-.20</td>
<td>-.20</td>
</tr>
<tr>
<td>Not White/Black Race/Ethnicity</td>
<td></td>
<td>-.30*</td>
<td>-.30*</td>
</tr>
<tr>
<td>Year in school</td>
<td></td>
<td>.03</td>
<td>.03</td>
</tr>
<tr>
<td>NIFS</td>
<td></td>
<td>-.07</td>
<td>-.07</td>
</tr>
<tr>
<td>FGCS</td>
<td></td>
<td>-.22**</td>
<td>-.22**</td>
</tr>
<tr>
<td>Sibling Support- Emotional</td>
<td></td>
<td>.12*</td>
<td>.11*</td>
</tr>
<tr>
<td>Sibling Support- Academic</td>
<td></td>
<td>-.09</td>
<td>-.09</td>
</tr>
<tr>
<td>SS-EM X FGCS Interaction Term</td>
<td></td>
<td>--</td>
<td>.05</td>
</tr>
<tr>
<td>SS-AC X FGCS Interaction Term</td>
<td></td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td></td>
<td>.06</td>
<td>.06</td>
</tr>
</tbody>
</table>

Note. NIFS = Non-Intact Family Status; SS-EM = Sibling Support-Emotional; SS-AC = Sibling Support-Academic; FGCS = First-Generation College Student.

* $p < .05$; ** $p < .01$
Research Question 5

Linear regression was used to examine the direct associations and interactions between NIFS, FGCS, SS-EM, SS-AC, and GPA, academic aspirations, and academic expectations. Race-ethnicity (White, non-Latino as reference group; dichotomized as Black race/ethnicity and neither White nor Black race/ethnicity), and completed year of school were used as control variables. Model 1 examined the direct associations between NIFS, SS-EM, SS-AC, and GPA, academic aspirations, and academic expectations. Outcomes examined separately, model 2 examined the interactions between family status (intact family status versus non-intact family status) and SS-EM on GPA, academic aspirations, and academic expectations. Model 3 examined the interactions between family status (intact family status versus non-intact family status) and SS-AC.

GPA

Three statistically significant direct associations with GPA were found. First, identifying as Black race/ethnicity was significantly associated with GPA ($\beta = -.14, p < .05$) (See Table 7). Second, a significant association between identifying as FGCS and GPA was found ($\beta = -.17, p < .005$) (see Table 7). Lastly, a significant association between SS-EM and GPA was found ($\beta = .21, p < .05$) (see Table 7). No direct significant associations between Black race/ethnicity, year in school, NIFS, SS-AC and GPA were revealed. No significant interactions between family status (non-intact family status and intact family status), SS-EM, SS-AC, and GPA were revealed.
**Academic Aspirations**

In regards to academic aspirations, identifying as a Black race/ethnicity was significantly associated with academic aspirations ($\beta = .14, p < .05$) (see Table 7). No direct significant associations between not White/Black race/ethnicity, year in school, FGCS, NIFS, SS-EM, SS-AC, and academic aspirations were revealed. No significant interactions between family status (non-intact family status and intact family status), SS-EM, SS-AC, and academic aspirations were revealed.

**Academic Expectations**

No statistically significant associations or interactions emerged for academic expectations (see Table 7).
Table 7
Multiple Linear Regression Models for Sibling Support (Emotional and Academic) Differing by Family Composition (NIFS and Non-NIFS)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model Number</th>
<th>GPA</th>
<th>Academic Aspirations</th>
<th>Academic Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Black Race/ Ethnicity</td>
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<td>-.20</td>
<td>-.21</td>
<td>-.21</td>
</tr>
<tr>
<td>Not White/ Black Race/Ethnicity</td>
<td></td>
<td>-.30*</td>
<td>-.30*</td>
<td>-.30*</td>
</tr>
<tr>
<td>Year in school</td>
<td></td>
<td>.03</td>
<td>.04</td>
<td>.09</td>
</tr>
<tr>
<td>FGCS</td>
<td></td>
<td>-.22**</td>
<td>-.23**</td>
<td>-.22**</td>
</tr>
<tr>
<td>Non-intact family status</td>
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<td>-.07</td>
<td>-.07</td>
<td>-.07</td>
</tr>
<tr>
<td>Sibling Support- Emotional</td>
<td></td>
<td>.12*</td>
<td>.16*</td>
<td>.12*</td>
</tr>
<tr>
<td>Sibling Support- Academic</td>
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<td>-.09</td>
<td>-.08</td>
<td>-.02</td>
</tr>
<tr>
<td>SS-EM X NIFS Interaction Term</td>
<td></td>
<td>--</td>
<td>-.10</td>
<td>--</td>
</tr>
<tr>
<td>SS-AC X NIFS Interaction Term</td>
<td></td>
<td>--</td>
<td>--</td>
<td>-.12</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td></td>
<td>.06</td>
<td>.06</td>
<td>.07</td>
</tr>
</tbody>
</table>

* FGCS = First-Generation College Student; SS-EM = Sibling Support-Emotional; SS-AC = Sibling Support-Academic; NIFS = Non-Intact Family Status.

* p < .05; ** p < .01.
CHAPTER V

DISCUSSION

The purpose of this study was to fill a void in the existing literature focusing on the importance of sibling relationships during emerging adulthood, specifically during one’s college experience. Previous research indicates that these relationships are salient throughout the lifespan (Cicirelli, 1995; Scharf et al., 2005); however, very few studies have focused on sibling relationships during the transition to college during emerging adulthood specifically. Participants in the current study reported moderate to high levels of both emotional support and academic support received from siblings, indicating that this relationship appears to be salient during this lifespan stage. The current study also highlights how these relationships are positively associated with academic outcomes.

The current study contributes to the growing body of literature focused on sibling relationships during emerging adulthood, specifically during the college experience. Importantly, emotional sibling support was positively associated with reported GPA. This finding suggests that emotionally supportive sibling relationships are positively associated with academic outcomes. Additionally, there were no differences on levels of sibling support-emotional based on generation status or family composition. This finding suggests that emotional support is equally important for one’s GPA across these high-risk groups. The results of the study are discussed next in terms of these high-risk groups.

Previous research has described how positive social support (e.g., parental/caregiver and peer support) is associated with positive academic outcomes and college adjustment (e.g., Dennis et al., 2005; Melby, Conger, Fang, Wickrama, &
Conger, 2008). Therefore, the current study hypothesized that when sibling support (emotional and academic) was present, individuals would report higher academic aspirations, academic expectations, and GPA. While this hypothesis was not fully supported, findings from the multiple regressions indicated that when students experienced emotional support from their siblings they also reported higher GPAs. Notably, this did not differ by high-risk population grouping (e.g., first-generation college student status and non-intact family student status).

**First-Generation College Students**

The present study found no significant differences between first-generation college students and non-first generation college students regarding levels of emotional and academic support provided by their sibling. Previous literature suggests that shared stressful life events, including school events may bring siblings closer together (Abbey & Dallos, 20004; Brody et al., 1994; Riggio, 2001; Widmer & Weiss, 2000). While not having emotional support from parent(s)/caregiver(s) to attend college may be a source of stress for students, it is possible that having emotional support from one’s sibling does not make sibling relationships in terms of levels of emotional support stronger among first-generation college students compared to non-first-generation students. Based on the reported sibling characteristics, the majority (56.9%) of the selected siblings had attended or are currently attending college. Therefore, it is possible that because of these sample characteristics, one’s sibling may have been able to provide siblings with social capital and knowledge surrounding the college experience. This may help explain why differences between FGCS and non-FGCS and academic sibling support did not exist.
Previous research, however, has discussed how one’s generation status is often associated with academic outcomes (Adelman, 2009; Choy, 2001; Padgett et al., 2012). Findings in the current study revealed statistically significant differences between FGCS and non-FGCS regarding GPA. More specifically, findings revealed that on average FGCS reported lower GPAs than non-FGCS. Thus, future research should explore ways in which FGCS can be further supported to promote positive academic outcomes.

**Family Composition**

The current study also did not find significant differences by family composition (non-intact family student status compared to intact family student status) on levels of sibling support (emotional and academic), academic aspirations, academic expectations, and GPA. Previous research has discussed how divorce, for example, is often viewed as a stressful life event. As a result, for siblings, this shared life event although negative is shown to strengthen the sibling relationship (Abbey & Dallos, 2004; Brody et al., 1994; Riggio, 2001; Widmer & Weiss, 2000). While it was hypothesized that because of this these individuals would report higher levels of support (emotional and academic) from siblings, it is possible that while experiencing a stressful life event may bring siblings closer together, this may not make them closer than siblings from intact families. It is possible that this may only account for the deficit in support that may be present if siblings were not available. Additionally, no differences by family composition and academic outcomes were revealed. It is possible that while shared life experiences may bring siblings together, it may not influence academic outcomes any stronger than individuals from intact families who report sibling support. While the current literature
focuses on impacts of divorce, future research should explore individuals who come from
non-intact families by means other than divorce (e.g., death of a parent, single-parent
household) and how their sibling relationships may be impacted during the transition to
college.

Limitations and Future Directions

This study was not without limitations. One main limitation to the current study
includes the homogeneity of the sample. As discussed in Chapter III, the sample was
predominately female, White, and from middle-class families. Additionally, sample
characteristics indicated that the majority of participants were non-first generation college
students and from intact families. A more diverse sample is needed in order to generalize
findings. A second limitation to this study is that it relied solely on self-report methods.
It is possible that this method may influence how questions were answered. It is possible
that based on levels of social desirability, and reporting on the sibling they felt closest to,
participants may have felt obligated to portray their sibling in a positive manner.
Collecting data from multiple sources may provide unique insight as to how siblings
influence one another in a reciprocal manner, specifically during one’s time in college.

A third limitation to the study is that participants were asked to choose one
sibling, with whom they felt closest, to report on levels of support (emotional and
academic). Future research should include reports from all siblings to explore potential
differences. It is possible that the number of siblings one has may be associated with
levels of support experienced. Including reports on multiple siblings may promote a
better understanding of the complexity of these relationships and how support can be
provided. Future research could explore if multiple siblings perhaps provided greater support for individuals, and if sibling demographics (e.g., whether or not siblings have attended college) influence the relationship and levels of both academic and emotional support. Future research could also explore how sibling relationships may influence individuals differently based on cultural and/or racial/ethnic differences. Research conducted by Updegraff and colleagues (2005) indicates that within Latino families, sibling relationships are valued more highly in comparison to parent-child relationships. Therefore, future research could examine how sibling relationships across race/ethnicities and cultures may impact levels of sibling support and academic outcomes for college students.

A fourth limitation includes that the current study only examined support within one sibling subsystem of the family context. As noted by Cox & Paley (1997), when families experience a transition, such as an individual going to college, it is important to examine how multiple family subsystems (e.g., parent/caregiver and child relationship, grandparent and grandchild relationship, sister sibling dyads, brother sibling dyads) are impacted. Future research could compare and contrast the salience of support from the sibling subsystem with other family subsystems (e.g. parent/caregiver and child relationship) during the transition to college for emerging adults. Exploring multiple subsystems would allow one to determine whether sibling support uniquely impacts academic outcomes, above and beyond support received from parent(s)/caregivers(s), for example. Additionally, by examining multiple subsystems, it becomes possible to explore how these subsystems may differentially contribute to academic outcomes. For
example, it is possible that sibling subsystems may provide more emotional and academic support when compared to parent/caregiver child subsystems.

In conclusion, there are implications to this research that may perhaps be useful for college retention programs. The current study found that emotional support from siblings was associated with higher GPAs. Additionally, the current study found there to be no differences on the levels of emotional and academic support based on generation status or family composition. While no differences were present, these finding still suggest that sibling relationships are indeed salient during this time in one’s life, and are associated with positive academic outcomes. Current college retention programs as well as college programs to support student family relationships (e.g., family welcome weekend) could use this knowledge to tailor programs and events to include siblings, and help promote these sibling relationships to help strengthen them.

Some universities already have “sibling weekend” events, where younger siblings are encouraged to come and spend the weekend on college campuses. Future programs could perhaps tailor these programs to include older siblings as well. As one enters emerging adulthood, and becoming more autonomous, the sibling relationship becomes an equal responsibility between the siblings (Steinberg & Morris, 2001). By supporting sibling relationships through these programs, it is possible that these activities, even as minor as watching a movie together, may promote dialogue and a feeling of closeness. As evidenced in the current study, emotional sibling support is associated with positive academic outcomes. These positive academic outcomes may perhaps help promote college retention, potentially helping to prevent college dropout.
APPENDICES
Sociodemographic Information

1. What is your age in years? (18-50; drop down box for selection)

2. What best describes your gender? (Please check all that apply)
   □ Female
   □ Male
   □ Transgender/ Gender Queer
   □ Transgender (Male to Female)
   □ Transgender (Female to Male)
   □ Other (Please identify): ______________________________________

3. What best describes your race and/or ethnicity? (Please check all that apply):
   □ American Indian or Alaskan Native
   □ Asian (Please identify specific country):
   □ Black or African American
   □ Latino or Hispanic (Please identify specific country):
   □ Native Hawaiian of Pacific Islander
   □ White / Caucasian / European descent
   □ Other: __________________________________

4. What is your sexual orientation? (Please check all that apply):
   □ Heterosexual/ Straight (meaning not Gay, Lesbian, Bisexual, or Queer)
   □ Gay
   □ Lesbian
   □ Bisexual
   □ Queer
   □ Questioning/ Don’t know
   □ Asexual
   □ Other (Please specify): __________________________________

58
5. Are you an international student?

☐ Yes (If so, what is your country of origin)? ___________________________
☐ No

6. What was your GPA during Fall 2014 (Please provide your high school GPA if you are a 1st semester freshman)? (0.0 - 4.0; drop down box here for selection)

7. What year of school are you currently enrolled in?

☐ Undergraduate, Freshman or 1st year
☐ Undergraduate, Sophomore or 2nd year
☐ Undergraduate, Junior or 3rd year
☐ Undergraduate, Senior or 4th year
☐ Undergraduate, Other (example, 5th year)______________________________

8. What is your major? ________________________________

9. What is your minor (if applicable)? ________________________________

10. How many semester hours are you currently enrolled in? (0 -25; drop down box here for selection)

11. Which range best describes your family-of-origin’s yearly income while you were growing up?

☐ Less than $5,000
☐ $5,000 to $14,999
☐ $15,000 to $24,999
☐ $25,000 to $29,999
☐ $30,000 to $39,999
☐ $40,000 to $49,999
☐ $50,000 to $74,999
☐ $75,000 to $100,000
☐ Over $100,000
12. Are you a first-generation college student (meaning that you are the first in your family of origin to attend college)?

☐ Yes
☐ No

13. Are you from a non-intact family (meaning your parent(s)/caregiver(s) are divorced, separated, were never married, or one of your parents is deceased)?

☐ Yes
☐ No

14. What best describes your parents’ current relationship status?

☐ Married or in a civil union/domestic partnership
☐ Unmarried but live together (If checked, participant then answered 14b)
☐ Unmarried and live apart( If checked, participant then answered 14b)
☐ Separated but live together (If checked, participant then answered 14a then 14b)
☐ Separated and live apart (If checked, participant then answered 14a then 14b)
☐ Divorced (If checked, participant then answered 14a then 14b)

14a. What age were you at the time of your parents’ separation or divorce? (0 – 50 years; drop down box for selection)?

14b. Who did you primarily live with during high school?

☐ Both parents
☐ Only lived with mother
☐ Only lived with father
☐ Other (please explain): _______________________________
15. How far would you like to go in school? (drop down box here for selection)

- □ 1 Year College, Vocational or Technical School
- □ 2 Years College, Vocational or Technical School, Associates Degree
- □ 3 Years College, Vocational or Technical School
- □ College Degree (BS/BA)
- □ Some advanced work, but no Graduate Degree
- □ MS/MA (Master's Degree)
- □ Some work toward Doctorate or Advanced Degree
- □ MD, JD, DO, DDS, OR PH.D. (etc...)

16. How far do you really think you will go in school? (drop down box here for selection)

- □ 1 Year College, Vocational or Technical School
- □ 2 Years College, Vocational or Technical School, Associates Degree
- □ 3 Years College, Vocational or Technical School
- □ College Degree (BS/BA)
- □ Some advanced work, but no Graduate Degree
- □ MS/MA (Master's Degree)
- □ Some work toward Doctorate or Advanced Degree
- □ MD, JD, DO, DDS, OR PH.D. (etc...)

17. Do you have siblings (e.g., brothers and/or sisters)?
- □ Yes (Note: if “yes,” participant moves on to question 18)
- □ No (Note: if “no,” participant will be taken to the end of the survey)

If the participant answers “yes,” the following questions will be asked:

18. If yes, how many? (1-10 siblings, More than 10 siblings; Drop down box for selection)
19. Please provide the following information about each of your siblings

<table>
<thead>
<tr>
<th>Sibling</th>
<th>What relation is this sibling to you?</th>
<th>What is your sibling’s age?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sibling 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sibling 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sibling 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sibling 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sibling 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sibling 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sibling 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sibling 8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sibling 9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sibling 10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Options for each question:

**What relation is this sibling to you**

- Full sibling (meaning that s/he is biologically related to your mother and father)
- Half sibling (meaning that s/he is biologically related to only your mother or only your father)
- Step sibling
- Adopted sibling
- Foster sibling
- Related through marriage or civil union (for example, sister-in-law)

**What is your sibling’s age?**

- Drop down box ranging from 0-60 years
20. Please provide the following information about all of your siblings (up to 10 siblings). If you have more than one sibling, please answer the questions about your siblings using the same order as you did above.

<table>
<thead>
<tr>
<th>Sibling</th>
<th>Which gender identity best describes this sibling? (Please check all that apply)</th>
<th>Do you currently live with this sibling?</th>
<th>Did (or does) this sibling attend college?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sibling 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sibling 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sibling 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sibling 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sibling 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sibling 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sibling 7</td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>Sibling 8</td>
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<td>Sibling 9</td>
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<td>Sibling 10</td>
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Options for each answer:

**Which gender identity best describes this sibling? (Please check all that apply)**

- Male
- Female
- Transgender/ Gender Queer
- Transgender (Male to Female)
- Transgender (Female to Male)

**Do you currently live with this sibling?**

- Yes
- No

**Did (or does) this sibling attend college?**

- Attends or has attended college
- Does not or has not attended college
- Not applicable
21. Based on the order you entered siblings in the questions above (ex., sibling 1, sibling 2, sibling 3, and so on), please choose one sibling with whom you feel closest to (if you have more than one sibling). You will need to think about the selected sibling when answering the remainder of the survey (Dropdown box for selection):

- Sibling 1
- Sibling 2
- Sibling 3
- Sibling 4
- Sibling 5
- Sibling 6
- Sibling 7
- Sibling 8
- Sibling 9
- Sibling 10
APPENDIX B

SIBLING SUPPORT-EMOTIONAL (SS-EM) SCALE
Sibling Support - Emotional (SS-EM)
Adapted from: Procidano & Heller’s (1983)
Perceived Social Support from Friends (PSS-Fr)

For the following items, please choose the sibling to whom you feel closest to (if you have more than one sibling). Please rate the following items on the provided scale, ranging from 1 (strongly disagree) to 6 (strongly agree):

1. My sibling gives me the moral support I need.
2. Most other people are closer to their sibling than I am.*
4. My sibling comes to me when they have problems or need advice.
5. I rely on my sibling for emotional support.
6. If I felt that my sibling was upset with me, I’d just keep it to myself.*
7. I feel that I do not fit in with my sibling.*
8. I could go my sibling if I were feeling down, without feeling funny about it later.
9. My sibling and I are very open about what we think about things.
10. My sibling is sensitive to my personal needs.
11. My sibling comes to me for emotional support.
12. My sibling is good at helping me solve problems.
13. I have a deep sharing relationship with my sibling.
14. My sibling gets good ideas about how to do things or make things from me.
15. When I confide in my sibling, it makes me feel uncomfortable. *
16. My sibling seeks me out for companionship.
17. I think that my sibling feels that I’m good at helping them solve problems.
18. I don’t have a relationship with my sibling that is as intimate as other people’s relationships with their sibling(s).*
19. I’ve recently gotten a good idea about how to do something from a sibling.
20. I wish my sibling were much different.*

* Indicates that item was reverse-coded.
APPENDIX C

SIBLING SUPPORT-ACADEMIC (SS-AC) SCALE
Sibling Support – Academic (SS-AC)
Adapted from: Porfeli & Savickas’s (2012) Career Adapt-Abilities Inventory - International Version 2.0

For the following items, please choose the sibling to whom you feel closest to (if you have more than one sibling). Please rate the following items on the provided scale, ranging from 1 (not strong) to 5 (strongest):

1. My sibling helps me think about what my future will be like.
2. My sibling helps me realize that today’s choices shape my future.
3. My sibling helps me prepare for my future.
4. My sibling helps me become aware of the education and vocational choices that I must make.
5. My sibling helps me plan how to achieve my goals.
6. My sibling is concerned about my career.
7. My siblings help keep me upbeat.
8. My sibling encourages me to make decisions by myself.
9. My sibling encourages me to take responsibility for my own actions.
10. My sibling encourages me to stick up for my beliefs.
11. My sibling encourages me that I can count on myself.
12. My sibling encourages me to do what is right for me.
13. My sibling encourages me (or helps me) to explore my surroundings.
14. My sibling encourages me (or helps me) look for opportunities to grow as a person.
15. My sibling helps me investigate my options before making a choice.
16. My sibling helps me (or encourages me) me observe different ways of doing things.
17. My sibling helps me probe deeply into questions I have.
18. My sibling encourages me to become curious about new opportunities.
19. My sibling encourages me to perform tasks efficiently.
20. My sibling encourages me in taking care to do things well.
21. My sibling encourages me to learn new skills.
22. My sibling encourages me to work up to my ability.
23. My sibling helps me and encourages me to overcome obstacles.
24. My sibling helps me solve problems.
REFERENCES


