The Relation Between the Attachments of Female College Students and Their Self-reported Resiliency and Stress Levels in Emerging Adulthood

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ABSTRACT
Past research has identified emerging adulthood as a period of vulnerability and heightened academic and interpersonal stress (Busari, 2011; Dahl, 2004; Seligman & Wuyek, 2007). Research has found that the trust and security of strong attachments provide support and resiliency during times of distress (Bowlby, 1969). The purpose of the present study was to investigate the association between strong attachments, stress, and resilience in emerging adults. The hypothesis was that participants with stronger attachments and higher resilience would report less academic and relational stress. Additionally, classic attachment theorists and developmental psychologists have indicated that attachment shifts from parents and caregivers to peers and romantic partners in emerging adulthood (Bowlby, 1969; Erikson 1950; Hazan & Shaver, 1994). Recent research indicating more familial reliance may suggest emerging adults are making the attachment shift to peers and romantic partners in college but later return the primary attachment function to parents and family members. Our hypothesis aligned with this model of attachment transfer. A survey was distributed to current female college students (N = 174) collecting data on demographics, stress, resiliency, and attachment. Results partially supported the hypothesis of transfer of attachment from family to peers and romantic partners and back to family. When predicting academic and relational stress, strong attachments to college friends and resiliency were found to be significant.

The developmental period of emerging adulthood (18-25) is a time of peak physical resilience and strength, but morbidity and mortality rates increase 200% through this same period of maturation (Dahl, 2004). This paradox of physical health and negative outcomes has led researchers to begin to focus on the unique life stage of emerging adulthood, characterized as a time of exploration and instability. Individuals are transitioning into different academic environments, living situations, and adult roles in society (Arnett, 2000), and as a consequence, are experiencing higher levels of physiological, academic, and relational stress (Dahl, 2004). Within the transition from high school to college alone, college freshman have been found to experience clinical levels of separation anxiety and the inability to cope with heightened academic stress (Seligman & Wuyek, 2007; Misra, McKean, West, & Russo, 2000).

Using the Perceived Stress Scale, researchers Misra, and colleagues (2000) determined that within the college population, underclassmen had higher mean levels of stress than upperclassmen due to change, conflict, and frustration. The challenging transition into college may explain why underclassmen were found to have higher behavioral, emotional, and physiological reactions to stress (Misra et al., 2000).

Not only faced with academic stress,
emerging adults in transitional phases often experience significant interpersonal stress. Seligman and Wuyek (2007) explored the separation anxiety symptoms experienced by first-semester college students. These students were living on campus and experiencing significant time apart from their homes and loved ones, many for the first time. Using the Adult Separation Anxiety Checklist, researchers found that 21% of participants could be expected to meet the diagnostic criteria for Separation Anxiety Disorder. These studies suggest that the transitions of emerging adulthood, such as high school to college, may exacerbate stress due to the change in relationships and academic expectations.

The stress of this developmental period is a strong correlate of mental health as found in a study of 1,257 young adults where stress was the strongest predictor of mental health (Bovier, Chamot, & Perneger, 2004). Social support was found to be an intervening variable in the relation between internal resources and stress, suggesting social support exerts its influence by strengthening internal resources (Bovier, et al., 2004).

The increase in stress during emerging adulthood makes internal resources such as resiliency critically important. Resiliency serves an adaptive function as a protective factor for adjustment (Masten, et al., 2004). In periods of constant instability such as emerging adulthood, the need increases for the ability to “bounce back” and “recover from stress” (Smith, et al., 2008). Masten and colleagues (2004) found that resiliency endures the transition of emerging adulthood and continues through young adulthood. Resiliency was associated with early life experiences, such as quality parenting, and with adaptive resources in emerging adulthood, such as the presence of a supportive adult.

**Attachment**

Erik Erikson (1950) first identified trust as a basis for independent exploration in children. Infants that perceive their caregiver as attentive and accessible feel secure to explore their environment. The relationship with the primary caregiver in infancy serves as an internal working model for attachments across the lifespan (Bowlby, 1969). Attachment is a function of relationships throughout life. Researchers found that the attachment behavioral system that motivated infants to remain close to caregivers is also present in adult relationships (Bowlby 1980; Hazan & Shaver, 1987, 1994). Attachment is characterized by three defining features: proximity maintenance, safe haven, and secure base (Bowlby, 1969). In order of depth, proximity maintenance is the desire to remain physically close to an attachment figure, safe haven is the attachment figure providing comfort in times of distress, and secure base is the attachment figure serving as an emotional stronghold, or anchor, from which the individual feels confident exploring the world (Bowlby, 1969).

Emerging adults, like children, seek proximity to and comfort from a known and trusted person in times heightened stress (Bowlby, 1969; Fraley & Davis, 1997). Adjustment difficulties from transitions such as moving from home, beginning college, or joining the workforce may lead emerging adults to experience greater needs for protection and security provided through attachments (Bowlby, 1969). The increased relational and academic stress of emerging adulthood (Dahl, 2004) may suggest that attachment functions may be more intensely needed than in other life stages (Bowlby, 1969).

**Attachment in Emerging Adulthood**

The emotional bond of attachment is a function of relationships throughout life, shifting from caregivers to peers and romantic partners (Bowlby, 1980; Hazan & Shaver, 1987, 1994). While attachment to parents is important throughout the lifespan, Bowlby (1980) found this relationship to be modified with age. The figure to whom attachment behavior is directed changes in adolescence and adulthood, typically shifting from parents to romantic partners and peers (Bowlby, 1969). Researchers have found that this attachment transfer is sequential by function. Proximity
seeking function transfers in early childhood, safe haven function transfers in adolescence and early adulthood, and secure base function transfers in adulthood (Hazan & Zeifman, 1994; Fraley & Davis, 1997). Fraley and Davis found that while young adults are predominately attached to parents (secure base), attachment related components (proximity maintenance, safe haven) are emerging in peers. Emerging adults are experiencing the transfer of their attachment stronghold as they navigate a stressful and unstable developmental period, creating another transition and potential for disruption.

While classic attachment theorists such as Bowlby (1980) and Hazan and Shaver (1994) identify this attachment shift from parents to peers and romantic partners as linear, emerging research suggests the transfer of attachment from parents to peers and romantic partners then back to parents throughout emerging adulthood. In emerging and young adulthood, peers and romantic partners begin to serve as primary attachment figures. However, parents continue to fulfill attachment needs, attesting to the continued dependence on the parent-child relationship (Doeherty & Feeney, 2004). Emerging adults and parents of emerging adults report financial and residential dependency as well as frequent, positive communication (Arnett & Schwab, 2013). Citing Goldschneider and Davano’s (2000) term “semi-autonomy,” Arnett describes emerging adults as having incomplete independence, responsibility, and freedom. With this continued dependence and need for support, the emotional bond between parent and child may be strengthened after the typical shift to peers and romantic partners, therefore returning the primary attachment function to parents and family.

Hypotheses

The literature has indicated that emerging adulthood is an exceptionally stressful time (Dahl, 2004), and resiliency is a protective factor in a period of vulnerability and transition (Masten et al., 2004). Past research has found that the trust and security of strong attachments provide support and resiliency during times of distress (Bowlby, 1969). The purpose of the present study was to investigate the association between strong relationships with hometown friends, college friends, family members, and romantic partners, stress, and resiliency. The hypothesis is that participants with stronger attachments and higher resiliency would report less academic and relational stress.

Recent research has suggested emerging adults remain dependent on their families in times of stress and for financial and residential support. This continued reliance, along with positive and frequent communication, may suggest that parents provide emotional support in emerging adulthood as well. This research supports a model of attachment transfer where emerging adults are making the attachment shift from parents and families to peers and romantic partners but later returning the primary attachment function to parents and families. We aim to examine the trends of attachment figures including two hometown friends, two college friends, two family members, and a romantic partner (if applicable) across the four years of college. Our hypothesis aligns with the model of attachment transfer from parents, to peers and romantic partners, and back to parents in emerging adulthood. We also expect attachment functions (proximity maintenance, safe haven, and secure base) to move sequentially as the attachment shift from parent to peer back to parent progresses.

Method

Participants

Participants (N = 174) included females ages 18-25 attending a women’s college in the Southeast United States. Participants were recruited through Blackboard pages and undergraduate courses in various disciplines. Extra credit was offered in the courses at the discretion of the professors. Participants who
did not meet the age restrictions were allowed to participate and receive extra credit, but their responses were not included in the analyses. Participation was voluntary and confidential, and participants were treated in accordance with the “Ethical Principles of Psychologists and Code of Conduct” (American Psychological Association, 2013). The participants were not otherwise compensated.

**Materials**

In April 2016, a survey was distributed including a demographic questionnaire, attachment scales, the Brief Resiliency Scale (Smith et al., 2008), and the Brief Relational and Academic Stress Scale. The demographic portion of the survey asked participants to identify age, class affiliation, major, minor, licensure, grade point average, size of hometown, distance from home, and program involvement. The attachment scales were adapted from Fraley and Davis (1997) and used previously in the Meredith Emerging Adulthood Longitudinal Studies (Pantlin & Woolard, 2014). Participants were asked to think of an attachment figure (two hometown friends, two college friends, two family members, and a romantic partner, if applicable) and rate six statements using a 7-point Likert scale (1 = Not at all, 7 = Definitely). Scale items assessed the attachment strength across all three functions of attachment (proximity maintenance, safe haven, secure base). The Brief Resiliency Scale consisted of eight items measuring resiliency as the ability to “bounce back” and “recover” from stress using a 7-point Likert scale (1 = Strongly disagree, 5 = Strongly Agree) (Smith et al., 2008). Participants needed an electronic device and Internet access to complete the survey.

**Brief Relational and Academic Stress Scale.** Pantlin and Woolard (2014) adapted two stress scales to measure both academic and relational stress in emerging adults (see also Busari 2011; Seligman & Wuyek, 2007). The original adaptation of the measure was 41 items, and the current study utilized a condensed 11 item version of Pantlin and Woolard’s scale. The scale was developed by evaluating reliability indices by computing Cronbach’s Alpha on Pantlin’s original sample (N = 11; α = .745). There was a strong correlation between the scales (r = .85; p<.01).

**Procedure**

Participants gave informed consent and indicated they were at least 18 years of age by continuing past the first page of the electronic survey. An overview of the confidentiality procedure was provided indicating that names would be replaced with numbers for the duration of the study. The attachment scale was completed for seven attachment figures: two family members, two hometown friends, two Meredith College friends, and a romantic partner if applicable. The attachment scale measured the three functions of attachment (proximity maintenance, safe haven, secure base) and was combined for a total attachment score. The attachment scores were combined for each type of attachment figure except romantic partners, as there was only one romantic partner reported. Where these scores are compared, Z-scores are used in the analyses. After completing the survey, participants were provided contact information for the researchers and information for the on-campus counseling center.

**Results**

A stepwise regression with backward elimination was chosen to predict stress based on resiliency and attachments. This method of analysis was used to investigate whether the set of variables have significant predictive capability even though a subset of them may not. By testing the impact of the deletion rather than the insertion into the model, variables that don’t predict well individually will have joint predictive capability noticed. For the purpose of this study, this method allowed us to investigate the strength of attachments and resiliency together as overlapping and inextricably linked concepts of internal and external resources.

An ANOVA was conducted to compare total attachment to each type of figure.
Attachment, Stress, and Resiliency. Stress and resiliency were found to be significantly correlated \( r(174) = -.46, p < .01 \). Resiliency did not significantly correlate with any specific attachment. Stress only correlated significantly with attachment to college friends \( r(174) = -.23, p < .01 \).

A stepwise regression with pairwise exclusion of missing cases and backward elimination was performed to predict stress based on resiliency and the strength of attachment to college friends, hometown friends, family members, and romantic partners. Table 1 shows the results of regression analysis with four significant models. The first model includes all variables (hometown friends, college friends, family, romantic partners, resiliency). A significant regression equation was found \( F(5, 99) = 7.109, p < .01 \), with an \( R^2 \) of .264. The second model eliminated attachment to family and remained significant (hometown friends, college friends, romantic partners, resiliency) \( F(4, 100) = 8.961, p < .01 \), with an \( R^2 \) of .264. The third model (hometown friends, college friends, resiliency) had a significant regression equation after eliminating romantic partners \( F(3, 101) = 12.041, p < .01 \), with an \( R^2 \) of .263.

The fourth model included college friends and resiliency with a significant regression equation \( F(2, 102) = 18.093, p < .01 \), with an \( R^2 \) of .262. This model eliminated the other attachments with beta values of -.041 (hometown friends), -.033 (family members), and -.032 (romantic partners). Participants’ predicted stress was equal to 84.517, with beta weights of -.616 (resiliency) and -.173 (college friend).

A linear regression was conducted to predict stress based only on attachments to assess the role of resilience as a mediating variable. A significant regression equation was found \( F(2, 102) = 3.526, p < .05 \), with an \( R^2 \) of .254 suggesting that resiliency may exert influence independent of attachment strength.

Attachment Trends. A one-way ANOVA was conducted to compare total overall attachment of each figure (hometown friend, college friend, family, and romantic partner) between class years. A significant difference was found in hometown friends across class year \( F(1, 86) = 4.499, p < .05 \); see Figure 1). When attachment functions (proximity seeking, safe haven, secure base) were examined between freshman and senior year, only changes in hometown friendships were significant. The change in safe haven function for hometown friends was found to be significant \( F(1, 86) = 4.755, p < .05 \) and the change in secure base was approaching significance \( F(1, 86) = 3.703, p < .058 \); See Table 2).

Discussion

Attachment, Stress, and Resiliency

The hypothesis of the present study was that participants with stronger attachments and higher resiliency would report less academic and relational stress. Regression analysis was used to investigate the relation between attachments, stress, and resiliency. Results indicated that higher resiliency and stronger attachment to college friends were significant predictors of lower stress. College friends appear to serve as immediate support and directly buffer stress better than other attachment figures.

Attachments were still a significant predictor of stress after controlling for resiliency indicating that the relationships of hometown friends, college friends, family, and romantic partners may exert protective influence on stress independent of resiliency. This does not support previous findings that suggest resiliency is a generative mechanism through which social support influences stress (Masten et al., 2004; Bovier, Chamot, & Pernerger, 2004). Similar to previous studies, the present study recognizes the predictive capability of strong attachments and resiliency, but findings suggest that...
the external resource of social support and the internal resource of resiliency may act independently. Classic theories of attachment are supported, indicating that attachment serves as a buffer to distress and allows securely attached individuals to face difficulties with less disruption (Bowlby, 1969).

**Attachment Trends**

We expected attachment functions (proximity maintenance, safe haven, and secure base) to move sequentially as the attachment shift from parent to peer back to parent progresses. Among the functions of attachment, safe haven changed significantly from freshman to senior year and secure base was approaching significance. In transition years, college friends and family remain relatively stable. Although the interaction between all class years and attachments was not significant, trends indicate that hometown friends are the primary attachment figure across all four years of college (See Figure 1). Differences in attachment across class years may not have been significant due to small sample size, as the original sample size was divided by class. The hypothesized attachment transfer from parents to peers and romantic partners back to parents was seen in the secondary attachment figure throughout college (Arnett & Schwab, 2013; Fraley & Davis, 1997; see Figure 1). Family members were the secondary attachment figure freshman, junior and senior year. College friends were the secondary attachment figure sophomore year. Romantic partners were not included in the observation of trends, as the other attachment scores were a sum of two figures. Overall, attachment drops among all figures in senior year, but particularly hometown friends (see Figure 1). This could be a reflection of the imminent changes of graduation and another transitional period of emerging adulthood. Future studies will continue to investigate the strength of attachment to different figures across the four years of college. The trends supported the hypothesis of attachment shift from family to peers back to family.

**Limitations**

The institution from which the sample was derived has an all-female and largely in-state student body. The geographical distance from home may have influenced the hometown and family relationships, as some of the typical separation felt during college would be lessened by local accessibility (Seligman & Wuyeck, 2007). Additionally, attachment transfer tends to be a function of relationship length and only longer lasting friendships are likely to be attachment bonds (Fraley & Davis, 1997). This may explain hometown friends trending as the primary attachment figure across all four years of college. An expanded sample and longitudinal studies will be needed to clarify the nature of these trends.

**Conclusion**

Stress is significantly predicted by resiliency and attachment to college friends. Attachment to hometown friends changes significantly in transition years, and all attachment drops in senior year of college. The transitional and unstable nature of emerging adulthood is reflected in the difficulty of identifying consistent trends. The clearest finding of the current study is the importance of proximate social support structures in mediating stress during a challenging developmental life stage. The stress buffering function of college friends is most salient in early transition years in college, indicating the importance of peers who understand the immediate demands of academic and college related social stress. Whereas family and hometown friends may provide longer-term attachment functions relevant to the concerns about an uncertain future common among college seniors.
Figure 1: Mean attachment score for each figure (hometown friends, college friends, family) for each class year. Standard errors are represented in the figure by the error bars attached to each column.

Table 1: Summary of Multiple Linear Regression Analysis with Backward Elimination for Variables Predicting Stress

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1**</th>
<th>Model 2**</th>
<th>Model 3**</th>
<th>Model 4**</th>
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<td>$SE\beta$</td>
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<td>$SE\beta$</td>
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Note: Pairwise elimination was performed for missing data
*p < .05.  **p < .01
Table 2: Attachment Function by Class Year

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