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# College Student Adjustment: Examination Of Personal And Environmental Characteristics

Aleksandra M. Stoklosa  
*Wayne State University,*

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**COLLEGE STUDENT ADJUSTMENT: EXAMINATION OF PERSONAL AND ENVIRONMENTAL CHARACTERISTICS**

by

**ALEKSANDRA M STOKLOSA**

**DISSERTATION**

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

for the degree of

**DOCTOR OF PHILOSOPHY**

2015

**MAJOR: EDUCATIONAL PSYCHOLOGY**

Approved By

\_\_\_\_\_  
Advisor

\_\_\_\_\_  
Date

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## **DEDICATION**

To my husband,

Lawrence Stoklosa,

without whom I would not be able to achieve my goals.

His ongoing support, encouragements, and drive taught me to pursue my goals and dreams regardless of the challenges that have come my way.

I would not have been able to achieve so much without him.

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## CHAPTER 1

### INTRODUCTION

The transition from adolescence to adulthood is a unique period that involves many developmental tasks. This unique period has been labeled by Arnett (2000) as *emerging adulthood*. This time involves significant transitions between dependency on parents, which is characterized during childhood, and adult responsibilities. In addition, the time between adolescence and adulthood is a period of frequent changes and exploration of life directions, including making life impacting choices. According to Arnett (2000), emerging adulthood can be characterized by the greatest opportunities for independent exploration of possibilities as compared to any other period of development. Individuals at this age often obtain their education, which will lead into their selected careers and incomes.

The common expectation for young adults who transition to college in the USA is to separate from family and become self-reliant. Based on this premise, individual and educational environment characteristics and experiences would have the strongest impact on one's ability to successfully adjust to college. However, many students continue to be burdened with family demands placed by parents on them to prioritize family over individual needs. Family commitments can influence students' adjustment to college in various ways.

Research in the area of college adjustment and outcomes has emphasized the importance of experiences within the educational environment. The retention theories proposed by Tinto (1982) and Astin (1984), which emphasized student experiences as predictive of college commitment, both acknowledged that students' success is influenced by experiences occurring within the university as well as background or personal characteristics. However, neither accounted for ongoing influences or forces that play a role outside of the academic setting. The

inclusion of outside commitments and demands expands the referenced models beyond the linear progression of previously studied variables. The expansion of the previous models provides a more integrative explanation of the process of students' adjustment to college.

### **Adjustment to College**

The process of adjusting to a higher education environment can be complex. College adjustment occurs in multiple contexts and can be defined in terms of academic, personal, social, as well as attachment to the institution. One of the earliest definitions of college adjustment was proposed by Arkoff (as cited in Abdullah, Elias, Mahyuddin & Uli, 2009) and referred to a student's interaction with his or her environment. His definition referenced student's academic achievement and personal growth as measures of the adjustment. Consistent with his proposed explanation of the adjustment process, well-adjusted students obtained good grades, passed their courses, and graduated. According to the ecological theory proposed by Bronfenbrenner (1979), each person's actions are defined by multiple layers of influences, and such influences operate as different systems. The adjustment to college occurs in the context of a person's background characteristics, personal variables, interactions with the immediate environments and the more distant environments. Hence, students' college experiences may vary significantly due to differences in the impact of these levels.

The process of transition, which leads to adjustment to college, has been explored by various scholars. Incoming college students face a number of challenges, which include greater academic demands, greater autonomy, and less academic structure as compared with their high school experiences. The adjustment to college has been identified as an important outcome in its own as well as an important predictor of educational outcomes. Through a review of the existing literature, Crede and Niehorster (2012) found that college adjustment is predictive of college

academic performance and a very good predictor of college retention. The relationship between college adjustment and college retention has been identified by others as well (e.g., Robbins, Oh, Le, & Button, 2009).

The studies of college adjustment utilize various foci regarding the meaning of adjustment. Crede and Nichorster (2012) emphasized an important distinction within the literature between adjustment to college, which they defined as “the degree to which students are able to quickly and effectively adapt to various challenges encountered in a new college environment” (p. 134), and the adjustment of college students, which referred to students’ personal characteristics that existed as separate from the process of transition to college and commonly were in existence prior to college entry. Those may include emotional and behavioral strengths and difficulties, such as coping strategies, self-esteem, and mental health, among others.

Despite various interests within the adjustment literature, consensus exists recognizing the fact that the process of college adjustment is multidimensional and complex. Based on their exploration of the area, Baker and Siryk (1986) developed an instrument designed to assess students’ adjustment to college, the Student Adaptation to College Questionnaire (SACQ). These authors recognized the multifaceted nature of college adjustment. In addition to overall experience, Baker and Siryk (1986) documented various aspects of adjustment, including academic adjustment, social adjustment, personal-emotional adjustment, and institutional adjustment. Each area of adjustment has been translated into a subscale within the SACQ. The Academic Adjustment subscale assesses students’ success in coping with various academic demands of college, such as their academic performance, seeking academic support when needed, and their motivation and confidence to do well. The Social Adjustment subscale assesses

students' demands with interpersonal-societal demands of college, such as developing satisfying relationships with others in college and involvement in social activities. The Personal-Emotional Adjustment subscale assesses students' internal; psychological state and level of distress experienced during adjustment to college, and may include depression, anxiety, substance abuse, and self-esteem. The final subscale, Institutional Adjustment, assesses the level of attachment to the institution as well as commitment to personal academic and institutional goals, such as feeling connected and sharing views aligning with the institution's mission.

### **Theoretical Orientation**

Based on the complexity of the college adjustment concept and the process of adjusting, it is crucial to incorporate various levels of influences to gain a valid understanding of this process. According to the bioecological model of human development, an individual develops and changes over time as a result of being influenced by environmental powers (Bronfenbrenner & Morris, 2006). The combination of biology and environment has been thought to greatly contribute to intrapersonal and interpersonal differences among young adults at various points in their lives, including starting college. However, an individual's internal characteristics may be defined prior to entering college. In this regard, characteristics are not static and continuously interact with the environment. Therefore, college adjustment is influenced by a person's internal and external forces.

Although college adjustment may be affected by numerous influences, intrapersonal characteristics, which can be referred to as psychosocial resources, serve a fundamental role in a person's abilities to adjust to various situations. Among such resources are self-confidence, motivation, and ability to cope with stress. Based on the dynamic nature of individuals, their adjustment to various situations will also be affected by external influences. In reference to



college adjustment, the external influences are those present in an individual's environment, including those within and outside of the college or university. The impact of the higher education environment has been emphasized by college retention theorists, Tinto (1982) and Astin (1984). Both theorists accounted for the individuals' personal and background characteristics, and college experiences as related to college commitment. However, they failed to recognize the dynamic nature of person-environment interplay. In this study, incorporating college experiences as emphasized by Tinto and Astin, and other environments into a bioecological model of development were used to explore the process of college adjustment.

### **Mediation**

Based on a continuous and changing nature of a person, intrapersonal characteristics may be directly and indirectly related to a person's college adjustment. In a direct relationship, an individual's characteristics may be directly linked to the outcome, college adjustment, defining the direct effect. However, the relationship may be affected by external forces. When an intervening or process variable is introduced, it is referred to as the mediator. The introduction of mediation in a relationship between two variables may completely or partially alter their relationship. When a relationship between personal characteristics and college adjustment is weakened by the introduction of external variables, partial mediation takes place. However, in cases where a relationship between two variables, intrapersonal characteristics and college adjustment, can no longer be detected after the introduction of a mediator (external variables), complete mediation takes place (Kenny, 2012).

### **Personal and Psychosocial Resources**

At the immediate level, each person possesses personal characteristics that impact the ability to function and thrive in a variety of settings. Past research identified a link between

students' past academic performances, such as high school GPA, and scores on standardized high school achievement tests, such as the ACT or SAT, with their academic performance in college (Friedman & Mandel, 2009). Further, college academic performance has been identified as one of the strongest predictors of college graduation (Robbins, et al., 2009). However, several other factors have been identified as important for successful adjustment to college, such as a positive outlook on college success (Solberg, Evans, & Segerstone, 2009), a high level of motivation (Robbins, et. al., 2009), personal characteristics, such as high levels of self-efficacy (DeWitz, Woolsey, & Walsh, 2009), and high levels of support (DeBerard, Spielmans, & Julka, 2004).

Gender differences regarding college outcomes also exist, with men being more likely to drop out of college than women. Even when controlling for other variables, females are twice as likely to graduate in four years as their male counterparts (Noble, Flynn, Lee, & Hilton, 2007). Consistent with the importance of socialization in academic achievement, girls are more social with others in a college setting, which may lead to more successful adaptation to college. Easier adaptation to college life may also lead to greater 'identification with school'. Noble et al. (2007) also found that sex and race had strong influences on academic performance. Consistent with other research, they found that women tend to have higher GPAs than men. However, this difference was present only when controlling for other variables.

### **Expectation for Success and Self-Confidence**

Individuals' confidence in their ability to succeed has been shown to affect their performance in various areas. The belief that one has the capacity to achieve a desired goal or behavior has been labeled by Bandura as 'self-efficacy'. Self-efficacy has been identified as significant factors that are related to college student academic outcomes and retention (DeWitz et

al., 2009). Low self-efficacy can lead to developing feelings of isolation and helplessness, which may dampen one's chances of utilizing peer supports. Strong self-efficacy can enhance performance and problem solving skills in certain areas, including academic achievement. DeWitz and colleagues (2009) found a strong relationship between one's sense of self-efficacy and students' subjective purpose in life, which has been associated with increased chances of continuing enrollment at school. In addition, a high level of self-efficacy can enhance one's level of motivation (Leszczynska, Gutierrez, -Donna, & Schwartz, 2005).

### **The Role of Coping Strategies**

According to the classic stress and coping theory, coping tactics play a crucial role in the adjustment process in the face of stress (Crockett, Iturbide, Torres Stone, McGinley, & Calo, 2007). Coping skills include cognitive and behavioral components. More specifically, efforts can be made and behavior can be altered based on the emotional appraisal of the situation. Crockett et al. (2007) described active coping strategy as cognitive or behavioral management of a stressor leading to decreased effects of stress. In the case of social adjustment, active coping may take the form of active social support seeking, such as taking part in campus life through participation in clubs, activities, and events offered by the educational institution. In basic terms, active coping implies taking action to address the problems. On the other hand, avoidant coping has been described as ignoring the problem and is thought to be less effective than active coping in reducing stress (Crockett et al., 2007). In terms of promoting successful adjustment, avoidant coping implies avoiding seeking social support from peers or organizations to cope with interpersonal difficulties and challenges related to social functioning on campus (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). In general, avoidant coping implies avoiding dealing with the problems and refraining from taking actions to improve the adjustment

process, often hoping that the problems will go away, but risking an increase in mental health problems. Regarding college adjustment difficulties, avoidant coping may be represented with poorer adjustment and possibly dropping out of school.

Successful adjustment to college resulting from constructive, active coping may be linked with actively seeking social activities on campus. However, coping strategies are not only regulated by the cognitive abilities one possesses but are also influenced by an individual's personality. Persons who are more likely to practice an active coping style may be described as more extroverted and social, which improves their chances of social adjustment. Crockett et al. (2007) stated that avoidant coping may be more detrimental for women who often have greater interpersonal needs as compared to men. Among all freshmen transitioning to college, those individuals who utilize social connections less frequently may be at the highest risk of experiencing adjustment difficulties and may require additional support. However, they are also less likely to seek that support from counselors or academic advisors, which may further exacerbate their stressors. Unfortunately, since they infrequently reach out for help, identifying this student population may be challenging. Professors, teaching assistants, and resident administrators should be educated and sensitized to identifying at-risk-students.

### **Motivation**

An individual's level of motivation to succeed in college has been perceived as an important aspect of academic success (Trapmann, Hell, Hirn, & Schuler, 2007). Achievement orientation can be defined, influenced, and characterized by behaviors such as time commitment, effort, and engaging in support seeking behaviors (Trapmann et al., 2007). Solberg et al. (2009) found a positive relationship between academic optimism, higher chances of school retention, increased motivation, and decreased distress. The authors explained that optimists are more

motivated to perform well in college because they expect a positive outcome (Solberg et al, 2009). An expectation for positive academic outcome can be also linked to academic self-efficacy.

### **Living Arrangements**

Certain aspects of college adjustment are related to students' living arrangements. Noble et al. (2007) evaluated the ESSENCE (Entering Students at South Engaging in New College Experiences) program, which was a program for resident first year students. The program included seven components: residential component, orientation component, structured group activities, relationship building activities, peer advising, and tutoring. The underlying assumption was that social integration into the campus life will promote student success. Noble et al. (2007) found that living on campus, regardless of participation in new student programs, was associated with higher GPAs as compared with GPAs of commuter students. Further, they found that, even when controlling for other variables, students who reside on campus had one-tenth of a point higher GPAs than those who reside off-campus. Further, those who participated in ESSENCE, which required on-campus residence, had even higher GPAs, 0.15 points higher than students who resided on campus, but did not participate in ESSENCE. Importantly, on campus living appeared to have positive effects for all student groups, including those more susceptible for dropping out, as well as men and minorities. Students who participated in ESSENCE also had higher rates of graduation than other student groups. The difference was a staggering 50 to 60%, even when controlling for ACT scores and GPA (Noble et al., 2007).

## **University Environment Influence**

### **Identification with School**

Noble et al. (2007) referred to the early proposed theoretical framework described by Tinto (1975), who emphasized the importance of two aspects of integration for education: moral (value) integration and collective affiliation. Moral integration refers to holding values similar to the university's, while collective affiliation refers to maintaining personal interactions with those involved in student life. Tinto's (1982) student integration theory states that a student's background information impacts his/her academic and social integration into the structure of the university. The model describes how well a student fits into a particular environment, which thereby affects his/her adjustment. The authors expected that students who present deficiencies in one or both areas of integration will experience a decreased learning experience and will be more likely to leave the college setting as compared with those who successfully engage in both aspects. Such successful adaptation has also been referred to as "identification with school" (Voelkl, 1997). Further, students who fail to integrate into the school life lack a sense of connection with the institution and may feel hopeless and lonely (Freeman, Hall, & Bresciani, 2007). Integration can occur via various channels, including participation within the classroom, involvement outside the classroom, and interacting with peers and faculty.

### **Peer Interactions and Social Engagement**

The level of social adjustment has also been identified as important to improving the college experience, and ultimately impacting college retention. Social adjustment can directly and indirectly impact individuals' retention level. In their work, Freeman et al. (2007), found that many students who contemplated leaving college also reported discontent with their college social life and experiences. Students who reach high levels of social adjustment may simply feel

more comfortable at college and may present with a higher ability to cope with school related stressors. Indirectly, students who are successfully socially adjusted may receive a high level of peer support, may model positive academic behaviors, and may feel better about their ability to succeed. Contrarily, students who fail to adjust socially may experience a lack of connection with the institution, feel isolated, perceive a lack of support, and feel worse about their ability to succeed. Considering the developmental period, the support needs noticeably shift from the parental to peer support networks.

### **Opportunities for Peer Engagement**

Students' out-of-class experiences are more influential than might be expected by the administrators. Although social adjustment has been generally linked with positive college experience and academic success, empirical evidence regarding the impact of socialization on academic performance and college adjustment is mixed. Findings of peer interaction studies vary based on the type of peer interaction examined. Terenzini, Pascarella, and Blimling (1996) reported a positive impact from academic peer interaction on students' performance through peer tutoring. On the other hand, students who spend more hours socializing with their friends in non-academic environments, such as those who are active in fraternities or sororities, appear to be at an academic disadvantage. Further, the authors reported that their previous research showed that even after controlling for precollege cognitive development, fraternity membership was negatively associated with various academic skills, such as reading, mathematics, and critical thinking (Terenzini et al., 1996).

One of the ways of engaging in peer interaction is through participation in learning communities. Learning communities were defined by Barnes and Piland (2010) as the "linking of courses with enrollment of a common cohort of students" (p. 8). Learning communities are

created by clustering students of similar interests and majors, designed around a common theme (e.g., theater). Past research linked student engagement with improved academic success and retention (Zhao & Kuh, 2004). Students who reside on campus and are a part of the learning community are often housed in the same residence halls. This arrangement has been referred to as living learning communities. However, living learning communities may be difficult to create in an urban university with a high rate of commuter students, such as at Wayne State University. Participation in learning communities provides students with opportunities for social engagement and often facilitates creation of peer support networks.

### **Faculty Engagement and Sense of Connectedness**

Although higher education institutions place heavy emphasis on academic and in-class development, much of the adjustment to college takes place outside of the classroom. Students' academic development has been strongly influenced by their out-of-classroom experiences and has been shown to be more significant than estimated by faculty members and academic and student affairs administrators (Terenzini et al., 1996). Students' interaction with faculty is most often associated with their in-class interactions. However, students also have opportunities to frequently seek contact with faculty outside of classrooms. As early as 1974, Wilson, Wood, and Gaff (1974) studied the accessibility and impact of faculty-student interactions beyond classrooms. They found that students who had the most out-of-classroom interaction with their faculty demonstrated the greatest gains in various skills and academic performance. Although such a relationship has been consistently identified by other researchers, less is known about the direction of the interaction between the student-faculty interactions and academic gain by students.



### **Experiences Outside of College**

Another layer of an individual's environment and respective influences is the immediate environment which often includes their living environment and those involved in it. Only about 10% of students attending Wayne State University (WSU) reside in university housing. The remaining population of students resides in other settings that can include living independently or with others in off-campus housing, or residing at home with their families. The students who reside with their families may be burdened with additional behavioral responsibilities and commitments. First-generation students and students from families with financial struggles may experience additional educational challenges. Such students may be faced with behavioral and financial demands and commitments toward the family. They may work to fulfill family obligations or their financial demands related to supporting themselves during college. The impact of financial responsibilities and commitments on college adjustment has been studied primarily among immigrant families who hold strong family values and commitments (Cabrera & Padilla, 2004; Fulgini & Pederson, 2002). Research on the general population within the context of a large urban university is virtually non-existent. However, demands placed on young adults from urban, financially struggling backgrounds, may have a similar effect. The unknown impact of external demands on students' adjustment involving employment status, the intricacies of family demands, and commitments are important in understanding the complex process of adjustment to college.

#### **Family Obligations and Commitments**

The family microsystem continues to impact undergraduate students. The concept of family obligations refers to a collection of values and behaviors related to the children's provision of assistance, support, and respect to their parents, siblings, and extended family.

The levels of family obligations also carry a cultural component. For example, Latino students report a stronger sense of family obligations as compared to European or Asian students (Sy & Brittan, 2008). Sy and Brittan (2008) also found that European American students with greater family obligations were more likely to reside at home while attending college. Such levels of family obligations and residing at home may hinder students' availability to connect with the campus community.

### **Employment**

Employment responsibilities can affect student's adjustment in various ways. Students who work long hours may not have time to connect with the university community and may therefore limit their exposure to the campus community only through attending classes. Research supports that working long hours off campus and in low income jobs, increases the level of stress among college students (Hey, Calderon, & Seabert, 2003). However, working on campus has not been shown to pose a similar problem for students (Sy, 2006). Thus, students in urban areas may be required to work to support their academic needs as well as their family needs.

### **Work-School Conflict**

Although each system can directly influence adjustment experiences, the systems can work indirectly and interact with one another in shaping a person's experiences. For instance, students' ability to reach a sense of connectedness and satisfaction with their social adjustment to college may be complicated by their family obligations and commitments. Students may feel torn between their wish to spend more time on the college campus involved in social activities and their responsibility to attend to their family's needs. Sy (2006) found that conflict between school and work responsibilities contributed to a higher level of stress and lower academic performance among Latino students. Although each system can directly influence adjustment

experiences, the systems can work indirectly and interact with one another in shaping a person's experiences. For instance, a students' ability to reach a sense of connectedness and satisfaction with their social adjustment to college may be complicated by their family obligations and commitments. Students may feel torn between their wish to spend more time on the college campus involved in social activities versus obligations to attend their family needs. The conflict between work and school may contribute to a heightened level of anxiety and may challenge successful adjustment to college. A complete understanding of factors that support and hinder college adjustment process is crucial for designing appropriate programing for students at risk.

### **Family-School Conflict**

In addition to the impact of work responsibilities on students' opportunities to connect with their college environment, students may also be affected by their family demands. The family demands may create a conflict between attending to their family and school responsibilities. Such conflict may lead to difficulties balancing their roles as a student and a family member, in turn impacting the students' well-being. Students, who spend much time assisting their families, may simply not have enough time for social life in college. Given the evidence for the negative impact of the conflict between school and work responsibilities on academic performance referenced by Sy (2006), it is likely that similar conflict may exist between family and school.

### **Problem Statement**

One of the most significant events during emerging adulthood is the attainment of education. Individuals who hold bachelor degrees earn almost twice as much over their lifetimes as those with high school diplomas (U.S. Census Bureau, 2002). Although numerous young adults enroll at colleges and universities, many of them fail to graduate within five years, and a

significant number never graduate. According to the American College Testing Services (2010), as many as 50 percent of students who enter colleges and universities never graduate. Furthermore, many students who graduate are taking significantly longer to obtain their degree. More specifically, only 35 percent of college students achieve the goal of graduation within 5 years, and many of them take significantly longer (American College Testing Services, 2010). In addition, students of color, low-income, and first-generation students, who comprise a significant portion of the student body in urban colleges and universities, have the lowest rates (8 to 18 percent) of graduation and timely degree completion (Education Commission of the States, 2004). Urban colleges and universities, such as Wayne State University, typically have high enrollment rates of minority students and are faced with higher rates of commuter students who may not connect with the institution as well as students on primarily residential university campuses.

College adjustment is important on its own as it is linked directly to a person's experiences. It is also an important factor in college retention and academic outcomes. The transition and eventual adjustment to college can be an overwhelming experience for many students. Based on Tinto's theory of retention, integration into an academic environment and academic experiences is directly linked to a student's decision to continue in college. Further, the level of students' success can carry impact on the individual, educational institution, as well as the society. Poor adjustment to college and disconnect from the educational institution may impact the college's reputation, revenue, and enrollment. Consequently, the availability of state funding for the institution may be limited. Based on WSU Fall Enrollment Report (2011), overall student enrollment decreased by 2.4% between Fall 2010 and Fall 2011, with the greatest decrease of 6.7% among First Time in Any College (FTIAC) students. Successful

adjustment to college can predict college success. Drop out of college is often related to adjustment difficulties. In his research, Tinto (1993) concluded that dropping out of college was caused by adjustment problems. Further, college adjustment can be predictive of academic performance in college. Therefore, students' college adjustment is important in improving retention rates in higher education.

Adjustment to college greatly influences a person's decision to continue in the educational environment or drop out. Past research identified various factors that contribute to college success and to persistence toward higher education attainment. However, several problems exist within current literature. The current studies tend to limit the focus to singular levels of influences within the context of ecological systems theory. Furthermore, considering the multilevel nature of adjustment, an understanding of college adjustment needs to incorporate a multifaceted nature of this process. Most prominent theories of college outcome, such as those discussed by Tinto and Astin, emphasize the significance of experiences within the educational environment, with little importance placed on experiences occurring outside of college or university interactions. The studies of social integration primarily examine the role of peer involvement. Although studies have recognized important roles faculty and staff play in promoting positive college experience, such research has been done primarily in community colleges or small private universities with greater frequencies and opportunities for student-faculty interactions (Braxton, Bray, & Berger, 2000). Furthermore, past research that evaluates the importance of outside experiences, such as family obligations, has been done mostly with the immigrant student population, primary Latino students, who tend to have a stronger sense of family obligations as compared to other ethnic groups (Fulgini, Witkow, & Garcia, 2005; Gonzalez, Stoner, & Jovel, 2003; Otero, Rivas, & Rivera, 2007). Little is known whether a

similar effect may be found among student populations in large urban university settings. Understanding the risk and protective factors that influence students' endurance in higher education is important for promoting educational success among young adults.

### **Significance of the Study**

Attainment of higher education is an important milestone in a person's life. However, the transition to college can be stressful and adjustment to college can become a source of stress. Successful adjustment has been linked with positive academic outcomes and improved college retention (Tinto, 1997). Further, level of education and failure to graduate from a higher education institution influences several generations. Individuals who fail to obtain a college education may struggle with obtaining employment and providing financial support for themselves and their families. The attainment of a college education is often associated with greater career opportunities and higher income. Promoting college education may promote various gains and may decrease the health cost and social service needs to society.

Wayne State University is a large, primarily commuter urban university. In addition, Wayne State University has been recognized as one of the major higher education institutions for minority students in the U.S. In addition, Wayne State University has graduation rates even lower than several other urban universities. Wayne State University's six-year graduation rate was only 32%, with the lowest rates for African-American students (Faculty Retention Committee Report, 2008). First-to-second year retention rates were lowest among African-American students. In Fall 2008, WSU first-year retention rates among FTIAC Caucasian students were around 79% while first-year retention rates among FTIAC African American students were at a relatively high rate of 69.6%, which was 12.8 points higher than compared to the Fall 2007 rate of 56.8% (Shapiro, 2010). An understanding of the unique needs of students in

the unique educational setting, a large commuter university with high levels of minority students enrollment, is important in designing specific programing to promote positive college experiences and retention

Although various predictors of college adjustment have been identified, questions regarding why certain groups of students report an easier transition and better adjustment to the college environment despite multiple risk factors remain. This study examined the differences in college adjustment of a diverse body of students at Wayne State University. The study also sought to validate the importance of various psychosocial influences occurring both within and outside of the university in addition to the personal characteristics on successful adjustment and anticipated persistence for students in a large urban university. The goal of the study was to identify unique aspects that promote student success among emerging adults attending a large urban university in a multisystemic context. The study investigated whether relationships exist between college adjustment and students' academic preparation (high school grade point average and ACT scores) and background characteristics, such as family socioeconomic status, ethnicity, gender, age, availability of financial aid, and living arrangements. Next, the study explored the relationship between college adjustment and personal characteristics, such as general and academic self-efficacy, motivation, and coping style. Further, the study explored the impact of variables present within the college environment, such as peer social experiences including, being part of different student groups, the amount of interaction with peers, and perceived peer support, and faculty influences such as perceived support on college adjustment. Next, the study examined the impact of external to college environment forces, such as family obligations, family behavioral demands, and employment on college students' adjustment. Finally, the study examined the extent of the relationship between students' college adjustment and the conflict

between work and family responsibilities and school responsibilities. Identification of factors that promote student success is important for university program development, as well as for tailoring programs to the unique needs of students who present with risk factors in differing levels of their environment.



## CHAPTER 2

### LITERRATURE REVIEW

#### Introduction

The transition to college can pose many challenges and difficulties throughout the adjustment process. Students, especially those who choose to reside on campus, experience many adjustments, including the loss of familiarity and embarking on new territories and struggles in their lives. The transition process involves many adjustments and necessitates life-altering decision making, including being away from family, depression, isolation, increasing independence, establishing new social networks, and coping with different levels of academic stress (Arnett, 2000; Dixon Rayley & Chung, 2007; Lamborn & Grosh, 2009; Skowron, Wester, & Azen, 2004). This process may involve becoming self-reliant and reaching psychological separation. Difficulties separating from parents have been linked with poorer social and personal/emotional adjustment to college (Lapsley, Rice, & Shadid, 1989). Skowron et al. (2004) confirmed a link between autonomy and adjustment among college students. However, the adjustment appears to be most problematic during early college experiences, which may be most important due to the highest dropout rates occurring during the first two years in college. Successful adjustment is important in promoting a satisfying college experience, which can lead to increased persistence and graduation rates (Gerdes & Mallinckrodt, 1994).

The process of college adjustment can be challenging and unpredictable to individuals. It may be seen as multidimensional rather than general. Students' adjustment may differ between various areas of functioning. By assessing adjustment expectations and actual adjustment midway through the initial semester, Gerdes and Mallinckrodt (1994) found that students commonly overestimated their academic and social adjustment ability and underestimated

personal/emotional adjustment potential. Baker, McNeil, and Siryk (1985) stressed the importance of studying variables related to college transition in order to provide appropriate interventions that can enhance adjustment.

### **Theory**

College experiences have been of interest to researchers for decades. College outcomes have been examined mainly from the retention and commitment perspectives. However, even retention models stress the importance of college experiences. Most current models of student retention include academic and social variables. The earliest theories regarding a student's retention were proposed by Tinto (1975, 1993) and Astin (1984, 1985). In his model stemming from the theory of student departure, Tinto placed particular focus on social and academic integration as crucial to institutional and goal commitments and, in turn, to college retention. He suggests that students need to separate and successfully integrate into academic and social aspects of college life in order to persist in college. Tinto's theory is most relevant to students who reside on campus who may have the greatest opportunities to successfully integrate into college life. Conversely, he suggests that commuter students may struggle the most with the integration process as they spend less time on campus compared to residential students. Another prominent theorist in the area of college adaptation is Alexander Astin, who proposed the I-E-O Model and Theory of Involvement, in which emphasis is placed on the input (past experiences and personal characteristics) and the college environment as related to the college outcomes, such as academic performance, adjustment, or retention.

The theories of college development appear to propose linear influences leading to specific experiences, with Tinto focusing on retention while Astin allowing a broader definition of academic outcomes. Although Tinto focuses on retention, his model places importance on

adjustment variables: academic and social integration. Both theorists acknowledge the importance of background characteristics and experiences within the educational institution. However, they appear to discount the impacts of interactions between different levels of influences present in a person's life at the time of their college experience. The importance of multiple settings that interact and change over time while shaping a person has been emphasized by Bronfenbrenner in his bioecological model (Bronfenbrenner & Morris, 2006). DeWitz, Woolsey and Walsh (2009) criticized the utility of Tinto's model as offering little practical suggestions regarding individual students beyond the general predictive value. Another criticism of the model pertains to cultural insensitivity and a lack of applicability to students of color (Museus & Quaye, 2009). Further, although Tinto's model is the most commonly used model in studies of retention, its empirical support is mixed. The importance of social integration as opposed to academic integration has received more empirical support (Friedman & Mandell, 2009). Academic integration has not rendered consistent empirical assertion in the context of the college departure process. Due to this shortcoming, the development of a more inclusive model, which encompasses interactions between college factors and ongoing external commitments, may allow for a comprehensive view of how students adjust to college successfully.

### **Current Model**

The current model involved three different levels of influences: personal resources, variables internal to the university, and variables external to the university. Personal resources included demographic variables (i.e., academic preparation, family socioeconomic status, ethnicity, gender, age, financial aid, first time in any college, and living arrangements) and psychosocial resources (i.e., self-efficacy, motivation, and coping style). Variables internal to the university included peer involvement, peer support, and perceived faculty understanding and

support. Variables external to the university included family obligations and employment. Past research examined the influence of personal resources and internal university influences on college adjustment, but primarily as a direct relationship. The model in this study involved external factors as mediators between personal resources and college adjustment.

An addition of the mediation of external influence between personal resources (internal personal characteristics) and college adjustment would not only expand, but possibly alter understanding of the process of college adjustment. The individuals who have a stronger sense of self-efficacy, and/or those who are able to cope well with stress are likely to report better adjustment to college. However, when they are faced with external responsibilities (separate from college interactions), such as family obligations or employment, their personal characteristics may no longer be predictive of their college success. For instance, even when an individual feels highly efficacious about their ability to successfully adjust to college, having family obligations that take up their time, or prioritize family responsibilities over school responsibilities, may overshadow positive effects of feeling efficacious, and diminish or cancel out the relationship between their self-efficacy and college adjustment. Similarly, this may be true for motivation and coping ability. In addition to family obligations, working while in college may negate the relationship between personal characteristics and college adjustment. Students who work long hours may feel too tired or lack time to engage in college life activities, which may challenge their chances of feeling connected with their educational institution regardless of their personal resources. It is important to note that different aspects of adjustment will likely be affected differently by mediation of external college influences.

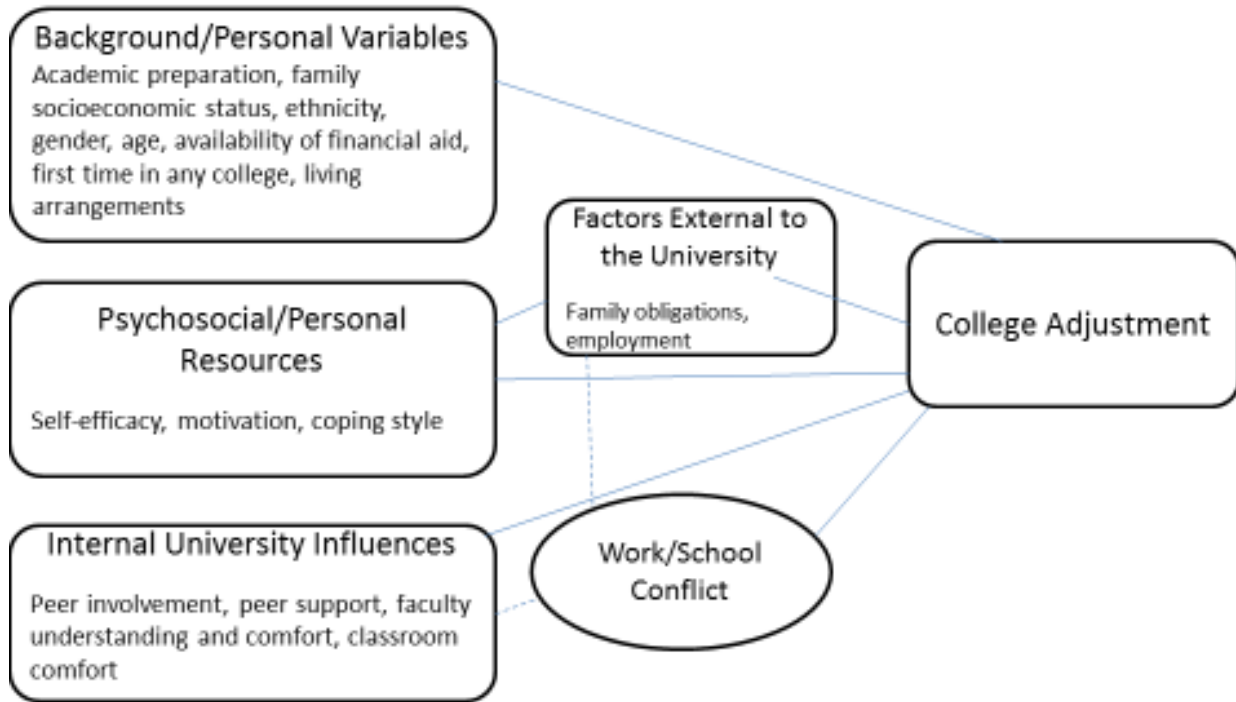


Figure 1. Multi-level model of college adjustment

### Levels of Influences

#### Background and Personal Characteristics

Past research identified personal, background, and situational characteristics as related to student outcomes. Tinto (1975) stated that students' entry characteristics directly influence students' commitments to the institutions and departure decisions. Academic and intellectual factors have been connected with academic success and college outcomes. Academic preparation and ability has been well documented as related to college success. Nora and Cabrera (1996) found a link between ACT scores and college success among minority and nonminority students. However, academic ability alone does not secure college success. Robbins, Lauver, Le, Davis, Langley, and Carlstorm (2004) found that psychosocial and study skill factors contributed much

more to predicting college outcomes than socioeconomic status, standardized achievement, and high school GPA. The impact of academic preparation on college outcomes may differ by ethnic and cultural background. Barnes and Piland (2010) found a relationship between course retention in a community college rates to be related to high school graduation status. They found that students who held a foreign high school diploma had the highest retention rates in developmental English courses as compared with students who held regular high school diplomas and General Educational Development certificates (the lowest retention rates). Further, ethnic and gender differences have been documented in relation to college adjustment. Enochs and Roland (2006) examined the relationship between living environment, gender, and general and social adjustment among students living in Freshmen Year Experience (FYE) Halls and students living in traditional halls. Males presented with higher levels of general adjustment than females in both types of halls. However, no gender differences were found in the levels of general adjustment when examined only in the sample residing in FYE halls. Further, students of both genders residing in FYE halls reported higher levels of social adjustment as compared with those residing in traditional halls.

Other authors referred to characteristics of living arrangements as important in promoting college adjustment. Adams, Ryan, and Keatingnes (2000) suggested that residing in an environment conducive to learning promoted better adjustment. Further, availability of financial aid may play a significant role in successful adjustment to college. Financial concerns are crucial in understanding college outcomes as higher education enrollment has been increasing in diverse student populations with limited resources (Museus & Quaye, 2009). Students who struggle financially and do not have access to financial aid, if needed, may experience higher levels of

stress and be burdened by additional responsibilities, such as employment, to support themselves while in college

### **Psychosocial Characteristics**

A number of personal variables have been identified as relevant to college experiences and outcomes. Some of these include beliefs about self, personality characteristics, motivation, and health behaviors. Although some appear to directly affect potential for successful college adjustment, others have been linked to college adjustment and retention rates in indirect ways. For instance, DeBerard, Spielmans and Julka (2004) found that health and psychosocial variables, such as smoking, drinking, health-related quality of life, social support, and maladaptive coping strategies, were also associated with retention rates. After other variables were accounted for, drinking and physical health were predictive of academic achievement. However, they were predictive only if assessed independently. Smoking was identified as a significant predictor of achievement, independently, and when the effect of other variables was accounted for. The overall level of mental health was also predictive of achievement. The relationship between self-efficacy and motivation has been identified as directly related to college adjustment, while the role of coping strategies appears to have a more indirect role. However, existing research fails to adequately explore possible mediators between psychological constructs and coping behaviors, and various aspects academic adjustment in college.

#### **Self-efficacy.**

The concept of self-efficacy plays an important role in how people feel, think, and behave. Bandura (1997) proposed four sources of self-efficacy: performance accomplishments, vicarious learning, social persuasion, and emotional arousal. Each of the sources can significantly contribute to different level of college adjustment and success. An individual's own

and observed experiences will affect their belief in success at tasks in college. In addition, social encouragement stemming from social support may encourage the individual to approach challenging tasks related to the adjustment process. Finally, emotional arousal may affect one's ability to cope with stress, also influencing their adjustment. Self-efficacy can be identified in general terms as well as specific to a given task, such as academic self-efficacy.

**General.** Self-efficacy has been well documented in promoting good academic performance (Bandura, 1993). Weiser and Riggio (2011) found self-efficacy strongly predicted grade point average and expectation for academic success in a sample of 93 students from a large state university in California. In addition, self-efficacy mediated the relationship between parental involvement and academic self-efficacy. This finding suggests that feeling efficacious may compensate for lack of parental involvement and support. Individuals with a stronger sense of self-efficacy are more likely to engage in and commit to challenging academic and non-academic tasks in college. General self-efficacy was found to be a strong predictor of a stronger purpose in life or a sense of meaning for college students (DeWitz et al., 2009).

**Academic.** Academic self-efficacy has been linked with positive academic outcomes (Weiser & Riggio, 2010). In addition, academic self-efficacy has been found to predict academic expectations and performance (Chemers, Hu, & Garcia, 2011; Majer, 2009). Through analysis of 109 studies, Robbins and colleagues (2004) found that academic self-efficacy along with achievement motivation, out of nine psychosocial and contextual factors, best predicted college GPA. However, only a moderate relationship was found between retention and academic self-efficacy. A study of academic self-efficacy among a diverse sample of first-generation college students showed that self-efficacy predicted grade point average at a 1-year follow-up (Majer, 2009). Although academic-self-efficacy may directly predict academic outcomes, less is known



about the impact of academic self-efficacy on multiple dimensions of college adjustment. In addition, the documented relationship may be affected by external responsibilities.

### **Motivation.**

Motivation to succeed in college is an important aspect of college outcomes. Past research has shown motivation to predict college student persistence and academic performance. However, limited research exists regarding motivation and all dimensions of college adjustment. Thomas (2009) studied the relationship between self-efficacy, motivation, and adjustment. She found that intrinsic motivation mediated the relationship between self-efficacy and academic adjustment, while extrinsic motivation did not mediate that relationship. Elliot (1999) studied approach and avoidance motivation and argued for expansion of a performance-mastery dichotomy. Further, the author argued for student motivation to predict college persistence. Friedman and Mandel (2009) found that students' academic expectancy motivation at the beginning of their freshman year predicted their GPA at the end of the year. Similarly, meta-analysis conducted by Robbins and colleagues (2004) indicated that achievement motivation was one of the most powerful predictors of college GPA. In a later study, Robbins, Allen, Casillas, Peterson, and Le (2006) found that performance-based motivation was primarily associated with college students' first-year GPA, while aspiration-based motivation was mainly associated with second-year retention. Another study examined motivational factors regarding students' dealings with challenging activities. Students identified primarily with extrinsic motivation (to earn a grade) as an explanation of their successes and failures (Schweinie & Helming, 2011). Motivation to succeed in college may be particularly strong among minority students who may have overcome many challenges to pursue their higher education. Tseng (2004) indicated that students from immigrant families report stronger academic motivation than their peers from non-

immigrant families. Cabrera and Padilla (2004) reported that Stanford University Latino graduates presented with a high level of intrinsic motivation and strong confidence in their ability to manage challenges while in college.

### **Coping**

The transition to college and resulting adjustment can be filled with stress. Academic stress has been linked with an increase in mental health concerns, including depression and anxiety, as well as higher drop-out rates among first-year college students (Dixon Rayle & Chung, 2007; McClain & Abramson, 1995). In addition, studies identified high levels of stress especially among first year college students related to changes in new and increased academic responsibilities, poor time-management skills, and financial pressures (Misra, McKean, West, & Russo, 2000). Perceptions of stress have also been linked with problems related to academic, social, and emotional adjustment (Brissette, Scheier, & Carver, 2002; Crockett, Iturbide, Torres Stone, McGinley, & Calo, 2007; Kerr, Johnson, Gans, & Krumrine, 2004). Misra et al. (2000) examined perception of students' stress among 249 students and 67 faculty. They found that faculty overestimated experiences of stress among students. Nevertheless, college students reported feeling stressed during college. Because stress is an integral part of the college adjustment process, the ability to effectively cope with stressors is vital to successful adjustment. New students must learn to manage stress related to new and increased independence and autonomy.

The role of coping can have a direct or indirect effect on college outcomes. DeBerard and colleagues (2004) found that smoking was related to 'escape-avoidance' coping behaviors. Those individuals were more likely to isolate themselves as opposed to addressing the issues directly, such as through seeking social support. Isolation can lead to feeling alienated and detached from

campus life. The study by Crockett and colleagues (2007) found that active coping (seeking support) was associated with lower levels of depression, while avoidant coping (ignoring the problem) was associated with higher levels of depression and anxiety among Mexican-American college students in the face of acculturation and college adjustment stressors. In turn, the study showed that social support from parents, in combination with active coping strategies, buffered the effects of stress on anxiety and depressive symptoms. In addition, the social support from peers acted as a moderator between acculturation stress and anxiety symptoms. The study exemplified and validated the assumptions of the classic stress and coping theory as critical in stress-adjustment relation.

Individuals who are more likely to practice an active coping style may be described as more extroverted and social, which improves their chances of social adjustment. Those individuals may not face similar struggles as compared to those who struggle with forming successful social connections. Importantly, individuals who are more likely to utilize an avoidant coping strategy may be characterized by introverted personalities. Such individuals may already face additional challenges of social anxiety and impaired interpersonal skills. Their coping style may be reflecting their general adaptation difficulties and personal struggles rather than conscious avoidance of addressing their problems.

### **University Experiences**

Students' experiences within the university contribute to their adjustment, integration, and persistence. Feeling comfortable and supported is important in facilitating a sense of connectedness in a given institution. Minority students may experience struggles adjusting to an environment due to their minority status in addition to common challenges related to college or university life (Smedley, Myers, & Harrell, 1993). Wei, Ku, and Liao (2011) found that

perceived university environment mediated the relationship between minority status at predominately White university and college persistence attitudes. The importance of the university environment has been consistently identified in the literature; however, more information about specific aspects of the college environment can enhance programming to facilitate successful adjustment, especially in an urban university with high rates of minority students.

### **Peer interactions.**

Interactions with peers are important in promoting satisfying college experiences. Social activity has been directly linked with academic performance and retention (Robbins et al., 2006). Making meaningful connections with peers can improve persons' adjustment to a specific environment. Lack of connection with peers can lead to lack of connection with the institution and complicates the adjustment process (Enochs & Roland, 2006; Gerdes & Mallinckrodt, 1994). Freeman, Hall, and Bresciani, (2007) reported that students who reported dissatisfaction with college social life were more likely to leave the institution as compared with those who felt that their social interaction expectations were met. Feeling satisfied with social life in school may increase students' commitment to and engagement in college life. Students may engage in various ways of establishing connections on campus, with a common one by becoming involved in campus activities. Such involvement may lead to establishing support networks.

### **Support and connectedness.**

As an individual transitions from high school to college, he or she often experiences a shift in sources of support to include new groups of peers, fellow college students. Past research identified a consistent link between the importance of social support from various sources in general, as well as specific, areas of life, such as the ability to manage stress, successful

adjustment, and improved mental health (Dwyer & Cummings, 2001; Lamborn & Grosh, 2009; Misra et al. 2000; Robbins, Lese, & Herrick, 1993). The importance of social support on college experiences has been emphasized by Tinto (1993). Tinto's model of college retention stresses the importance of social, in addition to academic, integration as predictive of students' decision to retain in, or drop out, of college. Social integration emphasized by the theory includes formal and informal associations with peers and faculty and administration outside of the classroom. Tinto emphasized that interactions between students can be powerful and initiated in classrooms, which may serve as a gateway for student involvement (Tinto, 1997). Similarly, Cabrera, Crissman, Bernal, Nora, Terenzini, and Pascarella (2002) found that collaborative learning practices positively influenced cognitive and affective outcomes (personal development, understanding science and technology, appreciation of art, analytical skills, and openness to diversity) in a sample of 2050 second-year college students enrolled in 23 varying types of higher education institutions. The intensive interactions between students and faculty members that occur as part of a collaborative learning approach may increase a students' sense of connectedness and integration into the institution. The use of collaborative learning in promoting successful adjustment was also recommended by Enochs and Roland (2006) and Lavelle and O'Ryan (2001).

*Peer support.* A link between social support and a sense of connectedness and significance within the educational environment exists. Crockett et al. (2007) found that peer support moderated the relationship between acculturative stress and anxiety in a sample of 148 Mexican American college students. The importance of peer support was also demonstrated by Sidelinger, Bolen, Frisby, and McMullen (2011) who found student-to student connectedness to mediate a negative relationship between faculty's indifference toward students and their

willingness to participate in class. Dixon and colleagues (2007) found that support from friends and family predicted a greater sense of significance to college peers. The authors implied that a sense of ‘mattering’ contributes to feeling more supported by and connected to their friends in college. The authors found their conclusions consistent with findings by Misra et al. (2000) regarding the importance of social support from friends on ability to manage stress during the first-year college experience. Further, a sense of connectedness and mattering is directly and indirectly linked to college outcomes.

A sense of fitting in is related to feeling confident, while a sense of not fitting in can be linked to feelings of worthlessness and feeling self-conscious. A lack of confidence can in turn affect students’ academic performance and ability to succeed (Schlossburg, 1989). Among increasingly popular ways of promoting social and academic support are learning communities. Learning communities serve to link student cohorts enrolled in similar courses, have common themes and connect particular groups of students. Barnes and Piland (2010) examined course persistence and retention rates among urban community college students over four semesters. The authors found that participation in learning communities had a significant impact on students’ retention rates. However, the results varied by groups examined. Students enrolled in certain English courses, Latino and the “other” category of communities presented with higher retention rates than predicted and compared with students enrolled in the developmental reading courses alone. This may suggest that diverse students may benefit most from peer support offered by learning communities.

**Faculty support.** Faculty support serves as another important layer of support, yet, their role has been understudied. Most of the existing research on college experiences has focused on interactions outside of classrooms (Barnett, 2011). Hong, Shull, and Haefner (2011) argued that

when faculty and students interact actively, faculty is seen as more than just instructors and serve as a source of guidance and support. Beyond the documented importance of faculty teaching skills on students' college outcomes (i.e., Braxton, Bray, & Berger, 2000; Pascarella, Salisbury, & Blaich, 2011), a sense of support by faculty can impact the ability to adjust to college. The interaction can occur in and outside of classrooms. The frequency and quality of student faculty interactions has been identified as an essential aspect of college outcomes (Astin, 1984; Kim & Sax, 2009; Pascarella, 2006). Pascarella (2006) found that the frequency and nature of interactions between students and faculty in the classroom predicted classroom experience.

Lack of faculty support can contribute to a sense of isolation, and may lead to adjustment difficulties (Loo & Rolison, 1986). Barnett (2011) argued for the importance of faculty validation, and found that validation promoted academic integration in college. Although student-faculty interactions are important for promoting adjustment, research indicates that the impact of such interactions may vary by students (Pascarella, 2006). Kim and Sax (2009) found gender differences in types of interaction rates, with male students being more inclined to volunteer for research assistance for pay, while female students were more likely to assist faculty for course credit. Female students also reported more frequent communication with faculty outside of classroom as compared with male counterparts, while male students were more engaged with faculty during class. Racial differences were also reported. Asian American students were most likely out of other racial groups studied to volunteer to assist with research, but communicated with faculty outside of class less frequently as compared with African-American students. The study found that female students and white students were more satisfied with their interactions with faculty on academic matters outside of class. Such differences

suggest a need for further understanding of dynamics and influences of student-faculty interactions.

### **External Commitments to the University**

Students' outside commitments are often omitted in research examining college transition and the adjustment process. Among common responsibilities college students adhere to are family and employment commitments.

#### **Family involvement and obligations.**

The majority of the literature around the impact of family obligations and role of family involvements on individuals' college experiences has been examined among minority and immigrant groups (Cabrera & Padilla, 2004; Fulgini, Tseng, & Lam, 1999; Knight, Norton, & Bentley, 2000; Tseng, 2004). The focus on family involvement studied in this population is relevant because young adults from immigrant families may place greater importance than young adults with non-immigrant parents (Tseng, 2004). Even though the majority of studies support this difference, it is not always the case. For instance, Phinney, Ong, and Madden (2000) did not find any significant differences between immigrant and non-immigrant youth in family obligation beliefs. The importance of family obligations can affect students' ability to adjust to college and succeed academically. Although many young adults may feel obligated to contribute to their families while living with or planning to live with them (Sy & Brittain, 2008), others may feel committed to provide assistance to their families in the future regardless of their living arrangement plans (Fulgini et al., 1999). The impact of family influences on college experiences has been most widely studied among Latino students, who, compared with non-Hispanic youth, place stronger value on family influences when making career, educational, and other decisions (Sy & Romero, 2008). However, Fulgini, and Pederson (2002) found an increase in a sense of



obligation among diverse groups of young adults from various racial and ethnic backgrounds during the transition out of secondary school. The authors observed the strongest sense of obligation toward the families among adults from Filipino and Latin American families. Further, research in this area commonly involves a qualitative approach. For instance, Cabrera and Padilla (2004), through in-depth interviews, explored academic resiliency of two Latino individuals who graduated from Stanford University. They found common themes between the individuals who emphasized maternal support and personal motivation as main contributors to their academic success. Knight et al. (2004) also utilized interviews with black and Latino families and found common themes regarding the importance of family in promoting their academic success. Although family involvement may serve a role of support and enhance student success, family obligations may interfere with college adjustment process.

Lapsley, Rice, and Shadid (1989) found that struggles with separating from parents hindered adjustment to college. Attainment of full independence among upper classmen resulted in improved adjustment. However, upperclassmen are often better adjusted regardless of separation status than new students due to having a longer time to adjust to college. Similar findings were reported by Skowron, Wester, and Azen (2004) who found that differentiation of self, a balance between autonomy and connection with family, was directly linked with adjustment, and mediated the impact of students' academic and financial stress on psychological adjustment. The findings point to a significance of family influences on successful personal and college adjustment.

Although feeling connected and supported by family may be a proactive factor, a sense of behavioral obligations toward the family may interfere with college adjustment. Students who feel obligated to assist their families may have less time to engage in college or university life. In

addition, the impact of perceptions of obligations differs from actual behavioral obligations while in college. Greater behavioral family demands can hinder academic adjustment, while family obligation attitudes increase academic motivation (Tseng, 2004). Sy and Romero (2008) found that Latino college students reported commonly assisting their families financially. However, they emphasized that such assistance is voluntary. Multiple respondents also indicated a need to assist with younger siblings, especially in single-parent homes. The extent of family obligations is significant as well. Fulgini and colleagues (1999) found that although a sense of family obligations was related to better family and peer relationship and academic motivation, an overly strong sense of obligations was associated with the lowest school grades. Additional stress stemming from current and future family obligations can lead to higher stress, coping difficulties, and lower motivation to succeed in college, which in turn may affect college adjustment. Considering that a diverse body of students enrolled in large urban universities, the understanding of family obligation influences seems indispensable in understanding their adjustment.

### **Employment.**

Many college and university students are employed at different times throughout their college career. The reasons for employment can vary from supporting hobbies and interests to supporting their education, housing, or families. Available research suggests that the impact of employment can vary on college outcomes, with some mixed results about the relationships. Through review of literature, Perozzi, Rainey, and Wahlquist (2003) concluded that employment generally is linked to positive academic achievement. However, differences were found based on employment as being optional, type of employment, or number of hours worked. They found that working voluntarily, on campus, and part time (up to 20 hours) promotes higher academic

achievement, while long work hours, working off-campus, and needing to work contributes to higher academic stress. Sy (2006) criticized existing literature on impact of student employment due to a lack of diversity in studied samples. The findings may not apply well to a more diverse sample of students in urban universities.

### **Conflict between Work, School, and Family Responsibilities**

Adjustment to college may be affected by work and family responsibilities. Students who work in addition to attending classes may not have as many opportunities to engage socially, may feel disconnected and unsupported, may not be able to seek additional academic assistance, or may not have sufficient time to complete their school work. Similar limitations may be imposed by extensive family responsibilities. Literature on the relationship between college attendance and employment is limited. The available studies support a negative impact of conflict between school and employment on educational outcomes. Sy (2006) found that students who experienced high levels of work-school conflict reported high levels of work and school stress as well as lower academic performance. Markel and Frone (1998) reported a negative relationship between work-school conflict and school readiness in a sample of high-school students, ages 16-19. Although evidence for the negative influence of conflict exists in some literature, more evidence is needed to understand the impact of this conflict on college adjustment.

### **Conclusions**

The literature on college adjustment points to a multifaceted construction of this construct. Existing literature has explored the role of common psychosocial variables; yet, more information is needed to understand interactions between personal variables and multiple contextual influences. Combining existing theories about college persistence and different levels

of influences interacting together within an ecological perspective offered by Bronfenbrenner, offers a more comprehensive approach to understanding college adjustment. Further, much of the research lacks appropriate diversity to generalize it to unique settings. Family obligations have been examined primarily in the context of immigrant families, while the impact of employment has been looked at primarily within traditional student groups. However, large urban universities tend to have a high enrollment of minority students and students from impoverished backgrounds. Those students may experience similar challenges and obligations to work, assist their families, and may struggle connecting with the university life. Full understanding of multiple layers of influences on different dimensions of college adjustment among a diverse body of students in a large urban university, will allow for understanding students' needs and promoting appropriate programming to enhance their transition and adjustment process.

### **Research Questions**

RQ1: Do personal characteristics (academic preparation (high school GPA, ACT score), perceived social status (perceived social class standing and income), race, gender, age, financial aid status, first generation college students, first time in any college, and living arrangements) predict emerging adults' college adjustment in a large urban university?

H<sub>1</sub>: Academic preparation (higher high school grade point average and ACT scores), higher perceived social status, being a member of a nonminority racial group, being female, being older, receiving financial aid, first generation college students, first time in any college, and living arrangements and living with parents can predict emerging adults' college adjustment in a large urban university.

RQ2: Do factors external to the university (current and future family obligations and employment status (number of hours work) mediate the relationship between psychosocial

characteristics (general and academic self-efficacy, motivation, and coping style) and emerging adults' college adjustment in a large urban university?

H<sub>2</sub>: Factors external to the university (current and future family obligations and employment status) mediate the relationships between psychosocial resources, including general and academic self-efficacy, motivation, and coping style, and emerging adults' college adjustment in a large urban university.

RQ3: Do factors internal to the university (peer social experiences, faculty understanding/comfort, perceived classroom comfort, and perceived peer support) predict emerging adults' college adjustment in a large urban university?

H<sub>3</sub>: Different college influences, such as peer social experiences, faculty understanding/comfort, perceived classroom comfort, and perceived peer support can predict emerging adults' college adjustment in a large urban university

RQ4: Do factors external to the university (current and future family obligations, and employment) interfere with students' college adjustment in a large urban university?

H<sub>4</sub>: Factors external to the university commitments, such as current and future family obligations, and employment status can predict students' college adjustment in a large urban university

RQ5: To what extent are there relationships between students' college adjustment and the conflicts between work responsibilities and school responsibilities, and between family and school responsibilities?

H<sub>5</sub>: There are statistically significant relationships between students' college adjustment and conflicts between work responsibilities and school responsibilities, and between family and school responsibilities.

## CHAPTER 3

### METHODOLOGY

This chapter presents the methods that will be used to collect and analyze the data needed to address the research questions and test the hypotheses. The topics that are included are a restatement of the problem, research design, setting for the study, participants, instrumentation, data collection procedures, and data analysis.

#### **Restatement of the Problem**

The purpose of this study was to identify internal and external factors that promote student adjustment among emerging adults attending a large urban university in a multisystemic context. Identification of factors that promote student adjustment will be important for university program development, as well as tailoring programs to meet the unique needs of students who present with risk factors in differing levels of their environment.

#### **Selection of Variables**

The variables were selected drawing from the bioecological model of human development (Bronfenbrenner & Morris, 2006). The model emphasizes the presence of internal and external factors that interplay and contribute to change and development of a person over time. In the context of college adjustment, internal variables (personal resources) were identified through literature review: self-efficacy, motivation, and coping. The external variables were partially selected based on retention models by Tinto (1982) and Astin (1984), which emphasize experiences within college environments as partially predictive of commitment to, and persistence in college. Another layer of external environments, including family obligations and employment variables, was included based on the bioecological model of human development that emphasizes multiple systems acting together shaping a person. Research by Fuligni and

colleagues (1999) who studied cultural differences in family obligations among youth, was incorporated as well.

### **Setting for the Study**

A large urban research-intensive university was the setting for the study. This public university provides undergraduate and graduate programs to approximately 29,000 students. The university has a large minority population (51.5%), with approximately 25% of the students reporting their race/ethnicity as African American. International students representing more than 70 countries add to the diversity of the university. The majority of the students commute to the university for classes. A total of 370 academic programs, including undergraduate (n = 126), graduate (n = 199), and certificate (n = 30) programs.

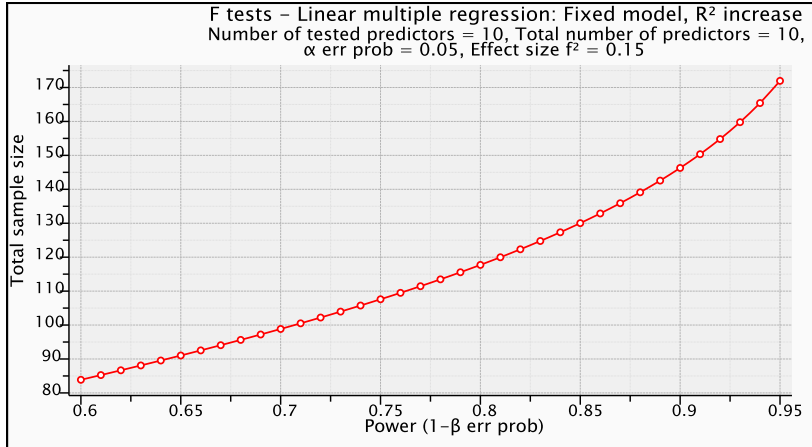
### **Participants**

The participants in this study were emerging adults attending undergraduate classes at a large, urban university located in the Midwestern area of the United States. Students were included if they were between 18 and 25 years of age and enrolled either full-time or part-time in undergraduate programs. Students were excluded based on their veteran status as student veterans may follow a unique college adjustment process. International students were excluded because their adjustment to college is expected to differ substantially from native students.

### **Sample Size**

A power analysis using G\*Power 3.1 (Faul, Erdfelder, Buchner, & Lang, 2009) was used to determine the sample size needed to attain a minimum power of .80. Using an effect size of .15, alpha level of .05, and 10 predictor variables, a sample of 120 would yield a power of .80. Increasing the sample size to 200 would increase the power to .95. Figure 1 presents the model for determining sample size at various power levels.

Figure 2: Power Analysis Plot



### Instrumentation

The current study examined the following variables: college adjustment, personal characteristic including general and academic self-efficacy, motivation, and coping style, college environment experiences comprising of peer social experiences including: being part of different student groups (learning communities, club, sororities/fraternities), the amount of interaction with peers, and perceived peer support, and faculty influences (perceived support), and external experiences including family obligations and demands, and employment.

Students were provided with self-report on-line questionnaires. The following instruments were used in this study: demographic sheet, participation in clubs or organization question sheet, the Student Adaptation to College Questionnaire (Baker & Siryk, 1999), The General Self Efficacy Scale, the Beliefs in Educational Success Test (Majer, 2009), the Academic Motivation Scale (AMS-C 28) College (CEGEP) Version (Vallerand & Bissonnette, 1992), 9 out of 14 scales of the Brief COPE inventory (Carver, 1997), Sense of Belonging scale



(Hoffman, Richmon, Morrow, & Salomone, 2002-2003) (including Perceived Faculty Understanding/Comfort, Perceived Peer Support, and Perceived Classroom Comfort Factors (Tovar & Simon, 2010), The Family Obligations survey (Fulgini, Tseng, & Lam, 1999), Work-School Conflict Scale (Markel & Frone, 1998), and Family-School Conflict Scale.

### **The Demographic Sheet and Personal Information**

The first questionnaire, the Demographic and Background Sheet, included items regarding the student's age, gender, race, perceived social status (social class standing and family income), high school GPA and ACT scores, first time in any college (FTIAC) status, veteran status, international student status, current college GPA, academic classification (freshman, sophomore, junior, senior), financial aid status, major, student's living arrangements (on-campus/off-campus, alone/with roommates/with family), mode of transportation, employment status (number of hours per week, on/off campus employment), and family composition (siblings and first generation college student status). The questions regarding social status were adopted from the MacArthur Scale of Subjective Social Status (Adler & Stewart, 2007). The principal investigator designed the questionnaire to obtain a description of the sample, control variables, and identify potential correlations associated with the studied variables. The principal investigator designed the next questionnaire, Participation in Social Groups, as well. The questionnaire consisted of three questions: "Are you a member of any Learning Community or a Learning Community at WSU?", "Do you belong to any clubs or social organizations on campus, such as fraternities or sororities, as part of your student life?" and "How many hours per week on average do you spent socializing with other WSU students outside of classroom activities?" This questionnaire required the participant to mark "yes" or "no" responses for the initial two questions, and a number of hours for the third question.

## College Adjustment

The students' adjustment to college was assessed using the Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1984). This instrument is a 67-item self-report for college freshman including four scales: Academic Adjustment, Social Adjustment, Personal-Emotional Adjustment, and Attachment/Institutional Adjustment subscales. The authors recognized the multifaceted nature of college adjustment. In addition to overall experience, the Baker and Siryk (1984) documented various aspects of adjustment, including academic adjustment, social adjustment, personal-emotional adjustment, and the institutional attachment/institutional adjustment. Each area of adjustment has been translated into a subscale within the SACQ. The definitions of each subscale and the items associated with the subscales are presented in Table 1.

Table 1

*Subscales on the Student Adaptation to College Questionnaire*

Subscale	Definition	Items on Subscale
Academic Adjustment	Assesses students' success in coping with various academic demands of college, such as their academic performance, seeking academic support when needed, and their motivation and confidence to do well	3, 5, 6*, 10*, 13, 17*, 19, 21*, 23, 25*, 27, 29*, 32*, 36, 39*, 41*, 43, 44, 50, 52*, 54, 58*, 62, 66
Social Adjustment	Assesses students' demands with interpersonal-societal demands of college, such as developing satisfying relationship with others in college and involvement in social activities	1, 4, 8, 9, 14, 16, 18, 22*, 26, 30, 33, 37, 42*, 46, 48*, 51*, 56*, 57*, 63, 65
Personal-Emotional Adjustment	Assesses students' internal; psychological state and level of distress experienced during adjustment to college, and may include depression, anxiety, substance abuse, and self-esteem	2*, 7*, 11*, 12*, 20*, 24, 28*, 31*, 35*, 38*, 40*, 45*, 49*, 55, 64*
Institutional Adjustment	Assesses the level of institutional attachment to the institution as well as commitment to personal academic and institutional goals, such as feeling connected and sharing views aligning with the institution's mission	1, 4, 15, 16, 26, 34*, 36, 42*, 47, 56*, 57*, 59*, 60*, 61*, 65
Full Scale		1-67

Items 53 and 67 contribute only to the full scale.

\*Indicate item must be reversed scored

**Scoring.** The students were asked to rate each of the items using a 9-point Likert scale ranging from 1 for applies very closely to me to 9 for doesn't apply to me at all. After reversing the negative items, the numeric values were summed to obtain a total score for each subscale and full scale. If an item was skipped by the participant, the mean score for that subscale was substituted. Nine items (1, 4, 16, 26, 36, 42, 56, 57, and 65) are included on more than one subscale, the sum of the subscales will be greater than the score for the full scale.

**Reliability and validity.**

According to the SACQ Manual (Baker & Siryk, 1999), reliability was obtained from data obtained over several years from first and second semester freshman at three institutions. Examination of alpha coefficients for the final 67-item version of the SACQ were as follows: for the Academic Adjustment subscales ranged from .81 to .90, for the social adjustment subscales from .83 to .91, for the personal-emotional adjustment subscale from .77 to .86, for the institutional attachment subscale from .85 to .91, and for the Full Scale from .92 to .95. The authors cited median intercorrelations among the subscales as well. The findings about relationships between the subscales based on 34 administrations of the SACQ (16 local samples and 18 samples at other institutions), were comparable. Median intercorrelations were .45 and .39 for academic adjustment/social adjustment, .60 and .55 for academic adjustment/personal-emotional adjustment, and .49 and .42 for social adjustment/personal-emotional adjustment. The authors pointed out that the Institutional attachment subscale in the final SACQ version included one item from the Academic Adjustment subscale and eight from the social adjustment subscale, resulting in inflated correlations between the institutional attachment subscales and the academic and social adjustment subscales. based on data collected from 16 local samples, the median intercorrelations between the institutional attachment subscale and the academic adjustment, social adjustment, and personal-emotional adjustment subscales were .47, .86, and .45 respectively. The intercorrelation among SACQ and full scale scores for 16 original samples ranged between .73 and .90 for the academic adjustment, .72 and .89 for the social adjustment, .74 and .84 for the personal-emotional adjustment, and .68 and .89 for the institutional attachment subscale.

The authors reported Pearson correlation values between academic adjustment, and social adjustment, personal-emotional adjustment, institutional attachment, and overall adjustment to be at .38, .41, .53, and .77 ( $p < .001$ ) respectively. The values between social adjustment and personal-emotional, institutional attachment, and overall adjustment were found to be .56, .85, and .81 ( $p < .001$ ) respectively. The correlations between personal-emotional adjustment and institutional attachment and overall adjustment were .57 and .79 ( $p < .001$ ) respectively. Finally, Pearson correlation value between institutional attachment and overall adjustment was .86 ( $p < .001$ ). These reports provide evidence that the SACQ is reliable across institutions as well as within institution.

Criterion validity of the SACQ has been obtained by correlating subscale scores with personal characteristics of the students completing the survey (Baker & Siryk, 1999). The correlations between the academic adjustment, social adjustment, personal emotional adjustment, and attachment subscales and election to Phi Beta Kappa at one university were statistically significant in the expected direction for second semester students, but not for first semester students. This result was expected because most students in their first semester are not in Phi Beta Kappa. Seeking services at a psychological services center during the first year at a university was related in a negative direction to their scores on the five subscales and the full score, indicating students with better adjustment were less likely to seek help at the psychological service center.

According to Baker and Siryk (1999), the scores on the four subscales and full scale score were correlated with several psychological measures (academic locus of control, self-esteem inventory, general self-efficacy scale, social self-efficacy, psychological separation inventory, emotional independence). The results of the correlations for self-esteem and self-efficacy with

academic adjustment (.47, .58), social adjustment (.40, .52), and personal emotional adjustment (.54, .52) respectively were statistically significant and in the expected direction. Academic locus of control scores were negatively related to all of the subscales, indicating that students who reported higher adjustment scores were more likely to have an internal locus of control. Similar findings were obtained for each of the measures. Beyers and Gossens (2002) examined the validity of scores on the SACQ in a sample of students in Belgium and compared them to findings among students in North America. Using confirmatory factor analysis, the authors confirmed that the four subscales make a distinctive contribution to the measurement of college adjustment. The authors found the SACQ scores to be reliable and valid within their sample freshman students.

### **The General Self Efficacy Scale**

Students' self-efficacy was assessed using the General Self-Efficacy Scale (GSE) designed by Schwarzer and Jerusalem (GSE, Retrieved from <http://userpage.fu-berlin.de/health/engscal.htm>). The scale originally was designed in 1979 in German to assess a general sense of perceived self-efficacy. The scale was designed for the general adult population, including adolescents, and college students. It has been used widely across various populations and can be adjusted to account for related to self-efficacy construct. However, for the purpose of this study, general self-efficacy measure, which is measured by the original scale, will be used. Among the weaknesses, the scale does not tap into specific behaviors and only provides a general account of a person's coping skills.

The scale originally consisted of 20 items and was later reduced to 10 items and was later adapted to 26 other languages by various co-authors (Schwarzer & Jerusalem, 1995). The scale consists of 10 statements that assess a general sense of perceived self-efficacy. Responses are

made on a 4-point Likert scale (1 = Not at all true; 2 = Hardly true; 3 = Moderately true; 4 = Exactly true). The statements included in the scale assess a person's beliefs about his/her ability to solve problems or accomplish goals, such as "It is easy for me to stick to my aims and accomplish my goals."

### **Scoring.**

The scoring procedure required adding all responses into a sum score. The possible range of scores including response to all questions is 10 to 40. The total score is divided by 10 (number of items on the scale) to obtain a mean score. The total score or a mean score could be used to interpret results. In case of missing data, the author recommends to calculate a score as long as no more than three items (out of 10) are missing. Mean score should be used to interpret the results. Higher scores reflect higher levels of self-efficacy. The author did not provide a cut-off score for interpretation purposes. Norm scores were obtained on the General Self-efficacy Scale using a sample of 1,594 American adults. The mean score was 29.48 ( $SD = 5.13$ ).

### **Reliability and validity.**

Reliability and validity of the instrument has been established by the original authors and additional researchers afterwards who used the instrument. In samples from 23 nations, Cronbach alpha coefficients ranged from .76 to .90, with the majority in the high .80s. The scale is unidimensional. Although the scale has been translated into various languages, it appears to be configurally equivalent across 28 nations, and corresponds to one global dimension of self-efficacy (Leszczynska, Gutierrez, -Donna, & Schwartz, 2005).

The construct validity of the instrument was obtained through a confirmatory factor analysis that supported the unidimensionality of the scale. The scores on the instrument were correlated with several personality variables (extraversion [FPI], neuroticism, extraversion

[PDE], failure or action orientation, decision or action orientation, action centering, hope for success, and fear of failure). The resultant correlations ranged from .15 to .49, with negative correlations obtained for neuroticism and fear of failure. These correlations provided support that the self-efficacy scale was valid for use with emerging adults.

### **Academic Self-efficacy**

The academic self-efficacy was measured using the Beliefs in Educational Success Test (BEST). The BEST was designed by Majer (2009) to assess students' confidence in their ability to engage in behaviors related to college among ethnically diverse first-generation community college students. According to Majer (2009), most students completed the instruments in less than five minutes.

The BEST was designed based on Bandura's self-efficacy theory that involves a person's sense of confidence to engage in goal oriented behaviors. The BEST consists of 10 questions regarding students' sense of confidence in engaging in tasks related to the pursuit of higher education. All questions include a stem question "How confident are you...?" followed by situations such as "in your ability to learn new information", "in completing your homework assignments", or "in your ability to work with others on class projects". The questions do not involve any specific subject areas and are designed to be relevant to general academic activities. Responses on the BEST range from 0% (Not at all confident) to 100% (Very confident). Higher scores on the BEST indicate a higher sense of confidence.

### **Scoring.**

The author's recommended that scoring requires adding the values of each of the 10 items and then dividing the sum by 10. If an item is skipped by the participant, the mean score for that subscale is substituted. This creates a percentage value between 1 to 100%, which



translates into values between 0.00 and 1.00. Higher scores indicate greater levels of self-efficacy for education.

### **Reliability and validity.**

The BEST was found to have good internal consistency with Cronbach alpha coefficients ranging from .83 to .91 in three pilot samples of 20, 74, and 97 ethnically diverse college students. Cronbach alpha coefficients of .92 were obtained with a sample of 96 first generation college students indicating the BEST had excellent internal consistency as a measure of reliability.

The concurrent validity of the instrument was examined in one pilot study in which 74 participants completed a measure of global confidence in one's ability to cope with demands in various challenging situations the General Self-Efficacy Scale (GSE) (Schwartz & Jerusalem) and the BEST. A positive relationship was expected between the two instruments. A partial correlation analysis, controlling for demographic variables, resulted in a positive relationship between BEST and GSE scores ( $r [53] = .52, p < .001$ ), indicating a moderate criterion-related validity for the best in reference to the self-efficacy domain. Construct validity was determined by examining the association between the BEST and optimism and self-mastery. The Life Orientation Test (LOT-R; Scheier, Carver, & Bridge as cited in Majer, 2009) was used to measure optimism and the Self-Mastery Scale (SMS; Pearlin & Schooler as cited in Majer, 2009) was used to measure self-mastery. The results of these analyses provided moderate correlations for LOT-R ( $r [65] = .38, p < .001$ ) and SMS ( $r [65] = .58, p < .001$ ), indicating the instrument had adequate convergent validity (Majer, 2009). Majer (2009) contended that the BEST had adequate reliability and validity.

## Academic Motivation

Academic motivation was measured using the Academic Motivation Scale - College (AMS-C 28) General and Vocational College Version (Vallerand & Bissonnette, 1992). The AMS-C is a 28-item measure used to assess students' motivation to learn. The instrument measures three domains of motivation: intrinsic, extrinsic, and amotivation and is comprised of seven subscales. The intrinsic and extrinsic motivation domains include three different subscales each. The intrinsic domain includes three subscales: to know, to accomplish, and to experience stimulation. The extrinsic domain includes motivation: identified, introjected, and external regulation. The amotivation domain does not include any subscales and measures the lack of motivation. Participants were asked to complete the scale using a Likert scale ranging from 1 (does not correspond at all) to 7 (corresponds exactly). Higher scores on the subscale indicates greater motivational attribute on the specified domain.

Table 2

### *Academic Motivation Scale - College (AMS-C)*

Motivation domain	Subscale	Items on subscale
Intrinsic motivation	To know	2, 9, 16, 23
	Toward accomplishment	6, 13, 20, 27
	To experience stimulation	4, 11, 18, 25
Extrinsic motivation	Identified	3, 10, 17, 24
	Introjected	7, 14, 21, 28
	External Regulation	1, 8, 15, 22
Amotivation		5, 12, 19, 26

The AMS was developed based on developments in the field of motivation developed by theorists, such as Deci and Ryan (2008) who indicated a need for a fuller understanding of

motivation in education beyond intrinsic motivation. The instrument was initially developed by Vallerand et al. (1989, as cited in Vallerand, Pelletier, Blais, Briere, Senecal, & Vallieres, 1993) in French at the University of Quebec, Montréal and was referred to as Echelle de Motivation en Education (EME). The instrument was later translated and published in English in 1992 and renamed as AMS. According to Vallerand et al. (1993), extensive data supported the reliability and validity of EME, and supporting evidence for the instrument's English version validity and reliability emerged.

### **Scoring.**

The students were asked to rate each of the items using a 7-point Likert scale ranging from 1 for “does not correspond at all to me” to 7 for “corresponds exactly.” If an item is skipped by the participant, the mean score for that subscale is substituted for that item. The items within each subscale will be averaged to obtain mean scores for each subscale. Higher scores indicate greater motivational attributes on the specified domain.

### **Reliability and validity.**

Vallerand et al. (1993) referenced studies of more than 3,000 students, indicating that the original EME held good psychometric properties. They reported satisfactory internal consistency levels, a mean alpha score of .80, and good stability with one-month test-retest correlations of .75. Similar results were shown upon translation of the instrument (AMS) into English. The construct validity was tested later in a 1993 study aligned with self-determination theories including Deci and Ryan. The study included 217 students in Montreal area junior college. The findings indicated Cronbach alpha coefficients ranging from .76 to .86, with an exception of the identification subscale, which yield an alpha coefficient of .60. The original authors, Vallerand

and Bissonnette (1992) reported Cronbach alpha coefficients ranging from .83 to .86 for the subscales, and test-retest reliability estimates over a one-month period ranging from .71 to .83.

Adequate concurrent and criterion validity were reported in college samples. Vallerand and Bissonnette (1992) assessed concurrent validity of the AMS through correlations between AMS subscales and other motivational scales (all at  $p < .05$ ). As predicted, they found positive correlation between the general subscale of the Children's Academic Intrinsic Motivation Inventory (CAIMI) that assessed intrinsic interest in learning, and intrinsic motivation subscales of the AMS, to know, accomplishment, and stimulation with coefficients of .67, .53, and .39 respectively. As expected, they also found a negative correlation of -.46 between the CAIMI and a motivation subscale of the AMS. Next, as expected, they found following correlations between Nicholl's Task Orientation scale that assesses a person's value in learning something interesting, and AMS domains and subscales as follows: external regulation, introjected regulation, and identified regulation, .01, .28, .28 respectively (extrinsic motivation scales); to know, accomplishment, and stimulation, .50, .47, and .31 respectively (intrinsic motivation scales), and -.39 for amotivation.

Construct validity was assessed through intercorrelations among the seven AMS subscales to assess the simplex pattern, with adjacent scales showing positive correlations, and negative correlation among the subscales at the opposite end of the continuum. They found that intrinsic motivation scales showed the highest positive correlations among themselves ( $r$ s of .58, .59, and .62 for to know-accomplishment, to know-stimulation, and motivation-stimulation. These findings suggested that they assess similar, yet, distinct constructs. As expected, the scales that represent the opposite end of spectrums, showed negative correlations, such as amotivation – to know ,  $r = -.43$ . The correlations between the AMS subscales and motivational antecedents

were calculated. One of the previously identified antecedents was perceived confidence that was expected to correlate in a positive direction with identification and the three intrinsic motivation scales. The predictions were confirmed with correlations ranging from  $-.31$  for amotivation to  $.25$  for to know scale. Another identified determinant of motivation was optimism. The most negative correlation of  $-.54$  was identified between optimism and amotivation scale, while most positive correlations were with the “to know” and “to accomplish” scales ( $.57$  for both).

The instrument was used by a number of researchers using college students to assess their level of and domain of college motivation. Thomas (2009) used the instrument in her study of relationships among self-efficacy beliefs, intrinsic and extrinsic motivation, and academic adjustment among a sample of 111 African American women from two historically Black universities and two predominately White universities. The results indicated that self-efficacy beliefs predicted motivation to know, external regulation, identified motivation, and academic adjustment. In addition, motivation to know was a partial mediator between self-efficacy beliefs and academic adjustment. The results yielded alpha coefficients for the intrinsic motivational domains including motivation to know ( $.92$ ), motivation to accomplish ( $.82$ ), and motivation to experience stimulation ( $.89$ ). Alpha coefficients for subscales included in the extrinsic motivational domains, introjected motivation ( $.71$ ), external regulation ( $.76$ ), and identified motivation ( $.87$ ) indicated adequate to good internal consistency.

### **Brief COPE inventory**

The Brief COPE inventory is a short version of the full COPE inventory, which has been identified as a valid and reliable measure of coping styles (Carver, 1997). The instrument can be applied to assessing a person’s coping style in various settings and regarding approaches to a wide range of problems. The COPE inventory was initially constructed by hemers, Scheier, and

Weintraub (1989). The instrument was derived from Carver and Scheider's model of behavioral self-regulation, Lazarus and Folkman model of coping, and at the existing extant of literature about coping (Carver, 1997). The original full COPE inventory consisted of 15 scales with a total of 60 items. The current study used the Brief COPE that is a shortened version of the COPE and was published in 1997. The Brief COPE consists of 14 scales, of two items each. The scales include Active Coping, Planning, Positive Reframing, Acceptance, Humor, Religion, Using Emotional Support, Using Instrumental Support, Self-Distraction, Denial, Venting, Substance Use, Behavioral Disengagement, and Self-Blame. The responses on the scale range from 0 (I haven't been doing this at all) to 4 (I've been doing this a lot). The present study used a composite mean score from the 5 scales (10 items) used to assess a person's *active coping* style (Active Coping, Planning, Positive Reframing, Using Emotional Support, and Using Instrumental Support). A composite mean score of the 4 scales (8 items) was used to assess an *avoidant coping* style (Self-Distraction, Denial, Substance Use, and Behavioral Disengagement). One limitation of the instrument was that its original reliability and validity was established based on a small sample (final sample of 126) of victims of a natural disaster, which could limit the generalizability of the instrument. However, additional use of the instrument and assessment of psychometrics occurred with various other groups, including international sample and college student population (i.e. Crockett, Iturbide, Torres Stone, McGinley & Calo, 2007).

### **Scoring.**

The author allows flexibility regarding scoring of Brief COPE. The scoring involves summing of items, with scores ranging 1 to 4 on each question, with possible total scores of 2 to 8. No reversal of coding is required on any items. The total of scores for 5 scales identified as *active coping* were combined, resulting in a possible range of scores 10-40. The total scores were

divided by the number of items (10) to obtain a mean composite score for active coping. The total of scores for four scales identified as *avoidant coping* was combined, resulting in a possible range of scores 8-32. A mean composite score was obtained by dividing the total score on the avoidant coping scale by 8. If an item is skipped by the participant, the mean score for that subscale is substituted. The use of a mean composite score provides scores that reflect the original unit of measure and allow for comparisons between the two subscales. Higher scores on each scale will indicate a higher frequency of engaging in a specified coping strategy.

### **Reliability and validity.**

The reliability and validity of the Brief COPE came from a sample of community residents who responded to a study following a natural disaster, Hurricane Andrew. The sample of participants included 168 participants recruited from the community who were assessed at three separate times, with the final assessment one year after the event, yielding a final sample of 126 persons. Coefficient alphas for the revised version were: Active Coping (.68), Planning (.73), Positive Reframing (.64), Acceptance (.57), Humor (.73), Religion (.82), Using Emotional Support (.71), Using Instrumental Support (.64), Self-Distraction (.71), Denial (.54), Venting (.50), Substance Use (.90), Behavioral Disengagement (.65), and Self-Blame (.69; Carver, 1997). In addition, other studies demonstrated good internal consistency and test-retest reliability (i.e., Cooper, Cornelious, & Gill, 2005).

The psychometric properties of Brief COPE, with addition of two questions comprising additional scale, restraint coping, were examined by Yuseff (2010) who examined construct validity and internal consistency of Brief COPE by administration of the instrument to 375 medical students from four medical schools in Malaysia. The author completed a principal components factor analysis with a promax rotation to determine the construct validity of the

Malay Brief COPE. Nine components emerged from the principal components analysis, accounting for 67.32% of the variance in coping styles. The reliability analysis indicated high internal consistency with alpha value higher than 0.7. The results yielded results of Cronbach Alpha coefficients for Self Distraction (.57), Active Coping (.68), Denial (.74), Substance Abuse (.87), Use of Emotional support (.82), Use of instrumental support (.80), Behavioral disengagement (.84), Venting of Emotion (.56), Positive Reinterpretation (.78), Planning (.74), Humor (.89), Acceptance (.80), Religion (.85), Self-blame (.80), and an additional scale, Restraint Coping (.64). The findings supported the construct validity of the 30-item instrument.

### **Different Levels of Support**

Peer and faculty support was assessed using the components of the Sense of Belonging (SOB) scale. The measure was developed by Hoffman and colleagues (2002-2003) to assess the sense of support. The authors examined aspects of *sense of belonging* in reference to students' decision to persist in or withdraw from college. The authors designed the instrument based on the premise that sense of belonging involves an appropriate fit and involvement, including support from various sources. The instrument initially included two measures totaling 85 questions: a 50-item measure evaluating student/peer relationships, and a 35-item measure evaluating student/faculty relationships. The items were selected based on an in-depth literature review, analysis of 24 focus groups (12 learning community groups and 12 not learning community groups) with first-year students, and evaluation of items for relevance and clarity by researchers involved in facilitating the focus groups. The norming study consisted of 205 freshmen students. The groups were held at the University of Rhode Island (URI) and participants recruited from URI 101 (mandatory freshman course). The authors identified quality of student/peer and student/faculty relationships as important themes related to institutional commitment. Further,



both social and academic supports were identified as significant themes related to student persistence in the educational environment. Following the identification of questions, the instrument was used as part of the study. A total of 448 complete questionnaires were collected in general psychology courses.

The SOB scale consists of 26 items in five subscales that assess the aspects of student belongingness in a college setting. The areas assessed by the measure include: peer-to-peer relationships, student-to faculty relationships, and classroom-specific interactions. The scales include peer support (8 items), perceived faculty support/comfort (6 items), perceived classroom comfort (4 items), perceived isolation (4 items), and empathetic faculty understanding (4 items). Each statement of the Sense of Belongingness uses a 5-point Likert scale, with responses ranging from 1 (Completely True) to 5 (Completely Untrue). Table 3 presents the subscales on the Sense of Belonging and items included on each subscale.

Table 3

*Hoffman et al. and Tovar and Simon (2010) Scales Based on Factor Analysis.*

Original factors/scales (Hoffman et al., 2002-2003)	Factors/Scales (Tovar & Simon, 2010)	Original Items
Peer Support (8 items)	Faculty understanding/comfort	4, 10, 12, 19, 25, 28, 30, 33
Perceived Faculty Support/comfort (6 items)	Perceived peer support	27, 31, 35, 37, 39, 43, 44, 46,
Perceived Classroom Comfort (4 items)	Perceived classroom comfort	2, 3, 5, 30
Perceived Isolation (4 items)		
Empathetic Faculty Understanding (4 items)		

For the purpose of the present study, the Tovar and Simon subscales will be used.

### **Scoring.**

Each statement on the Sense of Belongingness uses 5-point Likert scale is rated using a Likert scale ranging from 1 (Completely True) to 5 (Completely Untrue). The numerical values

of for each item on a subscale will be summed to obtain a total score. The total scores will then be divided by the number of items on the subscale to create a mean score that reflects the original unit of measure (1 to 5). If an item is skipped by the participant, the mean score for that subscale is substituted for the missed item. Lower scores on the Sense of Belonging subscales are indicative of a higher sense of belonging.

### **Reliability and validity.**

The original work by Hoffman and colleagues (2002-2003) provided detailed information regarding instrument development and the factorial structure of the SOB scale, however, they included limited information regarding the psychometric properties of the instrument. Tovar and Simon (2010) calculated Cronbach alpha coefficients to determine the internal consistency of the Sense of Belonging Scale as a measure of reliability. They obtained the following alpha coefficients among SOB subscales: Total Sense of Belonging Scale (.90), Perceived Faculty Understanding/Comfort (.89), Perceived Peer Support (.84), and Perceived Classroom Comfort (.93).

Using principal component analysis, items were significantly reduced to 26 from the original 85, which loaded into five components (scales), accounting for 63.3% of the variance (Hoffman et al., 2002-2003). Tovar and Simon (2010) recognized the potential for the use of SOB, but recognized problems related to a lack of psychometric data, and examined the validity of SOB. Tovar and Simon (2010) examined factorial structure and conducted intervariance analysis of SOB scale. They used a total sample of 916 participants in their study. Tovar and Simon divided their sample into a subsample for an exploratory factor analysis (EFA) study ( $n = 463$ ) and the second subsample for a confirmatory factor analysis (CFA) study consisted ( $n = 453$ ).

Tovar and Simon used principal axis factor (PAF) with a varimax rotation, which has been found to reproduce population loadings more accurately (2010). In addition, they used a sample of more diverse college students as compared to predominantly Caucasian sample used by Hoffman and colleagues (2002-2003). Tovar and Simon (2010) used EFA and found that three, not five as proposed by Hoffman and colleagues (2002-2003), converging factors are more appropriate. The factors included faculty understanding/comfort (8 items), perceived peer support (8 items), and perceived classroom comfort (4 items), totaling 20 items. The factors suggested by Tovar and Simon will be used as scales for the purpose of this study.

To examine the convergent validity of the SOB scales, Tovar and Simon (2010) examined correlations between SOB scale and College Mattering Inventory scales. Statistically significant correlations were obtained between the total score and three subscale scores on the SOB and the total score for the College Mattering Inventory and the six subscales: general college mattering scale, mattering versus marginality scale, mattering to instructors scale, mattering to counselors scale, mattering to students scale, and perception of values scale. The correlation ranged from  $-.11$  to  $-.59$ , with the negative correlations indicating high scores on the SOB were associated with low scores on the College Mattering Inventory.

### **Family Obligation Attitudes**

Family obligations were assessed by a measure created by Fulgini and colleagues (1999), which was developed to tap youth's attitudes toward family obligations in common areas of youths' lives. The measure includes three subscales: current assistance, respect for family, and future support. Two of the three subscales, current assistance and family support, will be used in this study. The current assistance subscale is comprised of 11 items, and 6 items are included on the future support subscale. The measure was initially designed to assess parents' expectations

for adolescents and adolescent perceptions of their expectations toward their families. Based on the confirmatory factor analyses (Tseng as cited in Fulgini et al., 1999), Tseng, as well as later researchers, indicated that as intended, the three subscales measure three distinct, yet overlapping aspects of family obligations.

The current assistance subscale was developed to assess youths' expectations regarding how often they should assist with household tasks and spend time with their families. The responses regarding the frequency with which respondents are expected to engage in 11 family related activities are rated using a 5-point scale ranging from 1 (almost never) to 5 (almost always). Some activities include "spend time at home with your family", "run errands that the family needs done", and "help out around the house". One item was added to the scale to adjust the content to college students: "Contribute some of my earnings to support my family."

The Future Support subscale assesses respondents' beliefs about their sense of obligation to support and remain in close proximity to their families in the future. The items on this subscale are rated to reflect the level of importance of engaging in various family-related behaviors using a 5-point Likert scale ranging from 1 (not important at all) to 5 (very important). Sample items on the scale include: "help your parents financially in the future" and "spend time with your parents after you no longer live with them."

### **Scoring.**

The responses to the items on each subscale were summed to obtain a total score. The total score was divided by the number of items that are included on each subscale to calculate a mean score. The mean score provided scores that reflected the original unit of measure and allowed comparisons between the two subscales. Higher scores indicated a greater sense of responsibility and assistance toward the family.

### **Reliability and validity.**

A number of different studies utilized the family obligations measure. For instance, Fulgini and Pederson (2002) used all three scales to examine changes in perceptions of obligations to assist, support, and respect the family during transition from secondary school into young adulthood. The study employed an ethnically diverse sample of 745 young adults, including two cohorts of 12<sup>th</sup>-grade students near graduation in the San Francisco Bay area and a follow up with them either one or three years later. The students completed the questionnaires during 12<sup>th</sup> grade of high school, as well as during the follow up. The authors reported intercorrelations between the scales current assistance and future support ( $r_s=.55$ ). The authors found that the current assistance measure had good internal consistency ( $\alpha=.84$ ) and yielded good reliability scores across different ethnic groups with alpha coefficients ranging from .82 to .86. They found that the future support scale also was internally consistent ( $\alpha=.76$ ) and had good reliability scores across different ethnic groups ranging between .60 and .80 (Fulgini & Pederson, 2002).

The three subscales were rationally derived from output from focus groups using adolescents as participants and a comprehensive review of extant literature on family obligations. Separate factor analyses were used with each subscale to determine construct validity. Fulgini and colleagues (1999) reported that the items on each subscale loaded on a single factor with loadings ranging from .48 to .76.

### **Conflict between Work and School Demands**

The conflict between work and school demands was assessed using the Work-School Conflict (WSC) survey developed by Markel and Frone (1998). The WSC measure is a five-item scale that measures students' perceptions of the extent of conflict between school and work responsibilities. Examples of items include, "Because of my job, I go to school tired" and "When

I'm at school, I spend a lot of time thinking about my job." The scale has been used by various authors to assess the effects of conflict between work and school responsibilities among adolescents and young adults.

### **Scoring.**

The frequency of occurrence of each item was rated using a 5-point Likert-type scale, ranging from 1 (never) to 5 (very often). The numeric values for each item is summed to obtain a total score, which is then divided by 5 to create a mean score that reflects the original unit of measure. No reversal of coding is required on any items. Higher scores corresponded with higher work-school conflict.

### **Reliability and validity.**

The instrument has been used in a number of studies. Markel and Frone (1998) first used the scale with 319 adolescents recruited from three different colleges and 37 high schools in the New York area. The inclusion criteria included formal work of at least five hours per week, a full time student status, and ages of the participants from 16 to 19 years. The authors reported an alpha coefficient of .86. Adebayo (2006) used the WSC scale to examine the relationships among workload, social support, and work-school conflict in a sample of 126 nontraditional students in a Nigerian university. The author reported an alpha coefficient of .77 and a 5-month test-retest coefficient of .68, indicating the scale had adequate internal consistency and stability as measures of reliability. Adebayo, Sunmola, and Udegbe (2008) also used the WSC scale to examine the effects of participating in work and school on the subjective well-being and work-school conflict. They found that work status was positively related to work-school conflict and reported an alpha coefficient of .86 as a measure of internal consistency. McNall and Michel (2010) found coefficient alpha value of -.24 ( $p < .01$ ) between WSC score and Work-School

Enrichment, which they defined as the degree to which work improves experiences at school. Markel and Frone (1998) correlated Netemeyer, Boles, and McMurrian's (1996) five-item Work-Family Conflict Scale with the WCS to establish a convergent validity. The obtained  $r$  of .77 provided support for the convergent validity of the scale.

### **Conflict between Family and School Demands**

The conflict between family and school demands was assessed using the Family-School Conflict (FSC) scale, which was adopted from the WSC scale (Markel & Frone, 1998). The items from the WSC scale were revised to assess the extent to which school demands conflicts with family demands. The FSC measure is a six-item scale that measures students' perceptions of the extent of conflict between family and work responsibilities. Examples of items include "My grades are lower because of the time I spend with my family" and "At times I have to put my schoolwork aside to run errands that the family needs done".

#### **Scoring.**

The frequency of occurrence of each item is rated using a 4-point Likert-type scale, ranging from 1 (strongly disagree) to 4 (strongly agree). The numeric values for each item is summed to obtain a total score, which is then divided by 4 to create a mean score that reflects the original unit of measure. No reversal of coding is required on any items. Higher scores corresponded with higher family-school conflict.

#### **Reliability and validity.**

The scale has been used in one previous study using a sample of students from Boston University and has shown adequate psychometric properties, including an alpha coefficient of 0.747. It should be noted, however, that the reliability of the scale was established on a small sample of students.

## Procedures

Approval from the Wayne State Human Investigation Committee (HIC) was requested and obtained prior to initiating the study and later revision of the Information Sheet was requested and approved. The participants were recruited by posting an online announcement on Pipeline. Approval from the Dean of Students was obtained prior to posting the announcement. The announcement on My Pipeline and the student tab on Pipeline provided a description of the study and a link to the information page and an on-line questionnaire that was on SurveyMonkey. Two different forms of the information sheet were used to reflect different rewards based on the timing of completion of the survey. Students interested in participation were asked to click on a link that took them directly to the study information page and the on-line questionnaire. The information page included a brief description of the study and a Research Information Sheet, which included information about eligibility to be entered into a drawing of a prize upon completion of the survey. Two different forms of the information sheet were used to reflect different rewards based on the timing of completion of the survey. Students who completed a survey prior to 3.30.14 were eligible to participate in a weekly \$100 gift card drawing, while students entering the study after 3.30.14 were eligible to enter into a drawing of six \$50 gift cards. The difference in the amount of gift cards offered was related to changes in the available rewards offered by SurveyMonkey. Initially, SurveyMonkey offered a service which allowed the research participants to be entered into weekly drawings of \$100 gift cards. However, when the service was no longer available, the funds available for the rewards were reduced. The content of the Research Information Sheet stated that completion of the questionnaire indicates their consent to participate in the study and the voluntary nature of



participation. In addition, the participants were assured that all information on the survey would be confidential and that no individual would be identifiable in the final report.

Upon student's consent to participate in the study, students were asked to click on the link provided to respond to a series of questions and items posted on SurveyMonkey. Following completion of all survey items, participants were asked if they would like to be entered into a drawing of Amazon gift cards. Those who expressed interest in being entered in the drawing were redirected to a separate page where they were asked to provide their email address. The gift cards were emailed directly to the email addresses provided.

### **Data Analysis**

The data obtained on the surveys from SurveyMonkey were downloaded as an IBM-SPSS file. The data were examined using the Explore command on IBM-SPSS. The continuous variables were evaluated (academic adjustment, social adjustment, personal-emotional adjustment, attachment/institutional adjustment, full scale – college adjustment, general self-efficacy, academic self-efficacy, motivation, active coping styles, avoidant coping styles, current family obligations, future family obligations, conflict between work responsibilities and school responsibilities, and conflict between family responsibilities and school responsibilities). The purpose of this analysis was to determine the extent to which scores on these variables met the assumption of a normal distribution. If the variables were skewed, a log or square root transformation was used to normalize the scores. A missing values analysis was also used to determine the extent of missing values in the data. Participants who missed more than 20% of the survey were eliminated from the study. The data analysis was divided into three sections. The first section used the frequency distributions, measures of central tendency and dispersion, and crosstabulations to create a profile of the participants in the study. The second section used descriptive statistics (means, standard deviations, median, and range of scores) to present

baseline information regarding the scaled variables. An intercorrelation matrix was used to examine the strength and relationship of all scaled variables in the study. Inferential statistical analyses, including stepwise multiple linear regression analysis and Pearson product moment correlations were used to test the hypotheses and address the research questions. All decisions on the statistical significance of the findings were made using a criterion alpha level of .05. The data analysis that was used to test each hypothesis is presented in Table 4.

Table 4

*Statistical Analysis*

Research Question	Variables	Statistical Analysis
<p>I: Do personal characteristics (academic preparation (high school GPA, ACT score), perceived social status, race, gender, age, financial aid status, first generation college students, first time in any college, and living arrangements) predict emerging adults' college adjustment in a large urban university?</p> <p>H<sub>01</sub>: Academic preparation (higher high school grade point average and ACT scores), higher perceived social status, being a member of a nonminority racial group, being female, being older, receiving financial aid, first generation college students, first time in any college, and living arrangements and living with parents cannot predict emerging adults' college adjustment in a large urban university.</p> <p>H<sub>1</sub>: Academic preparation (higher high school grade point average and ACT scores), higher perceived social status, being a member of a nonminority racial group, being female, being older, receiving financial aid, first time in any college, and living arrangements and living with parents can predict emerging adults' college adjustment in a large urban university.</p>	<p><u>Criterion Variable</u></p> <p>College adjustment</p> <ul style="list-style-type: none"> <li>• Academic Adjustment</li> <li>• Social Adjustment</li> <li>• Personal-Emotional Adjustment</li> <li>• Institutional Adjustment</li> <li>• Full Scale</li> </ul> <p><u>Predictor Variables</u></p> <ul style="list-style-type: none"> <li>• Academic preparation (high school grade point average and ACT scores)</li> <li>• Perceived social status (social class standing and family income)</li> <li>• Race</li> <li>• Gender</li> <li>• Age</li> <li>• financial aid</li> <li>• First generation college students,</li> <li>• First time in any college</li> <li>• Living arrangements</li> </ul>	<p>Separate stepwise multiple linear regression analyses were used to determine which of the predictor variables can be used to predict college adjustment.</p> <p>Prior to doing the stepwise multiple linear regression analysis, an intercorrelation matrix was developed to determine which of the predictor variables were significantly related to the criterion variable. Only those predictor variables that were significantly related to the criterion variable were included in the stepwise multiple linear regression analysis.</p>

	Research Question	Variables	Statistical Analysis
2:	Do factors external to the university (current and future family obligations and employment status) mediate the relationship between psychosocial characteristics (general and academic self-efficacy, motivation, and coping style) and emerging adults' college adjustment in a large urban university?	<u>Criterion Variable</u> College adjustment <ul style="list-style-type: none"> <li>• Academic Adjustment</li> <li>• Social Adjustment</li> <li>• Personal-Emotional Adjustment</li> <li>• Institutional Adjustment</li> <li>• Full Scale</li> </ul>	Baron and Kenny's (1986) mediation process was used to determine if the relationship between college adjustment variables and personal characteristics of emerging adult college students was mediated by factors external to the university. Separate analyses were used for each criterion variable and predictor variables and mediating variables. The four steps included:
H <sub>02</sub> :	Factors external to the university (current and future family obligations and employment status) do not mediate the relationships between psychosocial characteristics, including general and academic self-efficacy, motivation, and coping style and emerging adults' college adjustment in a large urban university.	<u>Predictor Variables</u> <ul style="list-style-type: none"> <li>• General self-efficacy</li> <li>• Academic self-efficacy</li> <li>• Motivation</li> <li>• Active coping styles</li> <li>• Avoidant coping styles</li> </ul>	<ol style="list-style-type: none"> <li>1. Determine if the predictor variable is significantly related to the criterion variable</li> <li>2. Determine if the predictor variable is significantly related to the mediating variable</li> <li>3. Determine if the mediating variable is significantly related to the criterion variable</li> <li>4. Determine the change in the relation between the predictor variable and the criterion variable while holding the mediating variable constant.</li> </ol>
H <sub>2</sub> :	Factors external to the university (current and future family obligations and employment status) mediate the relationships between psychosocial characteristics, including general and academic self-efficacy, motivation, and coping style, and emerging adults' college adjustment in a large urban university.	<u>Mediating Variables</u> <ul style="list-style-type: none"> <li>• Current family obligations</li> <li>• Future family obligations</li> <li>• Employment (number of hours worked)</li> </ul>	If the relation between the predictor and criterion variable became non-significant when holding the mediating variable constant, the result was a full mediation.
RQ3:	Do factors internal to the university (peer social experiences, faculty understanding/comfort, perceived classroom comfort, and perceived peer support) predict emerging adults' college adjustment in a large urban university?	<u>Criterion Variable</u> College adjustment <ul style="list-style-type: none"> <li>• Academic Adjustment</li> <li>• Social Adjustment</li> <li>• Personal-Emotional Adjustment</li> <li>• Institutional Adjustment</li> <li>• Full Scale</li> </ul>	Separate stepwise multiple linear regression analyses were used to determine which of the predictor variables can be used to predict college adjustment.
H <sub>03</sub> :	Different college influences, such as peer social experiences, faculty understanding/comfort, perceived classroom comfort, and perceived peer support cannot predict emerging adults' college adjustment in a large urban university.	<u>Predictor Variables</u> <ul style="list-style-type: none"> <li>• Peer social experiences (being part of different student groups, amount of interaction with peers)</li> <li>• Faculty understanding/comfort</li> <li>• Perceived classroom comfort</li> <li>• Perceived peer support</li> </ul>	Prior to doing the stepwise multiple linear regression analysis, an intercorrelation matrix was developed to determine which of the predictor variables were significantly related to the criterion variable. Only those predictor variables that are significantly related to the criterion variable were included in the stepwise multiple linear regression analysis.
H <sub>3</sub> :	Different college influences, such as peer social experiences, faculty understanding/comfort, perceived classroom comfort, and perceived peer support can predict emerging adults' college adjustment in a large urban university.		

Research Question	Variables	Statistical Analysis
RQ4: Do factors external to the university (current and future family obligations, and employment) interfere with students' college adjustment in a large urban university?	<u>Criterion Variable</u> College adjustment <ul style="list-style-type: none"> <li>• Academic Adjustment</li> <li>• Social Adjustment</li> <li>• Personal-Emotional Adjustment</li> <li>• Institutional Adjustment</li> <li>• Full Scale</li> </ul>	Separate stepwise multiple linear regression analyses were used to determine which of the predictor variables can be used to predict college adjustment.
H <sub>04</sub> : Factors external to the university commitments, such as current and future family obligations, and employment status cannot predict students' college adjustment in a large urban university.	<u>Predictor Variables</u> <ul style="list-style-type: none"> <li>• Current family obligations</li> <li>• Future family obligations</li> <li>• Employment (number of hours worked)</li> </ul>	Prior to doing the stepwise multiple linear regression analysis, an intercorrelation matrix was developed to determine which of the predictor variables were significantly related to the criterion variable. Only those predictor variables that were significantly related to the criterion variable were included in the stepwise multiple linear regression analysis.
H <sub>4</sub> : Factors external to the university commitments, such as current and future family obligations, and employment status can predict students' college adjustment in a large urban university.		
RQ5: To what extent are there relationships between students' college adjustment and conflicts between work responsibilities and school responsibilities, and between family and school responsibilities?	<u>Criterion Variable</u> College adjustment <ul style="list-style-type: none"> <li>• Academic Adjustment</li> <li>• Social Adjustment</li> <li>• Personal-Emotional Adjustment</li> <li>• Institutional Adjustment</li> <li>• Full Scale</li> </ul>	Pearson product moment correlations were used to determine the strengths and directions of the relationships between college adjustment and conflict between work responsibilities and school responsibilities and between family and school responsibilities.
H <sub>05</sub> : There are no statistically significant relationships between students' college adjustment and conflicts between work responsibilities and school responsibilities, and between family and school responsibilities.	<u>Predictor Variables</u> <ul style="list-style-type: none"> <li>• Conflict between work responsibilities and school responsibilities</li> <li>• Conflict between family responsibilities and school responsibilities</li> </ul>	
H <sub>5</sub> : There are statistically significant relationships between students' college adjustment and conflicts between work responsibilities and school responsibilities, and between family and school responsibilities.		

## CHAPTER IV

### RESULTS

The results of the data analyses that were used to describe the sample and address the research questions and associated hypotheses are presented in this chapter. Frequency distributions and measures of central tendency and dispersion are used to provide a profile of the students who participated in the study. Inferential statistical analyses are used to test the hypotheses and address the research questions posed for the study.

The purpose of this study is to identify internal and external factors that promote student adjustment among emerging adults attending a large urban university in a multisystemic context. Identification of factors that promote student adjustment will be important for university program development, as well as tailoring programs to meet the unique needs of students who present with risk factors in differing levels of their environment.

The online survey was available to all undergraduate students at Wayne State University through a link to SurveyMonkey. A total of 233 students responded to the survey. After reviewing the responses to determine if students met the criteria for inclusion, a total of 177 completed surveys were used in the analysis. Survey responses were eliminated if students were from foreign countries or had served in the military. Additional surveys were eliminated if students had not completed the majority of the sections on the survey.

A missing values analysis was used to determine the extent to which missing values could affect the outcomes of the study. The missing values in this study are considered to be missing at random because they are not associated with a particular variable or event. The results of the missing values analysis are presented in Table 5.

Table 5

*Missing Values Analysis: Scaled Variables*

Variables	Number Missing	Percent Missing
Academic adjustment	0	0.0
Social adjustment	0	0.0
Personal emotional adjustment	0	0.0
Institutional attachment	0	0.0
SACQ – Full Scale	0	0.0
General self-efficacy	0	0.0
Academic self-efficacy	1	0.6
Intrinsic motivation	7	4.0
Extrinsic motivation	6	3.4
Amotivation	7	4.0
Faculty understanding/comfort	20	11.3
Perceived peer support	18	10.2
Perceived classroom comfort	20	11.3
Active coping	11	6.2
Avoidance coping	11	6.2
Family school conflict	22	12.4
Work school conflict	33	18.6
Family obligation – current assistance	20	11.3
Family obligation - future assistance	20	11.3

With the exception of work school conflict scale, the missing values ranged from 0 (0.0%) for the school adjustment scales to 22 (12.4%) for the family school conflict. The 33 (18.6%) missing values on the work school conflict scale reflect the number of students who were not employed at the time of the study. According to Howell (2012), missing values can be replaced in a number of ways, including replacement by the mean score for the scale. This method was selected for the current study, with the exception of the work school conflict scale.

The missing values on this scale were not adjusted because of the number of students who were not employed.

### Description of the Participants

The students completed a demographic survey that provided their personal and educational characteristics. The students were asked to indicate their age. Their responses were summarized using descriptive statistics. The mean age was 20.62 (SD = 1.92) years, with a median of 21 years. The range of ages for the students was from 18 to 25 years. Eight students did not provide their ages on the survey. The frequency distributions of the personal characteristics (gender and race/ethnicity) are presented in Table 6.

Table 6

*Frequency Distributions: Personal Characteristics (N = 177)*

Personal Characteristic	Frequency	Percent
Gender		
Female	144	81.8
Male	32	18.2
Missing	1	
Race		
American Indian/Alaska Native	2	1.1
Arabic/Middle Eastern	11	6.3
Asian	27	15.3
Black/African American	33	18.8
Native Hawaiian/Other Pacific Islander	1	0.6
White/Caucasian/European American	102	57.9
Missing	1	

The majority of participants (n = 144, 81.8%) were female, with 32 (18.2%) of the students indicating their gender as male. One student did not provide his/her gender on the survey. The largest group of students indicated their race as White/Caucasian/European American (n = 102, 57.9%), with 33 (18.8%) students indicating their race as Black/African

American. Asian students (n = 27, 15.3%) were the third largest group participating in the study. One student did not provide his/her race on the survey.

The students provided information about their families on the survey. Their responses to questions involving their families are presented in Table 7.

Table 7

*Frequency Distributions: Family Characteristics (N = 177)*

Family Characteristic	Frequency	Percent
<b>Self-reported Social Class</b>		
Lowest (1-3)	28	16.4
Moderate (4-6)	86	50.3
Highest (7-9)	57	33.3
Missing	6	
<b>Number of People in Household</b>		
1 to 3	75	42.6
4 to 6	91	51.7
7 to 10	10	5.7
Missing	1	
<b>Number of Children in Household</b>		
None	87	53.0
1 to 3	66	40.2
4 to 6	11	6.8
Missing	13	
<b>Number of Adults</b>		
1 to 3	123	71.5
4 to 7	49	28.5
Missing	5	
<b>How many bring income into the household?</b>		
None	5	2.9
1	47	27.0
2	84	48.2
3	29	16.7
4	9	5.2
Missing	3	
<b>Home where student lives is:</b>		
Owned or being bought by someone in household	127	71.8
Rented for money	40	22.60
Occupied without payment or money or rent	5	2.8
Other	5	2.8



Family Characteristic	Frequency	Percent
Total combined family income for past 12 months		
Less than \$5,000	8	4.5
\$5,000 through \$11,999	14	7.9
\$12,000 through \$15,999	4	2.3
\$16,000 through \$24,999	16	9.0
\$25,000 through \$34,999	12	6.8
\$35,000 through \$49,999	11	6.2
\$50,000 through \$74,999	39	22.0
\$75,000 through \$99,999	22	12.4
\$100,000 and greater	34	19.2
Don't know	17	9.6
Income stability		
Very unstable	25	14.2
Moderately stable	84	47.7
Stable	67	38.1
Missing	1	
First generation college student in family		
Yes	54	30.5
No	123	69.5
Have siblings		
Yes	163	92.1
No	14	7.9
Number of Siblings		
None	37	20.9
1 to 2	40	22.6
3 to 4	31	17.5
5 or more	16	9.0

The largest group of students ( $n = 86$ , 50.3%) self-reported their socioeconomic class as moderate, with 28 (16.4%) indicating their socioeconomic class was low. Fifty-seven (33.3%) of the students self-reported their socioeconomic class as highest. Six students did not provide a response to this question.

The number of people in their households ranged from 1 to 10. The largest group ( $n = 91$ , 51.7%) had four to six people, with 75 (42.6%) reporting 1 to 3 people in their households. Ten (5.7%) had 7 to 10 people in their households. One student did not provide a response to this question. When asked how many of the people in the household were children, 87 (53.0%) reported none and 66 (40.2%) indicated 1 to 3 children in the households. Eleven (6.8%)

participants reported they had 4 to 6 children in their households. Thirteen students did not provide the number of children in their households. The majority of the students (n = 123, 71.5%) indicated 1 to 3 adults in their households, with 49 (28.5%) students having 4 to 7 adults in the household. Five students did not provide a response to this question.

The participants were asked to indicate the number of people who brought income into their households. Five (2.9%) reported that none of the members of the household brought in income, with 47 (27.0%) indicating that 1 person brought income into the household. Eighty-four (48.2%) of the participants indicated that 2 people brought income into the household and 29 (16.7%) reported that 3 people brought income into the household. Nine students lived in households with 4 people bringing in income. Three students did not provide a response to this question.

The majority of students (n = 127, 71.8%) lived in homes that were either owned or being bought by someone in the household. Forty (22.6%) students were in homes that were being rented for money and 5 (2.8%) were living in households that were occupied without payment or money or rent. Five (2.8%) students indicated other as the type of home in which they lived. Their explanations included: dormitory, in the process of their home being foreclosed, living with parents, and home provided by father's work.

The combined family income levels for the past 12 months ranged from less than \$5,000 to greater than \$100,000. The largest group of students (n = 39, 22.0%) reported their combined family income was between \$50,000 and \$74,999, with 34 (19.2%) indicating their combined family income was greater than \$100,000. Twenty-two (12.4%) students had combined family incomes between \$75,000 and \$99,999. Seventeen (9.6%) students did not know their combined family incomes.

When asked about the income stability, 25 (14.2%) reported their income was very unstable, with 84 (47.7%) indicating their income was moderately stable. Sixty-seven (38.1%) of the students thought their income was very stable.

The students were asked if they were a first generation college student in their families. The majority of students ( $n = 123$ , 69.5%) indicated no, with 54 (30.5%) reporting that they were their family's first college students.

The majority of students indicated they had siblings ( $n = 163$ , 92.1%). The number of students with no siblings was 37 (20.9%), with 40 (22.6%) reporting they had 1 to 2 siblings. Thirty-one (17.5%) students reported they had 3 to 4 siblings and 16 (9.0%) had 5 or more siblings.

The students were asked to provide information regarding their educational outcomes. The students self-reported their high school grade point averages (GPAs), their ACT scores, and their cumulative college grade point averages. Table 8 presents the results of the descriptive statistics used to summarize the data for high school GPAs and ACT scores.

Table 8

*Descriptive Statistics: High School Educational Outcomes (N = 177)*

Educational Outcome	Number	Mean	SD	Median	Range	
					Minimum	Maximum
High School GPA	177	3.51	.47	3.60	2.00	4.45
ACT Score	170	25.21	4.64	25.00	15.00	36.00

The mean high school GPA was 3.51 ( $SD = .47$ ), with a median of 3.60. The high school GPAs ranged from 2.00 to 4.45. High school students are awarded additional honor points when

completing advanced placement and honors classes, which is why high school grade point averages can exceed 4.00.

The ACT scores averaged 25.21 (SD = 4.64), with a median of 25.00. The range of ACT scores was from 15.00 to 36.00. The maximum possible ACT score is 36. Seven students did not provide their ACT scores on the survey, possible because they completed the SAT instead of the ACT.

The students were asked to report their cumulative college GPAs using forced-choice categories. Their responses were summarized using frequency distributions for presentation in Table 9.

Table 9

*Frequency Distributions: Cumulative College Grade Point Average (N = 177)*

Cumulative GPA	Frequency	Percent
Below 2.00	3	1.7
2.00 to 2.25	1	0.6
2.26 to 2.50	7	4.0
2.51 to 2.75	10	5.6
2.76 to 3.00	23	13.0
3.01 to 3.25	18	10.2
3.26 to 3.50	36	20.3
3.51 to 3.75	35	19.8
3.76 to 4.00	44	24.8
Total	177	100.0

The largest group of students (n = 44, 24.8%) reported their cumulative GPAs were between 3.76 and 4.00, and 35 (19.8%) had cumulative GPAs between 3.51 and 3.75. Thirty-six

(20.3%) students reported their cumulative GPAs were between 3.26 and 3.50. Three (1.7%) students had cumulative GPAs below 2.00 and 1 (0.6%) had a cumulative GPA between 2.00 and 2.25.

The students were asked about their college experiences. Their responses to this series of items were summarized using frequency distributions. Table 10 presents the results of these analyses.

Table 10

*Frequency Distributions: Educational Experiences (N = 177)*

Educational Experiences	Frequency	Percent
Attend any colleges or universities prior to enrolling at Wayne State University		
Yes	67	37.9
No	110	62.1
When transferred to Wayne State University		
2008	1	1.5
2009	3	4.5
2010	5	7.5
2011	9	13.4
2012	10	14.9
2013	21	31.3
2014	18	26.9
School/College Attended at Wayne State University		
School of Business Administration	20	11.4
College of Education	8	4.5
College of Engineering	17	9.7
College of Fine, Performing, and Communication Arts	24	13.6
College of Liberal Arts and Sciences	89	50.6
College of Nursing	8	4.5
College of Pharmacy and Health Sciences	5	2.8
School of Social Work	5	2.8
Missing	1	
Current Academic Classification		
Freshman	30	17.0
Sophomore	36	20.5
Junior	49	27.8
Senior	61	34.7
Missing	1	

Educational Experiences	Frequency	Percent
Living Arrangements		
On campus	50	28.2
Off campus	127	71.8
Who did student live with		
Alone	19	11.2
With Roommates	49	28.8
With Family	102	60.0
Missing	7	
If live off-campus, mode of transportation		
Car	110	62.1
No response	17	37.9
If you have siblings, are any currently attending or have attended college		
Yes	115	65.1
No	48	27.1
No siblings	14	7.8
Member of any learning community or a learning community at Wayne State University		
Yes	52	29.4
No	125	70.6
Belong to any clubs or social organizations on campus		
Yes	83	47.2
No	93	52.8
Missing	1	
Average hours per week spent socializing with other WSU students outside of classroom activities		
1 to 5	100	56.5
6 to 10	36	20.3
11 to 15	21	11.9
16 to 20	8	4.5
21 to 30	5	2.8
More than 30 hours	7	4.0
Receive financial aid		
Yes	141	79.7
No	36	20.3

Sixty-seven (37.9%) of the participants reported that they had transferred from another college or university prior to enrolling at Wayne State University (WSU). The years that they had transferred to WSU ranged from 2008 (n = 1, 1.5%) to 2014 (n = 18, 26.9%).

The largest group of students (n = 89, 50.6%) were enrolled in the College of Liberal Arts and Sciences, with 24 (13.6%) indicating they were attending the College of Fine, Performing,

and Communication Arts. Twenty (11.4%) students were in the School of Business Administration. One student did not provide a response to this question.

The largest group of students ( $n = 61$ , 34.7%) reported their academic classification as seniors, with 49 (27.8%) indicating they were in their junior year. Thirty-six (20.5%) students were sophomores and 30 (17.0%) were freshmen. One student did not provide a response to this question.

The majority of students ( $n = 127$ , 71.8%) reported they were living off-campus. Most of the students ( $n = 102$ , 60.0%) were living with their family, with 49 (28.8%) indicating they were living with a roommate. Most of the students ( $n = 110$ , 62.1%) who lived off-campus reported they used a car as the primary mode of transportation to school.

The majority of the students ( $n = 115$ , 65.1%) indicated they had siblings who were attending or had attended college. Forty-eight (27.1%) students did not have siblings who were attending or had attended college, while 14 (7.8%) had no siblings.

When asked if the student was a member of any learning community or a learning community at Wayne State University, 52 (29.4%) answered yes. The majority of students ( $n = 125$ , 70.6%) were not members of these types of organizations.

The students were asked if they belonged to any clubs or social organizations on campus. Eighty-three (47.2%) students indicated they were members of these types of organizations and 93 (52.8%) did not belong to these types of organizations. One student did not provide a response to this question.

The students were asked to indicate the number of hours they spent socializing with other Wayne State University students outside of class. The majority of the students ( $n = 100$ , 56.5%) reported they spent 1 to 5 hours a week socializing with other WSU students outside of class and

36 (20.3%) indicated they spent 6 to 10 hours in social activities. Twenty-one (11.9%) students spent 11 to 15 hours socializing with other WSU students, while 8 (4.5%) reported they spent 16 to 20 hours socializing with other WSU students outside of classroom activities. Five (2.8%) students spent 21 to 30 hours socializing with other WSU students and 7 (4.0%) spent more than 30 hours a week socializing with other WSU students outside of classroom activities. The majority of the students (n = 141, 79.7%) indicated they were receiving financial aid at the university. The remaining 36 (20.3%) students were not receiving financial aid. The students were asked about working. Their responses to these questions are summarized using frequency distributions. Table 11 presents results of these analyses.

Table 11

*Frequency Distributions: Work Experiences (N = 177)*

Work Experiences	Frequency	Percent
Employed		
Yes	138	78.0
No	39	22.0
Where employed		
Wayne State University	57	41.3
Outside of Wayne State University	81	58.7

The majority of students (n = 138, 78.0%) were working while attending college. Of this number, 57 (41.3%) were employed by Wayne State University and 81 (58.7%) were employed outside of the university.

### **Description of the Scaled Variables**

The participants' scores for the scaled variables were summarized using descriptive statistics. Cronbach alpha coefficients were obtained for each of the scales to determine the



reliability of the instruments with the present sample. The results of these analyses are presented in Table 12.

Table 12

*Descriptive Statistics: Scaled Variables*

Scale	N	M	SD	$\alpha$	Actual Range		Possible Range	
					Min	Max	Min	Max
Academic adjustment	177	6.20	1.22	.88	2.83	8.91	1	9
Social adjustment	177	5.84	1.47	.88	2.20	8.94	1	9
Personal emotional adjustment	177	5.31	1.66	.89	1.53	8.87	1	9
Institutional attachment	177	6.55	1.46	.85	2.36	9.00	1	9
Student Adjustment	177	6.00	1.17	.94	2.48	8.38	1	9
General self-efficacy	177	3.13	.50	.89	1.50	4.00	1	4
Academic self-efficacy	177	8.22	1.48	.74	1.81	10.00	1	10
Intrinsic motivation	177	4.64	1.42	.94	1.00	7.00	1	7
Extrinsic motivation	177	5.56	1.26	.91	1.00	7.00	1	7
Amotivation	177	1.99	1.44	.91	1.00	7.00	1	7
Faculty understanding and comfort	177	2.78	.81	.91	1.00	5.00	1	5
Perceived peer support	177	2.83	.60	.57	1.00	4.25	1	5
Perceived classroom comfort	177	2.50	1.02	.94	1.00	5.00	1	5
Active coping	177	2.70	.66	.89	1.10	4.00	1	4
Avoidance coping	177	1.86	.55	.78	1.00	4.00	1	4
Family-school conflict	177	1.86	.66	.87	1.00	4.00	1	4
Work-school conflict	144	2.66	1.14	.92	1.00	5.00	1	5
Family obligation – current assistance	177	3.43	.84	.90	1.18	5.00	1	5
Family obligation – future support	177	3.11	.85	.81	1.00	5.00	1	5

For the Student Adaptation to College Questionnaire (SACQ) (academic adjustment, social adjustment, personal emotional adjustment, attachment, and school adjustment), higher scores were indicative of better adjustment. For general and academic self-efficacy scales, higher scores indicate students have higher levels of self-efficacy. The Academic Motivation

Scale measures three types of motivation. Higher scores for intrinsic and extrinsic motivation indicate students have higher levels of motivation. Higher scores on the amotivation scale are indicative of lack of motivation. Lower scores on the Sense of Belonging Scale (faculty understanding and comfort, perceived peer support, and perceived classroom support), indicated more positive adjustment and perceived support. Active and avoidance coping scores range from 1 to 4, with higher scores indicating greater use of each type of coping strategies. Higher scores on the family-school conflict and work-school conflict indicate students perceive greater conflict between family and work. Higher scores on the family obligation scales (current and future) provide support that students perceive higher obligations to their families both currently and in the future. The Cronbach alpha coefficients obtained for each of the measures ranged from .57 for perceived peer support as a measure of the Sense of Belonging scale to .94 for the Student Adjustment to College scale. These results provided support that the scales had from adequate to excellent internal consistency as a measure of reliability.

The results of the Pearson product moment correlations used to test the relationships between the variables are presented in Table 13.

Table 13

*Correlation Matrix – Scaled Variables*

Scaled Variables	1	2	3	4	5	6	7	8	9	10
1 Academic adjustment	–									
2 Social adjustment	.50**	–								
3 Personal emotional adjustment	.61**	.46**	–							
4 Institutional attachment	.68**	.84**	.52**	–						
5 School adjustment	.87**	.79**	.80**	.87**	–					
6 General self-efficacy	.46**	.38**	.51**	.41**	.55**	–				
7 Academic self-efficacy	.66**	.40**	.48**	.50**	.64**	.46**	–			
8 Intrinsic motivation	.35**	.26**	.16*	.28**	.33**	.27**	.37**	–		
9 Extrinsic motivation	.26**	.12	.11	.22**	.22**	.24**	.33**	.56**	–	
10 Amotivation	-.49**	-.40**	-.32**	-.56**	-.53**	-.33**	-.34**	-.28**	-.45**	–
11 Faculty understanding and comfort	-.21**	-.24**	-.05	-.15	-.20**	-.19*	-.12	-.20**	.04	.04
12 Perceived peer support	-.11	-.30**	-.13	-.18*	-.21**	-.22**	-.11	-.12	-.01	-.01
13 Perceived classroom support	-.31**	-.30**	-.29**	-.26**	-.35**	-.34**	-.27**	-.14	.01	.05
14 Active coping	.25**	.31**	.10	.29**	.28**	.26**	.26**	-.36**	.09	-.07
15 Avoidance coping	-.35**	-.28**	-.47**	-.37**	-.45**	-.28**	-.20**	-.09	-.13	.52**
16 Family-school conflict	-.34**	-.24**	-.34**	-.29**	-.37**	-.31**	-.25**	.05	-.03	.30**
17 Work-school conflict	-.22**	-.02	-.16	-.09	-.17*	-.05	-.17*	-.07	-.09	.24**
18 Family obligation – Current assistance	.13	.10	.08	.18*	.15*	.24**	.18*	.09	.10	-.12
19 Family obligation – Future support	-.01	.12	.04	.11	.08	.11	.12	.09	.12	.01

\*p &lt; .05; \*\*p &lt; .01

Scaled Variables	11	12	13	14	15	16	17	18	19
1 Academic adjustment									
2 Social adjustment									
3 Personal emotional adjustment									
4 Institutional attachment									
5 School adjustment									
6 General self-efficacy									
7 Academic self-efficacy									
8 Intrinsic motivation									
9 Extrinsic motivation									
10 Amotivation									
11 Faculty understanding and comfort	–								
12 Perceived peer support	.30**	–							
13 Perceived classroom comfort	.40**	.37**	–						
14 Active coping	-.23**	-.15	-.25**	–					
15 Avoidance coping	.09	.11	.18*	.18*	–				
16 Family-school conflict	.11	-.02	.22**	.02	.40**	–			
17 Work-school conflict	.10	-.05	.08	.09	.25**	.41**	–		
18 Family obligation – Current assistance	-.10	-.27**	-.23**	.12	-.08	.10	.26**	–	
19 Family obligation – Future support	-.02	-.16*	-.09	.14	-.05	.18*	.14	.55**	–

\*p < .05; \*\*p < .01

Statistically significant correlations were found between academic adjustment and general self-efficacy ( $r = .46$ ,  $p < .001$ ), academic self-efficacy ( $r = .66$ ,  $p < .001$ ), intrinsic motivation ( $r = .35$ ,  $p < .001$ ), extrinsic motivation ( $r = .26$ ,  $p < .001$ ), amotivation ( $r = -.49$ ,  $p < .001$ ), faculty understanding and comfort ( $r = -.21$ ,  $p < .001$ ), perceived classroom support ( $r = -.31$ ,  $p < .001$ ), active coping ( $r = .25$ ,  $p < .001$ ), avoidance coping ( $r = -.35$ ,  $p < .001$ ), family-school conflict ( $r = -.34$ ,  $p < .001$ ), work-school conflict ( $r = -.22$ ,  $p < .001$ ). The correlations between social adjustment and general self-efficacy ( $r = .38$ ,  $p < .001$ ), academic self-efficacy ( $r = .40$ ,  $p < .001$ ), intrinsic motivation ( $r = .26$ ,  $p < .001$ ), amotivation ( $r = -.40$ ,  $p < .001$ ), faculty

understanding and comfort ( $r = -.24, p < .001$ ), perceived peer support ( $r = -.30, p < .001$ ), perceived classroom support ( $r = -.30, p < .001$ ), active coping ( $r = .31, p < .001$ ), avoidance coping ( $r = -.28, p < .001$ ), family-school conflict ( $r = -.24, p < .001$ ) were statistically significant. Personal emotional adjustment was significantly correlated to general self-efficacy ( $r = .51, p < .001$ ), academic self-efficacy ( $r = .48, p < .001$ ), intrinsic motivation ( $r = .16, p = .029$ ), amotivation ( $r = -.32, p < .001$ ), perceived classroom support ( $r = -.29, p < .001$ ), avoidance coping, ( $r = -.47, p < .001$ ), family school conflict ( $r = -.34, p < .001$ ). The correlations between institutional attachment and general self-efficacy ( $r = .41, p < .001$ ), academic self-efficacy ( $r = .50, p < .001$ ), intrinsic motivation ( $r = .28, p = .001$ ), extrinsic motivation ( $r = .22, p = .003$ ), amotivation ( $r = -.56, p < .001$ ), perceived peer support ( $r = -.18, p = .016$ ), perceived classroom support ( $r = -.26, p < .001$ ), active coping ( $r = .29, p < .001$ ), avoidance coping ( $r = -.37, p < .001$ ), family school conflict ( $r = -.29, p < .001$ ), and family obligation – current assistance ( $r = .18, p = .018$ ). The scores on the full scale school adjustment questionnaire were correlated with general self-efficacy ( $r = .55, p < .001$ ), academic self-efficacy ( $r = .64, p < .001$ ), intrinsic motivation ( $r = .33, p < .001$ ), extrinsic motivation ( $r = .22, p < .001$ ), amotivation ( $r = -.53, p < .001$ ), faculty understanding and comfort ( $r = -.20, p = .008$ ), perceived peer support ( $r = -.21, p = .005$ ), perceived classroom support ( $r = -.35, p < .001$ ), active coping ( $r = .28, p < .001$ ), avoidance coping ( $r = -.45, p < .001$ ), family-school conflict ( $r = -.37, p < .001$ ), work-school conflict ( $r = -.17, p = .041$ ), family obligation - current assistance ( $r = .15, p = .044$ ). Statistically significant correlations were found between general self-efficacy and academic self-efficacy ( $r = .46, p < .001$ ), intrinsic motivation ( $r = .27, p < .001$ ), extrinsic motivation ( $r = .24, p = .001$ ), amotivation ( $r = -.33, p < .001$ ), faculty understanding and comfort ( $r = -.19, p = .011$ ), perceived peer support ( $r = -.22, p = .003$ ), perceived classroom comfort ( $r = -.34, p < .001$ ), active coping

( $r = .26, p = .001$ ), avoidance coping ( $r = -.28, p < .001$ ), family-school conflict ( $r = -.31, p < .001$ ), family obligation – current assistance ( $r = .24, p = .002$ ). The correlations between academic self-efficacy and intrinsic motivation ( $r = .37, p < .001$ ), extrinsic motivation ( $r = .33, p < .001$ ), amotivation ( $r = -.34, p < .001$ ), perceived classroom comfort ( $r = -.27, p < .001$ ), active coping ( $r = .26, p < .001$ ), avoidance ( $r = -.20, p = .008$ ), family-school conflict ( $r = -.25, p = .001$ ), work-school conflict ( $r = -.17, p = .040$ ), and family obligation – current assistance ( $r = .18, p = .012$ ) were statistically significant. Statistically significant correlations were obtained between intrinsic motivation and extrinsic motivation ( $r = .56, p < .001$ ), amotivation ( $r = -.28, p < .001$ ), faculty understanding and comfort ( $r = -.20, p = .007$ ), and active coping ( $r = -.36, p < .001$ ). The correlation between extrinsic motivation and amotivation ( $r = -.45, p < .001$ ) was statistically significant. Amotivation was significantly correlated with avoidance coping ( $r = .52, p < .001$ ), family-school conflict ( $r = .30, p < .001$ ), and work-school conflict ( $r = .24, p = .004$ ). Statistically significant correlations were found between faculty understanding and comfort with perceived peer support ( $r = .30, p < .001$ ), perceived classroom support ( $r = .40, p < .001$ ), and active coping ( $r = -.23, p = .002$ ). The correlations between perceived peer support and perceived classroom comfort ( $r = .37, p < .001$ ) and family obligation – current assistance ( $r = -.27, p < .001$ ) were statistically significant. Perceived classroom comfort was significantly related to active coping ( $r = -.25, p = .001$ ), avoidance coping ( $r = .18, p = .016$ ), family-school conflict ( $r = .22, p = .003$ ), and family obligation – current assistance ( $r = .23, p < .001$ ). A statistically significant correlation was found between active coping and avoidance coping ( $r = .18, p = .014$ ). The correlations between avoidance coping and family-school conflict ( $r = .40, p < .001$ ) and work-school conflict ( $r = .25, p = .003$ ) were statistically significant. Family-school conflict was significantly correlated with work-school conflict ( $r = .41, p < .001$ ) and family obligation, future

support ( $r = .18$ ,  $p = .015$ ). The correlation between work-school conflict and family obligation – current assistance ( $r = .26$ ,  $p = .002$ ) was statistically significant. Family obligation – current assistance was significantly related to family obligation – future assistance ( $r = .55$ ,  $p < .001$ ).

### **Research Questions and Hypotheses**

Five research questions and associated hypotheses were developed for this study. Each of these research questions was tested using inferential statistical analyses. All decisions on the statistical significance of the findings were based on a criterion alpha level of .05.

RQ1: Do personal characteristics (academic preparation (high school GPA, ACT score), perceived social status (perceived social class standing and income), race, gender, age, financial aid status, first generation college students, first time in any college, and living arrangements) predict emerging adults' college adjustment in a large urban university?

H<sub>1</sub>: Academic preparation (higher high school grade point average and ACT scores), higher perceived social status, being a member of a nonminority racial group, being female, being older, receiving financial aid, first generation college students, first time in any college, and living arrangements and living with parents can predict emerging adults' college adjustment in a large urban university.

A correlation matrix was created to examine the relationships between school adjustment and personal and family characteristics of emerging adult college students. Only those predictor variables that were significantly related to college adjustment were used in the multiple linear regression analyses to test the hypothesis. Table 14 presents results of these analyses.

Table 14

*Correlation Matrix – School Adjustment (Full Scale) and Personal and Educational Characteristics*

Predictor Variables	Academic Adjustment		Social Adjustment		Personal-emotional Adjustment		Institutional Attachment		SACQ Full Scale	
	r	P	r	p	r	p	r	p	r	p
Age	-.06	.406	-.08**	.305	.07	.352	.01	.877	-.02	.804
Gender	-.09	.213	-.03	.686	.06	.463	<b>-.21**</b>	<b>.006</b>	-.07	.374
American Indian	-.08	.311	-.04	.567	-.01	.965	-.07	.357	-.06	.403
Arabic Middle-Eastern	<b>-.22*</b>	<b>.004</b>	-.14	.091	-.09	.227	<b>-.22**</b>	<b>.003</b>	<b>-.19*</b>	<b>.010</b>
Asian	-.06	.459	-.04	.596	-.05	.484	-.10	.204	-.07	.385
Black	-.09	.228	-.09	.211	-.03	.707	-.03	.688	-.09	.242
Native Hawaiian	-.08	.276	-.15	.053	-.01	.916	<b>-.17*</b>	<b>.025</b>	-.11	.151
White	<b>.24**</b>	<b>.001</b>	.14	.062	.12	.117	<b>.17*</b>	<b>.021</b>	<b>.21**</b>	<b>.005</b>
Family income	.04	.618	.06	.453	.10	.181	.09	.222	.08	.271
Self-reported social class	.04	.573	.11	.150	<b>.27**</b>	<b>&lt;.001</b>	.06	.442	<b>.15*</b>	<b>.046</b>
High school GPA	.10	.169	<b>.16**</b>	<b>.037</b>	.03	.692	.15	.052	.13	.082
ACT score	.03	.692	.13	.086	.09	.250	.09	.230	.11	.152
Cum College GPA	<b>.27**</b>	<b>&lt;.001</b>	<b>.23**</b>	<b>.002</b>	.08	.298	<b>.21**</b>	<b>.006</b>	<b>.26**</b>	<b>.001</b>
Receive financial aid	.03	.693	.04	.563	.14	.068	.04	.590	.07	.332
Residence	-.07	.366	-.09	.270	-.10	.217	<b>-.15*</b>	<b>.049</b>	-.11	.164
First time in any college	-.07	.296	.09	.229	-.09	.261	.01	.944	-.03	.679
First-generation student	.03	.725	-.11	.140	.02	.792	<b>-.16*</b>	<b>.026</b>	-.04	.582

\*p &lt; .05; \*\*p &lt; .01

Table 15 presents the results of the analysis using academic adjustment as the criterion variable, and Arabic Middle Eastern, White, and cumulative college GPA as the predictor variables.



Table 15

*Stepwise Multiple Linear Regression Analysis – Academic Adjustment*

Predictor Variable	Constant	b-Weight	$\beta$ -Weight	$\Delta R^2$	t-Value	Sig
Included Variables						
Cumulative college GPA	4.95	.16	.25	.07	3.53	.001
Arabic Middle Eastern		-.87	-.17	.05	-2.33	.021
White		.37	.15	.02	1.99	.048
Excluded Variables						
None						
Multiple R	.38					
Multiple R2	.14					
F Ratio	9.45					
DF	3, 173					
Sig	<.001					

The three predictor variables, cumulative college GPA, Arabic/Middle Eastern, and White, entered the stepwise multiple linear regression equation, accounting for 14% of the variance in academic adjustment,  $R^2 = .14$ ,  $F(3, 173) = 9.45$ ,  $p < .001$ . Cumulative college GPA entered the stepwise multiple linear regression equation first, accounting for 7% of the variance in academic adjustment,  $\beta = .25$ ,  $t = 3.53$ ,  $p = .001$ . The positive direction of the relationship between cumulative college GPA and academic adjustment indicated that students who had higher scores for academic adjustment tended to have higher college GPAs. Being Arabic Middle Eastern was a statistically significant predictor of academic adjustment, explaining an additional 5% of the variance in academic adjustment,  $\beta = -.17$ ,  $t = -2.33$ ,  $p = .021$ . The negative relationship between academic adjustment and being Arabic Middle Eastern provided support that students who were Arabic/Middle Eastern were more likely to have lower academic adjustment scores. Two percent of the variance in academic adjustment was accounted for by being White,  $\beta = .15$ ,  $t = 1.99$ ,  $p = .048$ . The positive relationship between academic adjustment

and being White indicated that White students tended to have higher scores for academic adjustment.

Two predictor variables, high school GPA and cumulative college GPA, were used in a stepwise multiple linear regression analysis. Scores for social adjustment were used as the criterion variable in this analysis. Table 16 presents results of this analysis.

Table 16

*Stepwise Multiple Linear Regression Analysis – Social Adjustment*

Predictor Variable	Constant	b-Weight	$\beta$ -Weight	$\Delta R^2$	t-Value	Sig
Included Variables						
Cumulative college GPA	4.62	.18	.23	.05	3.14	.002
Excluded Variables						
High school GPA			.06		.73	.466
Multiple R	.23					
Multiple R2	.05					
F Ratio	9.88					
DF	1, 175					
Sig	.002					

One predictor variable, cumulative college GPA, entered the stepwise multiple linear regression equation, accounting for 5% of the variance in social adjustment,  $F(1, 175) = 9.88$ ,  $p = .002$ . The positive relationship between cumulative college GPA and social adjustment provided evidence that students with higher cumulative college GPA were more likely to have higher scores for social adjustment. High school GPA did not enter the stepwise multiple linear regression equation, indicating it was not a statistically significant predictor of social adjustment.

Personal emotional adjustment was used as the criterion variable in a stepwise multiple linear regression analysis, with self-reported social class standing used as the predictor variable.

Table 17 presents results of this analysis.

Table 17

*Stepwise Multiple Linear Regression Analysis – Personal Emotional Adjustment*

Predictor Variable	Constant	b-Weight	$\beta$ -Weight	$\Delta R^2$	t-Value	Sig
Included Variables						
Self-reported Social Class	3.97	.25	.27	.07	3.72	<.001
Excluded Variables						
None						
Multiple R		.27				
Multiple R2		.07				
F Ratio		13.86				
DF		1, 175				
Sig		<.001				

Seven percent of the variance in personal emotional adjustment was explained by self-reported social class,  $F(1, 175) = 13.86, p < .001$ . The positive relationship between the criterion and predictor variable provided support that students who self-reported higher social classes tended to have higher scores for personal emotional adjustment.

Seven predictor variables, gender, being Arabic/Middle Eastern, Native Hawaiian, White, cumulative college GPA, residence, and being a first generation college students, were used in the next stepwise multiple linear regression analysis. The criterion variable in this analysis was institutional attachment. The results of this analysis are presented in Table 18.

Table 18

*Stepwise Multiple Linear Regression Analysis – Institutional Attachment*

Predictor Variable	Constant	b-Weight	$\beta$ -Weight	$\Delta R^2$	t-Value	Sig
Included Variables						
Arabic/Middle Eastern	7.32	-1.28	-.22	.05	-2.98	.003
Cumulative college GPA		.18	.24	.04	3.30	.001
First generation college student		-.70	-.22	.04	-2.99	.003
Residence		.32	.15	.02	2.05	.042
Excluded Variables						
Gender			-.14		-1.96	.052
Native Hawaiian			-.08		-1.01	.314
White			.14		1.83	.070
Multiple R	.39					
Multiple R2	.15					
F Ratio	7.34					
DF	4, 164					
Sig	<.001					

Four predictor variables, Arabic/Middle Eastern, cumulative college GPA, first generation college student, and residence entered the stepwise multiple linear regression equation, accounting for 15% of the variance in institutional attachment,  $F(4, 164) = 7.34$ ,  $p < .001$ . Being Arabic/Middle Eastern entered the stepwise multiple linear regression equation accounting for 5% of the variance in institutional attachment,  $\beta = -.22$ ,  $t = -2.98$ ,  $p = .003$ . An additional 4% of the variance in institutional attachment was explained by cumulative college GPA,  $\beta = .24$ ,  $t = 3.30$ ,  $p = .001$ . Being a first generation college student accounted for 4% of the variance in institutional attachment,  $\beta = -.22$ ,  $t = -2.99$ ,  $p = .003$ . Residence (living at home or at the college) entered the stepwise multiple linear regression equation, explaining 2% of the variance in institutional attachment. The negative relationships between the predictor variables and the criterion variable indicated that students who were not Arabic/Middle Eastern, or were not a first generation college student were more likely to have higher scores for institutional attachment. Students who lived on campus and had higher GPAs tended to have stronger

attachment to the university. The remaining predictor variables, gender, Native Hawaiian, and White did not enter the stepwise multiple linear regression equation as statistically significant predictors of institutional attachment.

A stepwise multiple linear regression analysis was used to determine which predictor variables (Arabic/Middle Eastern, White, self-reported social status, and cumulative college GPA) could predict the criterion variable (school adjustment: Student Adaptation to College full scale). Results of this analysis are presented in Table 19.

Table 19

*Stepwise Multiple Linear Regression Analysis – School Adjustment*

Predictor Variable	Constant	b-Weight	$\beta$ -Weight	$\Delta R^2$	t-Value	Sig
<b>Included Variables</b>						
Cumulative college GPA	4.92	.17	.27	.07	3.72	<.001
Arabic/Middle Eastern		-1.03	-.20	.04	-2.70	.008
<b>Excluded Variables</b>						
White			.14		1.80	.073
Self-reported social class			.12		1.65	.101
Multiple R	.33					
Multiple R2	.11					
F Ratio	10.18					
DF	2, 168					
Sig	<.001					

Eleven percent of the variance in school adjustment scale was accounted for by two predictor variables, cumulative college GPA and Arabic/Middle Eastern ethnicity,  $F(2, 168) = 10.18$ ,  $p < .001$ . Cumulative college GPA entered the stepwise multiple linear regression equation first, explaining 7% of the variance in school adjustment,  $\beta = .27$ ,  $t = 3.72$ ,  $p < .001$ . Being Arabic/Middle Eastern also was a statistically significant predictor of school adjustment, accounting for an additional 4% of the variance,  $\beta = -.20$ ,  $t = -2.70$ ,  $p = .008$ . The negative

relationship between the predictor and criterion variable indicated that students who Arabic/Middle Eastern were likely to have lower scores for the school adjustment scale.

The results of the analyses that examined the subscales and full scale scores on student adjustment provided support that some of the demographic variables were statistically significant predictors of student adjustment. Based on these findings, the null hypothesis of no relationship is rejected.

RQ2: Do factors external to the university (current and future family obligations and employment status (number of hours work, location) mediate the relationship between psychosocial characteristics (general and academic self-efficacy, motivation, and coping style) and emerging adults' college adjustment in a large urban university?

H<sub>2</sub>: Factors external to the university (current and future family obligations and employment status) mediate the relationships between psychosocial resources, including general and academic self-efficacy, motivation, and coping style, and emerging adults' college adjustment in a large urban university.

Baron and Kenny's (1986) mediation process were used to determine if the relationship between college adjustment variables and personal characteristics of emerging adult college students is mediated by factors external to the university. Separate analyses were used for each criterion variable and predictor variables and mediating variables. The four steps included:

1. Determine if the predictor variable is significantly related to the criterion variable
2. Determine if the predictor variable is significantly related to the mediating variable
3. Determine if the mediating variable is significantly related to the criterion variable
4. Determine the change in the relation between the predictor variable and the criterion variable while holding the mediating variable constant.

If the relation between the predictor and criterion variable became non-significant when holding the mediating variable constant, the result was a full mediation.

Mediation analyses were completed using the subscales and total score for school adjustment as the criterion variables, with general self-efficacy, academic self-efficacy, intrinsic motivation, extrinsic motivation, amotivation, active coping, and avoidance coping as the predictor variables. The mediating variables in these analyses were family obligations – current assistance, family support – future support, and hours worked. The results of the mediation analyses that were statistically significant are presented in this chapter. The results of the mediation analyses that were not statistically significant are available upon request.

A mediation analysis was completed using institutional attachment as a measure of school adjustment was used as the criterion variable, with general self-efficacy used as the predictor variable. The mediating variable in this analysis was family obligations – current support. Table 20 presents results of this analysis.

Table 20

*Mediation Analysis: Mediating Role of Family Obligations – Current Support on the Relationship between Institutional Attachment and General Self-efficacy*

Predictor	Criterion	$R^2$	$F$	Standardized $\beta$
<u>Step 1</u>				
General self-efficacy	Institutional attachment	.17	36.27	.41**
<u>Step 2</u>				
General self-efficacy	Family obligations – Current assistance	.06	10.33	.24**
<u>Step 3</u>				
Family obligations– Current assistance	Institutional attachment	.03	5.66	.18*
<u>Step 4</u>				
Family obligations – Current assistance	Institutional attachment	.03	5.66	.18*
General self-efficacy		.15	18.88	.40**

Sobel Test = 1.92,  $p = .055$

\* $p < .05$ ; \*\* $p < .01$

On the first step of the mediation analysis, general self-efficacy was accounting for a statistically significant amount of variance in institutional attachment as a subscale of school adjustment,  $r^2 = .17$ ,  $\beta = .41$ ,  $F(1, 175) = 36.27$ ,  $p < .001$ . Family obligations – current assistance was accounting for 6% of the variance in general self-efficacy on the second step of the mediation analysis,  $r^2 = .06$ ,  $\beta = .24$ ,  $F(1, 175) = 10.33$ ,  $p = .002$ . Family obligations – current assistance was used as the predictor variable and institutional attachment was the criterion variable on the third step of the mediation analysis. The results of this analysis were statistically significant,  $r^2 = .03$ ,  $\beta = .184$ ,  $F(1, 175) = 5.66$ ,  $p = .018$ . The mediating variable was held constant on the fourth step of the mediation analysis. The resultant standardized beta weight for the relation between general self-efficacy and institutional attachment was reduced from .17 (step 1) to .15 (step 4),  $R^2 = .15$ ,  $F(2, 174) = 18.88$ ,  $p < .001$ . To determine if the mediator variable has an influence on the relationship between the predictor and criterion variables (i.e., if



the indirect effect of the predictor variable on the dependent variable through the mediator variable is significant), Sobel's test was calculated. The obtained test statistic of 1.92 ( $p = .055$ ) was not statistically significant, indicating that family obligations – current assistance was not partially mediating the relation between general self-efficacy and institutional attachment as a measure of school adjustment.

Institutional attachment was used as the criterion variable in a mediation analysis, with academic self-efficacy used as the predictor variable. Family obligations – current assistance was used as the mediating variable in this analysis. Table 21 presents results of this analysis.

Table 21

*Mediation Analysis: Mediating Role of Family Obligations – Current Assistance on the Relationship between Institutional Attachment and Academic Self-efficacy*

Predictor	Criterion	$R^2$	$F$	Standardized $\beta$
<u>Step 1</u>				
Academic self-efficacy	Institutional attachment	.21	45.89	.46**
<u>Step 2</u>				
Academic self-efficacy	Family obligations – Current assistance	.03	5.32	.17*
<u>Step 3</u>				
Family obligations – Current assistance	Institutional attachment	.03	5.66	.18*
<u>Step 4</u>				
Family obligations – Current assistance	Institutional attachment	.03	5.66	.10
Academic self-efficacy		.19	24.22	.44**

Sobel Test = 1.65,  $p = .097$

\* $p < .05$ ; \*\* $p < .01$

Twenty-one percent of the variance in institutional attachment was explained by academic self-efficacy on the first step of the mediation analysis,  $\beta = .46$ ,  $F(1, 175) = 45.89$ ,  $p < .001$ . Academic self-efficacy was accounting for 3% of the variance in family obligations –

current assistance,  $\beta = .17$ ,  $F(1, 175) = 5.32$ ,  $p = .022$ , on the second step of the mediation analysis. On the third step, family obligations – current assistance was explaining 3% of the variance in institutional attachment,  $\beta = .18$ ,  $F(1, 175) = 5.66$ ,  $p = .018$ . After holding the mediating variable constant on the fourth step of the mediation analysis, the standardized beta weight for the relation between academic self-efficacy and institutional attachment was reduced from .21 (step 1) to .18 (step 4),  $R^2 = .18$ ,  $F(2, 174) = 24.22$ ,  $p < .001$ . Sobel's test was calculated to determine if the mediator variable had an influence on the relationship between the predictor and criterion variables (i.e., if the indirect effect of the predictor variable on the dependent variable through the mediator variable is significant). The results of this analysis were not statistically significant, indicating that family obligations – current assistance was not partially mediating the relationship between academic self-efficacy and institutional attachment, Sobel test = 1.65,  $p = .097$ .

A mediation analysis was used to determine if family obligations – current assistance was mediating the relationship between the school adjustment – full scale and general self-efficacy. The results of this analysis are presented in Table 22.

Table 22

*Mediation Analysis: Mediating Role of Family Obligations – Current Assistance on the Relationship between School Adjustment and General Self-efficacy*

Predictor	Criterion	$R^2$	$F$	Standardized $\beta$
<u>Step 1</u>				
General self-efficacy	School adjustment	.30	75.03	.55**
<u>Step 2</u>				
General self-efficacy	Family obligations – Current assistance	.05	10.33	.24**
<u>Step 3</u>				
Family obligations – Current assistance	School adjustment	.02	4.11	.15*
<u>Step 4</u>				
Family obligations – Current assistance	School adjustment	.02	4.11	.15*
General self-efficacy		.28	37.39	.54**

Sobel Test = 1.72,  $p = .086$

\* $p < .05$ ; \*\* $p < .01$

On the first step of the mediation analysis, general self-efficacy was accounting for 30% of the variance in school adjustment,  $r^2 = .30$ ,  $\beta = .55$ ,  $F(1, 175) = 75.03$ ,  $p < .001$ . The relationship between general self-efficacy and family obligations – current assistance, on the second step of the mediation analysis, was statistically significant,  $r^2 = .05$ ,  $\beta = .24$ ,  $F(1, 175) = 10.33$ ,  $p = .002$ . The relationship between family obligations – current assistance and school adjustment was statistically significant,  $r^2 = .02$ ,  $\beta = .15$ ,  $F(1, 175) = 4.11$ ,  $p = .044$ . The resultant standardized beta weight for the relationship between general self-efficacy and school adjustment decreased from .55 (step 1) to .54 (step 4),  $R^2 = .28$ ,  $F(2, 174) = 37.39$ ,  $p < .001$ . Sobel's test was calculated to determine if the mediator variable (family obligations – current assistance) was influencing the relationship between the predictor (general self-efficacy) and criterion variables (school adjustment; i.e., if the indirect effect of the predictor variable on the dependent variable through the mediator variable is significant). The obtained test statistic of

1.72 ( $p = .086$ ) was not statistically significant, providing support that family obligations – current assistance was not partially mediating the relation between academic self-efficacy and school adjustment.

The school adjustment scale was used as the criterion variable in a mediation analysis, with academic self-efficacy used as the predictor variable. The mediating variable in this analysis was family obligations – current assistance. Table 23 presents results of this analysis.

Table 23

*Mediation Analysis: Mediating Role of Family Obligations – Current Assistance on the Relationship between School Adjustment and Academic Self-efficacy*

Predictor	Criterion	$R^2$	$F$	Standardized $\beta$
<u>Step 1</u>				
Academic self-efficacy	School adjustment	.32	82.68	.57**
<u>Step 2</u>				
Academic self-efficacy	Family obligations – Current assistance	.03	5.32	.17*
<u>Step 3</u>				
Family obligations – Current assistance	School adjustment	.02	4.11	.15*
<u>Step 4</u>				
Family obligations – Current assistance	School adjustment	.02	4.11	.15*
Academic self-efficacy	School adjustment	.30	41.68	.56**

Sobel Test = 0.83,  $p = .405$

\* $p < .05$ ; \*\* $p < .01$

On the first step of the mediation analysis, academic self-efficacy was accounting for 32% of the variance in school adjustment,  $r^2 = .32$ ,  $\beta = .57$ ,  $F(1, 175) = 82.68$ ,  $p < .001$ . Academic self-efficacy was explaining a statistically significant amount of variance in family obligations – current assistance on the second step of the mediation analysis,  $r^2 = .03$ ,  $\beta = .17$ ,  $F(1, 175) = 5.32$ ,  $p = .022$ . Two percent of the variance in school adjustment was explained by

family obligations – current assistance on the third step of the mediation analysis,  $r^2 = .02$ ,  $\beta = .15$ ,  $F(1, 175) = 4.11$ ,  $p = .044$ . On the fourth step of the mediation analysis, the standardized beta weight for the relationship between general self-efficacy and school adjustment decreased from .57 (step 1) to .56 (step 4),  $R^2 = .30$ ,  $F(2, 174) = 41.68$ ,  $p < .001$ . Sobel's test was calculated to determine if the family obligations – current assistance was partially mediating the relationship between the academic self-efficacy and school adjustment (i.e., if the indirect effect of the predictor variable on the dependent variable through the mediator variable is significant). The obtained test statistic of 0.83 ( $p = .405$ ) was not statistically significant, indicating that family obligations – current assistance was not partially mediating the relation between academic self-efficacy and school adjustment scale. Based on the findings, the null hypothesis of no mediation is retained.

RQ3: Do factors internal to the university (peer social experiences, faculty understanding/comfort, perceived classroom comfort, and perceived peer support) predict emerging adults' college adjustment in a large urban university?

H<sub>3</sub>: Different college influences, such as peer social experiences, faculty understanding/comfort, perceived classroom comfort, and perceived peer support can predict emerging adults' college adjustment in a large urban university

A correlation matrix was developed to determine which of the predictor variables were significantly related to the criterion variables before completing the stepwise multiple linear regression analyses to address the hypothesis. Lower scores on faculty understanding and comfort, perceived peer support, and perceived classroom support were indicative of more positive adjustment and perceived support. The Table 24 presents results of this analysis.

Table 24

## Intercorrelation Matrix – School Adjustment and School Social Experiences

Predictor Variables	<u>Criterion Variables</u>									
	<u>Academic Adjustment</u>		<u>Social Adjustment</u>		<u>Personal Emotional Adjustment</u>		<u>Institutional Attachment</u>		<u>School Adjustment - Full Scale</u>	
	r	p	r	p	r	p	r	p	r	p
Faculty understanding & comfort	<b>-.21**</b>	.005	<b>-.24**</b>	.001	.05	.473	-.15	.053	<b>-.20**</b>	.008
Perceived peer support	-.11	.137	<b>-.30**</b>	<.001	-.13	.090	<b>-.18*</b>	.016	<b>-.21**</b>	.005
Perceived classroom comfort	<b>-.31**</b>	<.001	<b>-.30**</b>	<.001	<b>-.29**</b>	<.001	<b>-.26**</b>	<.001	<b>-.35**</b>	<.001
Belong to social clubs	.07	.375	<b>.16*</b>	.035	.06	.451	.13	.098	.11	.139
Hours spent socializing with WSU students	.01	.945	<b>.47**</b>	<.001	-.01	.862	<b>.32**</b>	<.001	<b>.19*</b>	.010

\* $p < .05$ ; \*\* $p < .01$

A stepwise multiple linear regression analysis was used to determine if academic adjustment could be predicted from faculty understanding and comfort and perceived classroom comfort. Results of this analysis can be found in Table 25.

Table 25

*Stepwise Multiple Linear Regression Analysis – Academic Adjustment and School Social Experiences*

Predictor Variable	Constant	b-Weight	$\beta$ -Weight	$\Delta R^2$	t-Value	Sig
<b>Included Variables</b>						
Perceived classroom comfort	7.11	-.36	-.31	.09	-4.24	<.001
<b>Excluded Variables</b>						
Faculty understanding & comfort			-.11		-1.35	.179
Multiple R	.31					
Multiple R2	.09					
F Ratio	17.95					
DF	2, 175					
Sig	<.001					

Perceived classroom comfort entered the stepwise multiple linear regression equation, accounting for 9% of the variance in academic adjustment,  $F(2, 175) = -4.24$ ,  $p < .001$ . The negative relationship between perceived classroom comfort and academic adjustment indicated that students with lower scores for perceived classroom comfort were more likely to have higher scores for academic adjustment.

A stepwise multiple linear regression analysis was used to determine if faculty understanding and comfort, perceived peer support, perceived classroom comfort, belonging to student clubs and organizations, and the number of hours spent socializing with WSU students could be used to predict social adjustment. Table 26 presents results of this analysis.

Table 26

*Stepwise Multiple Linear Regression Analysis – Social Adjustment and School Social Experiences*

Predictor Variable	Constant	b-Weight	$\beta$ -Weight	$\Delta R^2$	t-Value	Sig
<b>Included Variables</b>						
Hours/week spent socializing with WSU students	6.01	.52	.47	.22	7.57	<.001
Perceived classroom comfort		-.46	-.32	.10	-5.12	<.001
<b>Excluded Variables</b>						
Faculty understanding & comfort			-.04		-.61	.543
Perceived peer support			-.13		-1.88	.062
Belong to student clubs and organizations			.01		.22	.825
Multiple R	.57					
Multiple R2	.32					
F Ratio	40.99					
DF	2, 173					
Sig	<.001					

Two predictor variables, hours spent socializing with WSU students and perceived classroom comfort, entered the stepwise multiple linear regression equation, accounting for 32% of the variance in social adjustment,  $F(2, 173) = 40.99$ ,  $p < .001$ . Hours spent socializing with WSU students was accounting for 22% of the variance in social adjustment,  $\beta = .47$ ,  $t = 7.57$ ,  $p < .001$ . Students with higher scores for social adjustment were more likely to spend more time socializing with WSU students. Perceived classroom comfort explained an additional 10% of the variance in social adjustment,  $\beta = -.32$ ,  $t = -5.12$ ,  $p < .001$ . The negative relationship indicated that students who had higher scores on social adjustment were more likely to have positive perceptions of classroom comfort. The remaining predictor variables were not statistically significant predictors of social adjustment.



A stepwise multiple linear regression analysis was used to determine if perceived classroom comfort (predictor variable) was a statistically significant predictor of personal emotional adjustment (criterion variable). The results of this analysis are presented in Table 27.

Table 27

*Stepwise Multiple Linear Regression Analysis – Personal Emotional Adjustment and School Social Experiences*

Predictor Variable	Constant	b-Weight	$\beta$ -Weight	$\Delta R^2$	t-Value	Sig
Included Variables						
Perceived classroom comfort	6.48	-.47	-.29	.08	-3.96	<.001
Multiple R	.29					
Multiple R2	.08					
F Ratio	15.75					
DF	1, 174					
Sig	<.001					

Perceived classroom comfort entered the stepwise multiple linear regression equation, accounting for 8% of the variance in personal emotional adjustment,  $F(1, 174) = 40.99, p < .001$ . The negative relationship between the predictor and criterion variables indicated that students with higher scores for personal emotional adjustment were likely to have positive perceptions of classroom comfort.

To determine if institutional attachment as a measure of school adjustment could be predicted from school social experiences, a stepwise multiple linear regression analysis was completed. The results of this analysis are presented in Table 28.

Table 28

*Stepwise Multiple Linear Regression Analysis – Institutional Attachment and School Social Experiences*

Predictor Variable	Constant	b-Weight	$\beta$ -Weight	$\Delta R^2$	t-Value	Sig
Included Variables						
Hours/week spent socializing with WSU students	6.84	.36	.32	.10	4.66	<.001
Perceived classroom comfort		-.38	-.27	.07	-3.88	<.001
Excluded Variables						
Perceived peer support			-.04		-.59	.555
Multiple R	.41					
Multiple R2	.17					
F Ratio	17.97					
DF	2, 174					
Sig	<.001					

Seventeen percent of the variance in institutional attachment was explained by two predictor variables, hours spent socializing with WSU students and perceived classroom comfort,  $F(2, 174) = 17.97, p < .001$ . Hours spent socializing with WSU students was accounting for 10% of the variance in institutional attachment,  $\beta = .32, t = 4.66, p < .001$ . Students who spent more time socializing with WSU students were more likely to have higher scores for institutional attachment. Perceived classroom comfort entered the stepwise multiple linear regression equation explaining an additional 7% of the variance in institutional attachment,  $\beta = -.27, t = -3.88, p < .001$ . Students who had higher scores for institutional attachment were more likely to perceive more positive classroom comfort. Perceived peer support did not enter the stepwise multiple linear regression equation, indicating it was not a statistically significant predictor of institutional attachment.

A stepwise multiple linear regression analysis was used to determine if peer social experiences could be used to predict school adjustment. The criterion variable in this analysis was the full scale score for school adjustment. The predictor variables were faculty

understanding and comfort, perceived peer support, perceived classroom comfort, and hours/week spent socializing with WSU students. Table 29 presents results of this analysis.

Table 29

*Stepwise Multiple Linear Regression Analysis – School Adjustment and School Social Experiences*

Predictor Variable	Constant	b-Weight	$\beta$ -Weight	$\Delta R^2$	t-Value	Sig
<b>Included Variables</b>						
Perceived classroom comfort	6.68	-.41	-.35	.12	-5.09	<.001
Hours/week spent socializing with WSU students		.18	.20	.04	2.89	.004
<b>Excluded Variables</b>						
Faculty understanding and comfort			-.03		-.41	.681
Perceived peer support			-.06		-.84	.403
Multiple R	.40					
Multiple R2	.16					
F Ratio	16.80					
DF	2, 174					
Sig	<.001					

Two predictor variables, perceived classroom comfort and hours spent socializing with WSU students, entered the stepwise multiple linear regression equation accounting for 16% of the variance in school adjustment,  $F(2, 174) = 16.80, p < .001$ . Perceived classroom comfort was accounting for 12% of the variance in school adjustment,  $\beta = -.35, t = -5.09, p < .001$ . The negative relationship between the criterion and predictor variable provided evidence that students who had higher scores for school adjustment were more likely to have higher perceptions for classroom comfort. The hours spent socializing was explaining an additional 4% of the variance in school adjustment,  $\beta = .20, t = 2.89, p = .004$ . Students who had higher scores for school adjustment were likely to spend more time socializing with WSU students. The other predictor variables were not statistically significant predictors of school adjustment.

Based on the statistically significant findings for the four subscales and the full scale measuring school adjustment, the null hypothesis of no relationship between peer social experiences and school adjustment is rejected.

RQ4: Do factors external to the university (current and future family obligations, and employment) interfere with students' college adjustment in a large urban university?

H<sub>4</sub>: Factors external to the university commitments, such as current and future family obligations, and employment status can predict students' college adjustment in a large urban university.

Stepwise multiple linear regression analyses were used to determine which of the predictor variables (family obligations – current assistance, family obligations – future support, employment status, and hours employed) could be used to predict school adjustment. Before doing the stepwise multiple linear regression analyses, an intercorrelation matrix was completed to determine which of the predictor variables were significantly related to the criterion variables. Table 30 presents results of this analysis.

Table 30

*Intercorrelation Matrix – School Adjustment and Factors External to University Commitments*

Predictor Variables	School Adjustment									
	Academic		Social		Personal Emotional		Institutional Attachment		Full Scale	
	r	p	r	p	r	p	r	p	r	P
Family obligations – current	.13	.090	.10	.176	.08	.278	<b>.18*</b>	.018	<b>.15*</b>	.044
Family obligations - future	-.01	.988	.12	.100	.04	.636	.11	.136	.08	.306
Employment status	-.07	.377	-.05	.513	-.03	.736	-.09	.213	-.07	.385
Hours employed	.07	.374	.04	.581	.13	.091	.09	.253	.09	.212

\*p < .05

The correlations between academic adjustment, social adjustment, and personal emotional adjustment were not significantly related to the four predictor variables, family obligations – current assistance, family obligations – future support, employment status, and hours worked. Institutional attachment was significantly related to family obligations – current assistance ( $r = .18, p < .018$ ) and school adjustment – full scale was significantly related to family obligations – current assistance ( $r = .15, p < .044$ ). The planned stepwise multiple linear regression analyses for academic adjustment, social adjustment, and personal emotional adjustment were not completed because none of the predictor variables was significantly related to the criterion variables. Table 31 presents results of the analysis using institutional attachment as the criterion variable and family obligations – current assistance as the predictor variable.

Table 31

*Stepwise Multiple Linear Regression Analysis – Institutional Attachment and Factors External to University Commitment*

Predictor Variable	Constant	b-Weight	$\beta$ -Weight	$\Delta R^2$	t-Value	Sig
Included Variables						
Family obligations – Current Assistance	5.49	.31	.18	.03	5.66	.018
Multiple R	.18					
Multiple R2	.03					
F Ratio	5.66					
DF	1, 175					
Sig	.018					

Family obligations – current assistance entered the stepwise multiple linear regression equation, accounting for 3% of the variance in institutional attachment as a measure of school adjustment,  $\beta = .18, F = 5.66, p = .018$ . The positive relationship between the predictor and

criterion variables indicated that students with higher scores on family obligations – current assistance were more likely to have higher scores on institutional attachment.

A stepwise multiple linear regression analysis was used to determine if family obligations – current assistance could be used to predict school adjustment. The results of this analysis are presented in Table 32.

Table 32

*Stepwise Multiple Linear Regression Analysis – School Adjustment and Factors External to University Commitment*

Predictor Variable	Constant	b-Weight	$\beta$ -Weight	$\Delta R^2$	t-Value	Sig
Included Variables						
Family obligations – Current Assistance	5.28	.21	.15	.02	2.03	.044
Multiple R		.15				
Multiple R <sup>2</sup>		.02				
F Ratio		4.11				
DF		1, 175				
Sig		.044				

Two percent of the variance in school adjustment was explained by family obligations – current assistance,  $\beta = .15$ ,  $F = 4.11$ ,  $p = .044$ . The positive relationship between family obligations – current assistance and school adjustment provided support that students who had higher scores for family obligations – current assistance tended to have higher scores for school adjustment. Based on the lack of statistically significant relationships among the predictor and criterion variables, the null hypotheses that external factors to university commitment could be used to predict school adjustment was retained.

RQ5: To what extent are there relationships between students' college adjustment and the conflicts between work responsibilities and school responsibilities, and between family and school responsibilities?

H<sub>5</sub>: There are statistically significant relationships between students' college adjustment and conflicts between work responsibilities and school responsibilities, and between family and school responsibilities.

To determine which of the predictor variables (family-school conflict and work-school conflict) were significantly related to the four subscales and full scale measuring school adjustment, Pearson product moment correlations was used to create an intercorrelation matrix. The results of this analysis are presented in Table 33.

Table 33

*Intercorrelation Matrix – School Adjustment and Family and Work Conflict*

Predictor Variables	School Adjustment									
	Academic		Social		Personal Emotional		Institutional Attachment		Full Scale	
	r	p	r	p	r	p	r	p	r	p
Family-school conflict	-.34**	<.001	-.24**	.001	-.34**	<.001	-.29**	<.001	-.37**	<.001
Work-school conflict	-.22**	.007	-.02	.804	-.16	.061	-.09	.262	-.17*	.041

\*p < .05, \*\*p<.01

Statistically significant correlations were obtained between academic adjustment and family-school conflict ( $r = -.34$ ,  $p < .001$ ) and work-school conflict ( $r = -.22$ ,  $p = .007$ ). While the correlation between social adjustment and family-school conflict ( $r = -.24$ ,  $p < .001$ ) was statistically significant, the relationship between social adjustment and work school conflict was not significant. Personal emotional adjustment was significantly related to family-school conflict

( $r = -.34$ ,  $p < .001$ ). The relationship between institutional attachment and family-school conflict ( $r = -.29$ ,  $p < .001$ ) was statistically significant. The correlations between school adjustment – full scale and family-school conflict ( $r = -.37$ ,  $p < .001$ ) and work-school conflict ( $r = -.17$ ,  $p = .041$ ) were statistically significant. The predictor variables that were significantly related to the criterion variables were used in the subsequent stepwise multiple linear regression analyses.

Academic adjustment was used as the criterion variable in a stepwise multiple linear regression analysis, with family-school conflict and work-school conflict used as the predictor variables. Table 34 presents results of this analysis.

Table 34

*Stepwise Multiple Linear Regression Analysis – Academic Adjustment and Family and Work Conflict*

Predictor Variable	Constant	b-Weight	$\beta$ -Weight	$\Delta R^2$	t-Value	Sig
Included Variables						
Family-school conflict	7.46	-.69	-.38	.15	-4.92	<.001
Excluded Variables						
Work-school conflict			-.08		-.92	.359
Multiple R	.38					
Multiple R2	.15					
F Ratio	24.20					
DF	1, 142					
Sig	<.001					

Family-school conflict entered the stepwise multiple linear regression equation, accounting for 15% of the variance in academic adjustment,  $F(1, 142) = 24.20$ ,  $p < .001$ . Based on the negative relationship between the predictor and criterion variable, students who reported less family-school conflict were more likely to have higher scores for academic adjustment. Work-school conflict was not a statistically significant predictor of academic adjustment.



A stepwise multiple linear regression analysis was used to determine if family-school conflict was a statistically significant predictor of social adjustment. Table 35 presents results of this analysis.

Table 35

*Stepwise Multiple Linear Regression Analysis – Social Adjustment and Family and Work Conflict*

Predictor Variable	Constant	b-Weight	$\beta$ -Weight	$\Delta R^2$	t-Value	Sig
Included Variables						
Family-school conflict	6.80	-.50	-.24	.06	-2.89	.004
Multiple R	.38					
Multiple R2	.14					
F Ratio	23.82					
DF	1, 142					
Sig	<.001					

Six percent of the variance in social adjustment was accounted for by family-school conflict,  $F(1, 142) = 8.37, p = .004$ . The negative relationship between the predictor and criterion variable provided support that students who reported less family-school conflict were more likely to have higher scores for social adjustment.

Family-school conflict was used as the predictor variable in a stepwise multiple linear regression analysis, with personal emotional adjustment used as the criterion variable. The results of this analysis are presented in Table 36.

Table 36

*Stepwise Multiple Linear Regression Analysis – Personal Emotional Adjustment and Family and Work Conflict*

Predictor Variable	Constant	b-Weight	$\beta$ -Weight	$\Delta R^2$	t-Value	Sig
Included Variables						
Family-school conflict	6.97	-.89	-.38	.14	-4.88	<.001
Multiple R	.24					
Multiple R2	.06					
F Ratio	8.37					
DF	1, 142					
Sig	.004					

Fourteen percent of the variance in personal emotional adjustment was explained by personal emotional adjustment,  $F(1, 142) = 23.82, p < .001$ . The relationship between personal emotional adjustment and family-school conflict was in a negative direction, indicating that students who reported less family-school conflict were more likely to have higher scores for personal emotional adjustment.

A stepwise multiple linear regression analysis was used to determine if institutional attachment could be predicted from family-school conflict. The results of this analysis are presented in Table 37.

Table 37

*Stepwise Multiple Linear Regression Analysis – Institutional Attachment and Family and Work Conflict*

Predictor Variable	Constant	b-Weight	$\beta$ -Weight	$\Delta R^2$	t-Value	Sig
Included Variables						
Family-school conflict	7.76	-.65	-.31	.09	-3.81	<.001
Multiple R	.31					
Multiple R2	.09					
F Ratio	14.52					
DF	1, 142					
Sig	<.001					

Nine percent of the variance in institutional attachment was accounted for by family-school conflict,  $F(1, 142) = 14.52, p < .001$ . The negative relationship between institutional attachment and family-school conflict provided support that students who reported less family-school conflict tended to have higher scores for institutional attachment.

The scores for school adjustment – full scale were used as the criterion variable in a stepwise multiple linear regression analysis. Family-school conflict and work-school conflict were used as the predictor variables in this analysis. Table 38 presents results of this analysis.

Table 38

*Stepwise Multiple Linear Regression Analysis – School Adjustment and Family and Work Conflict*

Predictor Variable	Constant	b-Weight	$\beta$ -Weight	$\Delta R^2$	t-Value	Sig
Included Variables						
Family-school conflict	7.27	-.68	-.39	.15	-5.07	<.001
Excluded Variables						
Work-school conflict			-.01		-.13	.900
Multiple R	.39					
Multiple R <sup>2</sup>	.15					
F Ratio	25.72					
DF	1, 142					
Sig	<.001					

One predictor variable, family-school conflict, entered the stepwise multiple linear regression equation, accounting for 15% of the variance in school adjustment. The negative relationship between the predictor and criterion variable indicated that students who reported less family-school conflict were more likely to have higher scores for school adjustment. Work-school conflict did not enter the stepwise multiple linear regression equation, indicating it was not a statistically significant predictor of school adjustment – full scale. Based on the statistically

significant regression analyses between school adjustment and family-school conflict, the null hypothesis was rejected.

## CHAPTER V

### DISCUSSION

The purpose of the study was to explore personal, psychosocial, and environmental factors that promote aspects of student adjustment (social, academic, personal-emotional, institutional attachment to the institution, and overall adjustment) among emerging adults attending a large urban university in a multisystemic context.

#### Description of the Sample

The final sample included 177 Wayne State University undergraduate students ages 18-25. The mean age was 20.62, with a median of 21 years. The majority of participants (n = 144, 81.8%) were female. The largest group of students indicated their race as White/Caucasian/European American (n = 102, 57.9%). The other two largest groups were Black/African American (n=33, 18.8%), and Asian students (n = 27, 15.3%). The largest group of participants (n=86, 50.3%) self-reported their socioeconomic class as moderate, 57 (33.3%) reported highest social class, and 28 students (16.4%) reported lowest social class. The majority of the participants (n=23, 69.5%) were not first generation college students in their families. The majority of students indicated they had siblings (n = 163, 92.1%). The participants reported information about their educational outcomes. The mean high school GPA reported was 3.51 (SD = .47), with a median of 3.60. The ACT scores averaged 25.21 (SD = 4.64), with a median of 25.00. Regarding cumulative college GPA, the largest group of students (n = 44, 24.8%) reported their cumulative GPAs were between 3.76 and 4.00. The two second largest groups reported cumulative GPAs between 3.51 and 3.75 (n=36, 19.8%), and between 3.26 and 3.50 (n=36, 20.3%).

The participants were distributed among all undergraduate academic classifications of freshman (n=30, 17%), sophomore (n=36, 20.5%), junior (n=49, 27.8%), and senior (n=61, 34.7%). The majority of participants (n=127, 71.8%) resided off campus. Regarding their involvement in campus life, 125 (70.6%) students were not involved in any learning communities. However, 83 students (47.2%) belonged to a club or organization on campus. The largest group (n=100, 56.5%) reported they spent 1 to 5 hours a week socializing with other WSU students outside of class and 36 (20.3%) indicated they spent 6 to 10 hours in social activities. Twenty-one (11.9%) students spent 11 to 15 hours socializing with other WSU students.

### **Research Questions and Hypotheses**

Research Question 1: Do personal characteristics (academic preparation (high school GPA, ACT score), perceived social status (perceived social class standing and income), race, gender, age, financial aid status, first generation college students, first time in any college, and living arrangements) predict emerging adults' college adjustment in a large urban university?

H<sub>1</sub>: Academic preparation (higher high school grade point average and ACT scores), higher perceived social status, being a member of a nonminority racial group, being female, being older, receiving financial aid, first generation college students, first time in any college, and living arrangements and living arrangements can predict emerging adults' college adjustment in a large urban university.

The three predictor variables, cumulative college GPA, Arabic/Middle Eastern, and White, entered the stepwise multiple linear regression equation to assess variance in academic adjustment. Cumulative college GPA was the strongest predictor and was positively related to academic adjustment, indicating that students who had higher scores for academic adjustment

tended to have higher college GPAs. The negative relationship between academic adjustment and being Arabic Middle Eastern provided support that students who were Arabic/Middle Eastern were more likely to have troubles with academic adjustment. The positive relationship between academic adjustment and being White indicated that White students tended to have higher scores for academic adjustment.

One predictor variable, cumulative college GPA, entered the stepwise multiple linear regression equation, with social adjustment as the criterion variable. The positive relationship between cumulative college GPA and social adjustment provided evidence that students with higher cumulative college GPA were more likely to have higher scores for social adjustment.

One predictor variable, self-reported social class entered the stepwise multiple linear regression equation, with personal-emotional adjustment as the criterion variable. The positive relationship between the criterion and predictor variable provided support that higher self-reported social class was related to better personal emotional adjustment.

Four predictor variables, Arabic/Middle Eastern, cumulative college GPA, first generation college student, and residence entered the stepwise multiple linear regression assessing their impact on attachment to the institution. The negative relationships between two variables and institutional attachment indicated that being Arabic/Middle Eastern or living off campus was related to weaker attachment to the institution. Similarly, being a first generation college student was related to lower institutional attachment scores. The remaining predictor variables did not enter the stepwise multiple linear regression equation as statistically significant predictors of institutional attachment.

Two variables, cumulative college GPA and being Arabic/Middle Eastern entered the stepwise multiple regression equation when used to predict overall college adjustment (SACQ

full scale). The cumulative college GPA was related to stronger college adjustment. The negative relationship between being Arabic/Middle Eastern and the SACQ full scale, indicated that Arabic/Middle Eastern students had difficulty with college adjustment. The results of the analyses that examined the subscales and full scale scores on student adjustment provided support that some of the demographic variables were statistically significant predictors of student adjustment.

Research Question 2: Do factors external to the university (current and future family obligations and employment status (number of hours work) mediate the relationship between psychosocial characteristics (general and academic self-efficacy, motivation, and coping style) and emerging adults' college adjustment in a large urban university?

H<sub>2</sub>: Factors external to the university (current and future family obligations and employment status) mediate the relationships between psychosocial resources, including general and academic self-efficacy, motivation, and coping style, and emerging adults' college adjustment in a large urban university.

Baron and Kenny's (1986) mediation process was used to determine if the relationship between college adjustment variables and personal characteristics of emerging adult college students is mediated by factors external to the university. No full or partial mediation was found, indicating that factors external to the university did not mediate the relationships between psychosocial resources and college adjustment.

Research Question 3: Do factors internal to the university (peer social experiences, faculty understanding/comfort, perceived classroom comfort, and perceived peer support) predict emerging adults' college adjustment in a large urban university?



H<sub>3</sub>: Different college influences, such as peer social experiences, faculty understanding/comfort, perceived classroom comfort, and perceived peer support can predict emerging adults' college adjustment in a large urban university.

One predictor variable, perceived classroom comfort, entered the stepwise multiple linear regression equation, as a statistically significant predictor of academic adjustment. The negative relationship between the scores indicated that students who perceived a higher level of classroom comfort reported higher level of academic adjustment.

Two predictor variables, hours spent socializing with WSU students and perceived classroom comfort, entered the stepwise multiple linear regression equation, with social adjustment as the criterion variable. Hours spent socializing was the strongest predictor of college social adjustment. This finding indicated that students who socialized more with other WSU students reported better social adjustment. The second variable, perceived classroom comfort was positively related to social adjustment scores. The relationship indicated that students who had higher scores on social adjustment were more likely to have positive perceptions of classroom comfort.

Perceived classroom support entered the stepwise multiple linear regression equation, using personal-emotional adjustment as the criterion variable. Negative relationship between the two variables indicated higher personal-emotional adjustment was related to positive perceptions of classroom comfort.

Two predictor variables, hours spent socializing with WSU students and perceived classroom comfort, entered the stepwise multiple linear regression equation, with institutional attachment as the criterion variable. Positive relationship between hours spent socializing and scores on institutional attachment indicated that students who felt attached to the institution spent

a greater number of hours socializing with other WSU students. The negative relationship between scores on perceived classroom comfort and institutional attachment indicated that students who had stronger attachment to the institution also felt more comfortable in classrooms.

Two predictor variables, perceived classroom comfort and hours spent socializing with WSU students, entered the stepwise multiple linear regression equation, with overall college adjustment as the criterion variable. The results indicated that students with a higher level of adjustment to college were more likely to perceive their classroom environment as comfortable. In addition, the positive relationship between number of hours spent socializing and overall college adjustment scores provided evidence that students who reported higher level of adjustment to college also report socializing more with other students.

Research Question 4: Do factors external to the university (current and future family obligations, and employment) interfere with students' college adjustment in a large urban university?

H<sub>4</sub>: Factors external to the university commitments, such as current and future family obligations, and employment status can predict students' college adjustment in a large urban university.

Family obligation – current assistance entered the stepwise multiple linear regression equation, using institutional attachment as the criterion variable. The positive relationship between the two variables provided support that students who reported more current family obligations were also likely to feel a higher level of institutional attachment to their college. Next, based on the results of stepwise multiple linear regression, a positive relationship was found between family obligation – current assistance and overall college adjustment. The finding

indicated that students who reported having more current family obligations reported better adjustment to college.

Research Question 5: To what extent are there relationships between students' college adjustment and the conflicts between work responsibilities and school responsibilities, and between family and school responsibilities?

H<sub>5</sub>: There are statistically significant relationships between students' college adjustment and conflicts between work responsibilities and school responsibilities, and between family and school responsibilities.

A stepwise multiple linear regression equation was used to determine if family-school conflict was a statistically significant predictor of academic adjustment. A negative relationship between the variables indicated that students who experienced less conflict between family and school reported stronger academic adjustment. One variable, family-school conflict entered a stepwise multiple linear regression equation, using social adjustment as the criterion variable. The results yielded a negative relationship between the two variables, indicating that students who experienced less conflict between family and school also reported better social adjustment. Family-school conflict entered the stepwise multiple linear regression equation, using personal-emotional adjustment as the criterion variable. The negative relationship indicated that students who reported less conflict between family and school also reported higher levels of personal-emotional adjustment. A stepwise multiple linear regression analysis was used to determine if institutional attachment could be predicted from family-school conflict. The negative relationship between family-school conflict and institutional attachment provided evidence that students who experienced less conflict between family and school, had stronger institutional attachments to the institution. A stepwise multiple linear regression analysis used family-school

and work-school conflict as the predictor variables, and full scale college adjustment as the criterion variable. Family-school conflict entered the equation. A negative relationship was found between family-school conflict and full scale adjustment. The finding indicated that students who reported less conflict between family and school responsibilities, experienced stronger college adjustment.

### **Discussion**

This study, research questions, and hypothesis were based on the bioecological model of human development, college retention theories, and literature on personal and psychosocial factors, such as self-efficacy, coping, motivation, college experiences, social support, and family support and commitments. A multidimensional model of college adjustment was introduced and evaluated. Information about factors related to college adjustment was obtained through a one-time online survey completed by WSU students. The participants accessed the survey via an internet link between November 2013 and November 2014. The survey was available to all undergraduate students, ages 18-25, who were not international students and who had not served in the army.

Findings of the study identified two personal/demographic variables, race, and cumulative college GPA, that were related to academic adjustment. Students who identified as Arabic/Middle Eastern appeared to have academic adjustment problems, while those who identified as White were more likely to have adjusted better academically. As expected, a higher college GPA was related to higher academic adjustment, as the scale incorporated questions regarding academic performance. In addition, college GPA was the only personal/demographic variable predicting social adjustment. Students who reported better grades appeared to have an easier time with social aspects of college. Students with higher grades may also be engaged in

more academic social interactions, such as participation in groups (i.e., in class, study groups), professional associations, or learning communities. In addition, students who reported a higher GPA may feel more likely to socialize with other students when their school work is completed as opposed to students who do not feel as well prepared for school. Similarly, one variable, self-reported social class, was related to personal-emotional adjustment. This finding indicated that students who identified with a higher social class also experienced better personal-emotional adjustment. This finding could be explained by the fact that students from a higher social class may experience fewer financial problems and, as related, less stress.

The findings identified four personal/demographic variables that predicted institutional attachment to the institution. The findings indicated that students who were Arabic/Middle Eastern, were first generation college students, or lived off campus were more likely to have lower sense of institutional attachment to the institution. In addition, a higher college GPA was related to higher levels of institutional attachment, leading to the assertion that students who received higher grades might feel more comfortable at school. In turn, students who feel more committed and connected to their school might put greater effort into their school work. The direction of being the first generation college student was as expected. Students who were attending college for the first time in their families might not know what to expect and how to connect with college environment. Their families might not know how to support them in connecting with campus. This could also be true regarding living arrangement. Students who resided at home with their families might be expected to assist more with household responsibilities, leaving less time and opportunity to spend on campus. In addition, being Arabic/Middle Eastern, and cumulative college GPA were predictive of the overall college adjustment, with higher GPA related to higher adjustment. Arabic/Middle Eastern students

reported adjustment difficulties, which is congruent with findings for academic and institutional attachment aspects of adjustment.

The findings regarding college GPA were as expected and consistent with literature on adjustment. However, being Arabic/Middle Eastern was a consistent predictor of all aspects of college adjustment, except for social and personal-emotional adjustment. Furthermore, race has been identified as a significant predictor of academic outcomes. Noble, Flynn, Lee, and Hilton (2007) found that sex and race had strong influences on academic performance. For the purpose of this study, Arabic/Middle Eastern was the only ethnic group incorporated with racial categories. Arabic/Middle Eastern students tend to be closely connected with their community, as may be the case in the collective society practices. Henry, Stiles, Biran and Hinkle (2008) highlighted the utmost importance of family support and expectations on children and their choices among Arabic families. The authors examined the role of parental acculturation behaviors and their control on Arab American college students' well-being. They found that parents' control behaviors affected the relationship between the openness to American culture and students' well-being. Cultural openness was associated with students' positive well-being, particularly among families with parents exhibiting less control and more autonomy supporting efforts. A negative relationship between students' well-being and parental resistance to connect with the American culture was present among students' with parents who were more controlling (Henry et al., 2008). The findings may indicate that the pressures imposed by the cultural demands enforced by the families seeking more control over connecting to the mainstream culture can have pronounced negative effects on students.

Arabic/Middle Eastern students might experience greater pressure from their families and communities to select a course of work and majors that are more challenging, which could be

related to more difficulties at school. Certain aspects of Arabic/Middle Eastern culture might also affect students' sense of connectedness with students of different backgrounds. For instance, clothing, gender roles, and rules regarding socializing might impact opportunities and comfort with socializing on the college campus. The importance of socially integrating was emphasized by Tinto's (1982) student integration theory, which stated that student's background information impacts his/her academic and social integration into the structure of the university. The theory emphasized the importance of 'fitting in.' Students who present deficiencies in the areas of integration might experience a decreased learning experience and might be more likely to drop out of school. Thus, this ethnic group could benefit from additional support at college.

Based on the mediation analysis, no factors external to the university (i.e., current and future family obligations and employment status) mediated the relationships between psychosocial resources, including general and academic self-efficacy, motivation, and coping style, and any aspects of students' overall college adjustment. Family obligations and employment status did not affect the relationships between psychosocial resources and college adjustment. However, relationships between psychosocial resources and adjustment were identified. As previously identified in literature (i.e. Crockett, Iturbide, Torres Stone, McGinley & Calo, 2007; DeWitz, Woolsey, & Walsh, 2009; Trapmann, Hell, Hirn, & Schuler, 2007), psychosocial factors continued to play an important role in college adjustment. Lack of mediation indicated that those relationships were not altered by the introduction of factors external to the university: that is, current and future family obligations and employment status.

The lack of the expected mediation could be explained by the research used to develop the relevant hypothesis and the characteristics of the sample used in this study. Past research examining the role of family demands for assistance in respect to college experiences has

involved predominantly immigrant families. The sample in this study has proved to be a relatively homogenous group of well-adjusted students, and excluded international students. The mean high school GPA was 3.51, mean ACT scores were 25.21, and majority (64.9%) reported their college GPA to be above 3.26. In addition, 85.8% of participants reported their family income being moderately stable or stable, and 86.6% reported their social class to be moderate or high. Nearly 70% of the respondents did not have the 'first generation college students' status. The description of the sample might indicate that the sample included high achieving students, who may present a higher level of resiliency against external stresses. Fass and Tubman (2002) emphasized the institutional attachment to peers and parents, self-esteem, and intellectual functioning as protective factors for young adults during their transition to college. Similarly, they identified a positive relationship between cognitive functioning and academic experiences. Another study, using SACQ as the measure of college adjustment, identified first generation status as a risk factor in the relationship between self-esteem and college adjustment (Aspelmeier, Love, McGill, Elliott, & Pierce, 2012). The impact of family obligations may be different among students with fewer protective factors.

Some factors internal to the university were related to different aspects of college adjustment. Perceived classroom comfort was predictive of all areas of adjustment, including academic, social, personal emotional, institutional attachment, and overall adjustment. Students who felt comfortable in classrooms felt positive about their academics, social adjustment, personal emotional adjustment, felt a higher sense of institutional attachment to their educational institution, and felt overall better adjustment to their university. The second variable, number of hours socializing with other WSU students outside of class, was found to be predictive of three areas of adjustment: academic, social, institutional attachment, as well as overall college



adjustment. The higher the number of hours students spent with other students outside of classroom, the better they felt about their academics, social interactions, institutional attachment to their school, and their overall college adjustment. This finding was consistent with past research where social activity was linked with academic performance and retention (Robbins, Allen, Casillas, Peterson, & Le, 2006). Freeman, Hall, and Bresciani (2007), found that feeling dissatisfied with college life was correlated with students' consideration of leaving their higher academic institution. Interestingly, the number of hours socializing, but not belonging to clubs was found to predict college adjustment in the current study. The only aspect of adjustment that the number of hours socializing with other WSU students outside of class did not predict, was personal emotional-adjustment. This finding may point to different forms of socializing having a different impact on college adjustment. Students who belong to clubs or organizations on campus might do that for the primary purpose of professional development and advancing themselves academically, rather than to just socialize. This difference might explain the mixed findings regarding types of socializing. For instance, Terenzini, Pascarella, and Blimling (1996) found that academic student peer interactions, such as tutoring, were positively related with students' performance. However, the authors stated that fraternity membership was negatively associated with various academic skills, such as reading, mathematics, and critical thinking (Terenzini et al., 1996). The type of social interaction appears to be important in either enhancing or hindering college adjustment.

Exploration of factors external to the university, such as family obligations and employment on different aspects of college adjustment, provided support that a sense of obligation to assist the student's family while in college predicted attachment to the institution and the overall college adjustment. Students who experienced a high sense of obligation to assist

their families also felt a strong sense of attachment to their school and reported being overall better adjusted to college. Employment, or future family obligations, did not affect students' adjustment. Possibly, students who had stronger sense of obligation to assist their family while in college, might have had stronger sense of responsibilities toward other commitments such as school. They also might have developed a good ability to manage multiple responsibilities and commitments. Conversely, such students might have felt overwhelmed with their family needs and might have escaped to school as their "safe zone" and as an opportunity to move on the next stage in their life. Furthermore, research in the area of family obligations and college adjustment has focused primarily on minority and immigrant families (i.e. Knight, Norton, & Bentley, 2004; Tseng, 2004). Although this study did not include international students, students from immigrant families might have participated, as this was not asked of the participants. Mixed research on differences regarding the sense of obligations toward families does exist. Although some literature highlights stronger sense of obligation toward families among immigrant families (Sy & Brittain, 2008), other studies did not find such differences. Phinney, Ong, and Madden (2000) did not find any significant differences between immigrant and non-immigrant youth in family obligation beliefs. A sense of obligation to assist families while in college appeared to be an important predictor of college adjustment among the population used in this study.

The role of family appeared important in supporting or hindering college adjustment. Positive impact of family support has been documented; Dixon Rayle and Chung (2007) found that support from family was related to improved social outcomes among college students. On the other hand, stress related to family interactions could have the opposite effect. In the current study, family-school conflict was a consistent predictor of all aspects of college adjustment. A high level of conflict between family and school responsibilities was related to poor adjustment

to college, including academic, social, personal-emotional, institutional attachment, or overall adjustment. Contrarily to past research on academic outcomes, the relationship between work-school conflict and adjustment was not significant. Sy (2006) and Markel and Frone (1998) found a negative relationship between work-school stress and academic outcomes. This finding highlighted the importance of family demands on college outcomes.

### **Implications**

The findings of the study emphasized several areas of importance regarding college adjustment in the population studied. Those areas should be considered in developing policies and programing at the university level. The areas included needed focus on Arabic/Middle Eastern students, different aspects of socializing that promote adjustment (number of hours socializing, but not belonging to clubs/organization), classroom comfort, and managing stress related to family obligations and conflict between school and family responsibilities.

An important area of consideration in program development should include a focus on Arabic/Middle Eastern students. In line with Tinto's student integration theory, the way in which students fit into a particular environment affects his/her adjustment. The concept of identification with school was also emphasized by Voelkl (1997). In the future, it will be of importance to consider unique needs and difficulties Arabic/Middle Eastern students face during their college experience. This is especially important in areas with large Arabic/Middle Eastern communities, such as in the Detroit Metropolitan area. Needs assessment could assist with identifying unique needs students of different racial and ethnic backgrounds have. This could be accomplished by distributing a survey to students with questions regarding creating more inclusive campus environment, or reaching out to students organizations to further assess their unique needs. Wayne State University Dean of Students Office currently has 27 registered student

organizations categorized as Ethnic-Cultural. Creating a sense of inclusion for students of all cultures on college campus could lead to improved adjustment.

Another important significant finding was regarding social interactions in college. Variations between the types of socializing and engaging with other students should be recognized in planning of special programs. Interestingly, the number of hours socializing, but not belonging to clubs, was found to predict college adjustment in the current study. The support of university officials in offering both, academic and non-academic social opportunities appears important in promoting college adjustment. The support could involve offering informal events for students to attend, as well as offering comfortable spaces for students to socialize. This might be especially important with areas where things to do near campus or public transportation are not easily available. Within the university communities, the Dean of Students office generally coordinates student life. Ongoing support of the Dean of Students office efforts to offer variety of non-academic social events is recommended.

The findings of the study also identified classroom comfort as an important predictor of college adjustment. The questions assessing classroom comfort in this study looked at students comfort with speaking up, asking questions, volunteering ideas or opinions, and contributing to the class discussions. The classroom discussion dynamic is often managed by the teacher. It is important for the classroom facilitators to emphasize open, respectful, and encouraging environment in classrooms. Having more classroom engagement as opposed to lectures might lead to improve students' adjustment. However, the discussions must occur in an all-inclusive manner. Establishing participation ground rules at the beginning of the semester might be beneficial. Special efforts should be made to include students from different backgrounds in the classroom discussions. This is especially important and related to the finding that Arabic/Middle

Eastern students appear to have the most adjustment difficulties. Thus, special efforts should be made to include Arabic/Middle Eastern students in the classroom discussions.

Among factors external to the university, the negative impact of conflict between family and school responsibilities should be noted. Students who experienced a high level of conflict between family and school responsibilities displayed adjustment problems. Although the university cannot modify students' family structures, providing parents and families with information regarding demands placed on a college student could lead to modification of pressures placed on college students by their families. This could be done by distributing information to parents during the parent-student orientation, or mailing information directly to the parents. On the other hand, students may benefit from support and guidance through stress and time management strategies. Many workshops which focus on topics of stress or time management are typically offered through counseling services on campus, however, many students may not be aware of them and may be less likely to seek such supports if they are managing already demanding schedules. Such students may benefit more from information being available to them through webinars or on-line forums or presentations.

#### **Limitations of the Study and Direction for Further Research**

The multidimensional model of college adjustment explored in this study was not supported by the current findings. Possible reasons for the lack of support could be related to the sample used in this study, limited research available exploring the extent of the relationships between variables used in this model, and possibly the instruments used. As referenced earlier, the sample appeared to include primarily high achieving students, who may be focused on their academic performance and are driven to obtain their degree. The sample of students included predominantly White students. Consistent with the findings of this study, White students have

been found to have the fewest problems adjusting to college. In addition, the sample included primarily females (81.8%). Research in the area of gender differences and college outcomes finds that women tend to perform better academically and have higher graduation rates as compared with men. Noble and colleagues (2007) stated that the rates of graduation among female students are twice as high as their male counterparts. The high percentage of women in the current sample could suggest that the sample had lower risk of college adjustment problems.

Another limitation related to the sample used in this study was incorporating different academic levels of undergraduate students. Although a well-represented distribution of freshman, sophomore, junior, and senior students was one of the advantages regarding generalizability of the findings to most undergraduate students, students of different academic levels may experience adjustment to college differently. This study did not differentiate findings based on the freshman, sophomore, junior, or senior standing. Students in their freshman year likely experience different adjustment struggles than students in their senior year. Although the process of college adjustment has been studied, the focus has been primarily on first or second year students (i.e. Noble et al., 2007). It is recommended that further research should incorporate upperclassman, as they might experience unique set of struggles in the process of college adjustment, and may be affected by different internal or external factors than freshman or sophomore.

Furthermore, the data collection involved in this study included a one year period of time. Students engaged in the data collection process could have experienced different aspects of adjustment difficulties, which were not assessed based on the timing of participation. Future research should assess differences between reports of adjustment difficulties at different points during the school year. Even more valuable informative could be obtained through a longitudinal

approach and assessing the process of adjustment in respect to different variables at different points of the college progression. Such an approach could identify the students who are most at risk for having adjustment difficulties. Finally, this study included only registered students, while the most vulnerable population, students who dropped out of school, were not included.

Another limitations of this study pertaining to the sample used was related to and the setting of data collection. The sample included students from only one urban university. The social engagement opportunities outside of the university campus where data were collected may be limited. In addition, the university is considered primarily a commuter school. Students who choose to live on campus are unlikely to do so for the social experiences, which may be different than those choosing to reside at a university with a primarily residential campus. This may explain the lack of significant relationship between the involvement in clubs and organizations and college adjustment. Students who choose to live on campus may have more opportunities to socialize informally with other students in comparison to students who live off campus and commute to the university for classes.

The described specifications of the sample (race, gender, academic achievements, and social class) as well as the characteristics related to the nature and the location of the university likely influenced the findings of the study. This could lead to the limited generalizability of the results and may not be applicable for male students, racial and ethnic populations of students, students from lower socioeconomic backgrounds, and students who struggle academically. In addition, the findings should not be generalized to university and colleges in different geographical areas (urban vs. suburban) and universities with primarily residential campuses. Students who reside in areas with greater social opportunities near campus may report different college experiences. Future research should continue to explore the relationships in the model to

further support or reject the proposed relationships. Special attention should also be placed on the non-significant results prior to refuting their importance.

The instruments used in the current study could be responsible for the lack of support for the current model. Although all of the instruments were found to have good reliability scores, the coping styles were assessed by combining the subscale use by the Brief COPE inventory. The content validity of the newly created subscales was not evaluated. Further, no data regarding validity of the Family-School Conflict scale were available. Additional research addressing the validity of the new subscales is recommended.

One of the areas that warrants further exploration is related to social interactions in college. Freeman and colleagues (2007), found that feeling dissatisfied with college life was correlated with students consideration to leave their higher academic institution. Research distinguished between different types of social engagement in college and the impact in the adjustment process. For instance, Terenzini and colleagues (1996) found that engaging in non-academic peer interactions, such as being a part of a fraternity, was negatively related to academic outcomes, while engaging in academic peer interactions, such as tutoring was associated with positive academic outcomes. Zhao and Kuh (2004) studied the impact of involvement in learning communities, and found a positive relationship between belonging to learning communities and academic success. The findings in this study did not find the relationship between belonging to clubs and organizations, including learning communities, and college adjustment. The lack of the hypothesized relationship could be explained by previously referenced characteristics of the sample as well as the campus characteristics. Thus, further exploration about types of socializing in urban colleges and universities is recommended. As previously stated, social opportunities may be limited near primarily commuter campuses.



Identifying differences between the types of social interactions will also be important for the program development most supportive of college adjustment.

## APPENDIX A

### Background and Demographic Information

Please mark response that best describes you:

Age: \_\_\_\_

Gender: Male \_\_\_\_ Female \_\_\_\_ Transgender \_\_\_\_

Race:

Arabic / Middle Eastern \_\_\_\_

American Indian or Alaska Native \_\_\_\_

Asian \_\_\_\_

Black or African American \_\_\_\_

Native Hawaiian or Other Pacific Islander \_\_\_\_

White \_\_\_\_

Other \_\_\_\_

#### Perceived Social Status

Think of a ladder as representing the social class distribution in the United States, with those at the top of the distribution on the highest rung and those at the bottom of the distribution on the lowest rung. Please indicate where on a scale of 1 (lowest) to 10 (highest) you believe corresponds to your family's social class standing.

1      2      3      4      5      6      7      8      9      10

#### Sociodemographic Questionnaire

How many people are currently living in your household, including yourself?

\_\_\_\_\_ Number of people

\_\_\_\_\_ Of these people, how many are children?

\_\_\_\_\_ Of these people, how many are adults?

\_\_\_\_\_ Of the adults, how many bring income into the household?

1. Is the home where you live:

\_\_\_\_\_ Owned or being bought by you (or someone in the household)?

\_\_\_\_\_ Rented for money?

\_\_\_\_\_ Occupied without payment of money or rent?

\_\_\_\_\_ Other (specify) \_\_\_\_\_

2. Which of these categories best describes your total combined family income for the past 12 months? (This should include income (before taxes) from all sources, wages, rent from properties, social security, disability and/or veteran's benefits, unemployment benefits, workman's compensation, help from relatives (including child payments and alimony), and so on)

Less than \$5,000  
 \$5,000 through \$11,999  
 \$12,000 through \$15,999  
 \$16,000 through \$24,999  
 \$25,000 through \$34,999  
 \$35,000 through \$49,999  
 \$50,000 through \$74,999  
 \$75,000 through \$99,999  
 \$100,000 and greater  
 Don't know

How would you rate your family's current financial stability?

1	2	3	4	5	6	7	8	9	10
<i>Very</i>				<i>Moderately</i>					<i>Very</i>
<i>Unstable</i>				<i>Stable</i>					<i>Stable</i>

What was your High School GPA at graduation? \_\_\_\_

What was your overall ACT score? \_\_\_\_

Have you attended any colleges or universities prior to enrolling at Wayne State University (WSU)?

Yes \_\_\_\_ No \_\_\_\_

If Yes, when did you transfer to WSU? \_\_\_\_

Are you a veteran? Yes \_\_\_\_ No \_\_\_\_

Are you an international student? Yes \_\_\_\_ No \_\_\_\_

What is your cumulative GPA? \_\_\_\_

A \_\_\_\_ A- \_\_\_\_ B+ \_\_\_\_ B \_\_\_\_ B- \_\_\_\_ C+ \_\_\_\_ C \_\_\_\_ C- \_\_\_\_ D+ \_\_\_\_ D- \_\_\_\_ F \_\_\_\_

Which school/college are you attending at WSU?

- School of Business Administration \_\_\_\_
- College of Education \_\_\_\_

- College of Engineering \_\_\_\_
- College of Fine, Performing & Communication Arts \_\_\_\_
- College of Liberal Arts and Sciences \_\_\_\_
- College of Nursing \_\_\_\_
- College of Pharmacy and Health Sciences \_\_\_\_
- School of Social Work \_\_\_\_

What is your current academic classification?

- Freshman \_\_\_\_
- Sophomore \_\_\_\_
- Junior \_\_\_\_
- Senior \_\_\_\_

Are you receiving financial aid? Yes \_\_\_\_ -- Is it sufficient? Yes \_\_\_\_ No \_\_\_\_  
No \_\_\_\_ -- Do you need it? Yes \_\_\_\_ No \_\_\_\_

Living arrangements: On-campus \_\_\_\_ Off-campus \_\_\_\_ If off-campus, how far away? \_\_\_\_ miles  
Alone \_\_\_\_ With roommates \_\_\_\_ With family \_\_\_\_

If you live off-campus, what is your mode of transportation?

Car \_\_\_\_ Carpool \_\_\_\_ Bus \_\_\_\_ Bike \_\_\_\_ Other (please specify) \_\_\_\_\_

Are you employed? Yes \_\_\_\_ No \_\_\_\_

If Yes, approximately please specify:

How many hours per week? \_\_\_\_

At Wayne State University \_\_\_\_ Outside of Wayne State University \_\_\_\_

How many siblings do you have? \_\_\_\_

If you have siblings, are they currently attending, or have they attended college? Yes \_\_\_\_ No \_\_\_\_

Are you the first generation college student in your family? Yes \_\_\_\_ No \_\_\_\_

### Participation in Social Groups

Are you a member of any Learning Community or a Learning Community at WSU?

Yes \_\_\_\_ No \_\_\_\_

As part of your student life, do you belong to any clubs or social organizations on campus, such as fraternities or sororities, as part of your student life?

Yes \_\_\_\_ Please specify: \_\_\_\_\_

No \_\_\_\_

How many hours per week on average do you spent socializing with other WSU students outside of classroom activities?

0 \_\_\_ 1-5 \_\_\_ 6-10 \_\_\_ 11-15 \_\_\_ 16-20 \_\_\_ 21-30 \_\_\_ over 30 \_\_\_

Student Adaptation to College Questionnaire (SACQ)

Baker & Siryk (1989)

The 67 statements describe college experiences. Read each one and decide how well it applies to you at the present time. Please mark only one response for each statement.

		<i>Applies very closely to me</i>					<i>Doesn't apply to me at all</i>			
		←-----					-----→			
1	I feel that I fit in well as part of the college environment	1	2	3	4	5	6	7	8	9
2	I have been feeling tense or nervous lately	1	2	3	4	5	6	7	8	9
3	I have been keeping up to date with my academic work	1	2	3	4	5	6	7	8	9
4	I am meeting as many people, and making as many friends as I would like at college	1	2	3	4	5	6	7	8	9
5	I know why I'm in college and what I want out of it	1	2	3	4	5	6	7	8	9
6	I am finding academic work at college difficult	1	2	3	4	5	6	7	8	9
7	Lately, I have been feeling blue and moody a lot	1	2	3	4	5	6	7	8	9
8	I am very involved with social activities in college	1	2	3	4	5	6	7	8	9
9	I am adjusting well to college	1	2	3	4	5	6	7	8	9
10	I have not been functioning well during examinations	1	2	3	4	5	6	7	8	9
11	I have felt tired much of the time lately	1	2	3	4	5	6	7	8	9
12	Being on my own, taking responsibility for myself, has not been easy	1	2	3	4	5	6	7	8	9
13	I am satisfied with the level at which I am performing academically	1	2	3	4	5	6	7	8	9
14	I have had informal, personal contacts with college professors	1	2	3	4	5	6	7	8	9
15	I am pleased now about my decision to go to college	1	2	3	4	5	6	7	8	9
16	I am pleased now about my decision to attend this college in particular	1	2	3	4	5	6	7	8	9
17	I'm not working as hard as I should at my college courses	1	2	3	4	5	6	7	8	9
18	I have several close social ties at college	1	2	3	4	5	6	7	8	9
19	My academic goals and purposes are well defined	1	2	3	4	5	6	7	8	9
20	I haven't been able to control my emotions very well lately	1	2	3	4	5	6	7	8	9
21	I'm not really smart enough for the academic work I am expected to be doing now	1	2	3	4	5	6	7	8	9
22	Lonesomeness for home is a source of difficulty for me now	1	2	3	4	5	6	7	8	9
23	Getting a college degree is very important to me	1	2	3	4	5	6	7	8	9
24	My appetite has been good lately	1	2	3	4	5	6	7	8	9
25	I haven't been very efficient in the use of study time lately	1	2	3	4	5	6	7	8	9
26	I enjoy living in college dormitory (Please omit if you're not living in any university housing)	1	2	3	4	5	6	7	8	9
27	I enjoy writing papers for courses	1	2	3	4	5	6	7	8	9
28	I have been having a lot of headaches lately	1	2	3	4	5	6	7	8	9
29	I really haven't been having much motivation for studying lately	1	2	3	4	5	6	7	8	9
30	I am satisfied with the extracurricular activities available at college	1	2	3	4	5	6	7	8	9
31	I've given a lot of thought lately to whether I should ask for help from Counseling and Psychological Services or from a psychotherapist outside of college	1	2	3	4	5	6	7	8	9
32	Lately, I have been having doubts regarding the value of a college education	1	2	3	4	5	6	7	8	9

33	I am getting along very well with my roommate(s) in college (Please omit if you don't have a roommate)	1	2	3	4	5	6	7	8	9
34	I wish I were at another college or university	1	2	3	4	5	6	7	8	9
35	I've put on or lost too much weight lately	1	2	3	4	5	6	7	8	9
36	I am satisfied with the number and variety of courses available at college	1	2	3	4	5	6	7	8	9
37	I feel that I have enough social skills to get along well in the college setting	1	2	3	4	5	6	7	8	9
38	I have been getting angry too easily lately	1	2	3	4	5	6	7	8	9
39	Recently, I have been having trouble concentrating when I try to study	1	2	3	4	5	6	7	8	9
40	I haven't been sleeping very well	1	2	3	4	5	6	7	8	9
41	I'm not doing well enough academically for the amount of work I put in	1	2	3	4	5	6	7	8	9
42	I'm having difficulty feeling at ease with other people at colleges	1	2	3	4	5	6	7	8	9
43	I am satisfied with the quality or the caliber of courses available at college	1	2	3	4	5	6	7	8	9
44	I am attending classes regularly	1	2	3	4	5	6	7	8	9
45	Sometimes, my thinking gets muddled up too easily	1	2	3	4	5	6	7	8	9
46	I am satisfied with the extent to which I am participating in social activities at college	1	2	3	4	5	6	7	8	9
47	I expect to stay at this college for a bachelor's degree	1	2	3	4	5	6	7	8	9
48	I haven't been mixing too well with the opposite sex lately	1	2	3	4	5	6	7	8	9
49	I worry a lot about my college expenses	1	2	3	4	5	6	7	8	9
50	I am enjoying my academic work at college	1	2	3	4	5	6	7	8	9
51	I have been feeling lonely a lot at college lately	1	2	3	4	5	6	7	8	9
52	I am having a lot of trouble getting started on homework assignments	1	2	3	4	5	6	7	8	9
53	I feel I have good control over my life situation at college	1	2	3	4	5	6	7	8	9
54	I am satisfied with my program of courses this semester	1	2	3	4	5	6	7	8	9
55	I have been feeling in good health lately	1	2	3	4	5	6	7	8	9
56	I feel I am very different from other students at college in ways that I don't like	1	2	3	4	5	6	7	8	9
57	On balance, I would rather be home than here	1	2	3	4	5	6	7	8	9
58	Most of the things I am interested in are not related to any of my course work at college	1	2	3	4	5	6	7	8	9
59	Lately, I have been giving a lot of thought to transferring to another college	1	2	3	4	5	6	7	8	9
60	Lately, I have been giving a lot of thought to dropping out of college altogether and for good	1	2	3	4	5	6	7	8	9
61	I find myself giving considerable thought to taking time off from college and finishing later	1	2	3	4	5	6	7	8	9
62	I am very satisfied with the professors I have now in my courses	1	2	3	4	5	6	7	8	9
63	I have some good friends or acquaintances at college with whom I can talk about any problems I may have	1	2	3	4	5	6	7	8	9
64	I am experiencing a lot of difficulty coping with stresses imposed on me in college	1	2	3	4	5	6	7	8	9
65	I am quite satisfied with my social life at college	1	2	3	4	5	6	7	8	9
66	I'm quite satisfied with my academic situation at college	1	2	3	4	5	6	7	8	9
67	I feel that I will be able to deal in a satisfactory manner with future challenges here at college	1	2	3	4	5	6	7	8	9

**General Self Efficacy Scale** (Schwarzer & Jerusalem, 1995)

Please respond to the following statements on a scale 1-4

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

		Not at all true	Hardly true	Moderately true	Exactly true
1	I can always manage to solve difficult problems if I try hard enough.	1	2	3	4
2	If someone opposes me, I can find the means and ways to get what I want.	1	2	3	4
3	It is easy for me to stick to my aims and accomplish my goals.	1	2	3	4
4	I am confident that I could deal efficiently with unexpected events.	1	2	3	4
5	Thanks to my resourcefulness, I know how to handle unforeseen situations.	1	2	3	4
6	I can solve most problems if I invest the necessary effort.	1	2	3	4
7	I can remain calm when facing difficulties because I can rely on my coping abilities.	1	2	3	4
8	When I am confronted with a problem, I can usually find several solutions.	1	2	3	4
9	If I am in trouble, I can usually think of a solution.	1	2	3	4
10	I can usually handle whatever comes my way.	1	2	3	4

**Beliefs in Educational Success Test ©**  
(Majer, 2006)

The following questions will ask you to rate your belief in your ability to succeed in your education. Respond to each question using a 1 – 100 scale:

1-----10-----20-----30-----40-----50-----60-----70-----80-----90-----100

Not at all Confident

Most Confident

How confident are you...

- \_\_\_\_\_ 1. ...that you will do well in future courses?
- \_\_\_\_\_ 2. ...in your ability to learn new information?
- \_\_\_\_\_ 3. ...in completing your homework assignments?
- \_\_\_\_\_ 4. ...in understanding reading assignments?
- \_\_\_\_\_ 5. ...in your ability to study notes?
- \_\_\_\_\_ 6. ...that you will pass your course(s)?
- \_\_\_\_\_ 7. ...that you will complete all required coursework for your degree/program?
- \_\_\_\_\_ 8. ...in your ability to work with others on class projects?
- \_\_\_\_\_ 9. ...to seek your professors' help during office hours?
- \_\_\_\_\_ 10. ...that you are in control of your education?



## **ACADEMIC MOTIVATION SCALE (AMS-C 28)**

### **COLLEGE (CEGEP) VERSION**

*Robert J. Vallerand, Luc G. Pelletier, Marc R. Blais, Nathalie M. Brière,  
Caroline B. Senécal, Évelyne F. Vallières, 1992-1993*

*Educational and Psychological Measurement, vols. 52 and 53*

#### **Scale Description**

**This scale assesses the same 7 constructs as the Motivation scale toward College (CEGEP) studies. It contains 28 items assessed on a 7-point scale.**

#### **References**

**Vallerand, R.J., Blais, M.R., Brière, N.M., & Pelletier, L.G. (1989). Construction et validation de l'Échelle de Motivation en Éducation (EME). Revue canadienne des sciences du comportement, 21, 323-349.**

**WHY DO YOU GO TO COLLEGE (CEGEP) ?**

*Using the scale below, indicate to what extent each of the following items presently corresponds to one of the reasons why you go to college (CEGEP).*

Does not correspond at all	Corresponds a little		Corresponds moderately		Corresponds a lot		Corresponds exactly
1	2	3	4	5	6	7	

**WHY DO YOU GO TO COLLEGE (CEGEP) ?**

- 
1. Because with only a high-school degree I would not find a high-paying job later on.
 

1	2	3	4	5	6	7
---	---	---	---	---	---	---
  
  2. Because I experience pleasure and satisfaction while learning new things.
 

1	2	3	4	5	6	7
---	---	---	---	---	---	---
  
  3. Because I think that a college (CEGEP) education will help me better prepare for the career I have chosen.
 

1	2	3	4	5	6	7
---	---	---	---	---	---	---
  
  4. For the intense feelings I experience when I am communicating my own ideas to others.
 

1	2	3	4	5	6	7
---	---	---	---	---	---	---
  
  5. Honestly, I don't know; I really feel that I am wasting my time in school.
 

1	2	3	4	5	6	7
---	---	---	---	---	---	---
  
  6. For the pleasure I experience while surpassing myself in my studies.
 

1	2	3	4	5	6	7
---	---	---	---	---	---	---
  
  7. To prove to myself that I am capable of completing my college (CEGEP) degree.
 

1	2	3	4	5	6	7
---	---	---	---	---	---	---

8. In order to obtain a more prestigious job later on. 1 2 3 4 5 6 7
9. For the pleasure I experience when I discover new things never seen before. 1 2 3 4 5 6 7
10. Because eventually it will enable me to enter the job market in a field that I like. 1 2 3 4 5 6 7
11. For the pleasure that I experience when I read interesting authors. 1 2 3 4 5 6 7
12. I once had good reasons for going to college (CEGEP); however, now I wonder whether I should continue. 1 2 3 4 5 6 7
13. For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments. 1 2 3 4 5 6 7
14. Because of the fact that when I succeed in college (CEGEP) I feel important. 1 2 3 4 5 6 7
15. Because I want to have "the good life" later on. 1 2 3 4 5 6 7
16. For the pleasure that I experience in broadening my knowledge about subjects which appeal to me. 1 2 3 4 5 6 7
17. Because this will help me make a better choice regarding my career orientation. 1 2 3 4 5 6 7
18. For the pleasure that I experience when I feel completely absorbed by what certain authors have written. 1 2 3 4 5 6 7
19. I can't see why I go to college (CEGEP) and frankly,

I couldn't care less.	1	2	3	4	5	6	7
20. For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.	1	2	3	4	5	6	7
21. To show myself that I am an intelligent person.	1	2	3	4	5	6	7
22. In order to have a better salary later on.	1	2	3	4	5	6	7
23. Because my studies allow me to continue to learn about many things that interest me.	1	2	3	4	5	6	7
24. Because I believe that a few additional years of education will improve my competence as a worker.	1	2	3	4	5	6	7
25. For the "high" feeling that I experience while reading about various interesting subjects.	1	2	3	4	5	6	7
26. I don't know; I can't understand what I am doing in school.	1	2	3	4	5	6	7
27. Because college (CEGEP) allows me to experience a personal satisfaction in my quest for excellence in my studies.	1	2	3	4	5	6	7
28. Because I want to show myself that I can succeed in my studies.	1	2	3	4	5	6	7

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**Brief COPE (Caver, 1997)**

These items deal with ways you've been coping with the stress related to adjusting to college. I want to know to what extent you've been doing what the item says. How much or how frequently. Don't answer on the basis of whether it seems to be working or not-just whether or not you're doing it. Use these response choices. Try to rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can.	<i>I haven't been doing this at all</i>	<i>I've been doing this a little bit</i>	<i>I've been doing this a medium amount</i>	<i>I've been doing this a lot</i>
1. I've been turning to work or other activities to take my mind off things.	1	2	3	4
2. I've been concentrating my efforts on doing something about the situation I'm in.	1	2	3	4
3. I've been saying to myself "this isn't real."	1	2	3	4
4. I've been using alcohol or other drugs to make myself feel better.	1	2	3	4
5. I've been getting emotional support from others.	1	2	3	4
6. I've been giving up trying to deal with it.	1	2	3	4
7. I've been taking action to try to make the situation better.	1	2	3	4
8. I've been refusing to believe that it has happened.	1	2	3	4
9. I've been getting help and advice from other people.	1	2	3	4
10. I've been using alcohol or other drugs to help me get through it.	1	2	3	4
11. I've been trying to see it in a different light, to make it seem more positive.	1	2	3	4
12. I've been trying to come up with a strategy about what to do.	1	2	3	4
13. I've been getting comfort and understanding from someone.	1	2	3	4
14. I've been giving up the attempt to cope.	1	2	3	4
15. I've been looking for something good in what is happening.	1	2	3	4
16. I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.	1	2	3	4
17. I've been trying to get advice or help from other people about what to do.	1	2	3	4
18. I've been thinking hard about what steps to take.	1	2	3	4

### Sense of Belonging (Hoffman, Richmon, Morrow, and Salomone, 2002-2003)

Please indicate how true the following statements are for you and your experience at WSU. Mark one response out of 5 that fits best for you.

		Completely True	Mostly True	Equally True and Untrue	Mostly Untrue	Completely Untrue
<b>Faculty Understanding/comfort</b>						
4.	If I had a reason, I would feel comfortable seeking help from a faculty member outside of class time ( i.e., during office hours, etc.)	1	2	3	4	5
10.	I feel comfortable socializing with a faculty member outside of class	1	2	3	4	5
12.	I feel comfortable talking about a problem with faculty	1	2	3	4	5
19	I feel comfortable asking a teacher for help with a personal problem	1	2	3	4	5
25	I feel that a faculty member would take the time to talk to me if I needed help	1	2	3	4	5
28	I feel that a faculty member really tried to understand my problem when I talked about it	1	2	3	4	5
30	I feel that a faculty member would be sensitive to my difficulties if I shared them	1	2	3	4	5
33	I feel that a faculty member would be sympathetic if I was upset	1	2	3	4	5
<b>Perceived Peer Support</b>						
27	I could call another student from class if I had a question about an assignment	1	2	3	4	5
31	I know very few people in my class *	1	2	3	4	5
35	No one in my class knows anything about me *	1	2	3	4	5
37	I have discussed personal matters with students who I meet in class	1	2	3	4	5
39	I have developed personal relationships with other students in class	1	2	3	4	5
43	I invite people I know from class to do things socially	1	2	3	4	5
44	I discuss events which happen outside of class with my classmates	1	2	3	4	5
46	I have met with classmates outside of class to study for an exam	1	2	3	4	5
<b>Perceived Classroom Comfort</b>						
2	I feel comfortable asking a question in class	1	2	3	4	5
3	I feel comfortable volunteering ideas or options in class	1	2	3	4	5
5	Speaking in class is easy because I feel comfortable	1	2	3	4	5
30	I feel comfortable contributing to class discussions	1	2	3	4	5

### Family Obligation Attitudes

For the following items, please indicate how often you believe you should engage in the following activities on a scale from 1 to 5.

	Almost Never	←-----→			Almost always
<b>Current Assistance</b>					
1. Spend time with your grandparents, cousins, aunts, and uncles	1	2	3	4	5
2. Spend time at home with your family	1	2	3	4	5

3. Run errands that the family needs done	1	2	3	4	5
4. Help your brothers or sisters with their homework	1	2	3	4	5
5. Spend holidays with your family	1	2	3	4	5
6. Help out around the house	1	2	3	4	5
7. Spend time with your family on weekends	1	2	3	4	5
8. Help take care of your brothers and sisters	1	2	3	4	5
9. Eat meals with your family	1	2	3	4	5
10. Help take care of your grandparents	1	2	3	4	5
11. Do things together with your brothers and sisters	1	2	3	4	5

For the following items, please indicate how important it is for you to engage in the following behaviors on a scale 1 to 5

	Not Important at all	←-----→			Very Important
Future Support					
1. Help your parents financially in the future	1	2	3	4	5
2. Live at home with your parents until you are married	1	2	3	4	5
3. Help take care of your brothers and sisters in the future	1	2	3	4	5
4. Spend time with your parents even after you no longer live with them	1	2	3	4	5
5. Live or go to college near your parents	1	2	3	4	5
6. Have your parents live with you when you get older	1	2	3	4	5

**Family-School Conflict Scale (Sommerfeld)**

Please indicate to what extent you agree or disagree with each statement below

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. My grades are lower because of the time I spend with my family	1	2	3	4
2. At times I have to put my schoolwork aside to run errands that the family needs done	1	2	3	4
3. I do better in college when I have more family responsibilities	1	2	3	4
4. Since being in college my performance has suffered because of my responsibilities to my family	1	2	3	4
5. College would be easier if I didn't have as many family obligations	1	2	3	4
6. My family doesn't understand how much time my schoolwork takes	1	2	3	4

**Work-School Conflict Scale (Markel and Frone, 1998)**

People who work and go to school sometimes find that their job and school life interfere with each other. Check the number from 1 to 5 that indicates how frequently you experience each situation.

	Never	←-----→			Very Often
1. Because of my job, I go to school tired.	1	2	3	4	5
2. My job demands and responsibilities interfere with my school work.	1	2	3	4	5
3. I spend less time studying and doing homework because of my job.	1	2	3	4	5
4. My job takes up time that I'd rather spend at school or on school work.	1	2	3	4	5
5. When I'm at school, I spend a lot of time thinking about my job.	1	2	3	4	5



## APPENDIX B

### Research Information Sheet – 11.11.13

Title of Study: *College Student Adjustment: Examination of Personal and Environmental Characteristics*

Principal Investigator (PI): *Aleksandra Stoklosa*  
Theoretical/Behavioral Foundations – College of Education  
[REDACTED]

#### **Purpose:**

You are being asked to be in a research study of factors that contribute to students' college adjustment in a large, urban university because you are a student in such institution. This study is being conducted at Wayne State University.

#### **Study Procedures:**

If you take part in the study, you will be asked to respond to a series of on-line questions and statements by selecting the most appropriate response from those listed. The types of questions will vary, but they will pertain to your experiences, perception, background, interactions with peers and faculty, family, and employment. You will have the option of not answering any questions that you do not feel comfortable responding to. Your participation will take approximately 30-45 minutes and will require one session. Upon completion of all questionnaires, you will be provided an option of being entered into a drawing of a \$100 Amazon gift card. If you indicate your interest in the drawing, you will be redirected to a separate page where you will have a chance to win the reward.

#### **Benefits**

- As a participant in this research study, there will be no direct benefit for you; however, information from this study may benefit other people now or in the future.

#### **Risks**

- There are no known risks at this time to participation in this study.

#### **Costs**

- There will be no costs to you for participation in this research study.

**Compensation**

- You will not be paid for taking part in this study. However, you will be provided with an option to be entered into a random drawing of a \$100 Amazon gift card.

**Confidentiality:**

- All information collected about you during the course of this study will be kept without any identifiers.

**Voluntary Participation /Withdrawal:**

Taking part in this study is voluntary. You are free to not answer any questions or withdraw at any time. Your decision will not change any present or future relationships with Wayne State University or its affiliates

**Questions:**

If you have any questions about this study now or in the future, you may contact Aleksandra Stoklosa or one of research team members at the following phone number [REDACTED]. If you have questions or concerns about your rights as a research participant, the Chair of the Human Investigation Committee can be contacted at (313) 577-1628. If you are unable to contact the research staff, or if you want to talk to someone other than the research staff, you may also call (313) 577-1628 to ask questions or voice concerns or complaints.

**Participation:**

By completing the questionnaires you are agreeing to participate in this study.

### Research Information Sheet – 3.12.14

Title of Study: *College Student Adjustment: Examination of Personal and Environmental Characteristics*

Principal Investigator (PI): *Aleksandra Stoklosa*  
Theoretical/Behavioral Foundations – College of Education  
(██████████)

#### **Purpose:**

You are being asked to be in a research study of factors that contribute to students' college adjustment in a large, urban university because you are a student in such institution. This study is being conducted at Wayne State University.

#### **Study Procedures:**

If you take part in the study, you will be asked to respond to a series of on-line questions and statements by selecting the most appropriate response from those listed. The types of questions will vary, but they will pertain to your experiences, perception, background, interactions with peers and faculty, family, and employment. You will have the option of not answering any questions that you do not feel comfortable responding to. Your participation will take approximately 30-45 minutes and will require one session. Upon completion of all questionnaires, you will be provided an option being entered into a drawing of an Amazon gift card. If you indicate your interest in the drawing, you will be redirected to a separate page where you will have an option to enter your email for a chance to win a reward. If you enter your email for a prize prior to 03.30.14, you will be eligible to participate in weekly \$100 gift card drawings. If you enter into a drawing on or after 03.30.14, you will be eligible to participate in a drawing of six \$50 Amazon gift cards among all entries submitted on, or after that date (until the end of data collection).

#### **Benefits**

- As a participant in this research study, there will be no direct benefit for you; however, information from this study may benefit other people now or in the future.

#### **Risks**

- There are no known risks at this time to participation in this study.

#### **Costs**

- There will be no costs to you for participation in this research study.

### **Compensation**

- You will not be paid for taking part in this study. However, you will be provided with an option to be entered into a random drawing of a \$100 Amazon gift card using your email address until 03.29.14, or six \$50 Amazon gift cards entering on or after 03.30.14.

### **Confidentiality:**

- All information collected about you during the course of this study will be kept without any identifiers. Your email collected to be entered in a prize drawing will NOT be connected to the study survey.

### **Voluntary Participation /Withdrawal:**

Taking part in this study is voluntary. You are free to not answer any questions or withdraw at any time. Your decision will not change any present or future relationships with Wayne State University or its affiliates

### **Questions:**

If you have any questions about this study now or in the future, you may contact Aleksandra Stoklosa at [ax3119@wayne.edu](mailto:ax3119@wayne.edu) or one of research team members at the following phone number (313) 577 8545. If you have questions or concerns about your rights as a research participant, the Chair of the Human Investigation Committee can be contacted at (313) 577-1628. If you are unable to contact the research staff, or if you want to talk to someone other than the research staff, you may also call (313) 577-1628 to ask questions or voice concerns or complaints.

### **Participation:**

By completing the questionnaires you are agreeing to participate in this study.

## APPENDIX C

## Wayne State Institutional Review Board Approval

**WAYNE STATE UNIVERSITY**

IRB Administration Office  
87 East Canfield, Second Floor  
Detroit, Michigan 48201  
Phone: (313) 577-1628  
FAX: (313) 993-7122  
<http://irb.wayne.edu>

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**NOTICE OF EXPEDITED APPROVAL**

To: Aleksandra Stoklosa  
College of Education  
552 Student Center bldg

From: Dr. Scott Millis *S. Millis, PhD*  
Chairperson, Behavioral Institutional Review Board (B3)

Date: June 07, 2013

RE: IRB #: 054013B3E  
Protocol Title: College Student Adjustment: Examination of Personal and Environmental Characteristics  
Funding Source:  
Protocol #: 1305011993

Expiration Date: June 06, 2014

Risk Level / Category: Research not involving greater than minimal risk

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The above-referenced protocol and items listed below (if applicable) were **APPROVED** following *Expedited Review Category (#7)\** by the Chairperson/designee for the Wayne State University Institutional Review Board (B3) for the period of 06/07/2013 through 06/06/2014. This approval does not replace any departmental or other approvals that may be required.

- Revised Protocol Summary Form (received in the IRB Office 5/31/2013)
- Protocol (received in the IRB Office 5/7/2013)
- The request for a waiver of the requirement for written documentation of informed consent has been granted according to 45 CFR 46.117(1)(2). Justification for this request has been provided by the PI in the Protocol Summary Form. The waiver satisfies the following criteria: (i) The only record linking the participant and the research would be the consent document, (ii) the principal risk would be potential harm resulting from a breach of confidentiality, (iii) each participant will be asked whether he or she wants documentation linking the participant with the research, and the participant's wishes will govern, (iv) the consent process is appropriate, (v) when used requested by the participants consent documentation will be appropriate, (vi) the research is not subject to FDA regulations, and (vii) an information sheet disclosing the required and appropriate additional elements of consent disclosure will be provided to participants not requesting documentation of consent.
- Research Information Sheet (dated 5/30/2013)
- Participant Recruitment Notice/Flyer
- Data Collection Tools: Background and Demographic Information, Student Adaptation to College Questionnaire (SACQ), General Self Efficacy Scale, Beliefs in Educational Success Test, Why Do You Go to College (CEGEP), Brief COPE, Sense of Belonging, Family Obligation Attitudes, and Work-School Conflict Scale

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- Federal regulations require that all research be reviewed at least annually. You may receive a "Continuation Renewal Reminder" approximately two months prior to the expiration date; however, it is the Principal Investigator's responsibility to obtain review and continued approval **before** the expiration date. Data collected during a period of lapsed approval is unapproved research and can never be reported or published as research data.
- All changes or amendments to the above-referenced protocol require review and approval by the IRB **BEFORE** implementation.
- Adverse Reactions/Unexpected Events (AR/UE) must be submitted on the appropriate form within the timeframe specified in the IRB Administration Office Policy (<http://www.irb.wayne.edu/policies-human-research.php>).

**NOTE:**



## NOTICE OF EXPEDITED CONTINUATION APPROVAL

To: Aleksandra Stoklosa  
College of Education  
552 Student Center bldg

From: Dr. Deborah Ellis or designee C. Zolondak/AB.  
for Chairperson, Behavioral Institutional Review Board (B3)

Date: May 02, 2014

RE: IRB #: 054013B3E

Protocol Title: College Student Adjustment: Examination of Personal and Environmental Characteristics

Funding Source:

Protocol #: 1305011993

Expiration Date: May 01, 2015

Risk Level / Category: Research not involving greater than minimal risk

Continuation for the above-referenced protocol and items listed below (if applicable) were APPROVED following Expedited Review by the Chairperson/designee of the Wayne State University Institutional Review Board (B3) for the period of **05/02/2014 through 05/01/2015**. This approval does not replace any departmental or other approvals that may be required.

- Actively accruing participants.
- Waiver of written documentation of informed consent continued and approved.
- Research Information Sheet (dated 11/11/2013)
- Participant Recruitment Notice/Flyer

\* Federal regulations require that all research be reviewed at least annually. You may receive a "Continuation Renewal Reminder" approximately two months prior to the expiration date; however, it is the Principal Investigator's responsibility to obtain review and continued approval **before** the expiration date. Data collected during a period of lapsed approval is unapproved research and can never be reported or published as research data.

\* All changes or amendments to the above-referenced protocol require review and approval by the IRB BEFORE implementation. Adverse Recurring/Unplanned Events (ARUE) must be submitted on the appropriate form within the timeframe specified in the IRB Administration Office Policy (<http://www.irb.wayne.edu/policies-human-research.php>).

### NOTE:

1. Upon notification of an impending regulatory site visit, hold notification, and/or external audit the IRB Administration Office must be contacted immediately.
2. Forms should be downloaded from the IRB website at **each** use.

\*Based on the Expedited Review List, revised November 1998

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**ABSTRACT****COLLEGE STUDENT ADJUSTMENT: EXAMINATION OF PERSONAL AND ENVIRONMENTAL CHARACTERISTICS**

by

**ALEKSANDRA M STOKLOSA****August 2015****Advisor:** Dr. Stephen Hillman**Major:** Educational Psychology**Degree:** Doctor of Philosophy

This study used a multi-dimensional model of college adjustment to examine the relationships between multiple layers of personal influences and college adjustment (academic, social, personal/emotional, attachment to the institution, and overall adjustment) among emerging adults in a large urban university. The sample included 177 undergraduate students, ages 18-25, attending Wayne State University, who completed on-line questionnaires.

Race and cumulative college GPA were related to academic adjustment. Being Arabic/Middle-Eastern was a consistent predictor of college adjustment. It was found that higher college GPA and being White was related to higher academic adjustment, while being Arabic/Middle-Eastern was related to lower academic adjustment. College GPA was the only personal/demographic variable predicting social adjustment. A positive relationship was found between the self-reported social class and the personal-emotional adjustment. Being Arabic/Middle-Eastern, first generation college student, or on-campus living, were related to a lower sense of attachment to the institution, while higher college GPA was related to higher levels of attachment. Higher GPA was related to higher overall adjustment, while being Arabic/Middle Eastern was associated with lower overall adjustment.

The perceived classroom comfort was positively related to all aspects of college adjustment. The number of hours spent socializing with students outside of class was positively related to social adjustment, attachment to the institution, and the overall adjustment. Current family obligations were related to stronger attachment to the institution as well as the overall adjustment. Lastly, conflict between school and family responsibilities was related to lower college adjustment scores.

It would be helpful for university officials to pay special attention to students of various ethnic/racial backgrounds and first generation college students when designing special programs for students at-risk. In addition, enhancing classroom experiences could improve students' adjustment. Lastly, support should be provided to students who are struggling with managing the conflict between family and school responsibilities.

**AUTOBIOGRAPHICAL STATEMENT****Aleksandra Stoklosa**

Education	<p>2015 – Doctor of Philosophy Wayne State University, Detroit, Michigan Major: Educational Psychology</p> <p>2007 – Master of Arts Wayne State University, Detroit, Michigan Major: Marriage and Family Therapy</p> <p>2005 – Bachelor of Arts Oakland University, Rochester Hills, Michigan Major: Psychology</p>
Licensure	Limited License Psychologist – State of Michigan
Professional Experience	<p>2011 to Present University Counselor Wayne State University Counseling and Psychological Services</p> <p>2011 to Present Psychotherapist Michigan Psychological</p> <p>2010-2011 Staff Psychologist Northeast Guidance Center</p> <p>2009-2011 Psychologist / Assessment Specialist Juvenile Assessment Center</p> <p>2006-2007 Case Manager Supervisor Team Mental Health Services</p>
Professional Affiliations	American Psychological Association