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Parental Attachment, Cognitive Working Models, and Depression Among African American College Students

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In an attempt to understand the cognitive mechanisms by which parental attachments predict depression among African American college students, the authors examined a mediational path model containing parental attachment, cognitive working models, and depression. The model demonstrated a close fit to the data, and several significant paths emerged. The authors provide recommendations for counselors practicing in college counseling centers and suggest directions for future research.

Keywords: attachment, working models, depression, African Americans, college students

Counselors strive to promote emotional well-being by equipping clients with the tools necessary to mitigate daily life stressors (Gelso & Fretz, 1992). To do this, counselors must have an understanding of factors that buffer emotional distress (e.g., depression) to develop interventions that will foster emotional well-being. Attachment theory is a commonly used theoretical framework that researchers and clinicians have used to explain emotional well-being among clients. According to attachment theory, parental attachment relationships are enduring, affective bonds between individuals and their primary caregiver formed during childhood (Bowlby, 1969, 1988; Bretherton, 1992). Parental attachments have been important to counselors for years because of their known associations with psychological well-being, emotional well-being, interpersonal relationships, and social adjustment (Ferry, Tobin, & Beesley, 2004; Lapsley & Edgerton, 2002; Love, 2008; McCarthy, Moller, & Fouladi, 2001; Moller, Fouladi, McCarthy, & Hatch, 2003).

The College Experience

College students are susceptible to depression because of the many developmental challenges they encounter (Berk, 2006; D'Augelli & Hershberger, 1993; Kalsner & Pistole, 2003). In addition to the pressure to succeed academically, individuals' college years represent a period of transition during which late adolescents grow into independent, functioning people. Students encounter a new situation in which they must leave their primary source of social support, develop new attachments, and adjust to their newfound independence, all while completing

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their academic requirements. This process may be particularly difficult for African American students, especially those attending predominantly White institutions, because they tend to experience added difficulties that their Caucasian peers do not encounter. Some of these difficulties may include discrimination, alienation, and cultural discontinuity, all of which may make African American students more susceptible to depression than is true for their Caucasian peers (Allen, 1985; Kalsner & Pistole, 2003). However, parental attachments may serve as a valuable buffer against students' depression; therefore, understanding how they influence emotional outcomes is important.

Attachment Relationships, Cognitive Working Models, and Depression

Attachment relationships are theorized to influence depression through the development of internalized, cognitive working models that children develop of themselves and others in response to behavioral interactions that they experience with their primary caregiver, namely, the caregiver's physical accessibility and responsiveness as well as the caregiver's emotional responsiveness (Bowlby, 1969). Individuals who experience their caregivers as emotionally warm, consistently responsive, and encouraging of autonomy develop a positive working model of the self because they view themselves as worthy of love; likewise, they develop a positive working model of others because they view others as trustworthy and reliable. The combination of these two behavioral patterns is indicative of attachment security. Conversely, individuals whose primary caregivers are emotionally cold or distant, are physically unresponsive, and encourage overdependence develop a negative view of themselves because they think that they are not worthy of love, and they develop a negative view of others, who they deem as untrustworthy and unreliable. This behavioral pattern is considered attachment insecurity.

Throughout life, securely attached individuals tend to be self-reliant, possess high self-esteem, and have an emotional resilience that allows them to adapt and function effectively during times of stress, such as in college (Bowlby, 1977). African American college students from securely attached families are less likely to experience depression because they have a relatively easier time adjusting emotionally, socially, and academically than their insecurely attached peers (Kenny & Sirin, 2006; Love, 2008). By contrast, students lacking attachment security from home are more susceptible to depression because they lack the self-esteem, emotional resilience, and trust in others that allow them to effectively manage the stressors and adjustment issues associated with the college experience (Hysenbegasi, Hass, & Rowland, 2005; Kalsner & Pistole, 2003; Pritchard & Wilson, 2003). Thus, African American students are more likely to drop out and return home, because home is a place where they can function effectively, even though it may not necessarily be a healthy environment.

Theoretically, cognitive working models should mediate the relationship between attachment relationships and depression. In other words, parental

attachments should influence long-term development because of their influence on individuals' cognitive working models. A finite number of studies have demonstrated support for this assertion (Kenny, Moilanen, Lomax, & Brabeck, 1993; Kenny & Sirin, 2006; Van Buren & Cooley, 2002). Kenny et al. (1993) found a positive link between parental attachments, view of the self (self-esteem), and depressive symptoms among adolescents, noting that view of the self mediated the relationship between parental attachment and depression. Van Buren and Cooley (2002) found that undergraduate college students with insecure attachments were significantly more likely to suffer from low self-esteem (negative view of the self), show hostility toward others, and exhibit more depressive symptoms than their securely attached peers, with self-esteem mediating the relationship between parental attachment and depressive symptoms. Finally, among college students, Kenny and Sirin (2006) found that self-esteem mediated the relationship between parental attachment and depression.

Parental Attachment and Emotional Outcomes for African Americans

Numerous empirical studies have documented the predictive ability of attachment relationships as they relate to various outcomes such as self-esteem, anxiety, depression, life satisfaction, and social adjustment (Arbona & Power, 2003; Engels, Finkenauer, Meeus, & Dekovic, 2001; Kenny & Sirin, 2006; Laible, 2007; Love, 2008). Attachment security is generally associated with low levels of depression and anxiety and high levels of self-esteem, social adjustment, and life satisfaction (Lapsley, Rice, & FitzGerald, 1990; Lopez, Mitchell, & Gormley, 2002; Love, 2008). Grounded in an evolutionary behavioral system, attachment relationships are presumed to transcend race, ethnicity, and culture (Ainsworth, 1989; Bowlby, 1969) and have demonstrated predictive validity in some racial/ethnic minority samples (Arbona & Power, 2003; Love, 2008); however, there is limited support for this assertion among African Americans. Kenny and Perez (1996) found that parental attachment predicted depression, anxiety, and interpersonal sensitivity among a sample of college students in which 40% were African American. Similarly, Hinderlie, Heard, and Kenny (2002) found that attachment security inversely accounted for 8% of the variance in emotional distress among African American college students. Among a sample of racially and ethnically diverse college students, over 22% of whom were African American, Kalsner and Pistole (2003) found that men whose parents were emotionally supportive and encouraged autonomy exhibited lower levels of emotional distress, whereas women who were less dependent on the family exhibited less emotional distress.

The predictive capabilities of attachment relationships are well established in the literature. However, there is much less empirical evidence that validates the cognitive and affective underpinnings of attachment relationships that presumably contribute to the attachment–adjustment relationship; even fewer

studies have attempted to validate these mechanisms among African Americans. To address this limitation in the literature, we tested a model of attachment theory in a sample of African American college students by examining the extent to which cognitive working models of the self and others mediated the relationship between parental attachment and depression.

As previously indicated, among college student populations, two limitations exist in the attachment literature. First, an examination of the mechanisms by which both cognitive working models of the self and others mediate the relationship between parental attachment and depression is lacking from the literature. Second, an examination of these mechanisms as they specifically relate to African Americans is nearly nonexistent. In order for counselors to use parental attachment as a tool to buffer against depression, an understanding of the cognitive mechanisms by which this occurs is necessary.

In the present study, we tested a mediated path model in which cognitive working models of the self (self-esteem) and others (trustworthiness) mediated the relationship between parental attachment (affective quality and support) and depression in a sample of 167 African American college students (see Figure 1). We hypothesized that the proposed mediation model would demonstrate a close fit to the data, indicating that cognitive working models of the self and others mediated the relationship between parental attachment and depression.

Method

Participants

Participants were 167 African American college students recruited from three predominantly White colleges and universities in a medium-sized city in the Midwest. Students averaged 20.5 years of age (SD = 2.39, age range = 18–30 years), and slightly more than half (56%, n = 94) were women. Sixty-eight percent (n = 113) of participants were either freshmen or sophomores.

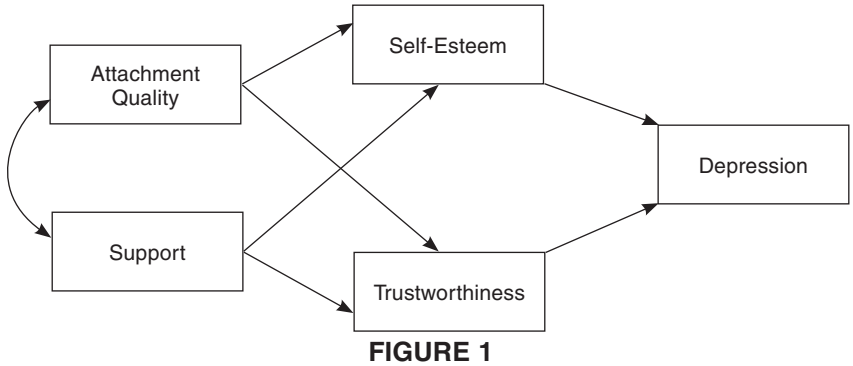


FIGURE 1

Hypothesized Mediation Model

Seventy-six percent (n = 127) of participants indicated that their annual income was between $0 and $10,000, with the remaining percentage of participants reporting incomes between $10,000 and $30,000. A majority of participants reported that their parental figures' annual income was $30,000–$45,000 (27%, n = 46) or $60,000–$75,000 (26%, n = 44).

Most participants (70%, n = 117) reported that they grew up in a two-parent household with both biological parents; 18% (n = 30) were from a single-parent home, and 9% (n = 15) were from stepfamilies. The remaining 3% (n = 5) reported that they either grew up in a two-parent home with someone other than their biological parents (e.g., grandparents) or lived in some other type of arrangement. A majority of participants (82%, n = 138) identified their biological or adoptive mother as their primary maternal attachment figure, with grandmothers (6%, n = 11) and others (2%, n = 4) making up the remaining percentage. Likewise, a majority of participants (59%, n = 98) identified their biological or adoptive father as their primary paternal attachment figure, followed by 5% (n = 9) who chose their stepfather or grandfather; other selections such as brothers and uncles accounted for most of the remaining percentage (4%, n = 6). The percentages do not total 100 because some participants did not identify who they selected as their primary attachment figures.

Measures

We assessed three constructs in the present study: parental attachment, cognitive working models, and depression. Participants completed self-report written surveys to measure the constructs of interest, plus a demographic form that elicited the following information: age, race, class rank, income, parental income, family type, and primary maternal and paternal caregiver.

Parental attachment. Participants completed the 55-item Parental Attachment Questionnaire (PAQ; Kenny, 1987) based on their self-selected primary attachment figure. The PAQ is a self-report questionnaire designed to measure attachment security by assessing three basic areas of the parent–child relationship through retrospective reflections: the affective quality of the relationship, the extent to which parents foster autonomy, and parental support. The Affective Quality subscale measures the extent to which individuals experience warmth and care from their parental figures. The Parental Fostering of Autonomy subscale measures the extent to which parental figures provide protection yet encourage autonomy. The Support subscale measures the extent to which parental figures provide emotional and physical support and guidance. However, consistent with previous studies (Hinderlie et al., 2002; Kenny & Sirin, 2006), we combined the Affective Quality subscale and Parental Fostering of Autonomy subscale to yield a single score, referred to as Attachment Quality, based on the high correlation that existed between the subscales (r = .76, p < .001). A 5-point scale ranging from 1 (*not at all*) to 5 (*very much*) was used to rate items. We scored the subscales by averaging across items. Higher scores represent better attachment quality and parental

support, which is indicative of attachment security. Previous studies have established good construct validity and reliability statistics among college samples (Kenny, 1987, 1990; Lopez & Gover, 1993). The alpha coefficients for scores on the Attachment Quality subscale and Support subscale among participants in the present study were .95 and .79, respectively.

Cognitive working models of the self. Participants completed the eight-item Global subscale of the Self-Esteem Questionnaire (SEQ) to assess cognitive working models of the self (DuBois, Felner, Brand, Phillips, & Lease, 1996). The SEQ measures self-esteem in relation to the primary contexts of peers, school, family, athletics, and body image and provides an overall measure of global self-esteem. For this study, we used the Global subscale, which serves as a general indicator of participants' feelings of self-worth and acceptance. Participants rated items on a 1 (*strongly disagree*) to 4 (*strongly agree*) Likert scale, with higher scores indicating more positive levels of self-esteem. The subscale was scored by averaging across items. DuBois et al. (1996) found adequate reliability and validity for all subscales of the SEQ in the initial validation of the measure. The alpha coefficient for scores on the SEQ Global subscale in the present study was .79.

Cognitive working models of others. Participants completed the 20-item Generalized Trust subscale of the Trust Inventory (Couch, Adams, & Jones, 1996) to assess cognitive working models of others. The Generalized Trust subscale measures individuals' beliefs about trustworthiness in others and their beliefs about the goodness of humankind. Participants responded to items using a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). We scored the subscale by averaging all 20 items. Higher scores represented greater levels of trust and positive perceptions of others. Concurrent validity has been established by correlating the Generalized Trust subscale with other measures of trust. Couch et al. (1996) provided support for the construct validity of the Trust Inventory by demonstrating positive correlations between the Generalized Trust subscale and other measures of social support and liking others. Likewise, previous studies have reported adequate internal consistency and test–retest reliability (Couch et al., 1996; Couch & Jones, 1997). The alpha coefficient for scores among participants in the present study was .83.

Depression. Participants completed the Depression subscale of the Comprehensive Personality and Affect Scales (COPAS), which is a 132-item multiaxial, self-report questionnaire that measures personality and affective traits (Lubin & Whitlock, 2002). The Depression subscale consists of 15 items. Respondents were instructed to rate how often they had felt a given emotion in the past week based on a 5-point scale ranging from 1 (*not at all*) to 5 (*a great deal*). An average of the 15 depression items was calculated to score the subscale; higher scores represented elevated levels of depression. COPAS has demonstrated adequate reliability and validity statistics among samples of ethnically diverse college students throughout the United States (Lubin & Whitlock, 2000, 2002). The alpha coefficient for scores on the Depression subscale was .92 in the present sample.

Procedure

With instructor consent, the principal investigator (first author) and/or trained data collectors recruited participants from a variety of undergraduate courses, including English, psychology, sociology, business, and computer science. The examiners read a standardized solicitation script that explained the purpose of the study, the voluntary nature of study, the benefits and risks associated with the study, eligibility requirements, and incentives for participation. Students who chose to participate in the study completed several surveys at the end of the class period. Students who chose not to participate could leave the classroom. Testing time took approximately 20 minutes. As an incentive to participate, one $20 cash prize was awarded to a student in each classroom through a random drawing.

Results

All variables in the study demonstrated significant bivariate correlations with each other (see Table 1); therefore, the criteria needed to test for mediation according to Baron and Kenny (1986) were met. According to Baron and Kenny, the predictor must be related to both the mediator and the criterion, and the mediator must be related to the criterion. To test the hypothesized model, we used AMOS 16.0 structural equation modeling software (Arbuckle, 2007). Although there are no absolute standards in the literature regarding sample size, it is generally accepted that a 10:1 ratio of participants to parameters is adequate (Kline, 2005). However, Bentler and Chou (1987) reported that models with less than the 10:1 ratio could be analyzed if the data are normally distributed and have no missing or outlying cases; the data in the present study met these criteria; therefore, we proceeded with our analysis. Using maximum likelihood estimation, we evaluated the adequacy of the model-to-data fit by examining the chi-square statistic, comparative fit index (CFI), Tucker–Lewis Index (TLI), and root mean square error of approximation (RMSEA) according to the guidelines recommended by McDonald and Ho (2002). A nonsignificant chi-square statistic ($p > .05$) and RMSEA value less than .05 paired with CFI and TLI values greater than .95 represent close model-to-data fits.

TABLE 1

Descriptive Statistics, Internal Consistency Reliabilities, and Bivariate Correlations Among Study Variables

Variables	*M*	*SD*	α	1	2	3	4	5
1. Attachment quality	3.74	0.66	.93	—	.57*	.37*	.31*	−.27*
2. Parental support	3.38	0.61	.82		—	.23*	.37*	−.20*
3. Self-esteem	3.12	0.55	.80			—	.20*	−.51*
4. Trustworthiness	3.61	0.52	.83				—	−.29*
5. Depression	1.77	0.66	.92					—

*$p < .01$.

We hypothesized that the proposed mediation model would demonstrate a close fit to the data, indicating that self-esteem and trustworthiness mediated the relationship between parental attachments and depression. The model demonstrated a close fit to the data, $\chi^2(3, N = 167) = 1.65$, $p = .649$, CFI = .99, TLI = .98, RMSEA = .00, 90% confidence interval (CI) [.00, .10], providing support for our hypothesis. Parental attachments accounted for 15% of the variance in both self-esteem and trustworthiness. In total, attachment, self-esteem, and trustworthiness accounted for 28% of the variance in depression, indicating that these variables have significant associations (see Figure 2).

Significant path coefficients were evidenced between attachment quality and self-esteem ($\beta = .38$, $p < .001$). Participants who characterized their attachment relationship as high in quality reported high levels of self-esteem. Conversely, the quality of the attachment relationship did not significantly predict participants' perception of trustworthiness in others ($p = .08$). Regarding emotional and physical support, participants who experienced their parental figures as high in support perceived others to be trustworthy ($\beta = .28$, $p = .001$). Support did not significantly predict self-esteem ($\beta = .01$, $p = .916$). Consistent with attachment theory, self-esteem was inversely associated with depression ($\beta = -.47$, $p < .001$). Participants who reported high levels of self-esteem reported low levels of depression. Similarly, participants who perceived others to be trustworthy reported low levels of depression ($\beta = -.19$, $p = .004$).

Given the significant correlations between parental attachment and depression (see Table 1), we considered the possibility that cognitive working models only partially mediated the relationship between parental attachment and depres-

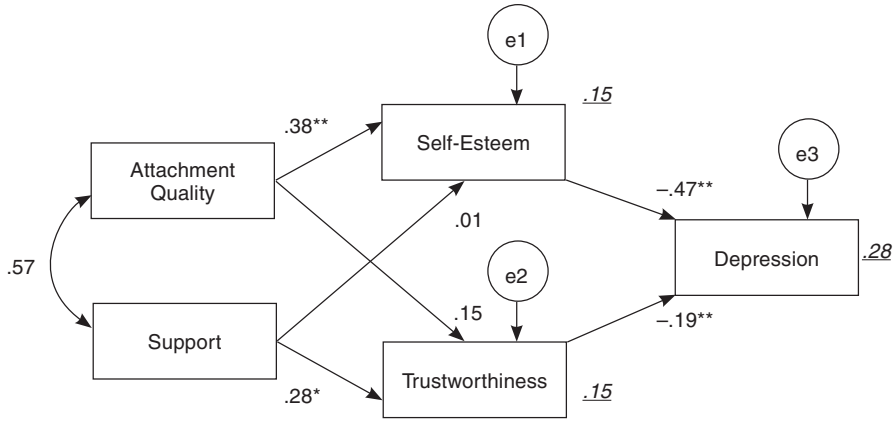


FIGURE 2

Results of the Hypothesized Path Model

Note. All reported regression weights are standardized. The italicized, underlined numbers beside the criterion variables indicate the amount of variance for which the preceding predictor variable(s) accounted. e1 through e3 refer to error terms.
*$p < .01$. **$p < .001$.

sion. As an alternative explanation, we tested the same mediation model but added direct paths from both attachment quality and support to depression to represent partial mediation. In relation to the original model, the model-to-data fit decreased, $\chi^2(1, N = 167) = 1.40$, $p = .238$, CFI = .99, TLI = .98, RMSEA = .05, 90% CI [.00, .21]; furthermore, the paths between attachment quality and depression ($p = .806$) and between support and depression ($p = .797$) were not significant. Therefore, we concluded that our original model depicting full mediation was the most parsimonious explanation of the data.

Discussion

We sought to uncover the mechanisms by which parental attachment predicted depression among a sample of African American college students by examining the fit of a mediation model in which cognitive working models of the self and others mediated the relationship between parental attachment and depression. This study is one of the first to examine cognitive working models of both the self and others as mediators between parental attachment and depression. Parental attachment and cognitive working models accounted for nearly 30% of the variance in depression, which is comparable or higher than that found in similar studies in the literature (Kenny & Perez, 1996; Kenny & Sirin, 2006; Love, 2008). Most important, the findings of this study lend support to the cross-cultural applicability of attachment theory among African Americans, because the proposed mediated model demonstrated a close fit to the data. Therefore, support is provided for the use of parental attachment relationships as a predictor of depression among African American college students.

According to attachment theory, individuals who experience their caregivers as warm, caring, emotionally and physically responsive, and encouraging of autonomy are primed to develop positive views of themselves and others, which is characteristic of a secure attachment. The present study validated this assertion: Participants who perceived the quality of their attachment relationship to be high reported high levels of self-esteem. These individuals tend to hold themselves in high esteem because they believe that they are worthy of love and view others as responsive and trustworthy. To our surprise, parental support did not significantly contribute to self-esteem. In an attempt to understand this outcome, we examined items in the PAQ for a potential answer. We found that most of the items on the Support subscale of the PAQ assessed the caregiver's physical and emotional availability, which inherently taps participants' perceptions of others' reliability and responsiveness rather than their perceptions of themselves. Therefore, the fact that the Support subscale significantly predicted trustworthiness and not self-esteem is conceivable. A different measure of parental attachment may have yielded a different outcome.

The tested model also demonstrated that cognitive working models inversely predicted depression. This finding is consistent with attachment theory, in that individuals who have positive views of themselves and others have an

emotional resilience that serves as a protective mechanism against depression. As a result, individuals who report high levels of self-esteem and view others as trustworthy—likely because they view others as a trustworthy, reliable source of support—should theoretically report lower levels of depression, which is what the present study demonstrated and which is consistent with other studies in the literature (Lopez et al., 2002; Love, 2008).

Implications for Counselors

The findings of this study have implications for practicing counselors. Assessing attachment relationships through objective assessments such as the PAQ or through clinical interviews may provide counselors with insights into clients' current depressive symptoms that originate from attachment insecurities. According to Bretherton (1992, pp. 768–769), a major goal in counseling is the "reappraisal of inadequate, outdated working models of the self in relation to attachment figures" and "the joint task of the therapist and client is to understand the origins of the client's dysfunctional internal working models of the self and attachment figures" and, from here, seek to positively change them. Although it may be difficult to alter young adults' parental attachment relationships, counselors can serve as a secure base from which these clients can explore parental attachment relationships to understand how they affect the clients' self-esteem and views of trustworthiness in others and, subsequently, their current level of depression (Bartholomew & Thompson, 1995; Pistole & Watkins, 1995). Working to minimize or ameliorate negative internalized views of the self, as evidenced by negative self-talk, cognitive distortions, or dysfunctional self-talk, through cognitive behavior interventions such as cognitive restructuring or reframing should help increase clients' self-esteem, thereby decreasing their reports of depressive symptoms (considering self-esteem was inversely associated with depression in the present study).

Likewise, support was shown to positively influence perceptions of trustworthiness in others, and viewing significant others as trustworthy was also inversely related to depression; therefore, simply focusing interventions on perceptions of the self may not be sufficient. Counselors may also be able to minimize depressive symptoms by altering clients' negative views of others by being supportive and trustworthy, or in other words, by serving as a supplemental secure figure on which clients can rely during times of stress. By establishing a supportive, trusting relationship, counselors can model a secure relationship, and they will have the therapeutic alliance necessary to challenge clients' negative perceptions and encourage them to be autonomous in establishing other secure relationships (e.g., with peers) and developing coping strategies to mitigate life stressors that contribute to emotional distress (Van Buren & Cooley, 2002).

Counselors should also be aware that some African American students suffering from depression might not seek counseling because of the socialized stigma associated with seeking counseling services among the African American

community (Brown et al., 2010). Faculty, dorm directors, and administrators who regularly interact with African American students and who may observe signs of depression should be encouraged to contact counseling center staff regarding these students for follow-up, as well as encourage the students to seek counseling services by normalizing the experience and focusing on the benefits. Counselors can also conduct outreach activities targeting African American students to increase the students' awareness and familiarity with the counseling center staff.

Limitations and Directions for Future Research

Because of the descriptive nature of data in this study, causality cannot be assumed. We are only at liberty to assert that parental attachments, cognitive working models, and depression are associated. Furthermore, although the sample size was sufficient to support the analysis conducted, the sample was relatively small; therefore, the results should be considered preliminary. A replication with a larger sample is encouraged to determine if the results hold. It is possible that relationships that did not meet the conventional level of significance ($p < .05$), such as the one between attachment and trustworthiness, will do so with a larger sample. As a next step, future researchers are encouraged to test the fit of the mediated model across different racial groups (e.g., Latino/Latina and Asian American). Checking for invariance across subgroups may provide further support, or contradiction, for the utility of attachment theory as a predictor of depression in numerous racial and ethnic minority groups. Understanding the role of attachment relationships and the mechanisms by which those relationships affect clients' internalized models and depression may aid counselors in the treatment of attachment and emotional concerns across culturally diverse groups.

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