

PERCEPTIONS OF RETENTION AND ADJUSTMENT IN MALE FIRST-YEAR
COLLEGE STUDENTS

by

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ABSTRACT

The study examined the relationship between belonging to an athletic or Greek-affiliated group and first semester freshmen male college students' (a) perceived stress, (b) level of college adjustment, (c) sense of belonging, and (d) expected retention. Thirty-first-year male college students who belonged to a collegiate group and non-members completed *The Student Adaptation to College Questionnaire* (SACQ; Baker & Siryk, 1984, 1989), the *Perceived Stress Scale* (PSS; Cohen, Kamarck, & Mermelstein, 1983), a demographic questionnaire assessing additional retention and adjustment factors, and questions from the *Sense of Belonging to Campus Scale* (Hurtado & Carter, 1997). On average, students reported low adjustment levels. Stress levels were similar for each group. Non-members reported higher sense of belonging. Athletes appear to have reported a slightly higher Sense of Belonging than fraternity members. Students who intended to return reported moderate stress. Members of a collegiate group reported lower expected retention than non-members.

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CHAPTER ONE: INTRODUCTION

A current issue for higher education institutions is the retention and successful graduation of students. Poor adjustment to the college environment, lack of social integration, and close peer relationships have been identified as supporting reasons for incompleteness of a college degree (Pascarella & Terenzini, 1983; Swenson, Nordstrom, & Hiester, 2008). Evidence-based research has also found adjustment to college to be positively related to grade point average (GPA) and social activities are negatively related to attrition (e.g., Baker & Siryk, 1984, 1986). College adjustment is defined by Tinto (1993) as the student's ability to assimilate both socially and academically into the college setting. High college dropout rates have been reported, particularly within the first two years of arriving to college, and it is estimated that more than 40% of students leave college without completing a degree (Tinto). In fact, a report conducted by the National Student Clearinghouse examined the retention rate of college students in the general population who began their postsecondary education in 2009 (Shapiro et al., 2015). Tracking students over a six-year time period, they were able to gain insight into completion rates. Drop out rates from four-year public institutions increased from 49.9% (out of 2.7 million students) in 2008 to 56.1% (out of 2.9 million students) in 2009. Decreasing retention rates suggest there is a critical need to understand what factors will improve student graduation rate.

Retention statistics also impact the economy and society. For instance, the Georgetown University Center on Education and the Workforce projects 55 million new job openings by 2020, with 65% requiring postsecondary education and training;

however, it is predicted that the U.S. will have a deficit of 5 million workers with the required college level education and training, resulting in an abundance of jobs that are unable to be filled (Carnevale, Smith, & Strohl, 2013). This may result in increased competition and a shortage of work opportunities for individuals without post-secondary education. With nearly two-thirds of jobs requiring postsecondary education, it is imperative that educational institutions ensure that students complete their degree. This further supports the need for investigating the factors that influence retention and graduation among college students.

Researchers have long been interested in defining the factors that positively relate to students' adjustment to college (Baker & Siryk, 1984, 1986; Tinto, 1993). In recent years, studies have begun to emerge that devote attention to the social adjustment of students. Students who have socially integrated into the college environment and have close peer relationships are less likely to drop out of college (Pascarella & Terenzini, 1983; Swenson et al., 2008). Therefore, social adjustment factors are increasingly being viewed as important as academic factors in predicting persistence in completing a college degree (Gerdes & Mallinckrodt, 1994). Persistence research has stressed the importance of studying student sub-groups to understand how students academically and socially integrate into the college campus (Tinto).

Many students integrate into the college life setting through various student organizations, such as Greek-affiliated associations and athletic associations. Maestas, Vaquera, and Zehr (2007) found that joining a fraternity was an important predictor of social integration and a sense of belonging. This is further evidence that membership in

Greek-affiliated and athletic associations promotes student retention and integration. Because students involved in athletic and Greek-affiliated organizations may have higher retention rates, studying these sub-groups is of particular interest in understanding the factors that impact retention.

This has led to the exploration of retention rates of college students who belong to an athletic team. The National Collegiate Athletic Association (NCAA) Division I Committee on Academic Performance endorsed an academic reform initiative in 2004 (NCAA, n.d.-a), wherein they implemented measures to track academic success, retention, and graduation of student-athletes. These measures were the Academic Performance Rate (APR) and the Graduation Success Rate (GSR). According to the NCAA, the APR is a “term-by-term measure of eligibility, retention, and graduation” for every scholarship athlete (NCAA, 2014 -c, p. 15). Intercollegiate athletic teams can earn a minimum score of 930 and a maximum score of 1,000 on the APR (NCAA, n.d.-b). Those teams earning below the minimum score receive team-based penalties. The GSR tracks the proportion of collegiate athletes who earn a degree within six years (Brown, 2014).

The NCAA’s most recent examination of the GSRs of collegiate athletes found that percentage rates of GSR increased by 10 percentage points between 2001 and 2013. Based on the GSR, this report signifies that collegiate athletes are steadily graduating at higher rates; this increase equates to 13,805 more athletes graduating (Hosick, 2014). Hosick credited NCAA academic reforms as contributing to this 84% graduation rate. Although academic reform is working, and collegiate athletes continue to do better than

the general college student body, when compared to the federal graduation rate, difficulties adjusting to college are still a threat to retention for collegiate athletes (Hosick; Melendez, 2007). Thus, one may conclude that collegiate athletes are still at risk for not completing post-secondary education.

The few studies that have explored retention rates of Greek-affiliated students produce mixed results. Some research suggests that this membership increases the risk of academic underachievement (Pascarella, Flowers, & Whitt, 2001); however, there is also support that membership results in greater retention rates (DeBard, Lake, & Binder, 2006; DeBard & Sacks, 2012; Nelson, Halperin, Wasserman, Smith, & Graham, 2006), gains in learning, and cognitive development (Pike, 2000).

The present study examined whether members of a Greek-affiliated or NCAA group have better adjustment to college than non-members. Specifically, this study evaluated whether belonging to an NCAA team and/or a Greek-affiliated group is positively correlated with four different variables related to college retention in first year college students: (a) perceived stress; (b) level of college adjustment; (c) sense of belonging; and (d) expected retention. The following literature review will examine research in these different areas, as well as existing research on student athletes and Greek-affiliated students.

Perceived Stress

One factor related to retention that researchers have examined is students' level of stress (Hoffman, Richmond, Morrow, & Salomone, 2002; Kimball & Freysinger, 2003; Lubker & Etzel, 2007; Tinto, 1993). The transition to college involves many stressful

personal, social, and academic experiences (Pancer, Hunsberger, Pratt, & Alisat, 2000; Tinto). Researchers have found that the dramatic lifestyle change and sudden increase in autonomy creates high levels of stress for the student who is acclimating to the post-secondary undergraduate setting. Some examples of stressors often encountered by freshmen include (a) separation from friends and family, (b) new student role expectations, and (c) increased academic demands (Chickering & Reisser, 1993; Hoffman et al.). For most traditional students, the freshman year of college is typically the first time to live away from home (Pancer et al.) and separate from their social support network of family and friends (Rice, 1992). Adjusting to the novel personal demands of independent living and adapting to adult roles during the first-year of college proves to be challenging for new college students (Pancer et al.). Hoffman et al. found that entering freshmen felt the most stress regarding academic expectations of college. Students reported that academics and time management were their greatest stressors; however, Hoffman et al. also found that experiencing a sense of mutual connectedness with other students enhanced students' ability to cope with college stress.

Similarly, Friedlander, Reid, Shupak, and Cribbie (2007) examined first year undergraduates during the first and second semester to determine the impact of stress, social support, and self-esteem on college adjustment using the *Student Adaptation to College Questionnaire* (SACQ) authored by Baker and Siryk (1984, 1989). Friedlander et al. found that changes in perceived stress predicted better adjustment. Furthermore, increased social support from friends and decreased perceived stress predicted

improvements in overall social and personal-emotional adjustment, excluding academic adjustment.

Although a significant amount of research has examined how perceived stress affects college students in general, other research has specifically explored how stress affects collegiate athletes and Greek-affiliated students (Lubker & Etzel, 2007; Melendez, 2007). In a study by Kimball and Freysinger (2003), collegiate athletes' responses to interview questions led to a mutual student-based definition of stress as feelings of having little to no control over others and their experiences. Athletes indicated that they felt stress due to feeling controlled by their coaches, schedules, and the pressures to perform well in their sport. However, the athletes also felt that that stress is reduced by the social support and companionship experienced because of membership in collegiate sports. Participation in sports moderates sport-specific stress and general stress found within the lives of collegiate athletes. Although other studies have also acknowledged a similar moderating relationship between stress and collegiate athletic participation (see Hudd et al., 2000), students who are members of college sports and Greek organizations (e.g., fraternities) often continue to face additional challenges adjusting to college because of obligatory membership requirements (Lubker & Etzel; Melendez). Adjustment challenges and stressors that exist specifically for collegiate athletes include (a) extreme time commitments, (b) physically demanding exercise routines, and (c) media scrutiny (Hudd et al.; Lubker & Etzel; Melendez). Athletes must also uphold academic eligibility and NCAA eligibility standards, while handling injuries and dealing

with the demands of training and competition (Broughton & Neyer, 2001; Carodine, Almond, & Gratto, 2001).

Negative stereotypes of Greek-affiliated college students exist and may create additional college adjustment stressors for this group, as well (Winston & Saunders, 1987). A unique set of stressors associated with Greek-affiliation is evidenced by a history of publicized events of detrimental hazing, alcohol abuse, risky behavior, and academic failure (Ellsworth, 2006). Despite the noted challenge of additional stressors on adjustment, research suggests that students are more likely to finish college if they are socially integrated in campus activities and participate in extracurricular activities, such as sports and Greek associations (Hoffman et al., 2002; Jacobs & Archie, 2008).

College Adjustment

College adjustment is also a significant factor influencing persistence towards graduation. Tinto (1993) defined college adjustment as a student's ability to socially and academically integrate into the new college setting. Moreover, Tinto considered successful integration into the college setting, both socially and academically, to positively affect students' retention.

College adjustment is a frequently reviewed factor in evaluating student adjustment and retention that includes four primary components: (a) academic adjustment; (b) social adjustment; (c) personal/emotional adjustment; and (d) goal commitment/institutional attachment in college students (Baker & Siryk, 1984). Baker and Siryk defined academic adjustment as the student's position towards academic objectives and the extent to which the student will persist in carrying out academic

objectives. Social adjustment was defined as the student's ability to be actively involved in social activities and to build interpersonal relationships with others on campus. Baker and Siryk defined personal/emotional adjustment as students' sense of their psychological and physical well-being. Additionally, the authors defined goal commitment/institutional attachment as a student's sense of fitting in with the college setting.

Melendez (2007) evaluated differences in social adjustment, academic adjustment, personal and emotional adjustment, and goal commitment/institutional attachment in 207 freshman and sophomore collegiate athletes (49%), and non-athletes (51%) during the second semester of college. Each group was surveyed using the SACQ (Baker & Siryk, 1984, 1989). The results revealed that collegiate athletes reported considerably higher academic adjustment and goal commitment/institutional attachment than non-athletes.

Although past research has examined factors that predict adjustment to college, few studies have examined the combined impact of these adjustment variables. In Cohorn and Giuliano (1999), psychology students presented themselves as data collectors and gave 110 first semester freshmen students from higher SES backgrounds a 52-item questionnaire. The data collectors explained the reason for the questionnaire to the first-year students as a way to determine their outlook toward college. Items were included to evaluate the students' adjustment in the subsequent categories: (a) academic; (b) personal-emotional; (c) social; (d) general; and (e) institutional. Demographic questions and two open-ended questions were included that asked specifically about students' least and most preferred elements of college life. Among the variables, faculty interactions

most strongly predicted positive academic adjustment. Having a close family relationship, however, was most strongly related to negative academic adjustment. The best predictors of social adjustment, in order of significance, were (a) the ability to find and make new friends and (b) self-esteem. The strongest predictor of personal-emotional adjustment was the ability to make friends. Intercorrelations among the adjustment measures showed that academic and personal-emotional adjustment predicted general adjustment but not goal commitment/institutional attachment. Academic adjustment measured students' satisfaction with their academic performance, and personal-emotional adjustment measured items, such as student stress and loneliness. Institutional attachment was predicted by social adjustment, which implies that involvement in the campus community, such as belonging to an on campus Greek or athletic group, is important for college adjustment.

Grade Point Average

Grade point average (GPA) assesses academic performance and is a natural predictor of a student's intention to persist. A student's GPA is one of the best objective predictors of college degree attainment (Baker & Siryk, 1984; Tinto, 1993) with good internal reliability (Bacon & Bean, 2006). Tinto notes that academic achievement, or high grades, is a vital predictor of student retention. Fraternities are widely known as social organizations that promote high levels of social involvement, academic development, and networking. Research suggests that college students can benefit from Greek-affiliated membership. For example, Pike (2000) compared Greek to non-Greek students and found Greek-affiliated students to have higher social participation levels that result in higher

gains in learning than non-Greek students. Additionally, Pike (2000) found that Greek students with higher levels of social engagement also had improvements in their educational development.

Nelson et al. (2006) compared Greek-affiliated students' GPA their first semester and the last semester of their fourth year to their non-affiliated counterparts. Greek-affiliated students had a slightly higher GPA both times. Specifically, 90% of Greek-affiliated students were still enrolled during their senior year compared to 70% of their non-affiliated counterparts. Conversely, Pascarella et al. (2001) surveyed 3,331 Greek-affiliated students to evaluate their academic performance and found that belonging to a Greek organization had a temporarily negative impact on students' academic performance during the first semester.

DeBard et al. (2006) evaluated the GPAs of Greek-affiliated students and found them to be higher than the overall student body, and DeBard and Sacks (2012) compared members of Greek organizations to non-Greek students during their first year and found that Greek men and women had higher fall, spring, and cumulative GPAs than did independent students. Greek-affiliated students were also retained at higher rates than non-Greek students; Greek-affiliated men were retained at 97%, whereas non-Greek men were retained at 85%. Likewise, Greek-affiliated women were retained at 98%, whereas non-Greek women were retained at 94%. Therefore, research indicates that Greek membership promotes greater retention and academic performance.

Sense of Belonging

Research regarding adjustment and persistence has specifically examined the relation between sense of belonging, integration, and students' intention to persist (Hoffman et al., 2002; Hurtado & Carter, 1997; Jacobs & Archie, 2008; Maestas et al., 2007). Literature reviews of students' first year college experiences frequently apply the concepts of social and academic integration. Persistence research has shown that social integration is just as important as academic integration and possibly more so (Bers & Smith, 1991). Students who were more socially integrated had higher persistence rates than students who were more academically integrated.

Likewise, a study of first year students at a university in the United Kingdom interviewed 22 students who completed their first year and 11 students who withdrew (Wilcox, Winn, & Fyvie-Gauld, 2005). Wilcox et al. found that social integration or a sense of belonging (e.g., having social supports and having a network of friends) was a key theme related to persistence or withdrawal. In fact, of the 11 students who withdrew, 9 reported "difficulties in making compatible friends" contributed to their decision to withdraw (p. 711).

Throughout the research, the terms *social integration* and *sense of belonging* are used interchangeably (Wolf-Wendel, Ward, & Kinzie, 2009). Tinto (1993) defined integration as the extent to which students share the values of the college and adhere to the campus culture and the degree to which this integration results in a student's sense of belonging to campus. Therefore, the sense of belonging that students feel in college is a result of integrating into the college life.

Sense of belonging also has accumulated various definitions throughout research. For instance, Hurtado and Carter (1997) defined a sense of belonging as a student's "view of whether he or she feels included in the college community" and noted that it is essential for students to have a sense of belonging in order to have the persistence required to obtain a degree (p. 327). Maestas et al. (2007) defined it as a "students' subjective feelings of connectedness or cohesion to the institution" (p. 239). Hoffman et al. (2002) similarly defined sense of belonging as a student's feelings of being connected to a network and feeling cared for by others at the same institution. Hausmann, Schofield, and Woods (2007) further defined sense of belonging as "the psychological sense that one is a valued member of the college community" (p. 804). Tinto (1993) and other researchers (e.g., DeBard et al., 2006; DeBard & Sacks, 2012; Hausmann et al.; Hoffman et al.; Hurtado & Carter; Jacobs & Archie, 2008; Severiens & Wolff, 2008) who have investigated retention among social groups have established that sense of belonging to the college is crucial for retention.

Naturally, fraternity membership promotes high levels of campus social involvement, and, therefore, establishes a sense of belonging to campus, decreasing the likelihood of drop-out (Winston & Saunders, 1987). Along with retention rates, a greater sense of belonging has been found among Greek-affiliated students than the general population (DeBard et al., 2006; DeBard & Sacks, 2012; Maestas et al., 2007). In their research, Hurtado and Carter (1997) found that students who belonged to a Greek-affiliated or athletic organization had a significantly higher sense of belonging than non-members. Furthermore, Hurtado and Carter found that sense of belonging positively

predicts retention. Increased sense of belonging has also been associated with student motivation and dedication to school, both of which are positively associated with retention and performance (Osterman, 2000).

Hoffman et al. (2002) developed an measure of sense of belonging, which considered a student's relationships with his or her college peers and faculty members. Five factors in the sense of belonging measure included (a) perceived peer support, (b) perceived faculty support/comfort, (c) perceived classroom comfort, (d) perceived isolation, and (e) empathic faculty understanding. In their research, students who reported feelings of "interpersonal ties" exhibited an increase in comfort and intrapersonal coping mechanisms within the college environment; both are factors shown to predict retention.

In a longitudinal study, Hausmann et al. (2007) examined how sense of belonging related to college freshmen's intentions to persist in obtaining a college degree. They surveyed students at the beginning of their first semester and at the end of their second semester to gain an understanding of changes in the ratings on measures of sense of belonging, intentions to persist, peer and parental support, and institutional commitment. They randomly assigned students to one of three groups an intervention group, a gift group and a no gift group. Those in the gift group received non-logo bearing gifts given to them by their professors. Gifts were not given to those in the no gift group. The intervention group received individualized written communications from university administrators and college logo-bearing gifts. Findings revealed that students in the intervention group exhibited a higher sense of belonging and greater intentions to persist as time progressed compared to students in both control groups.

Jacobs and Archie (2008) surveyed 305 first-year college students using the *Sense of Community Index* (SCI; Berger, 1997) to determine the relation between students' sense of community and retention. The following factors that shaped a sense of community were acknowledged: (a) membership in fraternities; (b) living in campus housing; (c) a desire to change major; and (d) employment status. Results obtained from this study indicate that sense of belonging/community was positively related to intent to return and that lack of a sense of belonging/community was related to a student's decision to discontinue enrollment. As stated by Tinto (1993), issues with college adjustment, social adjustment, and academic pressures predict college retention. Students with better college adjustment have higher retention rates (Jacobs & Archie). The researchers concluded that students have a higher retention rate if they experience a positive sense of belonging, and they have a lower retention rate if they do not have a positive sense of belonging.

From this research, it appears that a sense of belonging to a college community in the form of a Greek-affiliated or athletic group affords students a greater probability of positively assimilating into college life and continuing towards graduation. Similarly, students who report feeling comfortable in the school setting, who report being socially connected to students and professors, and who partake in extra-curricular activities stick with their academic goals (Severiens & Wolff, 2008). Therefore, research indicates that sense of community, such as membership in fraternities, sororities, and campus clubs, predicts students' intentions to persist (Hausmann et al., 2007; Hoffman et al., 2002; Jacobs & Archie, 2008).

In summary, the above research has shown that increasing students' sense of belonging can improve their persistence in obtaining a degree and improve their adjustment to the stressors of college life. Moreover, group membership has been shown to improve a student's sense of belonging, (Hurtado & Carter, 1997; Jacobs & Archie, 2008; Osterman, 2000), by facilitating successful social and academic integration in learning environments where students universally relate to the common stressors and demands of college (Hoffman et al., 2002).

Although there is a wealth of research on college persistence and completion, more research is needed to examine social factors that predict retention and how they relate to academic progress. Social integration has been shown to have a significant impact on students' intentions to persist to graduation (Bers & Smith, 1991; DeBard et al., 2006; DeBard & Sacks, 2012; Hausmann et al., 2007; Hoffman et al., 2002; Hurtado & Carter, 1997; Jacobs & Archie, 2008; Pike, 2000; Severiens & Wolff, 2008; Tinto, 1993; Wilcox et al., 2005). Collegiate athletes and Greek-affiliated students are uniquely positioned to experience greater social integration and a sense of belonging, both of which have been found to predict retention. However, there is a need for more research on college students' specific involvement in college athletics and/or Greek-affiliated groups that examines how this type of group membership is related to adjustment to college life and retention.

Although research has also reported on the many additional stressors that these groups face compared to college students who are not in these groups, such as extreme time commitments and negative stereotypes, research has not directly compared

collegiate athletes to students in Greek-affiliated groups. Furthermore, the research on perceived stress in Greek-affiliated groups is limited.

A substantial lack of research and comparison data on athletic and Greek-affiliated groups and traditional undergraduate students exists. For instance, although in recent years, some research has begun to devote more attention to these two student populations, especially in regards to sense of belonging (see Hausmann et al., 2007; Hoffman et al., 2002; Hurtado & Carter, 1997; Jacobs & Archie, 2008), few studies have specifically evaluated both athletic and Greek-affiliated groups or compared them to each other or to non group-affiliated students.

Present Study and Hypotheses

This study examined the relationship between belonging to an athletic or Greek-affiliated group and first year male college students' (a) level of college adjustment perceived stress, (b) perceived stress, (c) sense of belonging, and (d) expected retention. First year male college students who belonged to an NCAA or Greek-affiliated group and students who did not belong to either group completed the SACQ (Baker & Siryk, 1984, 1989), the *Perceived Stress Scale* (PSS; Cohen, Kamarck, & Mermelstein, 1983), questions from the *Sense of Belonging to Campus Scale* (Hurtado & Carter, 1997), and a demographic questionnaire assessing additional retention and adjustment factors. The following hypotheses were made:

- 1) Hypothesis 1: Students who identify as a member of an NCAA athletic team or Greek-affiliated group will report similar or higher Full Scale and Subscale

scores on the SACQ than the norms provided in the SACQ manual (Baker & Siryk, 1989).

- 2) Hypothesis 2: Students who identify as a member of an NCAA athletic team or Greek-affiliated group will report higher overall adjustment (as measured by the SACQ) than non-athletes or Greek-affiliated members and will not differ from one another.
- 3) Hypothesis 3: Students who report higher overall adjustment (as indicated by the Full Scale T score of the SACQ) will report lower perceived stress (as measured by the PSS).
- 4) Hypothesis 4: Greek-affiliated students and collegiate athletes will report similar and lower overall perceived stress (as assessed by the PSS) than students who do not belong to an athletic or Greek-affiliated group.
- 5) Hypothesis 5: Students belonging to an athletic or Greek-affiliated group will report a greater sense of belonging at MTSU than students who do not belong to an athletic or Greek-affiliated group (as assessed the *Sense of Belonging to Campus* questions).
- 6) Hypothesis 6: Students belonging to an athletic or Greek-affiliated group who agree (score of 4) or strongly agree (score of 5) with the perceived retention statement “I plan to return to MTSU next semester” on the Demographic Questionnaire will have a lower overall score on the PSS than students who disagree (score of 2) or strongly disagree (score of 1) with the statement.

7) Hypothesis 7: Students belonging to an athletic or Greek-affiliated group will report higher expected retention (as assessed using the statement “I plan to return to MTSU next semester” on the Demographic Questionnaire) than students who do not belong to an athletic or Greek-affiliated group.

CHAPTER TWO: METHOD

Participants

Participants included 30 first year male undergraduate college students attending Middle Tennessee State University (MTSU) during Fall 2017. The students' ages ranged from 18 to 23 years, with a mean age of 18.97 ($SD = 1.61$). Participants included 6 male college athletes and 4 male students affiliated with a Greek-affiliated organization, as well as 20 male students who were non-members of either organization. These last students served as the control group. Ten participants identified as African American or Black (33%), 1 identified as Asian/Pacific Islander (3%), 4 identified as Hispanic or Latino (13%), 14 identified as White/Caucasian (47%), and 1 identified as Other (3%).

Materials

Demographic questionnaire. A demographic questionnaire developed by the principal investigator consists of 22 questions about students' gender, age, GPA, and ethnicity. Program-specific questions were included such as program of study, current academic standing (e.g., freshman, sophomore, etc.), and anticipated graduation date from MTSU. Additional questions included whether students (a) were married or single, (b) were enrolled part-time or full time, (c) were intercollegiate athletes, (d) were a member of a fraternity, (e) had children, (f) lived on-campus or off-campus, (g) were a transfer student, (h) declared a major, and (i) were involved in other group organizations on campus.

An additional question assessed expected retention, using a 5-point Likert-type question ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Students responded to

the statement “I plan to return to MTSU next semester.” Higher values represent greater expectations to return to Middle Tennessee State University (MTSU) the next semester. All of the questions on the demographic questionnaire can be found in Appendix A.

Sense of belonging measure. Three statements adapted from Hurtado and Carter’s (1997) *Sense of Belonging to Campus* scale assess students’ sense of belonging. Permission for use is unnecessary when used for academic research or educational purposes. Statements include:

- (a) “I feel a sense of belonging to the MTSU Campus”
- (b) “I feel that I am a member of the MTSU community”
- (c) “I see myself as part of the MTSU community”

Questions are rated on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), with raw scores across all three questions combined to create a final overall score. Hurtado and Carter (1997) report a very high internal consistency reliability (coefficient alpha) of .94 among these three items. All questions can be found in Appendix B.

College adjustment questionnaire. The SACQ (Baker & Siryk, 1984, 1989) is a 67-item, Likert-type self-report questionnaire that assesses a college student’s overall university adjustment at any point in time. The SACQ assesses college adjustment across four subscales: (a) Academic Adjustment (AA) (measures response to academic demands) (24 items); (b) Social Adjustment (SA) (measures response to interpersonal and social demands) (20 items); (c) Personal/Emotional Adjustment (PEA) (measures psychological and physical functioning) (15 items); and (d) Goal

Commitment/Institutional Attachment (GCIA) (measures the student's attitude and attachment to the university) (8 items). The 9-point scale ranges from 1 (*applies to me very closely*) to 9 (*doesn't apply to me at all*). For each subscale, a higher score represents better adjustment. The sum of all scores provides an index of overall adjustment. The Full Scale and four Subscale raw scores are converted to T scores. T scores have a mean of 50 and a standard deviation of 10. Likewise, T scores of 31 to 40 are considered low, and T scores of 30 and below are considered very low. T scores of 60 and 70 are considered high and very high, respectively. Percentile rank equivalents are also provided. A score in the 50th percentile rank is considered average.

Baker and Siryk (1989) reported an internal consistency reliability (coefficient alpha) of .89 to .95 for the Full SACQ scale and .81 to .90 for the AA subscale, .83 to .91 for the SA subscale, .77 to .86 for the PEA subscale, and .85 to .91 for the GCIA subscale. Table 1 identifies the total number of questions and overlapping questions for each scale and subscale.

Perceived stress measure. The PSS (Cohen et al., 1983) assesses students' current feelings of stress. Permission for use is unnecessary when used for academic research or educational purposes (see Cohen et al.). The PSS includes 10 questions that are ranked on a 4-point Likert-type scale ranging from 0 (*almost never*) to 4 (*very often*). Scores 0 to 13 are considered average and indicate low perceived stress. Scores ranging

Table 1

An Overview of Questions for the SACQ Full Scale and Subscales

Scale/Subscale	Number of Questions	Overlapping Questions
AA	24	Question 36 occurs on GCIA
SA	20	Questions 1, 4, 16, 26, 42, 56, 57, 65, occur on GCIA
PEA	15	No overlapping questions occur
GCIA	15	Questions 1, 4, 16, 26, 42, 56, 57, 65, occur on SA; Question 36 occurs on AA
SACQ Full Scale	67	No overlapping questions occur; 2 questions (53 and 67) only occur as part of the Full Scale

Note. Although there are a total of 77 questions, there are only 67 non-overlapping questions. A total of 9 questions overlap, and 2 questions (questions 53 and 67) only occur as part of the Full Scale, resulting in a total number of 67 questions for the SACQ overall score.

from 14 to 26 are considered to be suggestive of moderate perceived stress. Scores ranging from 27 to 40 are considered to be suggestive of high perceived stress. The four positively worded questions (questions 4, 5, 7, & 8) are reverse scored. The sum of all items produces the overall score. According to Cohen and Williamson (1988), the PSS has good internal consistency of .85 and adequate test-retest reliability of .85. This scale can be found in Appendix C.

Procedure

The Institutional Review Board (IRB) granted approval before participants were recruited. The researcher obtained the necessary approval to use the selected measures (see Appendix D for copies of the survey approval letters and Appendix E for rights and permissions) and the Sona System from the appropriate representatives. After approval by the IRB, all survey questions were entered into Qualtrics. Qualtrics Research Suite, an online survey software program, was used to create the questionnaire imported into Sona System so that General Psychology students could access the survey (Qualtrics, 2016). General psychology students who accessed the survey link via the Sona System received one point of research credit for participation that counted towards gaining research credit or satisfying academic requirements in general psychology classes. The IRB approval letter can be found in Appendix F.

In order to obtain a viable sample of first year athletes (i.e., very few first year athletes enroll in the general psychology course their first semester), additional students who were not in the general psychology subject pool were sent an email that provided a direct link to the survey on Qualtrics. Those who accessed the survey via the direct

Qualtrics link in an email were offered an opportunity to earn a monetary reward, in the form of a random drawing for one of four \$25 gift cards that occurred at the completion of data collection.

The entire survey was administered online and consisted of 102 questions. The informed consent statement was adapted from MTSU's informed consent template form (MTSU n.d.). This study's informed consent was located on the first page of the web-based survey (see Appendix G). Participants checked "I agree" or "I do not agree" before gaining access to the questionnaire. Then, participants completed the demographic questionnaire, the sense of belonging questions, the PSS, and the SACQ. A short debriefing letter appeared at the conclusion of the survey (see Appendix H). The survey took approximately 20 to 30 minutes to complete. Those who did not agree to participate were directed to the end of the survey.

CHAPTER THREE: RESULTS

In the current study, raw scores from the SACQ Full Scale and those corresponding to each subscale were totaled and then converted from a total raw score into a T score using the *T-Score Conversions for SACQ Raw Scores* Appendix provided in the SACQ manual (Baker & Siryk, 1989, p. 75). According to the manual's procedural guidelines, norms for male first-semester, college freshmen were used. Raw scores on the PSS and Sense of Belonging measure were also converted into mean scores. Once all the data was either converted to a T score, total raw score, or to a mean score, a series of one-sample *t*-tests, independent samples *t*-test, and Pearson product-moment correlations were conducted.

Hypothesis 1

It was predicted that students who identify as a member of an NCAA athletic team and/or Greek-affiliated group would report similar or higher Full Scale and Subscale scores on the SACQ compared to the norms provided in the SACQ manual (Baker & Siryk, 1989). An individual one-sample *t*-test was conducted, using a test value comparison of $T = 50$ (which is equivalent to the 50th percentile) and an *SD* of 10.

Results from the one sample *t*-test ($\alpha = .05$) show that the 10 participants belonging to an NCAA athletic team or Greek-affiliated group had a SACQ Full Scale mean T score of 30.80 ($SD = 4.29$). This score was significantly lower than the previously published mean norm T score of 50 ($SD = 10$), $t(9) = -14.15$, $p < .05$. Thus, the average Full Scale T score for athlete and fraternity participants was about 19.20 points lower than the previously published population average.

Similarly, in the present study, SACQ subscale scores for AA, SA, PEA, and GCIA were also significantly lower than the norms for these subscales. Participants' SACQ AA subscale mean T score was 28.80 ($SD = 4.05$), compared to the previously published mean T score of 50 ($SD = 10$), $t(9) = -16.55, p < .05$. Additionally, participants' SACQ SA subscale mean T score was 36.80 ($SD = 7.73$), compared to the previously published mean T score of 50 ($SD = 10$), $t(9) = -5.40, p < .05$. Also, participants' SACQ PEA subscale mean T score of 38.30 ($SD = 9.32$) was significantly lower than the previously published mean T score of 50 ($SD = 10$), $t(9) = -3.97, p < .05$. Finally, participants' SACQ GCIA subscale mean T score of 35 ($SD = 2.16$) was significantly lower than the previously published mean T score of 50 ($SD = 10$), $t(9) = -21.96, p < .05$.

Additional analyses were conducted to determine if the control group also differed from the normative data. Using a one sample t -test ($\alpha = .05$), the control group's SACQ Full Scale mean T score was 32.5 ($SD = 4.81, n = 20$), which was significantly lower than the previously published mean T score of 50 ($SD = 10$), $t(19) = -16.28, p < .05$. Thus, the average Full Scale T score of the control group was about 17.50 points lower than the previously published population average.

The control group's SACQ AA subscale mean T score of 30.25 ($SD = 4.71$) was significantly lower than the previously published mean T score of 50 ($SD = 10$), $t(19) = -18.75, p < .05$. The control group's SACQ SA subscale mean T score of 38 ($SD = 6.71$) was significantly lower than the previously published mean T score of 50 ($SD = 10$), $t(19) = -8.00, p < .05$. The control group's SACQ PEA subscale mean T score of 38.20

($SD = 9.19$) also was significantly lower than the previously published mean T score of 50 ($SD = 10$), $t(19) = -5.75, p < .05$. Finally, the control group's SACQ GCIA subscale mean T score of 36.25 ($SD = 4.53$) was significantly lower than the previously published mean T score of 50 ($SD = 10$), $t(19) = -13.58, p < .05$. Overall, the SACQ subscale scores for the control group were all significantly lower than the normative data. According to the SACQ examiners manual, scores below 40 are considered low, and mean comparisons reveal that Full Scale and subscale scores for each group are within the low range (p. 24).

Hypothesis 2

The second hypothesis was that students who identified as a member of an NCAA athletic team and/or Greek-affiliated group would report higher overall adjustment, as measured by overall scores on the SACQ Full Scale T score of the SACQ, than non-collegiate NCAA athletes or Greek-affiliated members and would not differ from one another. An independent samples t -test ($\alpha = .05$) was conducted to evaluate the first part of this hypothesis. The Full Scale scores of participants belonging to an NCAA athletic team or Greek-affiliated group ($M = 30.80, SD = 4.29$) was not significantly different than that of the control group ($M = 32.50, SD = 4.81$), $t(28) = -.94, p = .353$. Comparative analysis of the NCAA athletic team and the Greek-affiliated group was not conducted due to low sample sizes.

Additional analyses explored differences for each of the individual SACQ subscales. SACQ AA subscale scores of participants in the athlete/Greek group ($M = 28.80, SD = 4.05$) did not significantly differ from scores for the control group ($M =$

30.25, $SD = 4.71$), $t(28) = -.83$, $p = .413$. SA subscale scores of participants in the athlete/Greek group ($M = 36.80$, $SD = 7.73$) did not significantly differ from scores for the control group ($M = 38$, $SD = 6.71$), $t(28) = .44$, $p = .664$. PEA subscale scores of participants in the athlete/Greek group ($M = 38.30$, $SD = 9.32$) also did not significantly differ from scores for the control group ($M = 38.20$, $SD = 9.19$), $t(28) = -.03$, $p = .978$. Finally, GCIA subscale scores of participants in the athlete/Greek group ($M = 35$, $SD = 2.16$) did not significantly differ from scores for the control group ($M = 36.25$, $SD = 4.53$), $t(28) = .82$, $p = .418$. Therefore, participants in both groups did not significantly differ from each other for reported AA, SA, PEA, or GCIA subscale scores.

Hypothesis 3

For this hypothesis, it was predicted that higher reported overall adjustment, as measured by overall scores on the Full Scale score of the SACQ, would be related to lower perceived stress (as measured by the PSS). A Pearson product-moment correlation coefficient was calculated to assess the relationship between SACQ Full Scale scores and ratings on the PSS, and these two variables were not related to one another, $r(28) = .07$, $p = .709$.

Subsequent correlations were not computed individually for the fraternity or the NCAA athlete group as the sample size was too small; however, correlations were computed to determine the relationship between SACQ Full Scale scores and ratings on the PSS for the control group. These two variables also were not related to one another for individuals in the control group, $r(18) = .02$, $p = .942$.

Hypothesis 4

The fourth hypothesis was that Greek-affiliated students and NCAA athletic team members would report similar and lower overall reported perceived stress (as assessed by the PSS) than students in the control group. It was not possible to statistically compare members of the two target groups because of the size of the sample; however, this hypothesis was partially assessed using an independent samples *t*-test to compare participants who were members of either an NCAA athletic team or a fraternity ($M = 18.40$, $SD = 6.96$) to the control group ($M = 19$, $SD = 5.07$). There were no significant differences in overall reported perceived stress, $t(28) = -.27$, $p = .789$.

Hypothesis 5

For the fifth hypothesis, it was predicted that students belonging to an NCAA athletic team or a fraternity would report a greater sense of belonging at MTSU than students in the control group (as assessed by the three *Sense of Belonging to Campus* questions). An independent samples *t*-test ($\alpha = .05$) was calculated with *Sense of Belonging* as the dependent variable. Students in the athlete/fraternity group ($M = 6.90$, $SD = 3.51$) reported a significantly lower sense of belonging than did students in the control group ($M = 11.05$, $SD = 2.54$), $t(28) = -3.71$, $p < .001$. The difference in average *Sense of Belonging* between athletes ($M = 8.67$, $SD = 3.01$) and the fraternity group ($M = 4.25$, $SD = 2.50$), was 4.42 points. Curiously, three out of four (75%) fraternity members reported that they strongly disagreed (score of 1) with all three questions in the sense of belonging measure. Only one fraternity member agreed with one statement “I feel a sense

of belonging to the MTSU Campus.” Table 2 shows the group mean level of agreement/disagreement with each sense of belonging statement.

Hypothesis 6

The sixth hypothesis predicted that students belonging to an athletic or Greek-affiliated group who agreed (score of 4) or strongly agreed (score of 5) with the perceived retention statement “I plan to return to MTSU next semester” on the Demographic Questionnaire would have a lower overall score on the PSS than students who disagree (score of 2) or strongly disagree (score of 1) with the statement. Due to the small sample size, it was not possible to statistically compare those who expected to return to those who did not expect to return; however, of the entire sample ($N = 30$), only four (13%) participants reported that they did not expect to return. Interestingly, individual differences in perceptions of retention show that three of the four (75%) fraternity members who participated disagreed/strongly disagreed with this question.

Additional analysis examined the relation between perceived retention and perceived stress (as measured by the PSS) for students who belonged to an athletic or Greek-affiliated group. These two variables were significantly related to one another, $r(5) = -.85$, $p = .016$, in the expected direction. Thus, there was a strong negative correlation between perceived stress scores and perceived retention for members of these two groups.

Table 2

Group Sense of Belonging Scores

Group	Sense of Belonging Statement			
	1	2	3	4
Control	3.85	3.65	3.55	11.05
Athlete	3.17	2.83	2.67	8.67
Fraternity	1.75	1.25	1.25	4.25

Note. The maximum rating possible on each statement is a score of 5. Total possible scores can range from 3 to 15.

1 = “I feel a sense of belonging to the MTSU Campus”; 2 = “I feel that I am a member of the MTSU community”; 3 = “I see myself as part of the MTSU community”; 4 = Total Sense of Belonging.

Hypothesis 7

For the last hypothesis, it was predicted that students belonging to an athletic team or Greek-affiliated group would report higher perceived retention than students in the control group. An independent samples *t*-test was performed comparing the mean perceived retention scores of students in the two groups. Students in the target group ($M = 2.90$, $SD = 1.37$) reported being significantly less likely to return to MTSU the next semester than students in the control group ($M = 4.50$, $SD = .946$), $t(28) = -3.75$, $p = .001$. Students belonging to an NCAA athletic team had a mean of 3.67 ($SD = 0.52$), whereas those who were in a fraternity had a mean of 1.75 ($SD = 1.50$).

Supplementary Hypotheses

Supplementary analyses were conducted to determine the presence of any significant correlations among any additional variables. Of interest to this study was the correlation between perceived retention and sense of belonging. Results indicate a strong positive correlation, between perceived retention and sense of belonging, $r(28) = .85$, $p = <0.00001$. The result is significant at $p < 0.05$. See Table 3.

Table 3

Correlations Among Survey Measures for Entire Sample

Measure	1	2	3	4	5	6	7	8
1. SACQ Full Scale	--							
2. SACQ AA	.69**	--						
3. SACQ SA	.63**	.35	--					
4. SACQ PEA	.41*	.21	-.33	--				
5. SACQ GCIA	.73**	.27	.64**	.15	--			
6. PSS	-.05	-.12	.53	-.69	.24	--		
7. Sense of Belonging	.16	.12	.04	.06	.14	-.31	--	
8. Retention	.23	.17	.20	.12	.17	-.12	.85**	--

*p < .05. **p < .01. (2-tailed).

CHAPTER FOUR: DISCUSSION

Summary of Findings

The present study was multifaceted in its attempt to examine adjustment and retention in first year male students. The primary focus was to explore whether students who were members of a specific collegiate group differed from those who were not. Based on previous literature (Hoffman et al., 2002; Hurtado & Carter, 1997; Jacobs & Archie, 2008; Maestas et al., 2007), it was hypothesized that members of an NCAA athletic team and/or Greek-affiliated group would have significantly different perceptions of belongingness and would therefore have different perceptions of (a) adjustment, (b) expected retention, and (c) perceived stress.

Adjustment to college. Interestingly, members of both groups reported significantly lower scores on all scales than the previously published mean. For each group, however, the mean Academic Adjustment scores were below 30 and considered to be in the low range. This may indicate that first year male freshmen are either struggling or are slow to adjust to the academic demands of college, including motivation, application, performance and satisfaction with the academic environment.

Contrary to the second hypothesis, there was not a significant difference in adjustment between the groups on the full scale or on the four SACQ subscale scales. Although research shows that group membership plays a positive role in increasing the adjustment of college students, membership is only one factor and does not explore the cohesiveness of a given group (Cohorn & Giuliano, 1999; Melendez, 2007). These results may indicate that first year male freshmen are less well adjusted to college during their

first semester. In fact, previously cited research surveyed male freshmen during their second semester of freshman year (Melendez, 2007). Participants in the Melendez study may have had higher scores on adjustment due to being given more time to adjust to college life.

Differences in perceived stress. The third and fourth hypotheses also were not supported. Hypotheses were partially based on the study by Kimball and Freysinger (2003) which found that athletes felt that stress was reduced through the social support and companionship experienced as a result of group membership. In the present study, perceived stress seems similarly heightened for the total population sample, as well as for the individual groups. According to the scoring guidelines, scores between 14 and 26 are considered to be indicative of moderate perceived stress. In the present sample, only one individual reported a score below 14 to indicate low or average stress. Moderate stress ratings may be due to first semester stressors of college life, including adjusting to academic demands. These results are partially consistent with Hoffman et al.'s (2002) finding that entering freshmen feel the most stress regarding academic expectations of college.

Sense of belonging. The fifth hypothesis also was not supported. Although prior research has shown that students who belong to a Greek-affiliated or athletic organization had a significantly higher sense of belonging than non-members (DeBard et al., 2006; DeBard & Sacks, 2012; Hurtado & Carter, 1997; Maestas et al., 2007), in the present study, the opposite was found. Results indicate that group members reported a lower

sense of belonging than non-members. In other words, non-members reported having a greater sense of belonging than members of the athletic and fraternity groups.

The primary focus of this study was to compare possible differences in college adjustment in students who were members of two specific types of collegiate groups to those who were not; however, determining whether differences existed among students who belong to an NCAA athletic team compared to a Greek-affiliated group was difficult due to the small samples in both groups. Informal comparisons of the group means of these two groups indicate that those belonging to an NCAA athletic team reported a greater sense of belonging than those belonging to a Greek-affiliated group.

It should be noted that the membership period for fraternity members and athletes is quite different. Fraternity participants may have been a new member of the fraternity and therefore may have not had a chance to grow as a member of the fraternity and develop a solid sense of belonging. On the other hand, most athletes are recruited before the semester begins, whereas fraternity members are recruited by the third or fourth week of a semester. Additionally, the “pledge” or intake period persists throughout the first semester. Most athletics hold fall multi-day training sessions before official practices and semesters begin, and therefore athletes may exhibit a higher sense of belonging.

Furthermore, most collegiate athletes transition from a high school sports team, wherein the setting, role, and expectations are fairly similar. This would most likely facilitate an easier transition to college, as well as a smoother sense of belonging. Interestingly, all athletes surveyed reported living on-campus in student-athlete housing; however, three of the four fraternity members surveyed reported living off campus, with

only one reporting living on-campus. Research supports that living in residence halls helps to shape a sense of belonging (Jacobs & Archie, 2008). On-campus housing with members of the same group also may have contributed to a stronger sense of belonging for the athletes. Overall, athletes may have a higher sense of belonging for multiple reasons, including training sessions, housing, and previous experience as an athlete.

Although, athletes sense of belonging is higher than fraternity members it is not higher than the control group. Albeit athletes are able to develop stronger ties to their membership and identity as a college athlete they may not have been able to see themselves as part of the entire campus community. In fact, analysis shows that on average athletes rated themselves as having a higher sense of belonging to the MTSU campus and a lower sense of seeing themselves as part of the MTSU community. Being able to see one's self as part of the entire community may take more time as well as a higher degree of involvement in academic oriented tasks outside of the athletic setting. In fact, the control group of general psychology students may have had a higher sense of belonging due to discussions of course content outside of class with professors and students. This is consistent with Hurtado and Carter's (1997) findings that students in the same classes were correlated with having an increased sense of belonging.

Perceived retention and stress. Perceived retention and stress was explored through hypothesis 6. Comparisons of those students who expected to return and those who did not were not possible because there were only four (13%) participants, including three in the fraternity group, who reported low perceived retention. All others agreed or strongly agreed with the statement. The negative correlation between perceived retention

and stress indicated that higher perceived stress was related to lower perceived retention. In fact, athletes and fraternity members who intended to return reported a mean perceived stress score of 18, which was in the moderate range.

Perceived retention. The results for the last hypothesis were contradictory to the prediction that students belonging to a group reported lower expected retention than non-members. Previous analysis reveals that those belonging to a group had a lower sense of belonging, and research shows that sense of belonging is related to perceived retention (Jacobs & Archie, 2008). In fact, for the entire sample, a supplemental analysis indicates that sense of belonging was positively correlated with perceived retention.

Limitations

Although the results of the current study may have implications for the college adjustment of freshman male students in a fraternity or on an NCAA athletic team, the current study's results do have limitations. Therefore, it is important to exercise caution when generalizing findings to other populations in a college setting.

First, the sample used for the current study has two limitations: (a) the size of the sample; and (b) the demographics of the data set. The sample size was only 30 participants; the control group consisted of 20 participants, and the target group consisted of only 10 participants summed across two groups. The results of the statistical analyses and lack of support for the hypotheses may have been due to the small number of athletes and fraternity members who responded to the questionnaire. There also was an uneven number of participants per group. Because the samples were so small, it wasn't statistically appropriate to compare individuals in the two target groups to one another or

to the control group; thus, some of the hypotheses could not be tested. Had more members of the target group participated trends among variables may have reached statistical significance.

This study also used a sample comprised exclusively of southern, male, first-semester freshman college students enrolled in general psychology courses ($n = 20$), as well as freshman athletes and fraternity members. This is a very specific population that may not be well suited for generalizability to other organizations or other genders in a college setting.

Another limitation pertaining to population sample is the type of university from which the sample was derived. According to MTSU 2016 Fact Book (MTSU, 2016), MTSU has approximately 22,000 students (p.7), whereas smaller universities such as Belmont and Vanderbilt University have fewer than 10,000 students. Students at a smaller university may have an easier time assimilating into college life due to smaller student-teacher ratios and smaller numbers of students per student organization. A smaller university also may allow students to feel more a part of campus, as opposed to feeling overwhelmed by a larger campus.

There are also methodological limitations that could have affected the outcome of the results. One such limitation was the method of recruitment. In the present study, the questionnaire URL was sent out via email to students involved in fraternity life or on an athletic team. Middle Tennessee's athletic department's associate athletic director was able to send out emails to all athletes; however, obtaining the emails of fraternity students

proved to be rather difficult and time consuming. Recruitment by email was far less successful than recruitment through the Psychology Department subject pool.

Additionally, the survey consisted of 102 questions and could be considered overly long. Item analysis shows that a few participants may have answered superficially. According to research, long web-based surveys risk fatiguing their participants, and participants may become increasingly inattentive as they complete them (Meade & Craig, 2012).

Future Directions

Future research also should recruit female participants. Additionally, recruitment should also focus on members of other collegiate organizations on campus, such as religious, academic, and/or student organizations. Further research should implement a mass recruiting method, such as advertising via social media or offering additional non-monetary rewards for students' time. This would give students the option to willingly participate as opposed to being emailed directly. Also, further research should seek to include the adjustment, stress, sense of belonging, and perceived retention levels in students enrolled in private and smaller institutions. Additionally, retention research should focus on assessing the relationship between a sense of belonging and perceived retention.

Although the focus of this study was on first semester male freshman students, future research may want to compare students from their first semester to their second semester. This may be beneficial because stressors, levels of adjustment, and sense of belonging may differ from semester to semester due to adaptation to the new college

environment. Furthermore, a longitudinal study may be beneficial in understanding the differences across adjustment, stress, sense of belonging, and perceived retention levels. Finally, according to Meade and Craig (2012), including a bogus item in long surveys of 50 items or more, such as “I have been to every country in the world” or “I am paid biweekly by leprechauns” might have aided in identifying careless responders. With a large enough sample, careless responders could be excluded from analyses.

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APPENDICES

APPENDIX A
Demographic Questionnaire

1. What is your Sex?
 - a. Male
 - b. Female

2. What is your age:
 - a. 17
 - b. 18
 - c. 19
 - d. 20
 - e. 21
 - f. 22
 - g. 23 and over

3. What is your ethnicity?
 - a. African American or Black
 - b. Asian/Pacific Islander
 - c. Hispanic or Latino
 - d. Native American or American Indian
 - e. White/Caucasian
 - f. Other (please specify) _____

4. What is your current academic standing?
 - a. Freshman (0 to 30 hrs.)

- b. Sophomore (31-60 hrs.)
 - c. Junior (61-90 hrs.)
 - d. Senior (> 90 hrs.)
5. In how many hours are you currently enrolled?
- a. Part-time (less than 12 hours)
 - b. Full-time (12 hours or more)
6. How many semesters have you completed at MTSU?
- a. Less than 1 full semester
 - b. 1 semester
 - c. 2 semesters
 - d. 3-4 semesters
 - e. 5 or more semesters
7. Are you a transfer student?
- a. Yes
 - b. No
8. Have you declared a major?
- a. Yes
 - b. No

9. If yes, how many times have you changed your major?
 - a. 0 times
 - b. 1 time
 - c. 2 times
 - d. 3 or more times
10. What was your highest score on the A.C.T.? _____
11. What was your high school G.P.A.? _____
 - a. If you have been at MTSU for at least one semester, what is your current G.P.A.? _____
12. What is your anticipated graduation date from MTSU? _____
13. What is your marital status?
 - a. Single
 - b. Married
 - c. Divorced
14. How many children do you have?
 - a. None
 - b. 1 child
 - c. 2 children
 - d. More than 2 children

15. Where do you currently reside?
- a. On-campus, dorm
 - b. On campus, honors dorm
 - c. On-campus, Greek housing
 - d. On-campus, athlete housing
 - e. Off-campus, with family
 - f. Off-campus, with friends or roommates
 - g. Off-campus, alone
16. Are you currently a member of an intercollegiate athletic team?
- a. Yes
 - b. No
17. If yes, what sport do you play?
- a. MTSU Baseball
 - b. MTSU Basketball
 - c. MTSU Football
 - d. MTSU Golf
 - e. MTSU Soccer
 - f. MTSU Softball
 - g. MTSU Tennis
 - h. MTSU Track and Field/Cross Country
 - i. MTSU Volleyball
 - j. Other (please specify) _____

k. How many hours a week do you spend with this group?

- a. 2 b. 4 c. 6 d. 8 e. 10 f. 12 g. >12

18. Are you a member of a fraternity?

- a. Yes b. No

How many hours a week do you spend with this group?

- a. 2 b. 4 c. 6 d. 8 e. 10 f. 12 g. >12

19. Are you a member of any other group on campus?

- a. Yes b. No

20. If you belong to campus groups, how many?

- a. 1 b. 2 c. 3 d. 4 e. 5

22. I plan to return to MTSU next semester

- a. strongly disagree
b. disagree
c. neutral
d. agree
e. strongly agree

APPENDIX B**Sense of Belonging Measure**

Please indicate the extent to which you agree with the following statements.

1. I feel a sense of belonging to the MTSU Campus.
 - a. strongly disagree
 - b. disagree
 - c. neutral
 - d. agree
 - e. strongly agree

2. I feel that I am a member of the MTSU community.
 - a. strongly disagree
 - b. disagree
 - c. neutral
 - d. agree
 - e. strongly agree

3. I see myself as part of the MTSU community.
 - a. strongly disagree
 - b. disagree
 - c. neutral
 - d. agree
 - e. strongly agree

APPENDIX C

Perceived Stress Scale

Directions: The following questions ask you about your feelings and thoughts during the last month. In each case, please indicate how often you felt or thought a certain way.

0 = Never	1 = Almost Never	2 = Sometimes	3 = Fairly often	4 = Very often
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1. In the last month, how often have you been upset because of something that happened unexpectedly?
2. In the last month, how often have you felt you were unable to control the important things in your life?
3. In the last month, how often have you felt nervous and “stressed”?
4. In the last month, how often have you felt confident about your ability to handle your personal problems?
5. In the last month, how often have you felt that things were going your way?
6. In the last month, how often have you found that you could not cope with all the things that you had to do?
7. In the last month, how often have you been able to control irritations in your life?
8. In the last month, how often have you felt that you were on top of things?
9. In the last month, how often have you been angered because of things that were outside of your control?
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

APPENDIX D

SACQ Approval from Western Psychological Services



June 23, 2016

Jessica Vest
 Graduate Student
 Middle Tennessee State University
 3343 Memorial Blvd.
 Apt. A 315
 Murfreesboro, Tennessee 37129

Re: Student Adaptation to College Questionnaire (SACQ)

Dear Jessica,

In follow-up to your email of 21 June '16 and Dr. Michelle Boyer-Pennington's email of support dated 22 June '16, this serves to provide terms that will permit you to adapt the format of the SACQ for administration and scoring via a secure, password-protected, online environment, for sole application within your registered scholarly study, examining adjustment to college in collegiate athletes and Greek-affiliated groups in comparison to the general freshmen population.

Western Psychological Services will authorize you to adapt and arrange for delivery of the SACQ material—parallel with and consistent to the entire prevailing item set and using prevailing response categories—including your administering the scale a specific number of times within the project, and your creating a scoring-only computerized key for tabulation of item responses, as based on our proprietary hand-scoring key. Our authorization is for the sole purpose of conducting the above-described study, and not for continued or commercial use, and is subject to satisfaction of the following conditions:

- (1) You must purchase from WPS a non-exclusive license for the anticipated number of SACQ administrations.
- (2) The license fee for this described use of the SACQ will be based on prevailing prices for the hand-scored SACQ Test Form (W-228A), less 20% Research Discount, with one hundred (100) minimum licensed uses; shipping and handling fees are not applicable to licensing fees (e.g., 100 administrations @ \$1.89 = \$189.00 license fee). Additionally, there is a one-time \$25.00 administrative fee.
- (3) The license fees must be prepaid in U.S. dollars drawn on a U.S. bank or by international money order (Visa, MasterCard, American Express and Discover Cards are accepted and swiftest), and are non-refundable. To ensure proper handling of your licensing arrangements, and to guarantee the rate in condition 2 above, please send the payment to my attention with a signed copy of this letter, within the next thirty (30) days. *Allow the emphasis that you must contact WPS Rights & Permissions to arrange payment of your license fees; please do not contact WPS Customer Service for this purpose.*
- (4) Each reprint (or viewing) of the SACQ material must bear—such as on each screen of SACQ item presentation—the required copyright notice that will be provided to you by WPS. WPS maintains its proprietary rights to all material directly sourced from our copyrighted material as contained within SACQ research adaptations.

*Jessica Vest
Graduate Student
Middle Tennessee State University
June 23, 2016
Page Two of Three*

- (5) With specific regard to the online administration, access to the SACQ items must be via a secure website (e.g. such as being password-protected to the individual participant).
- (6) You agree to provide WPS with one copy of all articles (including research reports, convention papers, journal submissions, theses, etc.) that report on the SACQ use in your research. The articles should be marked to the attention of WPS Rights & Permissions. WPS reserves the right to cite or reference the data included in such reports; you will of course receive proper acknowledgment if we use your research results.
- (7) WPS acknowledges that you will need to adapt our copyrighted scoring key for the purpose of computerized evaluation of responses to your research instrument—and you have our authorization to do so provided you agree to destroy the adapted key following completion of your research. Also, documentation for your computerized adaptation of the SACQ key must bear the required copyright notice that will be provided to you by WPS.
- (8) You acknowledge that—by undertaking a licensed modification in format and/or content of WPS's proprietary, formally published material—you assume full and sole responsibility for the WPS content used within your study and related results determined as a result of the investigation. You further agree to indemnify WPS, its assignees and licensees, and hold each harmless from and against any and all claims, demands, losses, damages, liabilities, costs, and expenses, including legal fees, arising out of the use of WPS-published material from which your uses shall derive.
- (9) This agreement shall be governed by the laws of the State of California, in the County of Los Angeles. If any portion of this agreement that may be deemed as unenforceable or otherwise not applicable, all remaining clauses and content herein shall remain in full force.

Upon receipt of your license payment with signature to this letter (see below), WPS will send to you the required copyright notice (see conditions #4 and #7), and we'll issue and send to you a license to create the online adaptation and to administer and score it the specified number of times.

NOTE: To source the administration instructions, item content, and scoring guidelines needed for your customized application, please refer to the SACQ Manual. In case you do not have (or have direct access to) the SACQ Manual (W-228B), this message serves for the next 60 days as your authorization to purchase one at 20% Research Discount (and note that discounted orders cannot be completed over our website); if you have questions about ordering the Manual, contact WPS Customer Service at 800/648-8857 or 424/201-8800, weekdays 7:30am to 4:00pm Pacific.

APPENDIX E

SACQ Rights and Permissions



Rights & Permissions

Certificate of Limited-use License

License #:	Date:
WPS-000592	September 7, 2016
Principal Investigator's name and title:	
Jessica Vest, Graduate Student	
Name of the Assessment:	Permitted number of uses:
Student Adaption to College Questionnaire (SACQ)	150 uses

Description of the study:

Examining adjustment to college in collegiate athletes and Greek-affiliated groups in comparison to the general freshmen population.

Reference terms dated 23Jun'16.

Method of administration:

Administration and scoring via a secure, password-protected online environment.

The required copyright notice that must be affixed in its entirety to each reprint/viewing of the assessment:

Material from the SACQ copyright © 1989, 1999 by Western Psychological Services. Format adapted by J. Vest, Middle Tennessee State University, for specific, limited research use under license of the publisher, WPS (rights@wpspublish.com). No additional reproduction, in whole or in part, by any medium or for any purpose, may be made without the prior, written authorization of WPS. All rights reserved.

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APPENDIX F

IRB Approval Letter

IRB

INSTITUTIONAL REVIEW BOARD

Office of Research Compliance,
010A Sam Ingram Building,
2269 Middle Tennessee Blvd
Murfreesboro, TN 37129

IRBN007 – EXEMPTION DETERMINATION NOTICE

Monday, May 01, 2017

Investigator(s):	Jessica Vest, Michelle Boyer-Pennington
Investigator(s) Email(s):	jv2s@mtmail.mtsu.edu, Michelle.Boyer-Pennington@mtsu.edu
Department:	Psychology
Study Title:	PERCEPTIONS OF RETENTION AND ADJUSTMENT IN MALE FIRST-YEAR GREEK-AFFILIATED STUDENTS AND ATHLETES
Protocol ID:	17-1233

Dear Investigator(s),

The above identified research proposal has been reviewed by the MTSU Institutional Review Board (IRB) through the **EXEMPT** review mechanism under 45 CFR 46.101(b)(2) within the research category (2) *Educational Tests*. A summary of the IRB action and other particulars in regard to this protocol application is tabulated as shown below:

IRB Action	EXEMPT from further IRB review***	
Date of expiration	NOT APPLICABLE	
Participant Size	60 (sixty)	
Participant Pool	Middle Tennessee State University students	
Mandatory Restrictions	Participants must be 18 or older	
Additional Restrictions	Email address may be collected for incentive delivery but must be collected and stored separately from participants survey responses.	
Comments	Participants may be offered to enter a drawing to receive a \$25 gift card.	
Amendments	Date	Post-Approval Amendments
		None at this time

***This exemption determination only allows above defined protocol from further IRB review such as continuing review. However, the following post-approval requirements still apply:

- Addition/removal of subject population should not be implemented without IRB approval
- Change in investigators must be notified and approved
- Modifications to procedures must be clearly articulated in an addendum request and the proposed changes must not be incorporated without an approval
- Be advised that the proposed change must comply within the requirements for exemption
- Changes to the research location must be approved – appropriate permission letter(s) from external institutions must accompany the addendum request form
- Changes to funding source must be notified via email (irb_submissions@mtsu.edu)
- The exemption does not expire as long as the protocol is in good standing

APPENDIX G

Informed Consent for Survey Participants

Principal Investigator: Jessica Vest

Study Title: Perceptions of Retention and Adjustment in Male First-Year College Students

Institution: Middle Tennessee State University

The following information is provided to inform you about the research project and your participation in it. Please read this form carefully and feel free to email any questions you may have about this study and the information given below.

Your participation in this research study is voluntary. You are also free to withdraw from this study at any time. In the event new information becomes available that may affect the risks or benefits associated with this research study or your willingness to participate in it, you will be notified so that you can make an informed decision whether or not to continue your participation in this study.

For additional information about giving consent or your rights as a participant in this study, please feel free to contact the MTSU Office of Compliance at (615) 494-8918.

1. **Purpose of the study:** You are being asked to participate in this study because you are a male first-year student attending Middle Tennessee State University. The purpose of the proposed study is to examine your experiences and adjustment to college.
2. **Description of procedures to be followed and approximate duration of the study:** If you choose to participate in this study, you will complete a survey that

will take approximately 20-30 minutes to complete. It will include demographic questions and questions that ask you to provide ratings for items.

3. **Expected costs:** There are no expected costs to you.
4. **Description of the discomforts, inconveniences, and/or risks that can be reasonably expected as a result of participation in this study:**

No foreseeable psychological risks, discomforts, or inconveniences are anticipated.
5. **Anticipated benefits from this study:**
 - a) The potential benefits to science and humankind that may result from this study are possible insights for institutions of higher education (i.e., colleges, universities, private schools) to help students have an easier transition into college life and improve retention rates of newly enrolled students.
 - b) **For general psychology students accessing the survey link via the Sona System, this message will appear:** The potential benefit to you for participating in this study is obtaining one research credit for your general psychology requirement.
6. **Alternative treatments available: For general psychology students accessing the survey link via the Sona System, this message will appear:** Other studies are available on the Sona System if students choose not to participate in this one.
For students accessing the survey link via the direct Qualtrics link, this message will appear: N/A
7. **Compensation for participation:**

For general psychology students accessing the survey link via the Sona System, this message will appear: Participants will receive one research credit for their participating that will count towards fulfilling the research credit requirement in their general psychology classes.

For students accessing the survey link via the direct Qualtrics link, this message will appear: In addition, each participant will be offered an opportunity to earn a monetary reward, in the form of a random drawing for one of four \$25 gift cards that will occur at the completion of data collection.

8. **Circumstances under which the Principal Investigator may withdraw you from study participation:**

You must be a male first-year male student at MTSU to participate. Students who do not fit this requirement should not participate and will be withdrawn from participating.

9. **What happens if you choose to withdraw from study participation?**

Your participation is voluntary, and you may choose to withdraw at any time without consequences. You may also refuse to answer questions that make you feel uncomfortable and still remain in the study. You may simply skip those questions.

10. **Contact Information.** If you have any questions about this research study, please feel free to contact me, Jessica Vest, at (615) 584-4340 or my Faculty Advisor, Dr. Michelle Boyer-Pennington, at (615) 898-5451 or michelle.boyer-pennington@mtsu.edu.
11. **Confidentiality.** All efforts, within reason, will be made to keep the personal information in your research record private, but total privacy cannot be promised. Your information may be shared with MTSU or the government, such as the Middle Tennessee State University Institutional Review Board, Federal Government Office for Human Research Protections, if you or someone else is in danger or if we are required to do so by law.
12. **STATEMENT BY PERSON AGREEING TO PARTICIPATE IN THIS STUDY**
- By clicking “I agree” below, you are stating that you have read this informed consent document, that you understand each part of the document, and that you freely and voluntarily choose to participate in this study**
- By clicking “I agree” below, you are agreeing to take part in this research study.
- I AGREE
 - I DO NOT AGREE

APPENDIX H

Debriefing Letter

Thank you for participating in my online research survey examining the experiences of first-year male college students. The study is a part of my Master's thesis requirement in the Department of Psychology at MTSU.

Your participation in this study is very important and will help us to better understand the needs and experiences of first-year male college students. Your answers will remain completely confidential.

If you have any questions about this research study, please contact the Principal Investigator, Jessica Vest, at jv2s@mtmail.mtsu.edu or my faculty advisor, Dr. Michelle Boyer-Pennington, at Michelle.Boyer-Pennington@mtsu.edu.