



INTERNAL WORKING MODELS OF PARENTAL RELATIONSHIPS: EXPLORING PREDICTORS OF EMOTIONAL FUNCTIONING DURING EMERGING ADULTHOOD

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Abstract

Parental relationships have consistently been associated with emotional functioning across child and adolescent development. However, fewer studies have explored perceptions of parental relationships during emerging adulthood. Drawing upon attachment theory, the purpose of this study was to examine the associations between internal working models of parental relationships and emotional functioning during early adult development. Undergraduates ($N = 197$) completed questionnaires assessing their perceptions of trust, communication, and alienation in their relationships with their parents as well as self-reported emotional reactivity and rumination. The findings suggest perceptions of alienation in parental relationships may be associated with maladaptive emotional functioning. Participant reports of parental alienation were associated with both emotional reactivity and rumination during emerging adulthood. Further, maternal and paternal alienation interacted such that perceiving high alienation from just one parent was associated with overall higher anger rumination, regardless of the perceived level of alienation from the other parent. The findings from the current study contribute to the growing literature supporting the association between parental relationships and emotional functioning during emerging adulthood. Relationships with parents, particularly a sense of alienation from either mothers or fathers, may predict emotional functioning during emerging adulthood.

Keywords

Perceptions of Parental Relationships, Parental Attachment, Internal Working Models, Emerging Adulthood, Emotional Functioning, Emotion Regulation

Introduction

Parental relationships are important for the development of emotion regulation skills and have been associated with emotional experiences and emotion regulation from infancy to adulthood (Cassidy & Shaver, 2008; Kochanska, 2001; Laible, 2007; Yurkowski et al., 2015). Many studies examining the effects of parental relationships draw upon attachment theory (Bowlby, 1969/1982) and have focused on early periods of youth development. However, parents may provide support during emerging adulthood as individuals navigate emotional challenges and developmental stressors (Beiter et al., 2015; Dyson & Renk, 2006; Trompetter et al., 2017). For example, attachment to parents has been linked to individuals' ability to cope with difficult emotions and stressors during emerging adulthood (Collins & van Dulmen, 2006; Fraley & Davis, 1997; Sugimura et al., 2023; Tambelli et al., 2021; Tanner et al., 2009; Yurkowski et al., 2015). Emerging adulthood refers to individuals between the ages of 18-29 (Arnett, 2000; 2015), and this developmental period can be thought of as a transitional phase between adolescence and adulthood, during which individuals may seek greater independence from parents (Barlett et al., 2020). Although individuation from parental figures is often viewed as a developmental hallmark for emerging

adults in Western cultures (Arnett, 2003; Nice & Joseph, 2023), many emerging adults maintain frequent communication and close relationships with their parents (Schon, 2014). Due to the role parents may play in emerging adults' lives, exploring individuals' relationships with their parents provides an opportunity to better understand the connections between parental relationships and emotional experiences during later developmental periods. Thus, the current study aimed to explore perceptions of parental relationships and emotional functioning among emerging adults.

Parental Attachment

Considerable research examining the association between parent-child relationships and emotions has been informed by attachment theory. Attachment refers to the emotional bond that forms between parents and children as well as the perceptions, or internal working models, of parental relationships that children develop over a history of interactions with their parents (Bowlby, 1969/1982). According to Bowlby, parental attachment relationships play an important role in the development of emotion regulation skills and are important for emotional functioning across the lifespan. Secure attachment relationships, characterized by trust, warmth, and responsiveness are often associated with adaptive emotion regulation. Conversely, insecure attachment relationships that are stressful, unpredictable or distant tend to be predictive of emotion dysregulation. Although research on parental attachment has largely focused on the developmental periods of infancy through adolescence, some studies have examined parental attachment among young adults. During emerging adulthood, secure attachment and warm parental relationships have been associated with both emotion regulation skills and psychosocial adjustment (Aznar & Battams, 2023; Valarezo-Bravo et al., 2024). Past studies found college students with higher perceived parental attachment security reported more adaptive emotional regulation and coping strategies as well as lower levels of perceived distress (Cabral et al., 2012; Kumar & Mattanah, 2016). Conversely, those who reported insecure attachment with parental figures also endorsed difficulty managing impulses and regulating emotions (Remondi et al., 2020; Tatnell et al., 2018). Furthermore, difficulty regulating emotions has emerged as a potential mediator in the relationship between parental attachment and various forms of psychopathology among adolescents and emerging adults (Pascuzzo et al., 2015; removed for review). Thus, emerging adulthood provides an opportunity to extend research on attachment to later developmental periods to better understand the association between parental relationships and emotional functioning.

Due to the association between parent-child relationships and emotional functioning as well as reported close relationships between parents and children during emerging adulthood, researchers have increasingly examined perceptions of parental relationships among emerging adults, including a sense of attachment to parents during this developmental period. Many studies of attachment focus largely on categories of secure or insecure attachment. However, Bowlby suggested internal working models, or cognitive representations based upon relationship quality and emotional experiences, can influence an individual's approaches to regulating their emotions, cognitions, and behaviors (Bowlby, 1973; Thompson, 2021). Thus, exploring perceptions of parental relationships, that are based in attachment, provides one potential way to study emerging adults' internal working models of their parental relationships. For example, a number of studies have used the Inventory of Parent and Peer Attachment Revised (IPPA-R; Armsden & Greenberg, 1987) to assess individuals' perceived relationships with parental figures. The IPPA-R was designed as a multifactorial measure of the emotional and cognitive dimensions of attachment relationships with parents and peers. The items were developed based upon Bowlby's conception of attachment and assess perceptions of the following dimensions: degree of mutual trust, quality of communication, and extent of alienation. A study of emerging adults using these dimensions found trust and communication were associated with adaptive emotion regulation while alienation was linked to maladaptive emotion regulation (Yurkowski et al., 2015). Thus, exploring perceptions of parental relationships may provide a better understanding of the associations between parental relationships and emotional functioning during emerging adulthood.

Trust, Communication, and Alienation

A sense of trust in parental relationships is important and supports children as they develop independence to explore their environment (Bowlby, 1969/1982). Parent-child trust is reinforced across interactions with parents, where children's needs and desires are understood, respected, and accepted. Although fewer studies have focused on perceptions of trust in parent-child relationships, the research that has been conducted has mostly included children and adolescents (Szcześniak et al., 2012). Lower levels of trust have been linked to emotion dysregulation and mental health difficulties among children and adolescents (e.g., Ebbert et al., 2019; Gresham et al., 2012). High levels of perceived parental trust among preadolescents and adolescents have been associated with adaptive psychosocial functioning, increased resilience towards stress, and lower levels of emotion dysregulation (Locati et al., 2023; Rotenberg et al., 2023; Sugimura et al., 2020; Yaghoubipoor et al., 2021). The authors are not aware of studies that have examined trust and emotional functioning during emerging adulthood. However, one study found trust in parents was associated with lower levels of depression among emerging adults (Zhang, 2024). Given the limited research on parental trust in emerging adult parent-child relationships, it is important to further explore the

dimension of trust in parental relationships to understand the potential association with emotional functioning during this developmental period.

Communication in parental attachment relationships refers to the perceived extent and quality of the communication. This is an important dimension of attachment and parental relationships during emerging adulthood due to a renegotiation of communication that can occur between parent and child (Keijsers & Poulin, 2013; Tabak et al., 2011). Similar to parental trust, most of the research in this area has included children and adolescents. For example, communication with parents has been associated with difficulties in emotional regulation among adolescents (Yaghoubpour et al., 2021). Furthermore, a study by Maya et al. (2023) found adolescents who reported higher communication with both mothers and fathers also reported greater attention to feelings and increased ability to differentiate emotions. However, only mother communication was associated with mood repair. Gresham and colleagues (2012) found poor parent-adolescent communication predicted emotional dysregulation. In a study involving emerging adults, communication patterns with mothers and fathers were associated with resilience and depressive symptoms (Leustek et al., 2020). Among the existing studies, few have explored perceived communication within parental relationships and emotional functioning during emerging adulthood.

Finally, parental alienation, defined as a child's feelings of detachment, anger, and isolation in their relationship with their parent, has been associated with maladjustment (King & Delfabbro, 2017) and lower psychological well-being (Safipour et al., 2011; Tambelli et al., 2012). Among the dimensions of attachment, more research has explored associations among alienation, emotional experiences, and mental health. A study by Yaghoubpour et al. (2021) found parental alienation was associated with difficulty regulating emotions among adolescents. Higher levels of perceived parental alienation have also been associated with maladaptive emotion regulation, including lower levels of cognitive reappraisal and higher levels of expressive suppression during adolescence (Gresham et al., 2012). Additionally, Ruijten et al. (2011) found perceptions of parental alienation among adolescents were correlated with self-reported rumination. Few studies have explored parental alienation and emotional functioning during emerging adulthood. However, one study involving emerging adults found parental alienation was associated with non-suicidal self-injuries (Yurkowski et al., 2015). Although several studies have examined parental alienation, research on perceptions of alienation and emotional functioning during emerging adulthood remains limited.

Emotional Reactivity and Rumination

Among studies focused on emotion dysregulation and mental health concerns, difficulty regulating emotions has been associated with emotional reactivity and rumination, which in turn have been linked to internalizing symptoms, externalizing symptoms, and self-injurious behavior (Kandsperger et al., 2021; Taylor et al., 2021; Zhou et al., 2024). As a result, it is important to further examine emotional reactivity and rumination due to their potential association with mental health. Emotion reactivity refers to the intensity and duration of an emotional response to stimuli (Nock et al., 2008), whereas rumination is the tendency to repetitively think about distressing emotions and their causes and consequences (Harmon et al., 2019). Peled and Moretti (2010) further suggest this can include sadness rumination and anger rumination. Sadness rumination is defined as repeated thoughts focused on one's sadness and attempts to understand one's feelings (Conway et al., 2000). Anger rumination refers to continually thinking about feelings of anger, which can contribute to ongoing or intensification of anger (Sukhodolsky et al., 2001). Although studies have explored associations among parental attachment, emotional reactivity, and rumination, the authors are not aware of studies that have focused on dimensions of attachment such as trust, communication, and alienation. Furthermore, existing studies of parental attachment, emotional reactivity, and rumination have primarily included younger children and adolescents. For example, insecure attachment and negative parent-child interactions have been associated with emotional reactivity among infants (Sherman et al., 2013), children (Smeekens et al., 2007), and adolescents (Wei et al., 2005). Children and adolescents who are high in emotional reactivity demonstrate an increased tendency to experience intense emotions and require a longer duration for the emotion to subside. Additionally, insecure attachment has been associated with dysfunctional trait rumination (Brown & Phillips, 2005) and anger rumination (Burnette et al., 2007). Ruijten et al. (2011) found adolescents with insecure parental attachment reported heightened levels of rumination and tended to ruminate in response to emotionally stressful events. A study involving emerging adults, similarly found insecure attachment was associated with rumination (Bugay-Sökmez et al., 2023). Taken together, these findings suggest individuals who perceive insecure attachment in their relationships with their parents may also experience emotional reactivity or tend to ruminate in response to emotionally stressful events, both of which can place individuals at increased risk for mental health concerns due to difficulty managing intense emotions (Carthy et al., 2010b; Lavender & Watkins, 2004).

Current Study

The current study explored perceptions of parental relationships and their association with emotional functioning. Drawing upon Bowlby's perspective on parental attachment and emotional development, this study examined

dimensions of parental relationships that are rooted in attachment to further understand the connection between parental relationships and emotional functioning during emerging adulthood. This study also examined perceptions of parents separately for mothers and fathers. Previous research involving heterosexual couples found adolescents and emerging adults reported different perceptions of their relationships with mothers compared to fathers (Ebbert et al., 2019; Nelson et al., 2011). Perceptions of mothers and fathers have also been further associated with differences in youth outcomes (Al-Yagon, 2011; Jensen et al., 2021; Zapf et al., 2023). Due to the potential differences in perceptions of relationships with mothers and fathers, the current study examined perceived parental relationships separately. Therefore, one aim of this study was to explore perceptions of maternal and paternal relationships and their association with emotional experiences, specifically emotional reactivity and emotional rumination.

This study also focused solely on emerging adults' perceptions. Parents and children do not always share the same views on the quality of their relationship with one another (e.g., Aznar et al., 2023; Clark et al., 1998). Although parent-child relationships may be explored from the perspectives of both parents and children, attachment theory suggests examining child perceptions, or internal working models, of parental relationships may provide a unique understanding of parental relationships and their association with emotional functioning (Bowlby, 1979). Additionally, emerging adult reports of parental relationships and parenting behaviors may be associated with youth outcomes in ways that differ from parental reports (Aznar et al., 2023; Dornbusch et al., 2001; Rosenberg & Shields, 2009). Assessing emerging adult perceptions presents an opportunity to explore internal working models of parental relationships during this developmental period and extends previous research examining parental relationships and child emotional development. It is important to investigate relationships with parents during later developmental periods because the association between parental relationships and emotional functioning may differ during emerging adulthood. Therefore, a second aim of this study was to focus on emerging adult perceptions by exploring internal working models of their parental relationships.

Two main hypotheses were developed. Hypothesis 1 involved the unique roles of maternal and paternal alienation on emotional reactivity and rumination. The potential predictive roles of maternal and paternal trust and communication were exploratory. We hypothesized both maternal and paternal relationship variables would predict emotional reactivity and rumination, with perceptions of trust and communication negatively predicting and perceptions of alienation positively predicting emotional reactivity and emotional rumination. Due to the existing research demonstrating a relationship between alienation and emotional difficulties, hypothesis 2 focused on maternal and paternal alienation. Specifically, we hypothesized maternal and paternal alienation would interact to significantly predict emotional reactivity and emotional rumination. Thus, in the current study, we aimed to examine the associations among perceptions of parental relationships, emotional reactivity and rumination by focusing on emerging adults' internal working models of their parental relationships.

Method

Participants and Procedures

One hundred ninety-seven undergraduate students at a Midwestern university participated in the current study (Mage = 19.55, SD = 1.31, ages ranged from 18-25; 61.4% female, 35% male, 3.6% did not respond). Participants predominantly identified as White (75.1%), followed by Hispanic (8.6%), African American (3.6%), Asian American (2.5%), American Indian/Alaska Native (0.5%), Biracial (3.0%), and Multiracial (3.0%). The sample consisted of primarily first- and second-year undergraduate students (70.1%). This study was approved by a university ethics committee, and all participants were treated in accordance with the American Psychological Association (2017) ethical principles. After providing informed consent, participants completed an online questionnaire and received course credit or extra credit for participation in the study.

Measures

Internal Working Models of Parental Relationships. The Inventory of Parent and Peer Attachment Revised (IPPA-R; Armsden & Greenberg, 1987) is a 75-item self-report measure that assesses perceptions of attachment relationships with parents and peers. The IPPA-R assesses three dimensions: trust, communication, and alienation. The 50-item parent versions were utilized for the current study (25 items per parent). Sample items are: *My mother/father trusts my judgment* (Trust), *My mother/father helps me to talk about my difficulties* (Communication), and *Talking over my problems with my mother/father makes me feel ashamed or foolish* (Alienation). Participants responded to each statement using a five-point Likert type response framework ranging from 1 (*Almost never or never true*) to 5 (*Almost always or always true*), and mean scores were calculated for each of the subscales. This scale demonstrated good reliability in the current sample: Trust ($\alpha = 0.92$ for mothers, $\alpha = 0.93$ for fathers), Communication ($\alpha = 0.90$ for mothers, $\alpha = 0.93$ for fathers), and Alienation ($\alpha = 0.83$ for mothers; $\alpha = 0.85$ for fathers).

Emotional Reactivity. The Emotional Reactivity Scale (ERS; Nock et al., 2008) is a 21-item self-report measure that assesses various aspects of emotional reactivity (i.e., emotional sensitivity, intensity, and persistence). Sample

items include: *I tend to get emotional very easily* and *When I am angry/upset, it takes me much longer than most people to calm down*. Participants responded to each statement using a four-point Likert type scale ranging from 1 (*Not at All Like Me*) to 4 (*Completely Like Me*). This scale demonstrated good reliability in the current sample ($\alpha = 0.95$).

Emotional Rumination. The Sadness and Anger Rumination Inventory (SARI; Peled & Moretti, 2007) is a 22-item self-report measure that assesses the extent to which individuals engage in ruminatory behaviors when feeling sad or angry. Sample items are: *When something makes me sad/angry, I turn this matter over and over again in my mind* and *When I am sad/angry, the more I think about it the sadder/angrier I feel*. Participants rated 11 statements for each type of rumination using a five-point Likert type scale ranging from 1 (*Never*) to 5 (*Always*). This scale demonstrated good reliability in the current sample for sadness rumination ($\alpha = 0.95$) and anger rumination ($\alpha = 0.94$).

Demographic Information. Participants were asked to provide information regarding their age, gender, race, and year in school.

Data Analytic Plan

We examined the hypothesized relationships using multiple regression and moderation analyses to test for interaction effects. In this study, we analyzed the results of perceptions of maternal and paternal relationships separately. We began by correlating key variables related to perceptions of parental relationships and emotional functioning, separated out by maternal and paternal relationships. Then, we used multiple regression to investigate relationships between maternal and paternal relationships and emotional reactivity or rumination, each done separately for maternal and paternal relationships with attention to the subscales of trust, communication, and alienation. Finally, based on existing research, we allowed maternal and paternal alienation to interact in a moderation analysis, to assess whether one's alienation from one parent can act as a protective factor with alienation from the other parent (Baron & Kenny, 1986). Full results output, including moderation analyses for both trust and communication, are available at <https://osf.io/m5b2n/>.

Results

Correlations

The means, standard deviations, and correlations for the key variables are provided in Table 1. Based on the sample means, we observed higher levels of trust and communication with mothers compared to fathers and higher levels of alienation with fathers compared to mothers (though the last was not statistically significant based on an independent samples t test). Maternal and paternal alienation were positively correlated with participant emotional reactivity ($r = .28, p < .001$; $r = .23, p = .002$), sadness rumination ($r = .26, p < .001$; $r = .29, p < .001$), and anger rumination ($r = .27, p < .001$; $r = .32, p = .008$) for mothers and fathers, respectively. Maternal and paternal trust and communication were not significantly correlated with emotional reactivity, sadness rumination, or anger rumination.

Table 1 Descriptive Statistics and Correlations for Maternal and Paternal Relationships, Emotional Reactivity, and Emotional Rumination Variables.

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Maternal Trust	4.35	.67								
2. Maternal Communication	3.94	.81	.83***							
3. Maternal Alienation	2.16	.76	-.76***	.73***						
4. Paternal Trust	4.20	.76	.59***	.55***	.49**					
5. Paternal Communication	3.49	.93	.44***	.53***	.42**	.79**				
6. Paternal Alienation	2.21	.82	-.44***	.44***	*	-.8***	-.73**			
7. Emotional Reactivity	40.1	13.1	-.08	.02	.28**	-.07	.03	.23**		
8. Sadness Rumination	31.0	10.2	-.04	-.01	.27**	-.09	-.12	.32**	.66*	
9. Anger Rumination	27.6	9.71	-.13	-.07	.26**	-.10	-.08	.29**	.52*	.67***

Note. ** indicates $p < .01$, *** indicates $p < .001$

Multiple Linear Regression

The effects of maternal and paternal relationships on emotional reactivity and emotional rumination were examined using regression analyses, predicting the separate outcomes of emotional reactivity, sadness rumination, and anger rumination from maternal and paternal trust, communication, and alienation as predictors in each of the six regression models (see Table 2). This allowed us to examine the unique contribution of each predictor variable (maternal and paternal trust, communication, and alienation) while controlling for the other predictor variables included in the model. Regressions were run separately for maternal and paternal relationships, and all reported coefficients are standardized.

Table 2 Regression Analyses Predicting Reactivity and Rumination, Separated by Maternal and Paternal Predictors.

	Maternal Predictors				Paternal Predictors			
	β	SE	95% CI	<i>p</i>	β	SE	95% CI	<i>P</i>
Emotional Reactivity								
Trust	-.0001	.06	[-.25, .25]	.996	0.11	.13	[-.15, .37]	.40
Communication	0.49	.12	[.26, .74]	< .001	0.38	.12	[.15, .61]	.001
Alienation	0.65	.11	[.44, .85]	< .001	0.60	.12	[.36, .83]	< .001
Sadness Rumination								
Trust	0.22	.13	[-.03, .48]	.09	0.43	.13	[.17, .69]	.001
Communication	0.28	.12	[.04, .48]	.02	0.04	.11	[-.18, .27]	.70
Alienation	0.65	.11	[.44, .85]	< .001	0.69	.12	[.46, .92]	< .001
Anger Rumination								
Trust	0.003	.13	[-.26, .27]	.98	0.26	.13	[-.01, .53]	.06
Communication	0.28	.13	[.02, .53]	.03	0.17	.12	[-.06, .40]	.15
Alienation	0.47	.11	[.25, .69]	< .001	0.62	.12	[.38, .86]	< .001

Maternal Relationships

The regression analysis examining simultaneous contributions of maternal trust, communication, and alienation explained significant variance in overall emotional reactivity $R^2 = 0.18$, $F(3, 187) = 14.84$, $p < .001$, sadness rumination, $R^2 = 0.15$, $F(3, 187) = 12.21$, $p < .001$, and anger rumination, $R^2 = 0.09$, $F(3, 187) = 7.38$, $p < .001$. Maternal trust did not significantly predict emotional reactivity, $\beta = -0.001$, $p = .99$, sadness rumination, $\beta = 0.22$, $p = .09$, or anger rumination, $\beta = 0.003$, $p = .97$. Maternal communication did, however, significantly predict emotional reactivity, $\beta = 0.50$, $p < .001$, sadness rumination, $\beta = 0.28$, $p = .02$, and anger rumination, $\beta = 0.27$, $p = .03$. Additionally, maternal alienation predicted significantly higher emotional reactivity $\beta = 0.65$, $p < .001$, sadness rumination, $\beta = 0.65$, $p < .001$, and anger rumination, $\beta = 0.47$, $p < .001$.

Paternal Relationships

Similar patterns were seen for paternal relationships. The regression analysis examining simultaneous contributions of paternal trust, communication, and alienation explained significant variance in overall emotional reactivity, $R^2 = .13$, $F(3, 179) = 10.21$, $p < .001$, sadness rumination, $R^2 = 0.16$, $F(3, 179) = 12.66$, $p < .001$, and anger rumination, $R^2 = 0.12$, $F(3, 179) = 9.58$, $p < .001$. Paternal trust did not significantly predict emotional reactivity, $\beta = 0.11$, $p = .40$, or anger rumination, $\beta = 0.26$, $p = .06$, but it did predict sadness rumination, $\beta = 0.42$, $p = .001$. Paternal communication significantly predicted emotional reactivity, $\beta = 0.38$, $p = .001$, but not sadness rumination, $\beta = 0.04$, $p = .70$, or anger rumination, $\beta = 0.17$, $p = .15$. Finally, paternal alienation significantly predicted emotional reactivity, $\beta = 0.60$, $p < .001$, sadness rumination, $\beta = 0.69$, $p < .001$, and anger rumination, $\beta = 0.62$, $p < .001$.

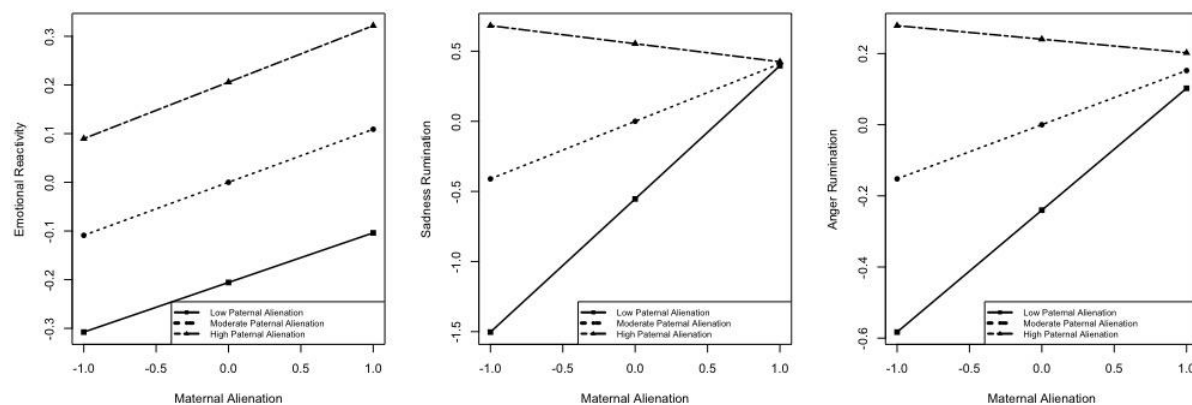
Moderation Analyses

To further examine perceptions of maternal and paternal relationships on reactivity and rumination, we conducted a moderation analysis for each of the three outcome variables. This approach allows two predictor variables to interact in predicting an outcome variable. More specifically, we tested interactions between maternal and paternal alienation in predicting emotional reactivity, sadness rumination, and anger rumination in each analysis. All variables were standardized ($M = 0$, $SD = 1$) prior to conducting these analyses (Aiken & West, 1991).

No significant interaction between maternal and paternal alienation was seen predicting emotional reactivity ($\beta = 0.01$, $p = .92$) or sadness rumination ($\beta = -0.10$, $p = .14$). However, maternal and paternal alienation had a significant negative interaction predicting anger rumination ($\beta = -0.18$, $p = .009$). Figure 1 shows interaction plots between maternal and paternal alienation for emotional reactivity, sadness rumination, and anger rumination probed at low (1 *SD* below the mean), medium (at the mean), and high (1 *SD* above the mean) levels of maternal and paternal alienation.

Probing the significant interaction, we found those who were high on maternal alienation scored higher than others on anger rumination when they were low to moderate on paternal alienation, but this pattern was not significant at high paternal alienation where anger rumination was high regardless of maternal alienation level. In other words, if an emerging adult was high on either maternal or paternal alienation, their predicted anger rumination score was high regardless of their perception of alienation from the other parent. The conditional effect of paternal alienation on anger rumination when maternal alienation was at its mean was 0.24, and the conditional effect of maternal alienation on anger rumination when paternal alienation was at its mean was 0.15. The effect of paternal alienation on anger rumination decreased by 0.18 units for each one standard deviation increase of maternal alienation. Using the Johnson-Neyman interval, maternal alienation must be at least 0.11 standard deviation units below the mean or paternal alienation must be at least 0.37 standard deviation units below the mean for the other maternal or paternal alienation score to significantly affect anger rumination.

Figure 1. Interactions Between Maternal and Paternal Alienation on Emotional Reactivity and Emotional Rumination.



Note. All variables are standardized, and interactions are probed where one standard deviation below the mean is considered “low,” at the mean is considered “moderate,” and one standard deviation above the mean is considered “high.” All probed values are within the values of the collected data. Anger rumination (panel 3) depicts a significant interaction between maternal alienation and paternal alienation. Paternal alienation was arbitrarily chosen to be the moderator variable for these interaction plots.

Discussion

The purpose of this study was to explore associations among perceptions of parental relationships and emotional functioning during emerging adulthood. The results from the regression analyses highlighted the roles of maternal communication and both maternal and paternal alienation on emotional functioning, while results from the moderation analyses suggested maternal and paternal alienation interacted to predict anger rumination specifically. The findings indicated low levels of parental alienation from both parents were associated with more adaptive emotional functioning.

Hypothesis 1 was partially supported. As expected, maternal alienation and paternal alienation positively predicted emotional reactivity, anger rumination, and sadness rumination. Despite some shared effects for trust and communication on emotional functioning, the findings suggest perceptions of alienation from parents may uniquely contribute to emotional reactivity and rumination in early adulthood. Notably, some relationships emerged as statistically significant that were not observed in the correlation table, which is likely due to suppressor effects. This can occur because another variable removes irrelevant variance, allowing the true relationship between a predictor variable and an outcome to emerge (Watson et al., 2013). Thus, the current findings suggest the possibility that trust and communication with mothers and fathers may be associated with some forms of emotional functioning; however, among emerging adults in this study, parental alienation was associated with both emotional reactivity and rumination.

Hypothesis 2 was also partially supported. A significant interaction was not found between maternal alienation and emotional reactivity. The lack of interaction between maternal alienation and emotional reactivity suggests low maternal alienation did not buffer the effect of paternal alienation on emotional reactivity. Similarly, we did not find evidence of a significant interaction between maternal alienation and sadness rumination. Thus, if emerging adults perceive they are alienated from either parent, this may lead to emotional reactivity and sadness rumination. Additionally, lower levels of alienation from one parent may not worsen or buffer the effect of

alienation from the other parent with regard to emotional reactivity and sadness rumination. However, this was not the case for anger rumination.

A significant interaction emerged for perceptions of maternal alienation and anger rumination, indicating the level of maternal alienation impacted the effect of paternal alienation on anger rumination. This suggests when perceptions of maternal alienation are high, anger rumination is also high and low levels of paternal alienation may not buffer the effects of maternal alienation on anger rumination. The reverse also holds true when perceptions of paternal alienation are high. Therefore, if an individual perceives they are distant and alienated from one of their parents, they may also have a tendency to ruminate when angry regardless of the amount of alienation they perceive in their relationship with another parent. Additionally, if an individual perceives a low to moderate sense of alienation from one parent, this can exacerbate the effect of the other parent's alienation on anger rumination, further contributing to a tendency to ruminate when angry during emerging adulthood.

In summary, there was a significant interaction between perceptions of maternal and paternal alienation with anger rumination. However, differences were only found at very low levels of alienation from one parent, suggesting a sense of alienation from one or both parents may be associated with poorer emotional functioning during emerging adulthood. Additionally, moderate levels of alienation from just one parent may also be associated with poorer emotional functioning. Although dimensions of parental attachment, such as trust and communication, are associated with adaptive emotional functioning among children and adolescents (e.g., Gresham & Gullone, 2012), the current findings suggest these associations may not be the same during emerging adulthood, particularly if a moderate sense of alienation with at least one parent is also present. In the current study, trust and communication with either mothers or fathers may not have provided a buffer against high levels of perceived alienation from another parent. Thus, parental trust and communication may be present but may not be sufficient to override the effect of perceptions of parental alienation in early adulthood.

The pattern of results for emotional reactivity, sadness rumination, and anger rumination in the present study suggest perceptions of parental relationships with mothers and fathers may be associated with emotional functioning in varying ways. Taking both parents into account, the presence of parental alienation presents an opportunity to explore parental relationship dimensions that are informed by attachment theory. The findings from this study provide additional evidence of the importance of parental relationships for emotional functioning during emerging adulthood. Despite the considerable amount of research on parental attachment and child emotional functioning, comparatively fewer studies have examined parental relationships and emotional experiences during emerging adulthood. Research findings from childhood studies may not apply during emerging adulthood because they do not take developmental differences unique to that part of the lifespan into account (Yeager, 2017). Informed by attachment theory, the present findings build upon previous research by examining these relationships during emerging adulthood.

The current findings support previous studies suggesting late adolescence and emerging adulthood are important developmental periods in which to explore parental relationships and attachment (Al-Yagon, 2011; Cassidy et al., 2013; Nice and Joseph, 2023; Tambelli et al., 2021). Furthermore, assessing individuals' perceptions of their relationship with their parents provides an opportunity to examine emerging adult internal working models and gain a greater understanding of associations between parent-child relationships and emotional functioning during emerging adulthood. Parents are important figures during this developmental period and may also play a role in emotional development. As young adults experience new and increasingly complex social situations and emotions, they may turn to parents for support or advice. Additional research is needed to understand the evolving nature of these relationships during early adulthood and their association with emotional functioning. This is particularly important with regard to maladaptive emotion regulation, which is associated with increased mental health concerns (Mikulincer & Shaver, 2012).

Limitations and Future Directions

The findings from this study provide preliminary support for exploring perceptions of parental relationships and emotional functioning during emerging adulthood. There were several limitations in the current study, and thus the results should be interpreted with caution. First, this study relied solely on reports from emerging adults regarding their parental relationships. Although attachment theory emphasizes children's internal working models, or cognitive representations of their relationships with caregivers, parent reports of attachment relationships may differ in ways that are important in understanding the dynamic interactions and relationships between parents and young adults. Therefore, it is important to note the findings represent only emerging adult perspectives on their parental relationships. Studying both emerging adult and parent perceptions of parent-child relationships and interactions may be important areas of further study regarding emerging adult and parental contributions to both attachment relationships and emotional development.

Although this was a study exploring perceptions of parental relationships that are based in attachment theory, the Inventory of Parent and Peer Attachment Revised may not assess all features of attachment relationships or attachment security. For example, items from the trust subscale may include relationship characteristics that

contribute to a sense of trust. Additional methodologies may be needed to fully measure and assess the defining features of trust in parental relationships. Similarly, one subscale was used to measure parental alienation. However, a sense of alienation may be the result of a multitude of parent and emerging adult characteristics and interactions. Furthermore, there are many factors that contribute to attachment security in addition to perceptions of alienation. A single measure may not effectively assess parental alienation or other factors associated with insecure attachment. Therefore, the current findings may provide an important but limited understanding of the associations between dimensions of parental attachment (e.g., trust and alienation) and emotional functioning during emerging adulthood. Future studies should also explore other dimensions and additional measures of attachment.

Third, the current study utilized self-report questionnaires to assess the key variables of interest. As such, complete independence of variables is impossible to assess without a true experimental design. Multi-method approaches including, for example, parent-child observation and physiological or neuroendocrine measures of emotional reactivity in addition to self-report questionnaires would further elucidate associations between parental relationships and emotional functioning.

The study was also cross-sectional, consisting of emerging adults from undergraduate classes. Thus, the findings cannot be generalized to other populations of emerging adults or age groups. Furthermore, the limited age range precluded an exploration of differences across childhood, adolescence, and young adulthood. A longitudinal design would allow researchers to examine different trajectories of parental relationships, attachment dimensions, and their influence on emotional functioning across development. For example, the differences observed in this study may have been due to parental alienation during this developmental period. Alternatively, they may also be the result of the cumulative effects of parental alienation across child and adolescent development that were measured during emerging adulthood. Longitudinal studies would facilitate an exploration of the influence of attachment across development as well as an increased understanding of the influence of different dimensions of attachment on emotional functioning.

Additionally, the majority of participants in this study reported they were raised in a home with a mother and father. Thus, we were unable to explore the potential impact of differing family structures and emotional functioning. Additional studies are needed to examine perceptions of parental relationships among emerging adults raised in various family contexts, such as single-parent, same-sex, adoptive, foster care, and multigenerational households.

Future studies should also further explore the impact of parental alienation and emotional difficulties on mental health during emerging adulthood. This may be particularly important if parental alienation is associated with both emotion dysregulation and mental health concerns or if there are different effects on mental health depending upon the level and type of parental alienation.

Conclusions

The current study adds to the growing literature supporting the association between parental relationships and emotional functioning during emerging adulthood. The findings suggest parental relationships may be important during emerging adulthood and further indicate that perceptions of alienation from parental figures may be associated with emotional difficulties. Furthermore, a low level of alienation from one parent may moderate the effect of the other parent's perceived alienation on anger rumination specifically. Importantly, this suggests relationships with parents, particularly perceptions of alienation from a parent, may predict emotional functioning in early adulthood.

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