

Adoption and Emerging Adult-Mother Relationship Quality: Is There an Association?

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Dedication

In memory of my mother, Jane Walkner.

Abstract

Emerging adulthood is a developmental period in which family relationships are important, yet research provides evidence that adoptive families have lower relationship quality compared to their nonadoptive counterparts. Despite some support for a relationship between adoption and adoptee-adoptive mother relationships during emerging adulthood, no systematic investigation has occurred. Utilizing self-report and observational data from the Sibling Interaction and Behavior Study, two studies employed hierarchical regression analyses to extend knowledge of the relationship between adoption and adoptee-adoptive mother relationships during emerging adulthood. Study 1 investigated the association between adoptee-reported adoption-related variables and the self-reported and observed relationships adoptees have with their adoptive mothers during emerging adulthood. Emerging adult adoptees who felt more positively about adoption had higher closeness and relationship quality and lower conflict with adoptive mothers. Additionally, transracial emerging adult adoptees were found to have lower conflict and higher relationship quality with adoptive mothers compared to inracial adoptees. Study 2 investigated the association between adoptive mother-reported adoption-related variables and the self-reported and observed relationships adoptive mothers have with their adopted children during emerging adulthood. Findings suggest that adoptive mothers' attitudes about adoption and adoption type (inracial vs. transracial) had little association with the relationships they had with their emerging adult adoptees.

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Study 1: Adoption and Adoptee-Mother Relationships During Emerging Adulthood

Emerging adulthood has been established as a developmental period in which family relationships are important, yet research provides evidence for lower relationship quality in adoptive families during this time compared to nonadoptive families (Rueter, Keyes, Iacono, & McGue, 2009; Walkner & Rueter, 2014). While both adopted and nonadopted emerging adults face the same normative transitions (e.g. leaving home, starting college), there is evidence to suggest this transition may be complicated by adoption status given the unique tasks faced by adoptive families (Brodzinsky, 1987; Kirk, 1984). Despite some support for a relationship between individual adoption-related variables and adoptee-adoptive parent relationships during emerging adulthood, there has been no systematic investigation of the relative association adoption-related variables might have on these relationships. In this study, the following variables are proposed as particularly salient to adoptee-adoptive mother relationships (Conflict, Closeness, and Relationship Quality) during emerging adulthood: Adoption Type, Adoption Feelings, and Adoption Interest.

Importance of Family Relationships During Emerging Adulthood

Increased attention has focused on the importance of emerging adulthood, the distinct life stage from the age of 18 until 25-29 years (Arnett, 2000; Arnett, Zukauskienė, & Sugimura, 2014). This stage represents a major psychosocial transition between adolescence and young adulthood, characterized by identity exploration, instability, self-focus, feeling in-between adolescence and young adulthood, as well as the ability to explore life possibilities (Arnett, 2000, 2004, 2006; Arnett et al., 2014;

Shulman & Ben-Artzi, 2003). During this time major life transitions occur, as emerging adults move out of the parental home, attend college, focus on identity exploration, enter into more serious romantic relationships, and engage in career exploration (Arnett, 2004).

The transition to emerging adulthood has been found to be a critical period in which important transformations in adolescents' perceptions of family relationships occur (Tsai, Telzer, & Fuligni, 2013). The importance of parent-child relationships during the transition to emerging adulthood cannot be overstated. Emerging adults with positive, cohesive, and nonconflictual relationships with parents have been found to have higher psychological well-being (Aquilino, 2006; Bucx & van Wel, 2008; Knoester, 2003; Paradis et al., 2011; van Wel, Linssen, & Abma, 2000), higher overall well-being (Fosco, Caruthers, & Dishion, 2012; Knoester, 2003; Paradis et al., 2011; van Wel et al., 2000), lower suicidal thoughts and behavior (Paradis et al., 2011; van Wel et al., 2000), increased capacity for intimacy (Aquilino, 2006), higher social adjustment (Johnson, Gans, Kerr, & LaValle, 2010; Paradis et al., 2011), lower aggression (Fosco et al., 2012), positive development (O'Connor et al., 2011), higher expressions of affect (Fosco et al., 2012), and higher personal/emotional adjustment in college (Fosco et al., 2012; Johnson et al., 2010; Paradis et al., 2011). It is evident that the relationships children have with their parents are instrumental to a successful emerging adulthood.

Adoptive Family Relationships

Historically, research on adoptee-adoptive parent relationships has taken a deficit approach, comparing adoptive families to nonadoptive families as the standard to which adoptive families should emulate. This includes research investigating the relationships

emerging adult adoptees have with their adoptive parents. Broadly, the characteristics of these adoptee-adoptive parent relationships have been conceptualized as conflict, closeness, and relationship quality.

Differences in conflict have been found to exist in the relationships adoptees and nonadoptees have with their adoptive mothers during late adolescence, with continuity into emerging adulthood. During adolescence, adoptees have reported significantly greater conflict with mothers compared to nonadoptees, and have been observed to initiate significantly greater levels of conflictual behavior towards their mothers compared to nonadopted adolescents (Rueter et al., 2009; Walkner & Rueter, 2014). These differences in conflict extend into emerging adulthood, with emerging adult adoptees reporting significantly greater conflict with mothers compared to nonadoptees, and being observed to have significantly higher conflict with their adoptive mothers during this time (Walkner & Rueter, 2014).

The literature on adoptive family closeness during late adolescence and emerging adulthood is contradictory. Adoptees have been found to have higher levels of closeness (Sobol, Delaney, & Earn, 1994), equal levels of closeness (Loehlin, Horn, & Ernst, 2010), or lower levels of closeness with mothers when compared to nonadoptees (Burrow, Tubman, & Finley, 2004; Rueter et al., 2009; Walkner & Rueter, 2014). Retrospective reports of parental closeness during adolescence by mid-life adoptees and nonadoptees have been found to support a general level of closeness regardless of adoption status, however parents were judged by adoptees and nonadoptees to have been closer to their biological children (Loehlin et al., 2010). When closeness and warm,

supportive communication were assessed through self-report and observation in adoptive and nonadoptive families during adolescence, adolescent adoptees reported less close and less warm, supportive communication compared to their nonadoptive counterparts (Rueter et al., 2009; Walkner & Rueter, 2014). Differences in closeness remained upon entering emerging adulthood, with adoptees reporting significantly lower closeness with adoptive mothers compared to nonadoptees (Walkner & Rueter, 2014). These findings were contradictory, as adoptees were observed to have increased closeness with adoptive mothers during the transition from late adolescence into emerging adulthood.

While less explored, differences in relationship quality with mothers between adoptees and nonadoptees also exist during late adolescence and emerging adulthood. During adolescence, adoptees have been found to rate their families lower in relationship quality compared to nonadoptees (Sharma, McGue, & Benson, 1996). These differences have also been found in observed relationship quality between adoptees and nonadoptees towards their mothers at late adolescence into emerging adulthood (Walkner & Rueter, 2014). While not significant, adoptees were observed to have lower relationship quality with their mothers compared to nonadoptees. Interestingly, while adoptees had lower observed relationship quality during this transition, they were observed to have a greater increase in relationship quality across time when compared to nonadoptees, however these differences were not significant (Walkner & Rueter, 2014). Further evidence exists to support lower relationship quality between adoptees and nonadoptees, with adoptees reporting lower relationship quality with adoptive parents compared to nonadoptees in emerging adulthood (Levy-Shiff, 2001).

The extant research reinforces differences between the relationships adoptees have with their mothers compared to nonadoptees during emerging adulthood. Given the impact child-parent relationships have on a successful transition to emerging adulthood, it is concerning that lower relationships have been found between adoptees and their mothers compared to nonadoptees. An in-depth look at adoption-specific variables may clarify discrepancies within these studies and provide further insight into the relationships adoptees have with their adoptive mothers during emerging adulthood.

Adoption Type

While all adoptees face unique tasks to be accomplished during adolescence and emerging adulthood, including the development of a healthy sense of self and identity, managing feelings related to adoption, and navigating the transition to adulthood, there are multiple ways in which this process may differ for adoptees raised by parents who are not the same race as themselves. Transracial adoptees, defined as “racial/ethnic minority children raised by White parents” (Lee, 2003, p. 711), may confront unique challenges not experienced by their inracial (adoptees raised by same-race parents) counterparts, including the development of an ethnoracial identity, the experience of the transracial paradox, and ethnic and racial socialization (Frasch & Brooks, 2003; Lee, 2003; Lee, Grotevant, Hellerstedt, Gunnar, & The Minnesota International Adoption Project Team, 2006).

The of task developing a positive and meaningful ethnoracial identity separate from their family may be complicated for transracial adoptees, due to being raised by parents of the majority culture (Frasch & Brooks, 2003). Transracial adoptees also

confront the “transracial paradox,” as they are viewed as minorities in society but may be perceived, treated, and socialized by family as members of the White, European culture (Lee, 2003). Additionally, transracial adoptees are reliant upon their adoptive parents for ethnic socialization (the acquisition of knowledge, values, and beliefs about one’s ethnic heritage and development of group pride and belonging) and racial socialization (awareness of race and oppression in society in preparation for racism and discrimination), despite their parents’ membership in the majority culture (Lee, 2003; Lee et al., 2006). Successful completion of these tasks within the adoptive family is key, as research finds family serves as the first context for identity formation, and because race and ethnicity become increasingly important during late adolescence and emerging adulthood as adoptees develop identities separate from their parents (Baden et al., 2013; Feigelman, 2000; Kim et al., 2013; Lee, Yun, Yoo, & Nelson, 2010; Shiao & Tuan, 2008).

How tasks related to race, ethnicity, and socialization are addressed within adoptive families has been found to impact parent-child relationships. For example, transracial adoptees with parents highly supportive of their ethnic background and racial/ethnic socialization have reported more positive relationships with adoptive parents (Mohanty, Keokse, & Sales, 2006; Yoon, 2000; 2004). On the other hand, transracial adoptees who perceived their parents as unresponsive to issues of race and ethnicity were unlikely to approach adoptive parents to discuss these issues, thus creating the potential for dissatisfaction with the adoptee-adoptive parent relationship (Docan-Morgan, 2011). Collectively, this research provides evidence of unique differences between inracial and

transracial parenting, and justifies the inclusion of an adoption type (inracial vs. transracial) variable in the examination of adoptee-adoptive mother relationship quality during emerging adulthood.

Adoption Feelings

Beyond adoption type, how adoptees feel about being adopted, whether positively or negatively, may be particularly important to the relationship they have with their adoptive mothers during emerging adulthood. Exploratory research investigating the relationship between young adult adoptees' adoption feelings and family environment found a positive relationship between adoption feelings and healthy family environment (Martin, Kelly, & Towner-Thyrum, 1999). While this study adds to our understanding of how adoption feelings are related to family relationships, it is limited due to its reliance on self-report measures and a homogenous sample lacking transracial adoptees.

Further support for the importance of adoption feelings can be found in areas outside the context of parent-child relationships. For example, adoptees with more positive feelings about adoption were found to have lower levels of conduct disorder problems (Nilsson et al., 2011). While this study focused on adolescents, it strengthens support for the importance of positive adoption feelings in adoptees' lives. Additionally, adoptees who felt adoption carried a social stigma were found to have higher dissatisfaction with being adopted compared to those who did not view adoption as stigmatic (Muller, Gibbs, & Ariely, 2002). These findings are limiting however, as the adoptees ranged in age from 19 to 71 years (Muller et al., 2002). Adoptees undergoing the unique developmental time period of emerging adulthood might have different

perceptions around adoption stigma and satisfaction as they enter a period of identity exploration and self-focus (Arnett, 2000, 2004, 2006). A study focusing on adoption feelings during this specific developmental period may be particularly insightful.

While there is support for the importance of positive adoption feelings in adoptees' lives, an empirical investigation of how this variable might be associated with the relationship adoptees have with their adoptive mothers during emerging adulthood is lacking. Therefore, an Adoption Feelings variable is proposed to account for a significant amount of the variance in the relationships adoptees have with their adoptive mothers during emerging adulthood.

Adoption Interest

Interest in adoption, defined in this study as interest in birth background and information about birth parents, may become particularly salient for adoptees during emerging adulthood, thus having an association with the adoptee-adoptive mother relationship. Support for inclusion of this variable comes from two general areas of the existing literature: adoption information seeking and search and reunion, both of which are normative experiences thought about during adolescence and acted upon in emerging adulthood (Skinner-Drawz, Wrobel, Grotevant, & Von Korff, 2011; Wrobel & Dillon, 2009; Wrobel, Grotevant, & McRoy, 2004), thus rendering them particularly important in studying adoptee-adoptive mother relationships during emerging adulthood.

Adoption Information Seeking

Adoption information seeking (also referred to adoption preoccupation) has been defined as, "the gathering of information previously unknown to an adopted person about

his or her adoption and birth family” (Wrobel & Dillon, 2009, p. 223). This interest exists on a continuum, intensifying at certain times; at one end adoptees may have strong feelings and an intense curiosity to synthesize their birth and adoptive identities, while at the other end adoptees may have little interest in or curiosity about their birth background (Grotevant, Wrobel, van Dulmen, & McRoy, 2001; Skinner-Drawz et al., 2011; Wrobel, Grotevant, Berge, Mendenhall, & McRoy, 2003). Research tends to agree that adoptees begin to desire information about their birth parents starting in late adolescence (Hajal & Rosenberg, 1991; Sachdev, 1992; Skinner-Drawz et al., 2011) continuing into emerging adulthood (Feast & Howe, 1997; Sachdev, 1992; Skinner-Drawz et al., 2011), and is likely influenced by multiple individual and family factors (Kohler, Grotevant, & McRoy, 2002; Skinner-Drawz et al., 2011; Wrobel et al., 2004). Commonly cited reasons for adoption interest include starting a birth relative search, interest in background information, the birth of one’s biological child, the death of adoptive parent(s), curiosity about origins, and difficulty in a current relationship (Campbell, Silverman, & Patti, 1991; Feast & Howe, 1997).

Search and Reunion

Adoptees typically begin the search and reunion process starting in late adolescence, extending into emerging adulthood (Kohler et al., 2002; Pacheco & Eme, 1993; Wrobel et al., 2003). Muller and Perry (2001a) estimated approximately 50% of all adoptees will at some point search for birth relatives, supporting the importance of adoption interest in emerging adulthood. Interest in search and reunion is similar to adoption preoccupation, and is most commonly brought about by life transitions and

markers, including birthdays, pregnancy, birth or adoption of a child, marriage, and death of adoptive parent(s) (Campbell et al., 1991; Kowal & Schilling, 1985; Muller & Perry, 2001a; Pacheco & Eme, 1993; Richardson, Davey, & Swint, 2013; Sachdev, 1992; Schechter & Bertocci, 1990; Sobol & Cardiff, 1983). Additional reasons include; interest in medical and hereditary background (Kowal & Schilling, 1985; Muller & Perry, 2001a; Pacheco & Eme, 1993; Sobol & Cardiff, 1983), to aid adoptees in identity development and self-understanding (Campbell et al. 1991; Kohler et al., 2002; Kowal & Schilling, 1985; Muller & Perry, 2001a; Sobol & Cardiff, 1983), and wanting factual information or curiosity of origins (Campbell et al., 1991; Muller & Perry, 2001a; Sobol & Cardiff, 1983). To a lesser extent, dissimilarity from adoptive parents (Hollingsworth, 1998) and to establish a relationship with birth parents (Sobol & Cardiff, 1983) were also mentioned as reasons for beginning a birth parent search. Many reasons associated with reunion interest are unique to the developmental stage of emerging adulthood.

Contrary to previous research, searchers mostly describe having a positive relationship with adoptive parents and positive family functioning (Feast & Howe, 1997; Wrobel et al., 2004). However, adoptees' perception of their parents' reactions to a search influences whether they feel their parents are able to understand their desire to meet their birth parents (Lichtenstein, 1996). Many adoptees have cited hesitations in searching based on concerns about disloyalty, hurting, and disrupting their adoptive parents (Hajal & Rosenberg, 1991; Muller & Perry, 2001b; Pacheco & Eme 1993; Sobol & Cardiff, 1983). Disclosure hesitations are similar to reasons adoptees decide not to undertake a search, namely worry about appearing disloyal and upsetting adoptive

parents (Feast & Howe, 1997). Conflicting evidence exists on the effect of reunion on adoptee-adoptive parent relationships, with some support for birth parent reunion not affecting the relationship (Muller & Perry, 2001b), and some support for the decrease of adoptee uncertainty at the expense of increased uncertainty within the adoptee-adoptive parent relationship (Powell & Afifi, 2005). Higher incidence of undertaking a biological parent search/reunion during emerging adulthood justifies Adoption Interest as a variable to consider in exploring adoptee-adoptive mother relationships.

Current Study

Given the importance of the emerging adult-parent relationship, the difference in relationship quality between adoptees and their mothers compared to nonadoptees, and the unique tasks adoptees undergo during emerging adulthood, the present study utilized self-report and observational data to study the association between adoption-related variables and the relationship emerging adult adoptees have with their adoptive mothers. Based upon the literature reviewed about adoptive family relationships during emerging adulthood, three hypotheses are presented.

- H1: Emerging adult adoptee self-reported and observed Conflict with adoptive mothers are associated with adoption-related variables
 - H1a: Adoption Type (inracial vs. transracial), over and above the covariates (Biological Sex and Negative Affect), will account for a significant amount of variance in Conflict with adoptive mothers
 - H1b: Adoption Feelings and Adoption Interest will account for a significant amount of variance in Conflict with adoptive mothers over and above

Adoption Type

- H2: Emerging adult adoptee self-reported and observed Closeness with adoptive mothers are associated with adoption-related variables
 - H2a: Adoption Type (inracial vs. transracial), over and above the covariates (Biological Sex and Negative Affect), will account for a significant amount of variance in Closeness with adoptive mothers
 - H2b: Adoption Feelings and Adoption Interest will account for a significant amount of variance in Closeness with adoptive mothers over and above Adoption Type
- H3: Emerging adult adoptee observed Relationship Quality with adoptive mothers is associated with adoption-related variables
 - H3a: Adoption Type (inracial vs. transracial), over and above the covariates (Biological Sex and Negative Affect), will account for a significant amount of variance in Relationship Quality with adoptive mothers
 - H3b: Adoption Feelings and Adoption Interest will account for a significant amount of variance in Relationship Quality with adoptive mothers over and above Adoption Type

Method

Sample

Data used in this study were provided by adoptees who participated in the Sibling Interaction and Behavior Study (SIBS; McGue et al., 2007; Walkner & Rueter, 2014), a longitudinal study investigating sibling influence on drug and alcohol use. The SIBS

collected data from three family types: those with two biological children, those with one biological and one adopted child, and those with two adopted children. Adoptive families were accessed through the three largest private adoption agencies in Minnesota. Contact information was located through adoption records and public records, and researchers located 90% of the identified adoptive families.

Data for the full study came from potential participants who were contacted via phone to determine eligibility. Eligible adoptive families were required to have two children ages 11-21 years, with at least one adoptee placed permanently in the home before age two (average placement age was 4.7 months). The second child was required to be non-genetically related to the adoptee, but could be genetically or non-genetically related to his or her parents. Adopted siblings were required to be within five years of age and be able to participate in a full day assessment. Adoptive families formed through kinship, special needs, and foster care adoptions were not recruited for this study. Family representativeness for the full study was assessed in two ways. First, 73% of families that did not participate in the study were asked questions to assess their representativeness compared to families that did participate in the study. The recruited sample was generally representative of the population it was drawn from. Second, U.S. census data specific to Minnesota was compared to the study sample in order to confirm representativeness (McGue et al., 2007).

Data for this study came from Wave 2 (W2) of the SIBS study. Adoptee age was restricted in order to focus on adoptee-adoptive mother relationships during emerging adulthood. Adoptees were included if they were between the ages of 18.50 and 22.49

years. Final sample size varied between self-report and observational data. For self-report, $N = 272$ ($n_{male} = 114$, $n_{female} = 158$) emerging adult adoptees ($M_{age} = 19.82$, $SD = 1.01$) reported on relationships with adoptive mothers. For observation, $N = 273$ ($n_{male} = 116$, $n_{female} = 157$) emerging adult adoptees' ($M_{age} = 19.81$, $SD = 1.00$) relationships with adoptive mothers were observed. The majority of adoptees identified as Asian/Pacific Islander (69%), followed by White (22%), Other/Mixed (4%), Hispanic (3%), and Black (2%).

Procedures

Using procedures approved by the University of Minnesota Institutional Review Board, adoptive families visited the University to participate in the study, and informed consent was obtained from all participants. W2 consisted of assessments that included independently completed self-report measures by adoptees and independent observations of adoptees and adoptive mothers. Families were reimbursed travel costs and given a small honorarium (McGue et al., 2007).

The family observation occurred in a room decorated like a living room/dining room with family members completing the observation task around a dining table (Rueter et al., 2009; Walkner & Rueter, 2014). Hidden video cameras recorded the observation task and families were aware of being recorded. Families participated in a 15-minute interaction with instructions given by a trained interviewer who left the room during videotaping. Families were asked to discuss and attempt to resolve up to three family problems identified on previously completed questionnaires, starting with the problem which caused the most disagreements. Families that completed the discussion before time

ended moved on to discussing a set of cards containing questions about family life.

Measures

Adoptee report of adoptee-mother relationships. Two adoptee-reported dimensions of relationship quality with adoptive mothers were measured: Conflict and Closeness. Adoptees reported Conflict and Closeness with their adoptive mothers utilizing the Parental Environment Questionnaire (PEQ; Elkins, McGue, & Iacono, 1997). The PEQ is a 50-item questionnaire intended to assess specific aspects of the parent-child relationship. Adoptees were asked to rate aspects of their relationship with their adoptive mothers on a four point scale ranging from 1 (*definitely true*) to 4 (*definitely false*). Two subscales of the PEQ were used: Conflict with Parent and Involvement with Parent.

Adoptee-reported Conflict with adoptive mothers was assessed using the 12-item Conflict with Parent subscale ($\alpha = 0.91$) of the PEQ. Items were reverse coded and summed so that higher scores indicated higher conflict. Questions answered included, “*Often there are misunderstandings between my mother and myself,*” and “*My mother and I often get into arguments.*”

Adoptee-reported Closeness with adoptive mothers was assessed using the 12-item Involvement with Parent subscale ($\alpha = 0.90$) of the PEQ. Items were reverse coded and summed so that higher scores indicated higher closeness. Questions answered included, “*My parent comforts me when I am discouraged or have had a disappointment,*” and “*My parent tries to keep up with how well I do in school and/or in my job.*”

Observed adoptee-mother relationships. Observed adoptee-adoptive mother relationships were assessed using the SIBS Rating Scales (Rueter et al., 2009; Walkner & Rueter, 2014), adapted from the Iowa Family Interaction Rating Scales (IFIRS; Melby et al., 1998). IFIRS has been used in more than a dozen research studies with consistently high interrater reliabilities assessed as intraclass correlations (ICC; Melby & Conger, 2001). Family interaction tasks were viewed by trained observers, who rated an individual's behavior toward each of the other family members using a nine point scale ranging from 1 (*not at all characteristic of the person*) to 9 (*mainly characteristic of the person*). Observers were required to complete 100 hours of training and to pass written and observation examinations before being allowed to view observation tapes (Rueter et al., 2009). Reliability was assessed through random selection of 25% of the videotapes to be rated by a second observer. Observers were required to attend biweekly meetings for continued training.

Observed Conflict by adoptees towards their adoptive mothers was measured using the SIBS Hostility scale. This scale measured the degree to which an adoptee displayed hostile, angry, critical, disapproving, and/or rejecting behavior towards his/her adoptive mother's actions, appearance, and state through verbal and nonverbal cues (ICC: .89).

Observed Closeness by adoptees towards their adoptive mothers was measured by summing four SIBS subscales into a single Closeness scale ($\alpha = .81$). The Warmth/Support scale measured the degree to which an adoptee expressed care, concern, and support toward his/her adoptive mother through verbal and nonverbal cues (ICC:

.85). The Listener Responsiveness scale measured the behavior of the adoptee as a listener, assessing the degree he/she showed interest in, acknowledged, and validated his/her adoptive mother (ICC: .90). The Communication scale measured the behavior of an adoptee as a communicator, assessing the degree to which he/she positively or negatively conveyed their needs to his/her adoptive mother (ICC: .83). The Prosocial scale measured the behavior of an adoptee as competently and effectively relating with his/her adoptive mother (ICC: .83).

Overall observed family relationships were measured using the SIBS Relationship Quality scale, comprised of the observer's evaluation of the quality of the adoptee-adoptive mother dyad. Relationship Quality was measured using a nine point scale ranging from 1 (*negative*) to 9 (*positive*), with higher scores indicating a more positive dyadic relationship (ICC: .90).

Adoption Type. Adoption Type was assessed utilizing adoptees' self-reported ethnicity. A dichotomous variable was created where 0 = inracial adoption (adoptee adopted by adoptive parents of the same race as themselves) and 1 = transracial adoption (adoptee adopted by adoptive parents of a different race than themselves).

Adoptee-report of adoption-related attitudes. Two adoptee-reported adoption-related attitude variables were measured: Adoption Feelings and Adoption Interest. Adoptees reported Adoption Feelings and Adoption Interest utilizing the Opinions About Adoption instrument (OPAD; Search Institute, 1992). The OPAD is 30-item measure intended to assess adoption-related factors. The OPAD was adapted for use by the SIBS study from the Survey Form for Adopted Adolescents, a measure developed for use in the

Search Institute's National Study of Adoptive Families. Adoptees were asked to rate their opinions about adoption on a four point scale ranging from 1 (*definitely true*) to 4 (*definitely false*). Two subscales of the OPAD were used: Positive Affect About Adoption and Interest in Birth Background.

Adoptee-reported Adoption Feelings were assessed using the 12-item Positive Affect About Adoption subscale ($\alpha = .88$). Items were reverse coded as necessary so that higher scores indicated higher positive feelings about adoption. Questions answered included, "*I think my parent(s) are happy that they adopted me,*" and "*I feel good that I'm adopted.*"

Adoptee-reported Adoption Interest was assessed using the 9-item Interest in Birth Background subscale ($\alpha = .90$). Items were reverse coded as necessary so that higher scores indicated higher wondering about birth parents and birth background. Questions answered included, "*I wish I knew more about my medical history,*" and "*I wish I knew more about my birthmother.*"

Covariates. Two covariates were included in the analyses: Biological Sex and Negative Affect. Based upon previous research citing relationship differences between mother-son and mother-daughter relationships during late adolescence and emerging adulthood (Collins & Laursen, 2004; Levitt, Silver, & Santos, 2007; Rice & Mulkeen, 1995; Youniss & Smollar, 1985), Biological Sex was a covariate in all analyses. Biological Sex was self-reported by the adoptees as a dichotomous variable, where 1 = male and 2 = female.

The wording of the OPAD (Search Institute, 1992) is such that the phrasing of

certain OPAD questions might skew results in favor of adoptees who were more highly preoccupied or felt more negatively about adoption. For example, almost all questions comprising the Adoption Interest scale began with the phrase “I wish.” In order to account for this a Negative Affect variable was utilized as a covariate in all analyses. Negative Affect was measured using a shortened version of the Multidimensional Personality Questionnaire (MPQ; Tellegen & Waller, 2008), created for use by the SIBS. The MPQ is a 198-item self-report personality inventory created through factor analysis, consisting of three higher order factors (positive emotionality, negative emotionality, and constraint), each derived by summing a uniquely weighted combination of 11 primary scales. Answers were rated on a four point Likert scale (reverse coded as necessary), with higher scores indicating higher trait levels.

The Negative Affect higher order factor, which includes all 11 primary scales, is weighted heavily of three 18-item primary scales: Stress Reaction, Aggression, and Alienation (see Tellegen & Waller, 2008 for measure reliability). Respondents high in Negative Affect are described as highly stressed and harassed, prone to strong negative emotions, and involvement in negative relationships, while those low in Negative Affect are described as having a higher tolerance for negative emotional responses (Tellegen & Waller, 2008).

Data Analyses

Analytic plan. Testing this study’s hypotheses required the examination of possible adoption-related variables that might account for the variance in self-reported and observed emerging adult adoptee relationships with adoptive mothers. To accomplish

this, hierarchical regression was employed. Separate analyses were run for self-report and observation data, and adoptee-adoptive mother relationship indicators (Conflict, Closeness, and Relationship Quality) were accounted for in separate equations. Biological Sex and Negative Affect were entered as covariates in Step 1 for all analyses. Due to the highly correlated nature of Adoption Type with Adoption Interest and its demographic nature, Adoption Type was entered in Step 2. Adoption Feelings and Adoption Interest were entered simultaneously in Step 3, due to their highly correlated nature and the relative importance they likely have on adoptee-adoptive mother relationships in emerging adulthood. Five regression equations were tested: Biological Sex/Negative Affect, Adoption Type, and Adoption Feelings/Adoption Interest accounting for self-reported adoptee-adoptive mother Conflict and Closeness; Biological Sex/Negative Affect, Adoption Type, and Adoption Feelings/Adoption Interest accounting for observed adoptee-adoptive mother Conflict, Closeness, and Relationship Quality.

Missing variable analysis. Missing data across all study variables ranged from 0% to 14.3%, and were limited to the adoption-related attitude variables (Adoption Feelings and Adoption Interest) and Negative Affect variable. In the self-report sample, missing data for the Negative Affect variable was 9.6% and ranged from 13.2% - 14.0% for the adoption-related attitude variables. In the observation sample, missing data for the Negative Affect variable was 10.3% and ranged from 13.6% - 14.3% for the adoption-related attitude variables.

T-test and chi square comparisons between adoptees with complete data and those

with incomplete data were performed for all study variables. Only one statistically significant difference was found between adoptees with complete data and those with incomplete data, in both the self-report and observation data sets. In the self-report sample, males had a significantly higher percentage of missing data compared to females, $\chi^2 = 4.43$, $df = 1$, $N = 272$, $p = .035$. In the observation sample, males had a significantly higher percentage of missing data compared to females, $\chi^2 = 6.13$, $df = 1$, $N = 273$, $p = .013$. All missing data were imputed through expectation maximization using SPSS 22.0.

Results

Self-report

Conflict. Means, standard deviations, and intercorrelations for self-reported Conflict with adoptive mothers can be found in Table 1. Preliminary analyses revealed that Negative Affect, $r = .41$, $p < .001$, Adoption Type, $r = -.14$, $p = .01$, Adoption Feelings, $r = -.48$, $p < .001$, and Adoption Interest, $r = .29$, $p < .001$, were all significantly correlated with self-reported Conflict.

Results of the hierarchical regression are reported in Table 2. At Step 1, the Biological Sex and Negative Affect covariates accounted for a statistically significant amount of variance, $F(2, 269) = 27.43$, $p < .001$, $R^2 = .17$. At Step 2, Adoption Type produced a 1% increase in the proportion of variance accounted for, over and above the covariates. At Step 3, Adoption Feelings and Adoption Interest produced a 16% increase in proportion of variance accounted for, $F(2, 266) = 31.25$, $p < .001$, $R^2 = .34$. Overall, this combination of variables explained a significant amount of the variance in self-reported Conflict with adoptive mothers, $F(5, 266) = 26.75$, $p < .001$. The R squared

value was .34, which indicates 34% of the variance in self-reported Conflict with adoptive mothers was accounted for by the model. These results indicate that adoptees with lower interest in adoption and more positive feelings about adoption reported lower conflict with adoptive mothers during emerging adulthood.

Closeness. Means, standard deviations, and intercorrelations for self-reported Closeness with adoptive mothers can be found in Table 3. Preliminary analyses revealed that Biological Sex, $r = .19, p = .001$, Negative Affect, $r = -.32, p < .001$, Adoption Feelings, $r = .55, p < .001$, and Adoption Interest, $r = -.17, p = .002$, were all significantly correlated with self-reported Closeness.

Results of the hierarchical regression are reported in Table 4. At Step 1, the Biological Sex and Negative Affect covariates accounted for a statistically significant amount of variance, $F(2, 269) = 21.38, p < .001, R^2 = .14$. At Step 2, Adoption Type produced no increase in the proportion of variance accounted for, over and above the covariates. At Step 3, Adoption Feelings and Adoption Interest produced a 21% increase in proportion of variance accounted for, $F\Delta(2, 266) = 41.54, p < .001, R^2 = .34$. Overall, this combination of variables explained a significant amount of the variance in self-reported Closeness with adoptive mothers, $F(5, 266) = 27.74, p < .001$. The R squared value was .34, which indicates 34% of the variance in self-reported Closeness with adoptive mothers was accounted for by the model. These results indicate that adoptees with more positive feelings about adoption reported higher closeness with adoptive mothers during emerging adulthood.

Observation

Conflict. Means, standard deviations, and intercorrelations for observed Conflict with adoptive mothers can be found in Table 5. Preliminary analyses revealed that Adoption Type, $r = -.20, p < .001$, and Adoption Feelings, $r = -.15, p = .006$, were significantly correlated with observed Conflict.

Results of the hierarchical regression are reported in Table 6. At Step 1, the Biological Sex and Negative Affect covariates did not account for a statistically significant amount of variance in the model. At Step 2, Adoption Type produced a 4% increase in the proportion of variance accounted for, over and above the covariates, $F\Delta(1, 269) = 11.00, p = .001, R^2 = .04$. At Step 3, Adoption Feelings and Adoption Interest produced a 3% increase in proportion of variance accounted for, $F\Delta(2, 267) = 3.54, p = .03, R^2 = .07$. Overall, this combination of variables explained a significant amount of the variance in observed Conflict with adoptive mothers, $F(5, 267) = 3.74, p = .003$. The R squared value was .07, which indicates 7% of the variance in observed Conflict with adoptive mothers was accounted for by the model. These results indicate that transracial adoptees were observed to have lower conflict with adoptive mothers during emerging adulthood, and adoptees with more positive feelings about adoption were observed to have lower conflict with mothers during emerging adulthood.

Closeness. Means, standard deviations, and intercorrelations for observed Closeness with adoptive mothers can be found in Table 7. Preliminary analyses revealed that Biological Sex, $r = .25, p < .001$, Adoption Type, $r = .10, p = .054$, and Adoption Feelings, $r = .19, p = .001$, were all significantly correlated with observed Closeness.

Results of the hierarchical regression are reported in Table 8. At Step 1, the Biological Sex and Negative Affect covariates accounted for a statistically significant amount of variance, $F(2, 270) = 9.93, p < .001, R^2 = .07$. At Step 2, Adoption Type produced no increase in the proportion of variance accounted for, over and above the covariates. At Step 3, Adoption Feelings and Adoption Interest produced a 3% increase in proportion of variance accounted for, $F\Delta(2, 267) = 3.82, p = .023, R^2 = .10$. Overall, this combination of variables explained a significant amount of the variance in observed Closeness with adoptive mothers, $F(5, 267) = 5.66, p < .001$. The R squared value was .10, which indicates 10% of the variance in observed Closeness with adoptive mothers was accounted for by the model. These results indicate that adoptees with more positive feelings about adoption were observed to have higher closeness with adoptive mothers during emerging adulthood.

Relationship quality. Means, standard deviations, and intercorrelations for observed Relationship Quality with adoptive mothers can be found in Table 9. Preliminary analyses revealed that Biological Sex, $r = .12, p = .027$, Negative Affect, $r = -.12, p = .028$, Adoption Type, $r = .15, p = .006$, and Adoption Feelings, $r = .25, p < .001$, were all significantly correlated with observed Relationship Quality.

Results of the hierarchical regression are reported in Table 10. At Step 1, the Biological Sex and Negative Affect covariates accounted for a statistically significant amount of variance, $F(2, 270) = 3.78, p = .024, R^2 = .03$. At Step 2, Adoption Type produced a 1% increase in the proportion of variance accounted for, over and above the covariates, $F\Delta(1, 269) = 4.05, p = .045, R^2 = .04$. At Step 3, Adoption Feelings and

Adoption Interest produced a 5% increase in proportion of variance accounted for, $F(2, 267) = 6.79, p = .001, R^2 = .09$. Overall, this combination of variables explained a significant amount of the variance in observed Relationship Quality with adoptive mothers, $F(5, 267) = 5.16, p < .001$. The R squared value was .09, which indicates 9% of the variance in observed Relationship Quality with adoptive mothers was accounted for by the model. These results indicate that transracial adoptees had higher observed relationship quality with adoptive mothers, and adoptees with more positive feelings about adoption had higher observed relationship quality with adoptive mothers during emerging adulthood.

Discussion

This study used self-report and observational data to examine the association between adoption-related variables and the relationships adoptees have with their adoptive mothers during emerging adulthood. It was hypothesized that adoption-related variables would account for a significant proportion of the variance in adoptee-adoptive mother relationship quality in emerging adulthood. This study is unique because it is one of the first to utilize adoptee-reported and observational data to gain a deeper understanding of the adoptee-adoptive mother relationship during emerging adulthood.

The most significant study finding was, regardless of data collection method, the attitudes emerging adult adoptees have about adoption appear to play an important role in the relationships they have with their adoptive mothers. These results add to the growing body of literature that finds how an adoptee feels about or perceives adoption is related to the relationship they have with an adoptive parent during adulthood. The results of this

study support the research of Martin, Kelly, and Towner-Thyrum (1999), who found young adults' satisfaction with adoption was positively related to family relationships. Unlike Martin et al.'s (1999) racially homogenous sample, this study's sample was comprised of inracial and transracial adoptees with an earlier average placement age (4.7 months versus 13 months), and this study incorporated both self-report and independent observations of the adoptee-adoptive mother relationship during emerging adulthood. In light of the differences in sample characteristics between studies, that adoptees' attitudes about adoption remained important in the adoptee-adoptive parent relationship during emerging adulthood suggests future research in this area is needed in order to verify these findings.

Adoption Feelings and Family Adoption Communication

While adoption attitudes accounted for a significant amount of the variance in relationships with adoptive mothers during emerging adulthood, it is particularly notable that how an adoptee felt about adoption was statistically significant in every model. How do emerging adult adoptees gain a sense of feeling positively about adoption? Adoption socialization is the primary responsibility of the adoptive parents (Brodzinsky, 1987; Hajal & Rosenberg, 1991). Specifically, adoptive mothers instill positive feelings about adoption in their children by how they communicate about adoption within the family (Brodzinsky, 2006; Hawkins et al., 2008; Levy-Shiff, 2001).

Theoretical support exists for the importance of open adoption communication in the adoptee-adoptive parent relationship. Open adoption communication has been defined as a continuum upon which adoptive family members explore adoption issues

(Brodzinsky, 2005). Early adoption theory focused on the importance of adoption communication as a task unique to adoptive families, related to the formation of healthy adoptive family relationships (Kirk, 1984). For example, adoptive parents have the unique task of telling their child they are adopted and answering their child's questions about adoption. Two communication strategies for adoptive families are commonly presented in literature: either acknowledgement within the adoptive family that adoptive parenting is different from biological parenting (acknowledgement-of-differences), or denial within the adoptive family that adoptive parenting is different from biological parenting (rejection-of-differences; Kirk, 1984). These communication strategies within families were thought to be related to adoptive family relationships. Specifically, reliance on rejection-of-differences was thought to decrease family relations, while acknowledgement-of-differences was thought to lead to increased positive family relations (Kirk, 1984).

Researchers have expounded upon the role and importance of adoption communication and family relationships during childhood and adolescence, citing the need for open communication about adoption shifts over time given the life stage of the adoptee (Brodzinsky, 1987, 2005; Jones & Hackett, 2008; Wrobel, Kohler, Grotevant, & McRoy, 2004). For example, more rejection-of-differences communication might be necessary during toddlerhood as the adoptee is tasked with attaching to parents, versus adolescence when greater cognition surrounding the meaning of adoption and physical parent-child differences require more communication around the acknowledgement of adoption differences within the family (Brodzinsky, 1987). The use of communication to

acknowledge and reject differences may vary between adoptive families, with families who communicate via extreme forms of acknowledgement and/or rejection of differences exhibiting problematic family relationships (Kaye, 1990; Kaye & Warren, 1988).

While adoption communication theory within adoptive families has focused on childhood and adolescence, the importance of open adoption communication on positive adoptee well-being and positive adoptive family relationships has been shown to extend throughout the life cycle (Brodzinsky, 2006; Brodzinsky & Pinderhughes, 2002; Farr, Grant-Marsney, & Grotevant, 2014; Levy-Shiff, 2001). During childhood, an open, direct, and nondefensive communicative atmosphere has been associated with higher self-esteem and lower adjustment difficulties for adoptees, as well as closer family relationships (Brodzinsky, 1987, 2006; Wrobel et al., 2004). As adoptees enter adolescence, open adoption communication is again associated with positive individual outcomes, including higher self-esteem, secure identity, positive adjustment, higher positive feelings about being adopted, as well as closer family relationships (Brodzinsky, 2006; Brodzinsky & Pinderhughes, 2002; Hawkins et al., 2008; Le Mare & Audet, 2011; Sobol et al., 1994; Stein & Hoopes, 1985).

While less is known about open adoption communication and adoptive family relationships during emerging adulthood, the benefits of open adoption communication appear to continue. Increased adoption communication is related to individual outcomes, such as higher self-concept and lower pathology, as well as secure attachment with mothers and increased cohesion with parents (Farr et al., 2014; Levy-Shiff, 2001; Sobol et al., 1994). Collectively, this body of research provides a tentative explanation for this

study's findings that adoptees' positive feelings about adoption are associated with positive emerging adult adoptee-adoptive mother relationships. Overall, the extant research and theory suggests that adoptive parents who consciously create an environment open to adoption discussion throughout the lifespan likely foster more positive individual outcomes and positive feelings about adoption in their adopted children, in turn positively impacting the adoptee-adoptive parent relationship into emerging adulthood. This is particularly important, as positive parent-child relationships have been associated with a successful transition to emerging adulthood (see Aquilino, 2006; Fosco et al., 2012; Johnson et al., 2010; Knoester, 2003; Paradis et al., 2011; van Wel et al., 2000).

Inracial and Transracial Adoption

A second significant finding of this study was that transracial adoptees were observed to have lower conflict and higher relationship quality with their adoptive mothers during emerging adulthood compared to inracial adoptees. These findings are not particularly surprising in light of the adoption literature, which finds transracial adoptees do equally as well or even better than their inracial and nonadoptive counterparts on multiple individual and familial outcomes. Comparisons between inracial and transracial adoptees during adolescence have found no differences in academic performance, family relationships, psychological adjustment, or physical health (Burrow et al., 2004). In adulthood, no differences have been found between international adult adoptees and nonadoptees in terms of well-being, depression, and self-esteem (Storsbergen, Juffer, van Son, & Hart, 2010). Across developmental stages, no difference in self-esteem has been

found between adoptees (including transracial adoptees) and nonadoptees (Juffer & van IJzendoorn, 2007).

Research also supports transracial and international adoptees as doing better in numerous individual outcomes compared to their inracial and nonadoptive counterparts. In adolescence, international adoptees have reported more positive communication with mothers compared to nonadoptees (Lanz, Iafrate, Rosnati, & Scabini, 1999). During adolescence and emerging adulthood, Swedish international adoptees were found to score higher in self-esteem compared to the general population (Cederblad, Hook, Irhammar, & Mercke, 1999; Westhues & Cohen, 1997). Across developmental stages, international adoptees have been found to have fewer behavior, externalizing, and internalizing problems compared to domestic adoptees (Juffer & van IJzendoorn, 2005).

Differences in outcomes between transracial adoptees, inracial adoptees, and nonadoptees extend into the parent-child relationship. During childhood, international adoptees have reported parents as more supportive compared to inracial adoptees (Levy-Shiff, Zoran, & Shulman, 1997). While overall differences in adolescent-parent relationships were not found between transracial and nonadopted adolescents, transracial adolescents have reported less communication problems with mothers and equal levels of openness and support compared to nonadoptees (Rosnati & Marta, 1997). Additionally, during adolescence more conflict and less warmth and support has been found between White adoptive mothers and White adoptees, compared to ethnic minority adoptees and their White adoptive mothers (Rueter et al., 2009). Collectively, this body of research and

the findings of this study provide evidence for positive transracial adoptee well-being not only individually, but also for parent-child relationships extending into adulthood.

Limitations

Two limitations of this study exist. First, while the ability existed to create a variable designating adoptees as either transracially or inracially adopted, study participants were not asked to specify whether their adoptions were domestic transracial or international during the data collection process. While the exact proportion of transracial domestic adoptees and international adoptees in this study is unknown, the majority of adoptees in this study identified as Asian/Pacific Islander (69%). One known characteristic of the SIBS sample is it includes a large proportion of Korean adoptees, therefore it is reasonable to assume the majority of the sample were international adoptees. Recommendations for future research include further study of how the association between emerging adult adoptee-adoptive mother relationships may differ between international and domestic transracial adoptees, as well as how these relationships may or may not differ from their inracial adoptee counterparts.

Second, the results of this study are limited in their generalizability to the adoptee population, as the sample excluded kinship, special needs, and foster care adoption. Additionally, given the recent trend towards structural openness in adoption (contact between birth family and adoptive family), it is unclear whether these results generalize to families involved in these types of arrangements as well. Future research should focus on how adoption communicativeness might be differently associated in the emerging adult adoptee-adoptive mother relationship in differing forms of adoption.

Implications

This study has implications for practitioners and researchers based upon its non-deficit approach in the study of the relationships adoptees have with their adoptive mothers during emerging adulthood. For practitioners, the relationship between positive adoption communication, positive feelings about adoption, and positive adoptee-adoptive mother relationships provides the groundwork necessary to take a strengths-based approach with the adopted individuals and adoptive families they serve. Those who prepare potential adoptive families for adoption should continue to stress the importance of creating a positive environment conducive to open adoption discussion, by educating families on the role this communication plays on positive parent-child relationships not only when the adoptee is young, but throughout the lifespan. Additionally, practitioners can use this knowledge to inform their work with adoptive families by proactively offering resources to adoptive parents that stress the importance of ongoing adoption communication on parent-child relationships throughout the life course, as well as provide concrete strategies for creating an environment conducive to positive discussion about adoption.

While most adoption research focuses on childhood and adolescence, this study provides evidence to researchers of the dynamic nature of adoptive family relationships, their importance, and the need for continued research on adoptees and adoptive families in adulthood. For example, while few studies have investigated the relationship adoptees have with their adoptive mothers during adulthood, none exist that investigate the relationship adult adoptees have with their adoptive fathers. Given the findings of this

study, it is likely adoption-related variables also have a significant association with the emerging adult adoptee-adoptive father relationship. Beyond emerging adulthood, numerous transitions occur that have the potential to impact the relationships adoptees have with their adoptive mothers and adoptive fathers. For example, little is known whether the birth of a biological child to an adoptee might trigger unresolved grief and loss in the adoptive mother and change the adoptee-adoptive mother relationship, or how the death of one adoptive parent might impact the relationship an adoptee has with his or her remaining adoptive parent. Clearly, much remains to be explored in adoptee-adoptive parent relationships in adulthood.

Study 2: Adoption and Adoptive Mother-Adoptee Relationships During Emerging Adulthood

It has been estimated there are approximately 1.5 million adoptees in the United States under the age of 18, accounting for just over 2% of the population (Nickman et al., 2005). The prevalence of adoption has helped advance knowledge of the uniqueness of adoptive family life, and has established inherent differences between adoptive and nonadoptive families. One of the most prominent differences between family types is the existence of two sets of parents in adoptive families: the adoptive parent(s) and the birth parent(s). The existence of a second set of parents presents unique parenting challenges to adoptive parents, which requires them to view adoptive parenting as different from biological parenting (Brodzinsky, 1987; Kirk, 1984). Other unique tasks adoptive parents undertake include telling their child they are adopted, providing an environment conducive to open communication about adoption, and dealing with visible differences if their family was formed through the adoption of a child of a different race and/or ethnicity than the adoptive parents.

Despite the advances in adoption research, much of the literature on adoptive family life has concentrated on childhood and adolescence, and little is known about how the unique parenting tasks inherent in adoption might be associated with the relationships adoptive mothers have with their adopted children as they enter adulthood. To move the field forward requires greater understanding of the adoptive mother's viewpoint of adoption and the study of adoptive mother-adoptee relationships in adulthood. Therefore, the purpose of this study is to investigate the relationship between adoption-related

variables (Adoption Type, Adoption Attitudes) and the relationships (Conflict, Closeness, and Relationship Quality) adoptive mothers have with their adopted children during emerging adulthood.

Adoptive Mother-Adoptee Relationships

In order to explore how adoption is uniquely associated with the relationships adoptive mothers have with their adopted children during emerging adulthood, it is important to understand the research on adoptive mother-adoptee relationships. The extant literature assumes a deficit approach, which focuses on comparing the relationships adoptive mothers have with their adopted children to the relationships nonadoptive mothers have with their children, rather than focusing on the uniqueness of the adoptive mother-adoptee relationship. What is known about the adoptive parent-adoptee relationship from the maternal perspective focuses on adolescence, and can be broadly characterized into three areas that include conflict, closeness, and relationship quality.

Overall, the research on mother-child conflict supports adoptive mothers experience greater conflict with their adopted children compared to mothers from differing family types. Comparisons between adoptive, nonadoptive, single, and step mothers found adoptive mothers reported higher conflict with their adolescents compared to mothers in the other family types (Lansford, Ceballo, Abbey, & Stewart, 2001). Additionally, through self-report and observational data, adoptive mothers reported and were observed to have greater conflict with their adopted children compared to nonadoptive mothers during the transition from late adolescence into emerging adulthood

(Walkner & Rueter, 2014).

Research on adoptive mother-adoptee closeness is inconsistent. Adoptive mothers have reported significantly lower closeness and a greater decrease in closeness with adoptees during the transition from late adolescence into emerging adulthood compared to nonadoptive mothers (Walkner & Rueter, 2014). Contradictorily, adoptive mothers have been observed to have significantly higher closeness and a greater increase in closeness with adoptees during the transition from late adolescence into emerging adulthood compared to nonadoptive mothers (Walkner & Rueter, 2014).

Few studies have examined overall relationship quality in the adoptive mother-adoptee relationship. One study focused on adopted adolescents, who rated their families lower in relationship quality compared to adolescents in nonadoptive families (Sharma, McGue, & Benson, 1996). A second study examined observed relationship quality between adoptive and nonadoptive mothers and their children during the transition from late adolescence into emerging adulthood and found only slight differences between family types (Walkner & Rueter, 2014). Adoptive mothers were observed to have a greater increase in overall relationship quality with adoptees during the transition from late adolescence into emerging adulthood in comparison to nonadoptive mothers, however these differences were not significant (Walkner & Rueter, 2014). Given the lack of observational studies on adoptive family relationship quality from the maternal view, further study of this variable will add valuable knowledge to the field. Collectively, research on adoptive mother-adoptee relationships reinforces differences between adoptive and nonadoptive mother-child dyads during adolescence and into emerging

adulthood, however little is known about these relationships after adolescence, particularly during emerging adulthood.

Maternal Relationships with Emerging Adults

Emerging adulthood, the culturally constructed time period occurring between the ages of 18 to 25, is characterized as a period of possibilities, feeling “in-between” (not an adolescent, but not yet an adult), identity exploration, instability (high mobility), and self-focus (Arnett 2000, 2004). For parents, this means navigating from an authority type relationship toward an equal adult relationship with their child (Aquilino, 2006).

Additionally, parents must come to terms with their child’s increasing adult status, learn to seek and accept support from their child, as well as strike a balance between allowing for autonomy while still providing needed support, all while negotiating new relationship rules (Aquilino, 2006; Buchard, 2014).

While research focused on the emerging adults’ point of view has established the impact child-parent relationships have on emerging adult well-being (see Aquilino, 2006; Knoester, 2003; Paradis, Giaconia, Reinherz, & Beardslee, 2011; van Wel, Linssen, & Abma, 2000 for examples), less is known about how emerging adulthood affects mothers. There is evidence that parent-child relationships remain mutually influential not only during emerging adulthood, but across the life span (Aquilino, 2006; Knoester, 2003; Umberson, Pudrovska, & Reczek, 2010). For example, positive relationships between mothers and their children during adulthood are associated with mothers’ mental health (Umberson et al., 2010). Additionally, mothers who perceived their children needed an unusual amount of support reported lower life satisfaction (Fingerman et al., 2012).

Given the unique tasks inherent in adoptive family life, lack of research from the adoptive mother point of view, evidence of lower relationship quality in adoptive mother-adoptee relationships compared to nonadoptive families, and the importance of mother-emerging adult relationships, the next step is to investigate the relationships adoptive mothers have with their adopted children in emerging adulthood. Based upon the literature, Adoption Type and Adoption Attitudes are hypothesized to be particularly salient in adoptive mother-emerging adult adoptee relationships.

Adoption Type

While all adoptive mothers face the unique tasks of adoptive parenting, those who have adopted a child of a different race than themselves (transracial adoption) face additional tasks in adoptive parenting compared to adoptive mothers who have adopted a child of the same race as themselves (inracial adoption). Connections have been made between how transracial adoptive parents navigate these tasks and positive adoptive parent-adoptee relationships. For example, associations have been found between adoptive parents' participation in racial/ethnic holidays and multicultural events and parent-child closeness and satisfaction (Vonk, Lee, & Crolley-Simic, 2010). In addition, Korean adolescent adoptees with parents highly supportive of their ethnic background and ethnic socialization (the acquisition of knowledge, values, and beliefs about one's ethnic heritage and development of group pride and belonging; Kim, Reichwald, & Lee, 2013) reported positive relationships with adoptive parents (Yoon, 2001, 2004).

Perceptual differences in how transracial parenting tasks have been executed within the family have been found between adoptive parents and their children adopted

from Korea; mainly that adoptive parents reported greater cultural socialization engagement than what was reported by their adopted children (Hu, Anderson, & Lee, in press; Kim et al., 2013). Research also indicates that transracial adoptive parents' interest in the cultural socialization of their children diminishes over time (Vonk et al., 2010). This is particularly alarming, as cultural socialization and the building of a racial and/or ethnic identity are particularly salient during late adolescence and emerging adulthood, as adoptees develop identities separate from their parents (Baden, Gibbons, Wilson, & McGinnis, 2013; Feigelman, 2000; Kim et al., 2013; Lee, Yun, Yoo, & Nelson, 2010; Shiao & Tuan, 2008). Given the relationship between transracial adoption-specific parenting tasks and positive parent-child relationships, it is reasonable to assume adoption type (inracial vs. transracial) is associated with the relationships adoptive mothers have with adoptees during emerging adulthood.

Adoptive Mother's Adoption Attitudes

Beyond adoption type, and perhaps more important to the adoptive mother-emerging adult adoptee relationship, is an adoptive mother's attitudes towards adoptive parenting. How an adoptive mother feels about the unique tasks inherent in adoptive family life, particularly during emerging adulthood, may be related to the relationship an adoptive mother has with her adopted child. For example, one unique normative task that may occur in adoptive families during emerging adulthood (the age of majority) is an adoptee's decision to search or reunite with a birth parent (Kohler, Grotevant, & McRoy, 2002; Pacheco & Eme, 1993; Wrobel et al., 2003). An adoptive mother may need to make meaning of her child's decision to undertake birth parent search and reunion.

Positive or negative reactions may occur depending upon the adoptive mother's views and attitudes about this adoptive parenting situation. Adoptive mothers who view search and reunion positively may see this event as a way their adoptees can strengthen their adoptive identity and maintain healthy self-esteem and self-worth, thus potentially creating an easier reunion experience for their child (Hajal & Rosenberg, 1991; Petta & Steed, 2005; Silverman, Campbell, & Patti, 1994). However, adoptive mothers who view search and reunion negatively may feel rejected and betrayed, may question their parental identity, may feel inadequate and/or insecure, or may view the event as the loss of their child (Hajal & Rosenberg, 1991; Petta & Steed, 2005; Silverman et al., 1994). If within an adoptive family the parents' feelings regarding their child's search/reunion are divided (i.e., one parent feels positively about it and the other feels negatively), this may introduce stress into the family system (Silverman et al., 1994), resulting in changes to the adoptive mother-emerging adult adoptee relationship.

Another potential parenting challenge unique to adoptive families is on-going contact with birth relatives, either in the form of a structurally open adoption (on-going contact between birth parent and adoptive family) or after a successful reunion. Adoptive mothers with positive views of adoptive parenting, or who see adoption as less different than biological parenting, are more likely to have positive family relationships and increased family closeness during emerging adulthood (Petta & Steed, 2005; Siegel, 2013). Conversely, adoptive mothers with negative views of adoptive parenting, or those who see adoption as different from biological parenting, may feel their child will view their family as inadequate (Petta & Steed, 2005). Overall, the additional tasks associated

with adoptive parenting, and how they influence adoptive mothers' attitudes about adoptive parenting, may be related to the relationship they have with their adopted children during emerging adulthood.

Current Study

Evidence supports the importance of healthy mother-emerging adult relationships on child well-being, and while research points to lower relationship quality in adoptive mother-adoptee relationships compared to nonadoptive counterparts, research has yet to investigate what might be associated with these differences. Through use of adoptive mother self-report and observational data, this study investigated the association between adoption-related variables and the relationship adoptive mothers have with their adopted children during emerging adulthood. Building upon our knowledge of adoptive mother-adoptee relationships during the transition from adolescence into emerging adulthood, three hypotheses are presented.

- H1: Adoptive mother self-reported and observed Conflict with emerging adult adoptees are associated with adoption-related variables
 - H1a: Adoption Type (inracial vs. transracial), over and above the covariate (Child Biological Sex), will account for a significant amount of variance in Conflict with emerging adult adoptees
 - H1b: Adoption Attitudes will account for a significant amount of variance in Conflict with emerging adult adoptees over and above Adoption Type
- H2: Adoptive mother self-reported and observed Closeness with emerging adult adoptees are associated with adoption-related variables

- H2a: Adoption Type (inracial vs. transracial), over and above the covariate (Child Biological Sex), will account for a significant amount of variance in Closeness with emerging adult adoptees
- H2b: Adoption Attitudes will account for a significant amount of variance in Closeness with emerging adult adoptees over and above Adoption Type
- H3: Adoptive mother observed Relationship Quality with emerging adult adoptees is associated with adoption-related variables
 - H3a: Adoption Type (inracial vs. transracial), over and above the covariate (Child Biological Sex), will account for a significant amount of variance in Relationship Quality with emerging adult adoptees
 - H3b: Adoption Attitudes will account for a significant amount of variance in Relationship Quality with emerging adult adoptees over and above Adoption Type

Method

Sample

Data used in this study were provided by adoptive mothers who participated in the Sibling Interaction and Behavior Study (SIBS; McGue et al., 2007; Walkner & Rueter, 2014), a longitudinal study investigating sibling influence on drug and alcohol use. Data were collected from three family types, including families with two biological children, families with one biological and one adopted child, and families with two adopted children. Data for this study came from a subsample of adoptive mothers with either two adopted children or one adopted and one biological child. Adoptive families were

recruited through the three largest private adoption agencies in Minnesota, and contact information was located through public, birth, or adoption records. Researchers located 90% of the identified adoptive families.

For the full study, potential participants were contacted via phone to determine eligibility. Adoptive families were eligible if they had two children ages 11-21 years, with at least one adoptee placed permanently in the home before two years of age (average age at placement was 4.7 months). The second child could be genetically or non-genetically related to his or her parents, but was required to be non-genetically related to the adoptee. Adopted siblings were required to be within five years of age and have the ability to participate in an all-day assessment. Families formed through kinship, special needs, and foster care adoption were not recruited for this study. Two methods were used to assess family representativeness. First, 73% of families that did not participate in the study were asked questions to assess their representativeness compared to families that did participate in the study. The recruited sample was generally representative of the population from which it was drawn. Second, representativeness was confirmed by comparing Minnesota-specific U.S. census data to the study sample, confirming representativeness (McGue et al., 2007).

In order to focus on adoptive mother-adoptee relationships during emerging adulthood, age of adopted child was restricted and data came from Wave 2 (W2) of the SIBS study. Adoptive mothers were included if their adopted children were 18.50-22.49 years ($M_{\text{age}} = 19.83$, $SD = 1.01$). 271 adoptive mothers' self-reports ($M_{\text{age}} = 51.60$, $SD = 3.60$) and adoptive mother-adoptee observations ($M_{\text{age}} = 52.00$, $SD = 3.55$) were

analyzed. Adoptive mothers predominantly identified as White (98.5%), followed by Black (1.1%), and Asian/Pacific Islander (0.4%). The adopted children of adoptive mother participants identified primarily as Asian/Pacific Islander (69.4%), followed by White (21.8%), Other/Mixed (4.1%), Hispanic (3.3%), and Black (1.5%), and the majority (57.9%) were female.

Procedures

After approval was received from the University of Minnesota Institutional Review Board, adoptive families participated in the study at the University of Minnesota, and informed consent was obtained from all participants. Assessments at W2 consisted of independently completed self-report measures by adoptive mothers and the independent observations of adoptive mothers and adoptees used in this study. Families were given a small honorarium and reimbursed for their travel (McGue et al., 2007).

Families were observed in a room decorated like a living room/dining room where family members completed the observation task around a dining table (Rueter, Keyes, Iacono, & McGue, 2009; Walkner & Rueter, 2014). Families were aware of being recorded by hidden video cameras. A trained interviewer, who left the room during videotaping, gave instructions to the family for participation in a 15-minute interaction. Families were tasked to discuss and attempt to resolve up to three previously identified family problems, beginning with the problem that caused the most disagreements. If families resolved a problem, they were instructed to continue to the next problem. Those who finished their discussion with time remaining continued discussion using cards with questions about family life.

Measures

Adoptive mother report of adoptive mother-child relationships. Adoptive mothers' self-reported relationship quality, Conflict and Closeness, was measured using the Parental Environment Questionnaire (PEQ; Elkins, McGue, & Iacono, 1997). The PEQ is a 50-item questionnaire created to measure aspects of parent-child relationships. Adoptive mothers rated aspects of their relationship with their adopted child on a four point scale (1 = *definitely true* to 4 = *definitely false*). Two subscales of the PEQ were used: Conflict with Parent and Involvement with Parent.

Adoptive mother-reported Conflict with adoptees was measured via the 12-item Conflict with Parent subscale ($\alpha = 0.90$) of the PEQ, in which items were reversed coded and summed so that higher scores indicated higher conflict with adoptees. Example questions include, "*Often there are misunderstandings between my child and me,*" and "*My child and I often get into arguments.*"

Adoptive-mother reported Closeness with adoptees was assessed using the 12-item Involvement with Parent subscale ($\alpha = 0.89$) of the PEQ, in which items were reverse coded and summed so that higher scores indicated higher closeness with adoptees. Example questions include, "*I praise my child when he/she does something well,*" and "*I comfort my child when he/she is discouraged or has a disappointment.*"

Observed adoptive mother-child relationships. Adoptive mother-adoptive child relationship observations were assessed using the SIBS Rating Scales (Rueter et al., 2009; Walkner & Rueter, 2014), adapted from the Iowa Family Interaction Rating Scales (IFIRS; Melby et al., 1998). IFIRS has been used in more than a dozen research studies

with consistently high interrater reliabilities assessed as intraclass correlations (ICC; Melby & Conger, 2001). Trained observers viewed the family interaction tasks and rated an individual's behavior toward each of the other family members using a nine point scale ranging from 1 (*not at all characteristic of the person*) to 9 (*mainly characteristic of the person*). Observer training consisted of 100 completed hours and the passing of written and observation examinations before viewing observation tapes (Rueter et al., 2009). In order to assess reliability, a second observer rated a random selection of 25% of the videotapes. Continued training for observers consisted of required biweekly meetings.

Observed adoptive mother Conflict towards her adopted child was measured using the SIBS Hostility scale. The Hostility scale measured the degree which an adoptive mother displayed hostile, angry, critical, disapproving, and/or rejecting behavior towards her child's actions, appearance, and state through nonverbal and verbal cues (ICC: .85).

Observed adoptive mother Closeness towards her adopted child was measured by summing four SIBS subscales into a single Closeness scale ($\alpha = .84$). The Warmth/Support scale measured the degree which the adoptive mother expressed care, concern, and support toward her adopted child through verbal and nonverbal cues (ICC: .81). The Listener Responsiveness scale measured the behavior of the adoptive mother as a listener, assessing the degree she showed interest in, acknowledged, and validated her child (ICC: .80). The Communication scale measured the behavior of the adoptive mother as a communicator, assessing the degree which she positively or negatively conveyed her needs to her child (ICC: .80). The Prosocial scale measured the behavior of the adoptive

mother as competently and effectively relating with her adopted child (ICC: .77).

Overall observed adoptive mother-adopted child relationships were measured using the SIBS Relationship Quality scale, which is comprised of the observer's evaluation of the quality of the adoptive mother-child dyad. Relationship Quality was measured using a nine point scale ranging from 1 (*negative*) to 9 (*positive*), with higher scores indicating a more positive dyadic relationship (ICC: .90).

Adoption Type. Adoption Type was assessed using a combination of adoptee self-reported ethnicity and adoptive mother self-reported ethnicity to create a dichotomous variable, where 0 = inracial adoption (adoptive mother and adoptee are the same race) and 1 = transracial adoption (adoptive mother and adoptee are different races).

Adoptive mother-report of adoption-related attitudes. Self-reported Adoption Attitudes were assessed using the 10-item Adoption is Different subscale ($\alpha = .90$) of the Opinions About Adoption instrument (OPAD; Search Institute, 1992), a self-report measure that assesses adoption-related factors. The OPAD was adapted for use by the SIBS study from the Survey Form for Adoptive Parents, a measure developed for use in the Search Institute's National Study of Adoptive Families. Adoptive mothers were asked to rate their attitudes about how adoption and adoptive parenting were different than non-adoptive parenting, on a four point scale ranging from 1 (*definitely true*) to 4 (*definitely false*), with items reverse coded and summed so that higher scores indicated greater attitudes of adoptive parenting as different. Example questions include, "*I believe adopted children face challenges and issues that other children do not face,*" and "*I think that being an adoptive parent is different than being a birthparent.*"

Covariate. Due to previous research citing differences in mother-son and mother-daughter relationships (Collins & Laursen, 2004; Levitt, Silver, & Santos, 2007; Rice & Mulkeen, 1995; Youniss & Smollar, 1985), the adopted child's biological sex (Child Biological Sex) was included as a covariate in all analyses. Child Biological Sex was self-reported by adoptees, where 1 = male and 2 = female.

Data Analyses

Analytic plan. Hierarchical regression analyses were conducted in order to examine the proportion of variance accounted for by adoption-related variables in the self-reported and observed relationships adoptive mothers had with their emerging adult adoptees. Separate analyses were conducted for self-report and observation data, and adoptive mother-adoptee relationship indicators (Conflict, Closeness, and Relationship Quality) were accounted for in separate equations. Child Biological Sex was entered as a covariate in Step 1 for all analyses. Given its demographic nature and high correlation with Adoption Attitudes, Adoption Type was entered in Step 2 for all analyses. Due to the relative importance of Adoption Attitudes on the relationships adoptive mothers have with their emerging adult adoptees, it was entered in Step 3 for all analyses. Five regression equations were tested: Child Biological Sex, Adoption Type, and Adoption Attitudes accounting for self-reported adoptive mother-emerging adult adoptee Conflict and Closeness; Child Biological Sex, Adoption Type, and Adoption Attitudes accounting for observed adoptive mother-emerging adult adoptee Conflict, Closeness, and Relationship Quality.

Missing variable analysis. Missing data across all study variables ranged from

0% to 14.3% and was limited to the adoption-related variable Adoption Attitudes. Missing data ranged from 12.2% - 12.5% for the self-report sample and 13.6% - 14.3% for the observation sample. T-test and chi square comparisons between adoptive mothers with complete data and those with incomplete data were calculated for all study variables. No statistically significant differences were found. Missing data were imputed through expectation maximization using SPSS 22.0.

Results

Self-report

Conflict. Means, standard deviations, and intercorrelations for self-reported Conflict with emerging adult adoptees can be found in Table 11. Preliminary analyses revealed that Adoption Attitudes, $r = .15$, $p = .008$, was significantly correlated with self-reported Conflict.

Results of the hierarchical regression are reported in Table 12. At Step 1, the Child Biological Sex covariate did not account for a statistically significant amount of variance. At Step 2, Adoption Type did not produce a significant increase in the proportion of variance accounted for, over and above the covariate. At Step 3, Adoption Attitudes produced a 3% increase in proportion of variance accounted for, $F\Delta(1, 267) = 6.90$, $p = .009$, $R^2 = .03$. Overall, this combination of variables did not explain a significant amount of the variance in self-reported Conflict with emerging adult adoptees. The R squared value was .03, which indicates only 3% of the variance in self-reported Conflict with adoptees was accounted for by the model. While not significant ($p = .057$),

these results indicate that adoptive mothers who have higher attitudes that adoption is different reported higher conflict with adoptees during emerging adulthood.

Closeness. Means, standard deviations, and intercorrelations for self-reported Closeness with emerging adult adoptees can be found in Table 13. Preliminary analyses revealed that Child Biological Sex, $r = .20$, $p = .001$, and Adoption Attitudes, $r = -.18$, $p = .002$, were significantly correlated with self-reported Closeness.

Results of the hierarchical regression are reported in Table 14. At Step 1, the Child Biological Sex covariate accounted for a statistically significant amount of variance, $F(1, 269) = 10.82$, $p = .001$, $R^2 = .04$. At Step 2, Adoption Type produced no increase in the proportion of variance accounted for, over and above the covariate. At Step 3, Adoption Attitudes produced a 3% increase in proportion of variance accounted for, $F(1, 267) = 9.88$, $p = .002$, $R^2 = .08$. Overall, this combination of variables explained a significant amount of the variance in self-reported Closeness with emerging adult adoptees $F(3, 267) = 7.61$, $p < .001$. The R squared value was .08, which indicates 8% of the variance in self-reported Closeness with adoptees was accounted for by the model. These results indicate that adoptive mothers who have higher attitudes that adoption is different reported lower closeness with adoptees during emerging adulthood.

Observation

Conflict. Means, standard deviations, and intercorrelations for observed Conflict with emerging adult adoptees can be found in Table 15. Preliminary analyses revealed that Child Biological Sex, $r = -.12$, $p = .021$, and Adoption Attitudes, $r = -.11$, $p = .038$, were significantly correlated with observed Conflict.

Results of the hierarchical regression are reported in Table 16. At Step 1, the Child Biological Sex covariate accounted for a statistically significant amount of variance, $F(1, 269) = 4.14, p = .043, R^2 = .02$. At Step 2, Adoption Type did not produce a significant increase in the proportion of variance accounted for, over and above the covariate. At Step 3, Adoption Attitudes produced no increase in the proportion of variance accounted for. Overall, this combination of variables did not explain a significant amount of the variance in observed Conflict with emerging adult adoptees. The R squared value was .03, which indicates only 3% of the variance in observed Conflict with adoptees was accounted for by the model.

Closeness. Means, standard deviations, and intercorrelations for observed Closeness with emerging adult adoptees can be found in Table 17. Preliminary analyses revealed no variables were significantly correlated with observed Closeness.

Results of the hierarchical regression are reported in Table 18. At Step 1, the Child Biological Sex covariate did not account for a statistically significant amount of variance. At Step 2, Adoption Type did not produce a significant increase in the proportion of variance accounted for, over and above the covariate. At Step 3, Adoption Attitudes produced no significant increase in the proportion of variance accounted for. Overall, this combination of variables did not explain a significant amount of the variance in observed Closeness with emerging adult adoptees. The R squared value was .02, which indicates only 2% of the variance in observed Closeness with adoptees was accounted for by the model.

Relationship quality. Means, standard deviations, and intercorrelations for observed Relationship Quality with emerging adult adoptees can be found in Table 19. Preliminary analyses revealed that Child Biological Sex, $r = .14$, $p = .012$, and Adoption Type, $r = .10$, $p = .05$, were significantly correlated with observed Relationship Quality.

Results of the hierarchical regression are reported in Table 20. At Step 1, the Child Biological Sex covariate accounted for a statistically significant amount of variance, $F(1, 269) = 5.19$, $p = .024$, $R^2 = .02$. At Step 2, Adoption Type did not produce a significant increase in the proportion of variance accounted for, over and above the covariate. At Step 3, Adoption Attitudes did not produce a significant increase in proportion of variance accounted for. Overall, this combination of variables did not explain a significant amount of the variance in observed Relationship Quality with emerging adult adoptees. The R squared value was .03, which indicates only 3% of the variance in observed Relationship Quality with adoptees was accounted for by the model.

Discussion

This study used observation and self-report data to examine the potential association between adoption-related variables and the relationships adoptive mothers have with their adopted children during emerging adulthood. It was hypothesized that adoption-related variables would account for a significant proportion of the variance in adoptive mother-emerging adult adoptee relationship quality. This study is unique because it is one of the first to examine adoptive family relationships from the maternal point of view during the understudied developmental period of emerging adulthood.

Overall, the findings of this study suggest that adoptive mothers' attitudes about adoption, or whether they had adopted transracially or inracially, had little association with the relationships they had with their adopted children during emerging adulthood. However, one association found in the current study warrants in-depth discussion. Namely, adoptive mothers who held attitudes of adoption and adoptive parenting as no different (did not acknowledge differences between adoptive and nonadoptive families) than biological parenting had higher relationship quality with their emerging adult adoptees. These results are indirectly comparable to previous research, which investigated the relationship between adoptive parents' attitudes about adoption and adoptive family life during adolescence. One study found increased family time, and thus the strengthening of adoptive family relationships, led to a decrease in the acknowledgement of differences that adoptive family life is different from nonadoptive family life (Palacios & Sanchez-Sandoval, 2005). The results of the current study relate to these findings, as both found a relationship between attitudes of adoption as different and the relationship adoptive parents have with their adopted children.

A second study investigated adoptive parents' attitudes about adoptive parenting using a measure similar to the one utilized in the current study. Of adoptive parents who reported feeling comfortable openly discussing adoption with their adopted adolescents, the majority rejected that adoptive parenting was different from nonadoptive parenting (Benson, Sharma, & Roehlkepartain, 1994). These findings are important because they suggest a relationship between the rejection of adoptive parenting as different and open adoption communication. Research provides evidence as to the importance of open

adoption communication and higher adoptive parent-adoptivee relationship quality, starting in childhood and extending into emerging adulthood (Brodzinsky, 2006; Farr, Grant-Marsney, & Grotevant, 2014; Sobol, Delaney, & Earn, 1994; Wrobel, Grotevant, & McRoy, 2004). While the current study did not directly examine open adoption communication, it was found that adoptive mothers who felt adoptive parenting was less different had higher relationship quality with adoptees during emerging adulthood. Together, the findings of this study and the current study highlight the potential importance of adoption communication, adoptive parents' attitudes about adoptive parenting, and adoptive parent-adoptivee relationship quality. Future research is needed that explores the connection between these variables.

Overall, these three studies demonstrate a relationship between adoption attitudes and the adoptive parent-adoptivee relationship. Beyond these studies exists a body of research that provides possible context for the non-significant findings of this study; it is possible adoptive parents and adoptive families may not be as different from nonadoptive families as is commonly perceived. Despite the deficit approach normally taken in adoptive parent research, review of the adoption literature finds generally positive outcomes for adoptive families, and that adoptive families might not be more troubled than their nonadoptive counterparts (O'Brien & Zamostny, 2003). There is also research that supports adoptive parents do as well, or even surpass, their nonadoptive counterparts in the general areas of parental investment, parenting practices and attitudes, as well as parental and child well-being. It is possible that parenting similarities and differences in favor of adoptive parents, in comparison to nonadoptive parents, provide support for this

study's findings. Perhaps parenting similarities between adoptive and nonadoptive mothers occur when adoptive mothers view adoptive parenting as more similar to, rather than different from, biological parenting.

Parental Investment

The literature on parental investment finds adoptive parents have inherent strengths, including older age associated with financial security, high valuing of children as indicated by their willingness to proceed with the lengthy adoption process, and their ability to overcome numerous obstacles related to infertility and the adoption process (Brodzinsky & Huffman, 1988; Hamilton, Cheng, & Powell, 2007; O'Brien & Zamostny, 2003). Differences in parental investment between adoptive and biological parents begins in childhood and extends into emerging adulthood. During childhood adoptive parents were more likely to send their children to preschool and summer school compared to biological parents, had similar involvement in their adopted child's activities compared to biological parents, and were more likely to play games, build things, and exercise with their adopted children compared to biological parents (Borders, Black, & Pasley, 1998; Gibson, 2009; Hamilton et al., 2007). In adolescence, adoptive mothers reported spending more time with their adopted children compared to single-mother, stepfather, and stepmother families (Lansford et al., 2001). Differences in parental investment between adoptive and biological parents have also been found to extend into adulthood, as emerging adult adoptees reported being more likely to receive cars, rent, and personal loans in comparison to emerging adults raised by biological parents (Gibson, 2009). Overall, adoptive parents have shown equal, and more often greater, amounts of parental

investment in their children compared to biological parents across the lifespan. Relating this body of literature to results discussed previously, it is possible the increased time adoptive mothers spend with their adopted children translates into lower attitudes of adoption as different, therefore resulting in increased adoptive mother-adoptee relationship quality.

Parenting Attitudes and Practices

Research finds adoptive parents have similar parenting practices and attitudes compared to nonadoptive parents during childhood and adolescence. It is possible these similar parenting practices and attitudes between parental types are indicative of adoptive mothers not viewing adoptive parenting differently from nonadoptive parenting. Similar attitudes about family life have been expressed by adoptive and biological parents, including opinions about maternal employment and attitudes about the importance of marriage (Borders et al., 1998). These similarities included desirable behavioral attitudes for their children, as both adoptive and biological parents felt it important that their children and adolescents follow the rules, do well in school, and engage in creative activities (Borders et al., 1998). Differences were also found between adoptive and biological mothers in parenting attitudes, such that adoptive mothers reported fewer parenting doubts in comparison to biological mothers (Cohen, Coyne, & Duvall, 1996). Parenting practices were also found to be more similar than different between adoptive and biological parents of children and adolescents, as both parental types included the use of positive parenting behaviors, such as praising and hugging their child (Borders et al., 1998). Across the literature, adoptive and biological parents tend to have similar

parenting attitudes and parenting practices, providing evidence that adoptive mothers do not view adoptive parenting as different from biological parenting.

Parental and Child Well-Being

Adoptive and biological parents reported many similarities on a variety of parental well-being indicators. For example, parents of adopted children reported nearly the same levels of depression, health, self-esteem, and overall happiness in comparison to parents of biological children (Borders et al., 1998). Adoptive and biological parents of adolescents have also been found to have similar levels of stress, and adoptive parents were even found to have lower stress scores in comparison to measure norms (Sanchez-Sandoval & Palacios, 2012).

The similarities in well-being reported by adoptive and biological parents also extend into the reported well-being of their children. For example, adoptive parents reported their school age children as equally capable as biological children of social interaction and desirable behaviors, such as following the rules and trying new things (Borders et al., 1998). Adopted children were also seen as having similar levels of problem behavior, well-being, and prosocial behavior in comparison to children of biological parents (Borders et al., 1998). Overall, the well-being of both adoptive parents and their adopted children has been shown to be similar to that of biological parents and their biological children, providing the basis for positive adoptive mother-adoptee relationships.

Strengths and Limitations

This study adds valuable knowledge to the field of adoptive family research and has multiple strengths. First, because adoption research has neglected to study adoption in adulthood (Palacios & Brodzinsky, 2010), a major strength of this research study is its focus on the adoptive mother-adoptee relationship during emerging adulthood. Given the association between parent-emerging adult relationships and positive well-being (Aquilino, 2006; Fosco, Caruthers, & Dishion, 2012; Paradis et al., 2011), it is clear additional research is needed which investigates adoptive family relationships and adoptee well-being during this developmental period. A second strength of this study is its focus on the often neglected adoptive mother point of view, utilizing strong methodology that incorporates adoptive mother self-report and observational data.

Despite multiple strengths, this study also has limitations. First, while significant associations were not found between adoption-related variables and adoptive mother-emerging adult adoptee relationship quality, it is possible additional variables not included in this study's data set might have been significant. For example, how adoptive families discuss adoption has been associated with positive family outcomes during emerging adulthood (Farr et al., 2014; Levy-Shiff, 2001; Sobol et al., 1994), yet this research has only been conducted from the adopted adults' point of view. Additionally, this study was only able to investigate international and domestic transracial adoption using a dichotomous variable specifying inracial or transracial. Existing transracial adoption research has focused on how adoptive parents racially and culturally socialize their adopted children (see Lee, Grotevant, Hellerstedt, Gunnar, & The Minnesota International Adoption Project Team, 2006; Mohanty, Keoke, & Sales, 2006; Song &

Lee, 2009), but little is known about the impact of this socialization on the relationships adoptive mothers have with adoptees during emerging adulthood.

Implications

The implications of this research are two-fold. First, this research is helpful for practitioners, as it demonstrates the need to take a non-stigmatizing, strengths-based approach to work with adoptive families during emerging adulthood. It is clear more research is needed that contributes to the knowledge of the role of adoptive mothers have in emerging adult adoptive families. Based upon the state of the research, this study serves as a reminder to those who work with adoptive parents that given the lack of knowledge about adoptive families in emerging adulthood, presenting problems should not automatically assumed to be adoption-related. Additionally, this study summarizes numerous strengths of adoptive parents as research shows they are not substantially different from biological parents on parental well-being, parenting practices, and parental investment.

For researchers, this study demonstrates the continued need for empirically-based, theory driven research that builds upon what is known about adoptive family relationships in childhood and adolescence. It is also clear that adoptive family research needs to heed the call of others in the field to move away from investigating differences between family structures, towards research that looks at adoptive family dynamics, processes, and function (Lansford et al., 2001; Palacios & Sanchez-Sandoval, 2005). Future research on adoptive parents needs to include how adoptive family processes

might be impacted by normative life transitions, such as the marriage of an adopted child or the birth of a grandchild.

While many gains have been made and knowledge of adoptive families has greatly increased, it is clear that much remains to be explored about this unique family form, particularly during adulthood. To move the field forward will require further empirically-based investigation from the perspectives of all members of the adoptive family: adoptive mothers, adoptive fathers, and adoptees.

Table 1

Means, Standard Deviations, and Intercorrelations for Self-reported Adoptee Conflict with Adoptive Mothers

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
Adoptee Conflict	1.88	0.61	-.03	.41***	-.14**	-.48***	.29***
Predictor variable							
1. Biological sex	1.58	0.49		-.01	.20***	.12*	.08
2. Negative affect	86.41	13.30			-.11*	-.34***	.24***
3. Adoption type	0.77	0.42				.05	-.16**
4. Adoption feelings	3.55	0.43					-.15**
5. Adoption interest	2.67	0.68					

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2

Hierarchical Regression Analysis Summary for Self-reported Adoptee Conflict with Adoptive Mothers

Step and predictor variable	<i>B</i>	<i>SE B</i>	β	R^2	ΔR^2
Step 1				.17***	
Biological sex	0.02	0.06	.02		
Negative affect	0.01	0.003	.24***		
Step 2				.18***	.01
Adoption type	-0.11	0.08	-.07		
Step 3				.34***	.16***
Adoption feelings	-0.53	0.08	-.38***		
Adoption interest	0.15	0.05	.16**		

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3

Means, Standard Deviations, and Intercorrelations for Self-reported Adoptee Closeness with Adoptive Mothers

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
Adoptee Closeness	3.15	0.56	.19***	-.32***	.09	.55***	-.17**
Predictor variable							
1. Biological sex	1.58	0.49		-.01	.20***	.12*	.08
2. Negative affect	86.41	13.30			-.11*	-.34***	.24***
3. Adoption type	0.77	0.42				.05	-.16**
4. Adoption feelings	3.55	0.43					-.15**
5. Adoption interest	2.67	0.68					

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4

Hierarchical Regression Analysis Summary for Self-reported Adoptee Closeness with Adoptive Mothers

Step and predictor variable	<i>B</i>	<i>SE B</i>	β	R^2	ΔR^2
Step 1				.14***	
Biological sex	0.15	0.06	.13**		
Negative affect	-0.01	0.002	-.14**		
Step 2				.14***	.00
Adoption type	0.01	0.07	.01		
Step 3				.34***	.21***
Adoption feelings	0.60	0.07	.47***		
Adoption interest	-0.07	0.04	-.08		

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 5

Means, Standard Deviations, and Intercorrelations for Observed Adoptee Conflict with Adoptive Mothers

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
Adoptee Conflict	3.58	1.85	-.01	.04	-.20***	-.15**	-.01
Predictor variable							
1. Biological sex	1.58	0.50		.003	.21***	.10*	.09
2. Negative affect	86.36	13.27			-.10*	-.34***	.23***
3. Adoption type	0.77	0.42				.07	-.15**
4. Adoption feelings	3.55	0.43					-.14**
5. Adoption interest	2.67	0.67					

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 6

*Hierarchical Regression Analysis Summary for Observed Adoptee Conflict with Adoptive**Mothers*

Step and predictor variable	<i>B</i>	<i>SE B</i>	β	R^2	ΔR^2
Step 1				.001	
Biological sex	0.20	0.23	.05		
Negative affect	-0.004	0.01	-.03		
Step 2				.04**	.04***
Adoption type	-0.92	0.27	-.21***		
Step 3				.07**	.03*
Adoption feelings	-0.70	0.28	-.16*		
Adoption interest	-0.16	0.17	-.06		

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 7

Means, Standard Deviations, and Intercorrelations for Observed Adoptee Closeness with Adoptive Mothers

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
Adoptee Closeness	3.98	1.14	.25***	-.09	.10*	.19***	.06
Predictor variable							
1. Biological sex	1.58	0.50		.003	.21***	.10*	.09
2. Negative affect	86.36	13.27			-.10*	-.34***	.23***
3. Adoption type	0.77	0.42				.07	-.15**
4. Adoption feelings	3.55	0.43					-.14**
5. Adoption interest	2.67	0.67					

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 8

Hierarchical Regression Analysis Summary for Observed Adoptee Closeness with Adoptive Mothers

Step and predictor variable	<i>B</i>	<i>SE B</i>	β	R^2	ΔR^2
Step 1				.07***	
Biological sex	0.49	0.14	.21***		
Negative affect	-0.004	0.01	-.05		
Step 2				.07***	.001
Adoption type	0.13	0.16	.05		
Step 3				.10***	.03*
Adoption feelings	0.42	0.17	.16**		
Adoption interest	0.14	0.10	.08		

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 9

Means, Standard Deviations, and Intercorrelations for Observed Adoptee Relationship

Quality with Adoptive Mothers

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
Adoptee Relationship	5.86	1.62	.12*	-.12*	.15**	.25***	.01
Quality							
Predictor variable							
1. Biological sex	1.58	0.50		.003	.21***	.10*	.09
2. Negative affect	86.36	13.27			-.10*	-.34***	.23***
3. Adoption type	0.77	0.42				.07	-.15**
4. Adoption feelings	3.55	0.43					-.14**
5. Adoption interest	2.67	0.67					

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 10

*Hierarchical Regression Analysis Summary for Observed Adoptee Relationship Quality
with Adoptive Mothers*

Step and predictor variable	<i>B</i>	<i>SE B</i>	β	R^2	ΔR^2
Step 1				.03*	
Biological sex	0.20	0.20	.06		
Negative affect	-0.01	0.01	-.04		
Step 2				.04**	.01*
Adoption type	0.50	0.23	.13*		
Step 3				.09***	.05***
Adoption feelings	0.86	0.24	.23***		
Adoption interest	0.15	0.15	.06		

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 11

Means, Standard Deviations, and Intercorrelations for Self-reported Adoptive Mother

Conflict with Adoptees

Variable	<i>M</i>	<i>SD</i>	1	2	3
Adoptive Mother Conflict	1.83	0.52	-.02	-.05	.15**
Predictor variable					
1. Child sex	1.58	0.50		.19***	.08
2. Adoption type	0.77	0.42			.19***
3. Adoption attitudes	2.36	0.63			

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 12

Hierarchical Regression Analysis Summary for Self-reported Adoptive Mother Conflict with Adoptees

Step and predictor variable	<i>B</i>	<i>SE B</i>	β	R^2	ΔR^2
Step 1				.00	
Child sex	-0.02	0.06	-.02		
Step 2				.00	.00
Adoption type	-0.10	0.08	-.08		
Step 3				.03	.03**
Adoption attitudes	0.13	0.05	.16**		

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 13

Means, Standard Deviations, and Intercorrelations for Self-reported Adoptive Mother

Closeness with Adoptees

Variable	<i>M</i>	<i>SD</i>	1	2	3
Adoptive Mother Closeness	3.30	0.48	.20***	-.04	-.18**
Predictor variable					
1. Child sex	1.58	0.50		.19***	.08
2. Adoption type	0.77	0.42			.19***
3. Adoption attitudes	2.36	0.63			

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 14

Hierarchical Regression Analysis Summary for Self-reported Adoptive Mother Closeness with Adoptees

Step and predictor variable	<i>B</i>	<i>SE B</i>	β	R^2	ΔR^2
Step 1				.04***	
Child sex	0.21	0.06	.22***		
Step 2				.05**	.01
Adoption type	-0.05	0.07	-.04		
Step 3				.08***	.03**
Adoption attitudes	-0.14	0.05	-.19**		

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 15

Means, Standard Deviations, and Intercorrelations for Observed Adoptive Mother

Conflict with Adoptees

Variable	<i>M</i>	<i>SD</i>	1	2	3
Adoptive Mother Conflict	2.65	1.46	-.12*	-.08	-.11*
Predictor variable					
1. Child sex	1.58	0.50		.19***	.08
2. Adoption type	0.77	0.42			.19***
3. Adoption attitudes	2.39	0.63			

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 16

Hierarchical Regression Analysis Summary for Observed Adoptive Mother Conflict with Adoptees

Step and predictor variable	<i>B</i>	<i>SE B</i>	β	R^2	ΔR^2
Step 1				.02*	
Child sex	-0.32	0.18	-.11		
Step 2				.02	.00
Adoption type	-0.14	0.22	-.04		
Step 3				.03	.01
Adoption attitudes	-0.21	0.14	-.09		

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 17

Means, Standard Deviations, and Intercorrelations for Observed Adoptive Mother

Closeness with Adoptees

Variable	<i>M</i>	<i>SD</i>	1	2	3
Adoptive Mother Closeness	6.06	1.14	.07	.10	.07
Predictor variable					
1. Child sex	1.58	0.50		.19***	.08
2. Adoption type	0.77	0.42			.19***
3. Adoption attitudes	2.39	0.63			

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 18

*Hierarchical Regression Analysis Summary for Observed Adoptive Mother Closeness
with Adoptees*

Step and predictor variable	<i>B</i>	<i>SE B</i>	β	R^2	ΔR^2
Step 1				.00	
Child sex	0.11	0.14	.05		
Step 2				.01	.01
Adoption type	0.21	0.17	.08		
Step 3				.02	.00
Adoption attitudes	0.10	0.11	.05		

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 19

Means, Standard Deviations, and Intercorrelations for Observed Adoptive Mother

Relationship Quality with Adoptees

Variable	<i>M</i>	<i>SD</i>	1	2	3
Adoptive Mother	5.75	1.63	.14**	.10*	.05
Relationship Quality					
Predictor variable					
1. Child sex	1.58	0.50		.19***	.08
2. Adoption type	0.77	0.42			.19***
3. Adoption attitudes	2.39	0.63			

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 20

*Hierarchical Regression Analysis Summary for Observed Adoptive Mother Relationship**Quality with Adoptees*

Step and predictor variable	<i>B</i>	<i>SE B</i>	β	R^2	ΔR^2
Step 1				.02*	
Child sex	0.40	0.20	.12*		
Step 2				.03*	.01
Adoption type	0.28	0.24	.07		
Step 3				.03	.00
Adoption attitudes	0.07	0.16	.03		

* $p < .05$. ** $p < .01$. *** $p < .001$.

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