

Beyond GPA: The Impact of Secure Attachment on Motivation, Engagement, and Achievement in College

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Abstract

This study explores how secure attachment formed during childhood and adolescence influences college students' academic motivation, engagement, and achievement. The correlation between secure attachment and academics during childhood and throughout the formative years has been studied, but the research lacks support for these attachments into adulthood. During the college years success has often been measured with cognitive attributes like GPA, but this study aims to dive deeper into non-cognitive attributes and consider a wholistic view on the individual and how they may be affected by whether the individual had a secure attachment during childhood or adolescence. Moreover, one must ask if students who develop a secure attachment during the formative years have higher adjustment levels in college than those who do not. Academic adjustment will have three components: academic motivation (internal interactions with the self), academic engagement (external interactions with others), and academic achievement (GPA). This study surveyed 364 students enrolled at a South-Central public university, and there was sufficient evidence to conclude that students who reported having a trusted caregiver during childhood or adolescence, in situations of emotional distress, demonstrate higher academic motivation ($p = 0.019$), academic engagement ($p = 0.002$), and academic achievement ($p = 0.038$) compared to those who did not. This indicates that early supportive experiences with a caregiver carry lasting effects into adulthood. The data does not provide strong enough evidence to confirm within this sample that in situations of having a trusted caregiver during physical distress in the formative years leads to higher levels of academic adjustment.

Keywords: Secure Attachment, Academic adjustment, Motivation, Engagement, Higher Education, College, Success

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1. Introduction

Success in school can often be measured with quantitative attributes, often through grade point average (GPA) and attendance, and after their time in post-secondary education, earned income (Al Hazaa, et al, 2021). Educators have often seen pupils demonstrate high achievement through these markers, yet after formal education they do not achieve as much as one would have expected. The opposite has also been proven to be true with low academic performing students becoming high earners later in life, but is this that we would call success?

What makes a person successful at an institute of higher learning? If American College Testing (ACT) and Scholastic Aptitude Test (SAT) scores are no longer adequate moderators of a student's success for entry into these institutions; how can we adapt to meet the needs of future and current students to empower them

throughout their college experience? Heckman and Rubinstein (2001) highlighted the importance of considering non-cognitive abilities when evaluating what contributes to college students' success. College admissions offices have begun to acknowledge these markers as well and have started to incorporate high school GPA as a metric instead of solely ACT and SAT scores, aiming to capture aspects of non-cognitive development.

College years are a time when students develop autonomy and independence from their caregivers (Chickering, 1969). Bakar and Mohamed (2004) noted that transitioning from the K– 12 public education environment to a two- or four-year college or university can be a highly challenging experience during this pivotal stage of life. Similarly, Dyson and Renk (2006) concluded that admission to an institution of higher education serves as a test of one's ability to adapt to new environments. According to Feldt, Graham, and Dew (2011) the first year is often considered the most difficult period in a student's academic journey. While cognitive skills play a role in navigating these challenges, non-cognitive factors may be even more critical to overall success.

This quantitative study aims to investigate these non-cognitive factors related to student success at the tertiary level. A survey was conducted addressing the question, do students who develop a secure attachment during the formative years have higher adjustment levels in college than those who do not? In other words, does having experienced secure attachment in childhood and/or adolescence correlate with success in college students? How do we define 'success'? In this context, success is not defined solely by GPA [cognitive aspects], but by broader markers identified as non-cognitive [soft skill] factors.

2. Literature Review

2.1 Conceptual Framework

Attachment Theory states that children develop either secure or insecure attachment styles based upon their early interactions with their caregiver (Bowlby, 1969). Bowlby's study emphasized the importance of emotional connections as critical to healthy personal development and success in adult life. His work established a foundation for other research on early parent-child separation.

Mary Ainsworth (Mooney, 2010, p. 26), much like Bowlby, focused on "infants in their home environment." She observed the emotional stability and attachments of infants and small children that supported Bowlby's attachment theory. Ainsworth built on Bowlby's theory and developed the concept of a "secure base" theory. A secure base is defined when children move away from their first attachments [mother or caregiver] they make in life but find comfort when moving back to the secure base of the caregiver (Bowlby, 1988; Ainsworth et al., 1978). If during childhood the caregiver did not care for and meet the child's needs, this resulted in an insecure attachment, an unsecure base.

Ainsworth went on to name various attachment styles. These styles included secure, anxious/preoccupied/ambivalent, dismissive-avoidant, and fearful-avoidant/disorganized. Between Bowlby and Ainsworth's work on attachment theory and their colleagues' work that followed, attachment security plays a key role in individuals' transitions in the various stages of life. Gorres saw the attachment framework as important when studying "cognitive, social, and emotional adjustment in young adults" (2015, p.117). Wang noted that attachment styles "do not directly impact children's academic achievement; rather, different attachment styles affect diverse children's non-intellectual skill, [non-cognitive], which in turn affects children's academic success" (Wang, 2021, p. 2).

Recent statistics show college dropout data continues to remain high (Education Data Initiative, 2025). Approximately 23% of undergraduates leave their higher education campuses every year. Kurland and Siegel (2013) studied students during their first year of college and how attachment affects academic, psychological, and ethical success. While their study looked at anxiety, depression, GPA, academic cheating, and socialization, our study focuses on how attachment affects academic motivation, academic engagement, and GPA. This research continues to review and find quantitative and qualitative data that contributes to and highlights the value of secure attachment and completion of undergraduate work.

2.2 Review of the Broader Problem

The authors' literature review was conducted using peer-reviewed journal articles found through educational databases provided by the local university library services. The literature review focused on aspects of cognitive and noncognitive success in undergraduate education. More specifically, what key roles do academic motivation, engagement, and achievement play in successful degree completion at the undergraduate

level? In addition, an in-depth examination by the authors will be conducted of the interwoven components of secure attachment styles, the benefits of secure attachment, indicators of secure attachment, and how these components may impact an individual's success in future contributions to society and the workplace after graduation.

2.3 Cognitive and non-cognitive factors that contribute to college success.

A multitude of factors, both cognitive and non-cognitive, are essential for a student's holistic development (Upreti, Kushwaha, Vats, Alam, Singhai, Jain, and Tiwari, 2024). Cognitive factors may include the ability to focus, memory recall, logical reasoning, and critical thinking. Previously, Tuononen (2019) referred to these as hard skills, which included a wide range of technical skills, as well as complex intellectual abilities and ethical values. Along with strong cognitive skills, non-cognitive skills [soft skills] were identified as also needed for professional growth and a successful career.

Some non-cognitive factors include social skills, emotional maturity, and resilience. These skills, according to Tuononen (2019), are called soft skills. Herrity (2023) expressed that soft skills influence how people get along with others in their work and everyday lives. A combination of strong cognitive [hard skills] and non-cognitive skills [soft skills] help with employability in current job markets. Zhang and Aslan (2021) agreed with Herrity that, with the ever-changing educational environment, both cognitive and non-cognitive skills were necessary to align educational practices and the modern-day demands of our society. With such a multitude of factors, both cognitive and non-cognitive, developing within students, Hansford and Hattie (1982) provided evidence in a literature review that pointed to cognitive or aptitude variables accounting for only about half of the academic performance, while non-cognitive variables accounted for the other half. For this study, the literature focus will lean deeper into the role of soft skills and what factors affect the growth and development of these skills as students enter their tertiary studies.

Yang, Li, Xie, and Chen (2024) referred to this comprehensive approach to success as academic adjustment, which includes academic motivation, academic engagement, and academic achievement. They describe academic motivation as internal interactions with the self, academic engagement as external interactions with others, and academic achievement is measured by current GPA. Schneider and Schneider (2024) defined engagement as belongingness, they believed belongingness described a form of organizational identification leading to better college retention. For our study, we will be defining academic adjustment in the same manner as Yang, Li, Xie, and Chen (2024), a holistic view of academic motivation, engagement, and achievement. Some examples of academic motivation include finishing what one starts, coming to class prepared, avoiding procrastination, and persisting after failure. Academic engagement includes participating in activities, demonstrating enthusiasm, encouraging peers, listening actively, remaining calm when provoked, and showing respect and appreciation. Lastly, academic achievement is measured by current GPA. This study aims to examine an accumulative view of both soft and hard skills pertaining to these three levels of academic adjustment.

Academic adjustment at the college or university level is multilayered. Students transitioning from high school to college or university may experience numerous life-changing experiences (Salami, 2011). Alrumaidhi (2023) emphasized that first-year university students entered classrooms facing numerous problems with academic adjustments. Adjustment was defined by Raza, Qazi, and Yousufi (2021, p. 850) as “the psychological process used to adapt, handle, and manage issues faced in daily life.” Many variables played a role in the academic success of first-year students. Earlier, Van Rooij, Jansen, and Van de Grift (2018) had previously researched and concluded, drop-out rates were higher in first-year university students around the world. With a need for strong academic adjustments early in a university student's course of study, a look at academic motivation is applicable.

Academic motivation stems from initiated interests. According to Jones (2009), academic motivation is defined as a student's level of interest, personal attitudes, and determination toward their area of study. Ryan and Deci (2000) defined three components of motivation as intrinsic, extrinsic, and amotivation. Intrinsic motivation is doing something for the inherent satisfaction of the action or activity, Extrinsic motivation is based on receiving an external reward or sidestepping negative consequences, and amotivation is defined as a lack of motivation. Depending on which component of academic motivation is activated, it ultimately determines the level of academic engagement.

Huang (2011, p.16) defined academic engagement as “the amount of intellectual effort that a student puts forth in his or her academic life.” According to Searer (2019), student engagement played a crucial role in students' academic achievement. Tinto (1993) identified academic integration, also referred to as engagement, as a critical component of student retention. Tinto named examples of academic engagement, including but not

limited to attending class and actively participating in educational activities outside the classroom. According to Tinto, students were found to have greater academic success when academically engaged. Harbour, Evanovich, Sweigart, and Hughes (2015) determined that academic engagement leads to academic achievement, and thus leading to overall student success.

Shirazi and Heidari (2019) defined academic achievement as the knowledge, skills, and experiences acquired during the learning process. They went on to point out that when students reached pre-set academic goals, it led to success. In earlier research, Suhre, Jansen, and Harskamp (2007) found that when students reach satisfaction with programs in their academic environments, drop-out rates lowered. Therefore, to achieve academic success, academic achievement, motivation, and engagement must be tightly woven together to support students' future. Many times, transitioning to tertiary education is met with many challenges including academic, financial, social/personal, and general management skills necessary for reaching academic success.

2.4 Secure attachment verse insecure attachment and college academic success.

According to Kurland and Siegel (2020), higher education institutional professionals are constantly working to find ways to improve student retention and degree completion. For student retention and degree completion to be successful, a deeper look into individuals' secure attachment bonds should be considered. Bowlby (1988) pointed out who we are and how we operate in the world attributed to the bonds we have with our caregivers during the first years of life. Hargreaves and Shirley (2012, p. 38) also stated, "who we are is a result of an accumulation of events that begin at conception." For retention and degree completion in higher education to improve, a look at the connection between early bonds (secure and insecure) and the cognitive performance of students necessitates further review.

According to Bowlby (1988) and Ainsworth (Mooney, 2010), there are four primary attachment styles: secure, anxious/preoccupied/ambivalent, dismissive-avoidant, and fearful-avoidant/disorganized (Bowlby, 1988). Campbell, Barron, and Bonafede (2022) claimed that a secure style comes from a responsive and consistent caregiver. They stated insecure attachment styles [anxious/preoccupied/ambivalent, dismissive-avoidant, and fearful-avoidant/disorganized] stem from an inconsistent or neglectful caregiver. According to Bartholomew and Horowitz (1991, p.16) "Secure attachment is based on positive views of self and others, fearful individuals reflect negative views of self and others, dismissive have a positive view of self and a negative view of others, and preoccupied have a negative view of self and a positive view of others".

Students that have a secure attachment to a caregiver start with a secure base to explore the world (Bowlby, 1988). Students with insecure attachments often experience uncertainty about caregivers' responses to their needs, which can lead to classroom disengagement and reduced self-confidence compared to peers with secure attachments (Mikulincer & Shaver, 2019). Gore and Rogers (2010) examined how attachment style moderates the relationship between students' reasons for studying and their academic outcomes. They found that for securely attached individuals, studying for relational reasons (e.g., to please or connect with others) was positively associated with academic motivation, whereas among avoidantly attached individuals, relational reasons for studying were inversely associated with academic motivation.

The attachment framework put forth by Bowlby (1988) has continued to be a valuable tool for higher education professionals looking to improve retention and graduation rates. Attachment styles that individuals grow and develop under sets the trajectory of cognitive and non-cognitive factors that ultimately determine academic adjustment. Gorrese (2015) agreed that the social and emotional adjustment of young people was based on the attachment theory framework.

2.5 Stressors and academic success.

Students' academic success depends on identifying and understanding stressors. Munoz (2004, p. 55) defined stressors as "those factors or stimuli in the educational environment that put pressure on the student in some way." Stressors are interruptions in the teaching and learning process for individuals that put pressure on students. These may play out in a variety of ways. The simple transition from secondary education to undergraduate level can activate any number of stressors, and the way individuals react to these stressors can be correlated to the secure base that may or may not have been established during the formative years.

However, when secure attachments are absent from an emerging adult's life, adverse events can disrupt their stress response system, resulting in psychopathology, poorer perceptions of the self, and a weakened sense of purpose in life (Zimmer-Gembeck & Skinner, 2016). The research to date still lacks clarity in understanding the role of resilience in academic stress processes (Durso et al., 2021). Research in the current study continues to make connections between secure or insecure base attachments and academic success in higher education.

3. Methods

3.1 Participants

This study surveyed 364 students enrolled at a South-Central public university with an overall enrollment of approximately 5,000 to 6,000 students. The survey (see Appendix A) was distributed to all students enrolled during the Spring 2025 semester. It remained open for one week, with a single email reminder sent one day before the survey closed. At the time of distribution, there were 5,076 students enrolled, resulting in a response rate of approximately 7.2% (364 responses).

Among the respondents, 71% identified as female ($n = 259$), 27% as male ($n = 97$), and 2% selected “Other” ($n = 8$). The average age of respondents was 27 years. Notably, 62% of respondents ($n = 227$) were between the ages of 18 and 24. This would be the age range of students if they did not delay enrollment Choy, S. (2002). Regarding employment status, 29% of students ($n = 105$) reported working a full-time job, defined as 35 or more hours per week, and 44% ($n = 160$) reported working a part-time job, defined as 34 hours or fewer per week. Choy defined a nontraditional student is one who has one of any of the following characteristics: delay enrollment, attends part time for at least part of the academic year, works full time, is considered financial independent, has dependents other than a spouse, is a single parent, or does not have a high school diploma. Of our respondents 38% responded being of non-traditional age, and 29% reported working full-time.

In terms of race/ethnicity, 70% identified as White/Caucasian ($n = 255$), 9% as Hispanic/Latino ($n = 33$), 4% as Asian ($n = 15$), 4% as Native American ($n = 15$), 2% as African American ($n = 8$), 10% as Two or More Races ($n = 36$), and 1% as Other ($n = 2$). Respondents' academic classification varied: 24% were freshmen ($n = 87$), 18% sophomores ($n = 67$), 22% juniors ($n = 80$), and 36% seniors ($n = 130$).

3.2 Data Collection

The anonymous survey took students an average of 12:02 minutes to complete. It employed both a quantitative and qualitative design, and was chosen as the method of data collection to maximize participation and ensure timely collection. Other means of data collection would have been more time-consuming and may not have resulted in a larger number of responses. Due to the variety of student types: commuter, hybrid, online, and in-person, it is believed that an online survey was the best method for collecting data.

The survey began with a demographic section, which included questions about gender, age, background, education, employment status, income, and GPA. The remainder of the survey consisted of both multiple choice and open-ended response questions. There were two types of multiple-choice formats: one with four answer options and an additional open-ended “Other” option where students could elaborate, and another using a 1–5 Likert scale, where respondents selected a value from 1 (strongly disagree) to 5 (strongly agree).

The secure attachment section included questions regarding the respondent’s trusted caregiver during childhood and/or adolescence (approximately ages 8–12). These questions addressed both physical and emotional needs. The responses to these questions were both open-ended and multiple-choice. The multiple-choice options were:

- Yes, I had at least one consistent adult that I could depend on.
- Sometimes I could expect comfort, but not consistently.
- No, no one showed up for me. I would typically tend to myself.
- I didn’t want anyone’s help or often rejected help from an adult.
- Other

The “Other” response was an open-ended text box in which respondents could elaborate.

In the analysis of these responses, all survey answers that were not “Yes, I had at least one consistent adult that I could depend on.” were categorized as “No.” Any “Other” responses were analyzed individually and categorized as either “Yes” or “No.” Additionally, the survey asked whether the trusted caregiver emphasized the importance of work, college, and academics; however, these results will not be reported in this paper.

The final section included the Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), in response to statements about the respondent’s character. These character-related questions were based on the KIPP NYC Character Report Card. The development of the KIPP Character Report Card was inspired by a 2005 meeting between Angela Duckworth, David Levin, and psychologists Martin Seligman and Christopher Peterson (Hartnett, 2012).

There was a total of 24-character survey questions on a Likert scale, with respondents assessing themselves

from 1 (strongly disagree) to 5 (strongly agree). When analyzing the data, we scored the respondents' academic motivation level as an average of 10 questions that pertained to internal interactions with the self. For example: "I finish whatever I begin," "I work independently with focus," and "I try very hard, even after experiencing failure." The respondents' academic engagement level was calculated as an average of 14 questions pertaining to external interactions with others. For example: "I actively participate in activities, school, and work," "I allow others to speak without interruption," and "I am polite to instructors, bosses, and peers."

The academic achievement level was measured solely by the respondents' reported current GPA. If the student indicated that they did not know their current GPA, we used their self-reported high school GPA. If both were left blank or no numerical value was provided, that respondents' academic achievement was not included in the overall analysis. Only 2% ($n = 6$) of respondents left both current and high school GPAs blank.

In the survey, there were two attachment-related questions used to assess their perceived sense of security. The students' self-reported secure attachment during physical distress and the students' self-reported secure attachment during emotional distress:

- During my childhood and/or adolescence (approximately ages 8–12), when I was physically hurt, I had at least one trusted caregiver in my life who I could go to for help.
- During my childhood and/or adolescence (approximately ages 8–12), when my feelings were hurt, I had at least one caregiver in my life that I could go to talk about my feelings.

These questions were not tested for reliability or validity, but it is worth noting that they were created after analyzing the Security Scale (Kerns, Aspelmeier, Gentzler, & Grabill, 2001), which has been tested for validity (Van Ryzin & Leve, 2012) and synthesizing the overall scale into two unified concepts for the survey.

Before conducting statistical inferential analyses, descriptive statistics were calculated for the academic adjustment (motivation, engagement, and achievement) level variables within each group, in relation to the "Yes" and "No" categorized responses to the attachment-related question. These included the mean, median, mode, standard deviation, range, minimum, and maximum. Reporting these measures helps assess the shape and spread of the data distribution.

Furthermore, to examine whether perceived secure attachment during childhood or adolescence is associated with differences in current academic adjustment levels among college students, a two-sample t-test, assuming equal variances was conducted.

The two-sample t-test assuming equal variances relies on several assumptions, all of which were considered in this analysis:

- Independence: The two groups (students who reported having a trusted caregiver vs. those who did not) are independent of each other. Each respondent contributed data to only one group, and the academic adjustment levels (motivation, engagement, and achievement) were collected independently.
- Normality: While the normality assumption is important for small samples, both groups contained at least 30 observations, allowing the Central Limit Theorem to justify the use of the t-test even if the underlying distributions are not perfectly normal.
- Equality of Variances: The assumption of equal variances was evaluated using a rule-of-thumb approach. The ratio of the larger group standard deviation to the smaller group standard deviation was found to be less than 2, suggesting that the variance difference is not substantial enough to violate the equal variance assumption.

The independent variable was the categorization of the survey answers of either "Yes" or "No", and the dependent variable was the students' academic motivation, academic engagement, and academic achievement levels. Academic motivation and academic engagement were measured on a 1–5 scale, and academic achievement was measured by GPA and hence was on a 0–4 scale. The academic adjustment levels were compared with those who reported having had a secure attachment ("Yes") and those who did not ("No"). A one-tailed test was used to evaluate the directional hypothesis that students with a secure attachment would report higher adjustment levels than those without.

3.3 Two sample t-test.

Let

- μ_1 = mean adjustment level for students whose answer was categorized as "Yes"
- μ_2 = mean adjustment level for students whose answer was categorized as "No"

Then the hypotheses are:

- Null hypothesis (H_0): $\mu_1 = \mu_2$

(There is no difference in adjustment levels between students who had a secure attachment – during physical or emotional distress - and those who did not.)

- Alternative hypothesis (H_1): $\mu_1 > \mu_2$

(Students who had a secure attachment - during physical or emotional distress – have higher adjustment levels than those who did not.)

4. Results

4.1 Secure attachment during physical distress vs. academic adjustment.

The following analysis includes students' self-reported secure attachment during physical distress and their academic adjustment levels.

- Secure Attachment During Physical Distress vs. Academic Motivation
 - a p-value of 0.287 (one-tailed), statistically not significant
- Secure Attachment During Physical Distress vs. Academic Engagement
 - p-value of 0.479 (one-tailed), statistically not significant
- Secure Attachment During Physical Distress vs. Academic Achievement
 - p-value of 0.468 (one-tailed), statistically not significant

The analysis between students who had a trusted caregiver during physical distress and all levels of academic adjustment yielded p-values above the conventional alpha level of 0.05 (one-tailed), indicating non-statistically significant results. Therefore, there is insufficient evidence to conclude that students who reported having a trusted caregiver during childhood or adolescence, in situations of physical distress, demonstrate higher academic adjustment levels compared to those who did not. While the results do not support the hypothesized association, it does not necessarily imply that no relationship exists—rather, the data does not provide strong enough evidence to confirm it within this sample.

4.2 Secure attachment during emotional distress vs. academic adjustment.

The following analysis includes students' self-reported secure attachment during emotional distress and their academic adjustment levels.

- Secure Attachment During Emotional Distress vs. Academic Motivation
 - a p-value of 0.019 (one-tailed), statistically significant
- Secure Attachment During Emotional Distress vs. Academic Engagement
 - p-value of 0.002 (one-tailed), statistically significant
- Secure Attachment During Emotional Distress vs. Academic Achievement
 - p-value of 0.038 (one-tailed), statistically significant

The analysis between students who had a trusted caregiver during emotional distress and all levels of academic adjustment however yielded p-values below the conventional alpha level of 0.05 (one-tailed), indicating statistically significant results. Therefore, there is sufficient evidence to conclude that students who reported having a trusted caregiver during childhood or adolescence, in situations of emotional distress, demonstrate higher academic adjustment levels compared to those who did not.

Even though there was insufficient evidence to provide a correlation between a secure attachment during physical distress and academic adjustment this does not disprove the hypothesis. One possible reason that there were no strong results in this area could be that some avoidant attached individuals may succeed in a high stress isolated environment. (Ein-Dor, Reizer, Shaver, & Dotan, 2011) found that avoidant attachment predicted higher tennis rankings and greater satisfaction in computer science, both fields where you work independently. Due to the nature of avoidant attachment, students who are majoring in a field where it is common practice to isolate and work independently, like engineering, math, or science, may have similar results, but this has not been studied extensively. Although their motives and adjustment may be at unhealthy levels it is possible for them to still achieve “success” in their field.

What is most promising is the positive result of being able to show that students who reported having a trusted caregiver during childhood or adolescence in situations of emotional distress, demonstrate higher levels

of academic adjustment levels compared to those who did not. That is students who had an emotional secure attachment had higher levels of academic achievement [GPA], academic motivation, and academic engagement.

A box plot was generated to examine the relationship between secure attachment during emotional distress and academic motivation and engagement. As shown in Figure 1, students who reported having a trusted caregiver displayed a slightly higher median motivation score compared to those who did not. The distribution of scores for both motivation and engagement in the "Yes" group appeared somewhat higher overall.

A second box plot was generated to examine academic achievement in relation to secure attachment during emotional distress. As shown in Figure 2, students who reported having a trusted caregiver again demonstrated a slightly higher median achievement score compared to those who did not. Overall, the pattern of slightly higher central tendency for the "Yes" group was consistent with the results observed in Figure 1.

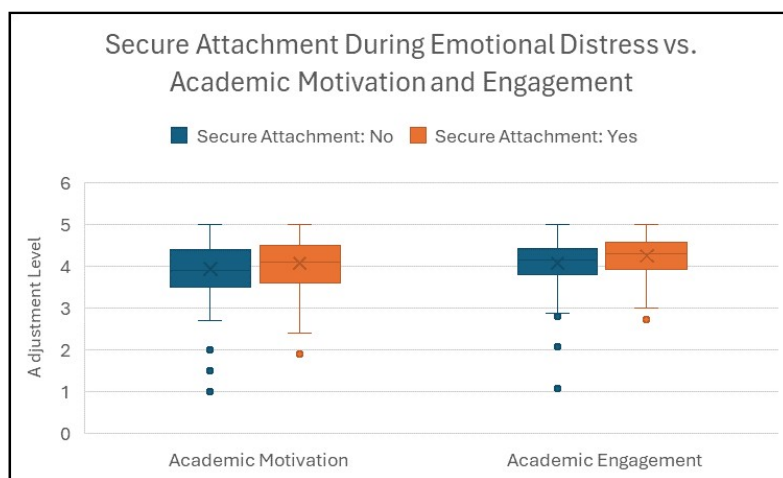


Figure 1. Box plot representing secure attachment during emotional distress verses academic motivation and engagement.

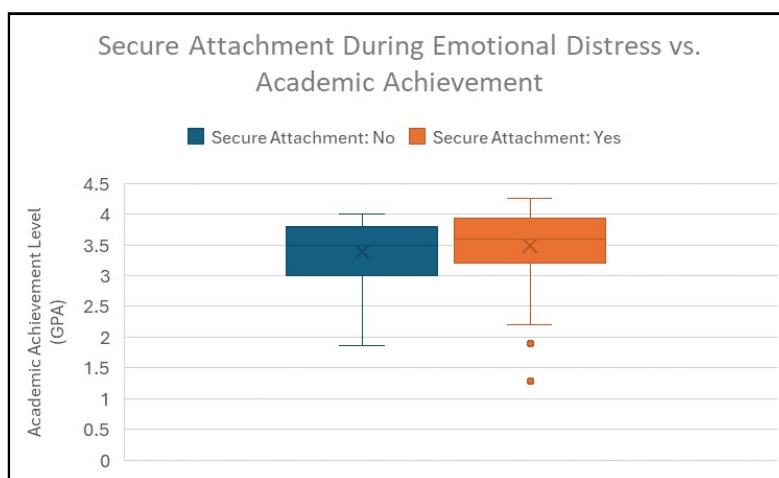


Figure 2. Box plot representing secure attachment during emotional distress verses academic achievement.

5. Limitations

This study included data pertaining to students' GPA, character ratings—obtained through respondents'

ratings on a 1–5 Likert scale across 24 questions—and students’ self-assessments of their perceived attachment during periods of physical and emotional distress. All moderating variables—GPA, character, and attachment—related to academic adjustment were self-reported, which presents a limitation of the study. Self-reported data inherently carries the risk of unknown biases that cannot be fully accounted for. Furthermore, the survey was conducted during the Spring 2025 semester and included responses from 364 participants. The majority of respondents identified as female (71%) and White/Caucasian (70%), which does not reflect the demographic makeup of the university where the survey was administered. According to the most recent available enrollment data from Fall 2023, the undergraduate population at the institution was 58% White and 59.2% female. Thus, the sample used in this study does not fully represent the broader student body.

6. Conclusion

With the significant results shown that college students who have a secure attachment during emotional distress have higher adjustment levels, institutions of higher learning have a responsibility to support students that may have a non-secure base. Furthermore, organizations and departments responsible for K-12 education, particularly grades 7-9, should put systems in place to support students during these formative years. Li and Wu (2025) most recently investigated how insecure attachment is associated with psychological distress during these formative years, with the mediating role of loneliness, and brought to light the critical window for intervention. Circle of Security (COS) is a structured, relationship-based intervention that helps parents understand children’s attachment needs and their own emotional responses. Cassidy et al. (2011) and Hoffman et al. (2006) both examined the effectiveness of attachment-based COS interventions and showed increased secure attachment rates and better outcomes in high-risk dyads, including mothers with postpartum through intervention.

Ultimately, this study shows that the bonds formed in childhood and adolescence continue to influence how students navigate the academic, motivation, and engagement challenges of higher education. Secure attachment during emotional distress, in particular, was a meaningful predictor of greater academic adjustment, indicating that early supportive experiences with a caregiver carry lasting effects into adulthood. As colleges and universities strive to improve student retention and long-term success, acknowledging the role of attachment and implementing supportive, relationship-centered practices may provide students with the secure base they need to thrive. By bridging early developmental experiences with higher education practices, institutions can play a transformative role in helping students not only succeed academically but also grow into capable, confident contributors to society.

7. Future Directions

This study took a snapshot of a variety of students at different levels of their college career, recall that 24% were freshmen ($n = 87$), 18% sophomores ($n = 67$), 22% juniors ($n = 80$), and 36% seniors ($n = 130$). Van Rooij, Jansen, and Van de Grift (2017) had previously researched and concluded, drop-out rates were higher in first-year university students around the world thus, looking into dropout rates with regards to a secure or non-secure attachment would be an interesting study. Furthermore, following students throughout their college tenure while studying the question: do students who have a secure attachment have higher adjustment levels than those who do not, would be a worthwhile endeavor. Also, looking at first generation college students, that is students where neither parent has a 4-year college degree, and seeing how a secure base impacts their adjustment levels would be a beneficial study.

Knowing our results, that students who have a secure attachment during emotional distress have higher adjustment levels, it is imperative that higher education institutions develop appropriate pedagogical principals to reflect current research, including these results. How could colleges better equip general study courses and educators to effectively teach students that may not have a secure base? For math, history, science, and general arts, introductory courses that all college students must take for their general education requirements, is it possible that for institutions to properly support their students they must move away from the historical lecture style methodology and embrace teaching practices that reflect a more empathetic and wholistic method.

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Appendix A

Success in Higher Ed vs. Secure Attachment Survey

Success in Higher Ed vs. Secure Attachment Survey

This study aims to investigate the correlation between childhood or adolescent secure attachment and academic success in higher education among college students. You are being asked to participate in this because you are currently enrolled at The University of Arkansas - Fort Smith. Your responses are entirely voluntary, and you may refuse to complete any part or all of this survey. This survey should take approximately 5 minutes to complete.

* Required

Demographics

1. I verify that I am 18 or older. *

- ☐ I am 18 or older
- ☐ I am a minor (younger than 18) and cannot complete this survey.

2. What is your gender? *

- ☐ Female
- ☐ Male
- ☐ Other

3. How old are you? *

4. What is your ethnic background? *

- ☐ White/Caucasian
- ☐ Asian
- ☐ Native Hawaiian or Pacific Islander
- ☐ Hispanic/Latino
- ☐ African-American
- ☐ Native American
- ☐ Two or More
- ☐ Other

5. What is your highest level of education? *

- ☐ Less than High School
- ☐ High School Diploma
- ☐ General Education Development (GED)
- ☐ Technical Certification
- ☐ Other

6. What was your high school GPA (if you don't remember just type "I don't remember") *

7. What is your employment status? *

- ☐ Full-time (35 hours or more per week)
- ☐ Part-time (less than 34 hours per week)
- ☐ Student
- ☐ Contract or temporary
- ☐ Retired

8. What is your current household income? *

The value must be a number

9. Are you a first generation student? A first generation college student is someone whose parents did not complete a four-year college degree. *

- ☐ I am a first generation student
- ☐ I am NOT a first generation student

10. What is your major? *

11. What is your current GPA? *

12. What year are you in college? *

- ☐ Freshman
- ☐ Sophomore
- ☐ Junior
- ☐ Senior

13. How many years have you been enrolled in college? *

The value must be a number

Secure Attachment

Please answer each question to the best of your ability.

14. Who would you consider to be a loving, supportive caregiver in their life?

15. During my childhood and/or adolescence (approximately ages 8-12) when I was physically hurt I had at least one trusted caregiver in my life who I could go to for help.

- ☐ Yes, I had at least one consistent adult that I could depend on.
- ☐ Sometimes I could expect comfort but not consistently.
- ☐ No, no one showed up for me. I would typically tend to myself.
- ☐ I didn't want anyone's help or often rejected help from an adult.
- ☐ Other

16. During my childhood and/or adolescence (approximately ages 8-12) when my feelings were hurt I had at least one caregiver in my life that I could go to to talk about my feelings.

- ☐ Yes, I had at least one consistent adult that I could depend on.
- ☐ Sometimes I could expect comfort but not consistently.
- ☐ No, no one showed up for me. I would typically tend to myself.
- ☐ I didn't want anyone's help or often rejected help from an adult.
- ☐ Other

17. During my childhood and/or adolescence (approximately ages 8-12), I had at least one trusted caregiver in my life that had my best interest at heart.

- ☐ Yes, I had at least one consistent adult that I could depend on.
- ☐ Sometimes I could expect comfort but not consistently.
- ☐ No, no one showed up for me. I would typically tend to myself.
- ☐ I didn't want anyone's help or often rejected help from an adult.
- ☐ Other

18. If you had one trusted caregiver in your life, share an experience you had where you felt that the relationship was secure and trustworthy.

19. If you did not have at least one trusted caregiver, do you have any experiences where the relationship did not feel dependable?

20. During my childhood and/or adolescence, I had at least one trusted adult in my life attend at least one year of college. (This is anybody that positively impacted your life - not necessarily the person from #14-19)

- ☐ Yes, I had one trusted adult in my life attend at least one year of college.
- ☐ Yes, I had 2-4 trusted adults in my life attend at least one year of college
- ☐ Yes, I had 5 or more trusted adults in my life attend at least one year of college
- ☐ No, I did not have one trusted adult in my life attend at least one year of college

21. During my childhood and/or adolescence, I had at least one trusted adult in my life encourage me to attend college. (This is anybody that positively impacted your life - not necessarily the person from #14-19)

- ☐ Yes, I had one trusted adult in my life encourage me to attend college.
- ☐ Yes, I had 2-4 trusted adults in my life encourage me to attend college.
- ☐ Yes, I had 5 or more trusted adults in my life encourage me to attend college.
- ☐ No, I did not have one trusted adult in my life encourage me to attend college.

22. During my childhood and/or adolescence, I had at least one trusted adult in my life emphasize the importance of earning a college degree. (This is anybody that positively impacted your life - not necessarily the person from #14-19)

- ☐ Yes, I had one trusted adult in my life emphasize the importance of earning a college degree.
- ☐ Yes, I had 2-4 trusted adults in my life emphasize the importance of earning a college degree.
- ☐ Yes, I had 5 or more trusted adults in my life emphasize the importance of earning a college degree.
- ☐ No, I did not have one trusted adult in my life emphasize the importance of earning a college degree.

23. During my childhood and/or adolescence, I had at least one trusted adult in my life emphasize the importance of hard work in my academics.. (This is anybody that positively impacted your life - not necessarily the person from #14-19)

- ☐ Yes, I had one trusted adult in my life emphasize the importance of hard work in my academics.
- ☐ Yes, I had 2-4 trusted adults in my life emphasize the importance of hard work in my academics.
- ☐ Yes, I had 5 or more trusted adults in my life emphasize the importance of hard work in my academics.
- ☐ No, I did not have one trusted adult in my life emphasize the importance of hard work in my academics.

24. During my childhood and/or adolescence, I had at least one trusted adult in my life emphasize the importance of hard work in daily tasks **outside** of academics.(This is anybody that positively impacted your life - not necessarily the person from #14-19)

- ☐ Yes, I had one trusted adult in my life emphasize the importance of hard work in daily tasks outside of academics.
- ☐ Yes, I had 2-4 trusted adults in my life emphasize the importance of hard work in daily tasks outside of academics.
- ☐ Yes, I had 5 or more trusted adults in my life emphasize the importance of hard work in daily tasks outside of academics.
- ☐ No, I did not have one trusted adult in my life emphasize the importance of hard work in daily tasks outside of academics.

25. If you had a trusted adult, what is one way they encouraged you to achieve and have success in life?

Characteristics

Rate the following characteristics on a scale from 1 (strongly disagree) to 5 (strongly agree) on how accurately it describes yourself

26. I actively participate in activities, school, and work

1	2	3	4	5
---	---	---	---	---

27. I show enthusiasm towards my learning process

1	2	3	4	5
---	---	---	---	---

28. I invigorate (gives strength or energy to) others

1	2	3	4	5
---	---	---	---	---

29. I finish whatever I begin

1	2	3	4	5
---	---	---	---	---

30. I try very hard, even after experiencing failure

1	2	3	4	5
---	---	---	---	---

31. I work independently with focus

1	2	3	4	5
---	---	---	---	---

32. I come to class/work prepared

1	2	3	4	5
---	---	---	---	---

33. I pay attention and resist distractions

1	2	3	4	5
---	---	---	---	---

34. I remember and follow directions

1	2	3	4	5
---	---	---	---	---

35. I get to work right away rather than procrastinating

1	2	3	4	5
---	---	---	---	---

36. I remain calm even when criticized or otherwise provoked

1	2	3	4	5
---	---	---	---	---

37. I allow others to speak without interruption

1	2	3	4	5
---	---	---	---	---

38. I am polite to Instructors, bosses, and peers

1	2	3	4	5
---	---	---	---	---

39. I keep my temper in check

1	2	3	4	5
---	---	---	---	---

40. I get over frustrations and setbacks quickly

1	2	3	4	5
---	---	---	---	---

41. I believe that effort will improve my future

1	2	3	4	5
---	---	---	---	---

42. I recognize and show appreciation for others

1	2	3	4	5
---	---	---	---	---

43. I recognize and show appreciation others' opportunities

1	2	3	4	5
---	---	---	---	---

44. I am able to find solutions during conflicts with others

1	2	3	4	5
---	---	---	---	---

45. I demonstrate respect for others' feelings

1	2	3	4	5
---	---	---	---	---

46. I know when and how to include others

1	2	3	4	5
---	---	---	---	---

47. I am eager to explore new things

1	2	3	4	5
---	---	---	---	---

48. I ask and answer questions to deepen understanding

1	2	3	4	5
---	---	---	---	---

49. I actively listen to others

1	2	3	4	5
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