# Mothers' Functional Limitations and Relationship Quality With Adult Children: Exploring the Moderating Roles of Race and Gender

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# Catherine Stepniak<sup>1</sup>, J. Jill Suitor<sup>2</sup>, and Megan Gilligan<sup>3</sup>

#### Abstract

Theory and research on intergenerational relations emphasize the salient role that mothers and their adult children play in one another's lives. However, little is known about how mothers' health may shape mother–child relationship quality in later-life. We utilized data from the Within Family Differences Study to explore how mothers' functional limitations affect multiple dimensions of mother–child relationship quality, as reported by mothers and their offspring, with particular emphasis on whether race, child's gender, or generational position moderated these associations. Although mothers' reports of relationship quality were not predicted by their functional limitations, adult children reported higher ambivalence when they perceived their mothers had limitations. Further, adult children in White families reported higher ambivalence when mothers had limitations than did those in Black families. This study highlights the importance of considering the roles of structural factors in shaping the conditions under which health limitations affect mother–child ties.

#### **Keywords**

intergenerational relationships, parent-child relationships, functional limitations, adult children

Both theory and empirical research have demonstrated that the lives of mothers and their children are inextricably linked, such that the experiences of members of one generation impact the members of the other generation as well as the relationship between the two generations (Elder, 1998; Elder et al., 2003). Further, research has consistently shown that mothers and their children maintain a high degree of intergenerational solidarity throughout the life course, even when mothers enter later-life and adult children enter mid-life (Bengtson & Roberts, 1991; Suitor et al., 2016b). Despite the continued salience of the mother-child tie, few studies have explored how mother's health status affects the quality of mother-child relationships. Bengtson, Silverstein and colleagues' work on family solidarity and conflict (Bengtson et al., 2002; Silverstein & Bengtson, 1997) provides a basis to propose that the presence of mothers' limitations may well shape the quality of their relationships with their offspring. However, studies that have explored this question provide an inconsistent picture, with some studies reporting lower relationship quality when parents have health limitations (Fingerman et al., 2006; Fingerman et al., 2008; Kiecolt et al., 2011; Kaufman & Uhlenberg, 1998; Wilson et al., 2003; Wilson et al., 2006), and other research finding no association between parents' health limitations and relationship quality (Hammersmith, 2019).

We suggest that these inconsistencies may be attributable to moderating factors on the main effect of mothers' functional limitations on mother–adult child relationship quality. Based on theory and research on the quality of parent–child relations in the later years (cf. Bengtson & Allen, 1993; Dilworth-Anderson et al., 1993; Fingerman et al., 2020; Suitor et al., 2016a; 2016b), we propose that three social structural characteristics will moderate the impact of mothers' health on mother–adult child relations: a) generational position; b) children's gender; and c) race. Further, as family scholars have emphasized the complex nature of intergenerational relations (Bengtson et al., 2002; Fingerman et al., 2020; Suitor et al., 2016b), we examine how mothers' limitations are associated with three distinct dimensions—closeness, tension, and

#### Corresponding Author:

<sup>&</sup>lt;sup>1</sup>Sociology and Gerontology at Purdue University, West Lafayette, IN, USA <sup>2</sup>Department of Sociology and Anthropology, Center of Aging and the Life Course at Purdue University, West Lafayette, IN, USA <sup>3</sup>Human Development and Family Studies and a Faculty Associate of the Gerontology Program at Iowa State University, Ames, IA, USA

Catherine Stepniak, MS, Sociology and Gerontology at Purdue University, 317-900-0319, 700 W. State St. West Lafayette, IN 47907, USA. Email: cstepnia@purdue.edu

ambivalence. We utilize data from 285 mothers and 691 of their adult children collected as part of the Within Family Differences Study (WFDS).

#### **Conceptual Framework**

Intergenerational solidarity theory (Bengtson & Roberts, 1991) highlights how the mother-child relationship is both enduring and multidimensional. Throughout the adult life course, family members engage in interaction, affection, similarity, intergenerational exchange, and adhere to familial norms that re-enforce family cohesion. Further conceptual developments, such as theories of intergenerational ambivalence (Bengtson et al., 2002; Connidis & McMullen, 2002; Luescher & Pillemer, 1998) have led scholars to acknowledge that intergenerational relationships are often both less harmonious and more complex than suggested by classic theories of solidarity. Nevertheless, empirical studies have continued to show that although there is substantial variation in relationship quality between mothers and adult children, most mothers maintain relatively high levels of emotional closeness and low levels of tension with their offspring across the life course (cf. Fingerman & Birditt, 2011; Suitor et al., 2016b).

However, there may be particular situations that challenge the maintenance of the harmonious relationships between mothers and their adult children. Drawing from the combination of life course and intergenerational solidarity perspectives (Bengtson & Allen, 1993; Bengtson et al., 2002; Elder, 1984), we suggest that the presence of mothers' functional limitations could be one of these points. Studies of mother-child exchanges in adulthood have shown that until mothers are well into later-life, the flow of support is typically disproportionately from mothers to their adult offspring (Boerner et al., 2021; Fingerman et al., 2020; Kalmijn, 2019; Suitor et al., 2016b). Mothers' limitations are likely to reverse this flow of support, with mothers becoming disproportionately the recipients, and adult children moving from recipients to providers. Such reconfigurations of roles that disrupt established patterns of expectations and behaviors have been shown to alter the quality of ties across a variety of relational contexts (cf. Bulanda, 2011; Gilligan et al., 2013; Lawrence et al., 2007); as would be predicted by classic sociological theories of role performance (Burr, 1973; Goode, 1960). Thus, both theory and empirical research provide a basis for proposing that the presence of mothers' limitations would be associated with lower relationship quality from the perspective of both mothers and their adult children.

# The Role of Moderators in the Association between Mothers' Limitations and Relationship Quality

The life course and solidarity frameworks (Bengtson & Allen, 1993; Bengtson et al., 2002; Elder, 1984) can also be used to suggest factors that may moderate the impact of mothers' limitations on both mothers' and children's assessment of their relationship quality. In particular, Bengtson and Allen (1993)

proposed that the impact of life course events on families and individual family members are shaped by several structural factors, including generational position, gender, and race. Although life course theories are often applied to changes *across* time, it is important to emphasize that these theoretical principles and propositions are also applicable to any specific time point within the life course as well, and thus, guide our choice of moderators.

Generational Position. Both theory and empirical research provide a basis for anticipating that the impact of mothers' health on the quality of mother–adult child relations varies by generational position, with stronger negative effects on children's than mothers' assessment. As first described in Bengtson and Kuyper's (1971) classic work on generational stake, parents' greater investment in their ties with their adult children lead them to characterize their relationships as more harmonious than their offspring do (Birditt et al., 2012; Suitor et al., 2016a). These generational differences might be even more pronounced in the presence of parents' poor health, given that the motivation for perceiving stability in such salient ties would be high when parents experience limitations in other aspects of their lives.

Further, mothers may experience less strain in their role relationships with their offspring compared to their children because mothers perceive fewer changes than their offspring do. Even parents who have notable physical limitations often perceive that they are still providing substantial support to their adult children, whereas those offspring perceive a reduction in the support they receive and an increase in both the support they provide and the expectation to provide even more support (Fingerman et al., 2007). Thus, mothers' functional limitations likely magnify the differences in relationship quality that would be predicted by the intergenerational stake hypothesis.

However, the limited existing literature on mothers' health and mother-child relationships provides mixed evidence regarding generational differences in the impact of mothers' limitations on mother-child relationship quality. For example, Hammersmith (2019) reported that from the perspective of the parents, there was no change in either positive or negative dimensions of relationship quality when parents developed chronic conditions. However, parents who were in poorer health reported higher feelings of ambivalence toward their adult children (Fingerman et al., 2006; Kiecolt et al., 2011). Also consistent with our proposal of generational differences, Kaufman and Uhlenberg (1998) and Wilson and colleagues (2006) found that from the perspective of adult children, relationship quality between parents and offspring was lower when parents were in poor health. Likewise, adult children reported feelings of greater ambivalence toward parents who were in poorer health (Fingerman et al., 2006, 2008; Wilson et al., 2003).

Taken together, these studies suggest that when considering positive and negative relational dimensions, mothers' health impacts relationship quality from the perspective of the adult children, but not their mothers. In contrast, when considering intergenerational ambivalence both mothers and their offspring report an impact of mothers' poor health. However, with one exception, these studies have not used data collected from mothers and adult children in the same families (Fingerman et al., 2006), nor have any of these studies compared the effects on positive, negative, and ambivalent relational dimensions. Therefore, rather than developing specific hypotheses regarding the combination of generational position and relational dimensions, we will explore the differential effects of mothers' limitations on mother–child ties across both of these factors.

Gender. Theories of gender role development posit that, beginning in childhood, women are socialized to be sensitive to others' emotions and value social relationships (cf. Chodorow, 1989; Gilligan, 1982). The roles and attitudes instilled in women through gender socialization typically lead them to give higher priority to social relationships in general than do men (Antonucci, 2001; Birditt et al., 2009; Rossi & Rossi, 1990). Consistent with these theories, the empirical literature demonstrates gender differences in intergenerational relationships. First, mothers report higher relationship quality with their adult children than do fathers (Suitor et al., 2016b; Ward, 2008). Additionally, mother-daughter relationships are typically reported as the most emotionally close (Rossi & Rossi, 1990; Suitor & Pillemer, 2006; Suitor et al., 2016a). Further, mothers overwhelmingly choose daughters as their preferred caregivers (Suitor et al., 2013, 2016b).

However, in close and intense relationships there are more opportunities for tensions. Families with daughters report experiencing increased tension and conflicts compared to families with sons (Birditt et al., 2009; Rossi & Rossi, 1990). Additionally, multiple studies find that mothers report greater tension with daughters than sons (Birditt et al., 2009; Suitor et al., 2016a, 2016b).

The role of gender in intergenerational ambivalence is highly inconsistent in the literature. Some studies have found greater ambivalence in ties between parents and daughters than sons (Birditt et al., 2010), particularly between mothers and daughters (Pillemer et al., 2012; Wilson et al., 2003). In contrast, Kiecolt and colleagues (2011) reported that parents felt less ambivalent toward daughters than sons. Finally, other studies report no effects of children's gender on ambivalence (Fingerman et al., 2006; Pillemer, 2004; Pillemer & Suitor, 2002; Wilson et al., 2006).

Taken together, these theoretical and empirical literatures suggest that gender likely plays a role in intergenerational relationship quality, but the evidence does not provide a clear foundation for arguing for a single direction of effects. The highly close and intense mother–daughter ties may buffer the effect of mothers' functional limitations. In other words, perhaps the degrees of closeness between mothers and daughters will better weather mothers' functional limitations than will mother-son ties. However, as mother-daughter ties are more intense and include more conflict, mother-daughter ties may intensify the effect of mothers' functional limitations. Thus, rather than proposing a single hypothesis that relationship quality will be better for daughters than sons when mothers face limitations, we will test alternative hypotheses regarding the role of child's gender in the effect of mothers' limitations on closeness, tension, and ambivalence between mothers and adult children.

*Race.* One of the key principles of life course theories is taking into consideration the ways in which families differ by race and ethnicity (Bengtson & Allen, 1993; Dilworth-Anderson et al., 1993). Theoretical explanations for these differences have cited both cultural explanations such as differences in norms and values between Black and White families and structural ones such as differences in income and wealth (Dilworth-Anderson et al., 1993; Sarkisian & Gerstel, 2004). Further, empirical research on Black families have typically shown high levels of contact and close affective bonds with family members (Laditka & Laditka, 2001; Taylor & Chatters, 1991; Taylor et al., 2013).

Black adults are more likely to give support to their family members than are White adults (Taylor et al., 2013) and are especially likely to do so when parents experience a health crisis (Fingerman et al., 2011). Black caregivers typically have also been found to report positive feelings about caregiving (Pinquart & Sörensen, 2005; White et al., 2000), and Black adult child caregivers express more concern about whether they are meeting their mothers' expectations for care than do White offspring (Suitor et al., 2018a).

In addition, although the majority of studies report no effects of race on intergenerational ambivalence (Birditt et al., 2010; Fingerman et al., 2006, 2008), Kiecolt and colleagues (2011) reported that non-White parents felt less ambivalent toward their adult children than did White parents. Taken together, these findings suggest that the ties between Black mothers and adult children may remain more positive in the presence of mothers' physical limitations than do the relationships between White mothers and children. Thus, we predict that mothers and children in Black families, relative to White families, will report better relationship quality as measured by higher levels of closeness and lower levels of tension and ambivalence when mothers have functional limitations.

#### Summary

Based on the combination of theory and empirical evidence, we propose the following hypotheses. First, on the basis of theories of solidarity, the life course, and roles, we hypothesize that the presence of mothers' limitations will be associated with lower relationship quality from the perspectives of both mothers and their adult children. Additionally, we explore patterns of differential effects on three dimensions of relationship quality—closeness, tension, and ambivalence. Second, we propose that generational position, child's gender, and race will moderate the association between mothers' limitations and relationship quality. In the case of generational position, we propose that mothers' functional limitations will be a stronger predictor of adult children's than mothers' reports of relationship quality. We test alternative hypotheses regarding the moderating role of child's gender in the association between mothers' limitations and relationship quality. Regarding race, we hypothesize that mothers and children in Black families will report better relationship quality when mothers have functional limitations than will those in White families.

# Methods

The data used in the present analyses came from the With Family Differences Study (WFDS), which has a probability sample of mothers 65–75 years old with at least two living adult children. Time 1 interviews with mothers and children were conducted from 2001 to 2003 and Time 2 interviews from 2008 to 2011. We analyzed data from Time 2, when adult children were asked about their mothers' functional limitations. For a detailed description of the study design, see Suitor et al. (2016a, 2018a, 2018b) where portions of this section have been published previously and http://web.ics.purdue. edu/~jsuitor/within-family-differences-study

# Procedures

A probability sample of women aged 65–75 years with two or more children was drawn from the greater Boston area using Massachusetts city and town lists. The T1 sample consisted of 566 mothers, which represented 61% of those who were eligible for participation, a rate comparable with that of similar surveys in the 2000s (Wright & Marsden, 2010).

For the follow-up study, the survey team attempted to contact each mother who had participated in the original study. At T2, 420 mothers were interviewed. Of the 146 mothers who participated at only T1, 78 had died between waves, 19 were too ill to be interviewed, 33 refused, and 16 could not be reached. Thus, the 420 represent 86% of mothers who were alive at T2. Comparisons between the mothers alive at T2 who did and did not participate revealed that they differed on only education and subjective health; those who participated were better educated and in better health. Comparison of the T1 and T2 samples revealed that the respondents differed on subjective health, educational attainment, marital status, and race. Mothers who were not interviewed at T2 were less healthy, less educated, less likely to have been married at T1, and were more likely to be Black.

Following the interviews, mothers were asked for contact information of their adult children; at T2, 81% of the mothers provided contact information—a rate higher than typically found in studies of multiple generations (Kalmijn & Liefbroer, 2011; Rossi & Rossi, 1990). In cases in which the mother was not interviewed at T2, information from T1 was used to contact adult children at T2. Seventy-five percent of the adult children for whom contact information was available agreed to participate, resulting in a final sample of 826 children nested within 360 families.

Analyses comparing mothers with no participating children and those who had at least one participating child revealed no differences between the mothers in terms of race, marital status, education, age, or number of children. However, daughters, married adult children, and adult children with higher education were slightly more likely to participate, consistent with other studies with multiple generations (Kalmijn & Liefbroer, 2011; Rossi & Rossi, 1990). We also compared mothers' closeness to children whose contact information they did and did not share, using the same scale as is in the present article (description of the scale below). This comparison revealed that mothers reported slightly higher closeness to children whose contact information they shared than to those whose contact they withheld or did not know (9.9 vs. 10.2; p < .01), consistent with other multigenerational studies (Kalmijn & Liefbroer, 2011). Examination of the qualitative data collected from each respondent revealed that mothers were less likely to share contact information for children living abroad, in institutional settings (i.e., prison, rehabilitation centers, and assisted living), or from whom they were estranged.

To be included in the sample, both mothers and adult children in the same families needed to be interviewed at T2. Of the total of 826 adult children who were interviewed at T2, 63 were omitted from the analytic sample for this article because their mothers were no longer alive when the children were interviewed, seven were omitted because their mothers were too ill to participate, 16 had mothers who refused to participate, eight had mothers who could not be contacted, and nine were stepsiblings who were not related to the mothers who participated in the study. We also omitted six mother-child dyads in which one of the two adult children in the family died between T1 and T2. Nine mother-child dyads were omitted because data on variables included in the analyses were missing from either the mother or child. Finally, given the small number of Latina and Asian families in the study and the marked differences in patterns of intergenerational relationships between families of different racial categories (cf. Suitor et al., 2016b), seventeen adult children and seven mothers were omitted. Less than two percent of the adult children were adopted or stepchildren; because the mothers of these offspring had identified them as their own children, only noting their adopted or stepchild status in response to specific questions about their biological status, we have chosen to include these offspring in the analytic sample. Thus, the final analytic sample for this study includes 691 adult children nested within 285 mothers. Table 1 presents the demographic characteristics of both the mothers and adult children.

Table I. Descriptive Statistics of All Model Variables.

Mothers Regarding Children (N = 691)	Means (SE)/%
Closeness scale	10.38 (1.74)
Tension scale	5.71 (2.23)
Ambivalence scale	4.08 (1.45)
Family size	3.86 (1.72)
Value similarity to children	3.03 (0.75)
Mothers regarding self (N = 285)	
Physical limitations	0.92 (1.21)
No limitations	48.10%
One limitation	33.00%
Two limitations	6.00%
Three limitations	4.90%
Four or more limitations	8.10%
Race (Black=1)	23.51%
Marital status	
Married	40.00%
Divorced or separated	13.30%
Widowed	46.70%
CES-D	10.88 (4.25)
Age	77.88 (3.15)
Educational status	
Less than high school	18.30%
High school graduate	35.80%
Vocational school	8.10%
Some college	13.30%
College graduate or higher	24.60%
Adult children (N = 691)	
Closeness scale	9.51 (2.20)
Tension scale	6.55 (2.26)
Ambivalence scale	4.20 (1.69)
Mother's physical limitations	1.03 (1.28)
No limitations	46.20%
One limitation	28.90%
Two limitations	9.60%
Three limitations	6.10%
Four or more limitations	9.30%
Value similarity to mother	3.03 (0.75)
Race (Black=I)	23.51%
Gender (Daughter=I)	58.00%
Age	49.42 (5.68)
Marital status	
Married	71.49%
Divorced or separated	14.33%
Never married	14.18%
Last-born	24.31%
Employment status (Employed=1)	79.88%
CES-D	11.70 (5.08)
Educational status	
Less than high school	5.10%
	20.00%
High school graduate	
High school graduate Vocational school	4.90%
	4.90% 13.20% 56.80%

#### Measures

Dependent Variables. In this analysis, relationship quality between mothers and their adult children was measured both from the mothers' perspectives and the adult children's perspectives at T2. Such an approach is important because, consistent with Bengtson and Kuyper's (1971) generational stake hypothesis, adult children and their mothers often differ in their assessments of the quality of their relationship (Birditt et al., 2012; Suitor et al., 2006). Thus, in order to understand whether mothers' functional limitations impact the quality of the intergenerational ties, the perspective of both generations needs to be considered. Separate analyses were conducted using data collected from the mothers and their adult children. Mothers reported relationship quality for each of their children separately. Thus, both mothers and adult children reported on the same dyadic relationships.

The three relationship quality scales were created by summing two or three items. Because the items that comprise each of the scales had differing numbers of response categories, items were collapsed to match the item with the lowest number of categories. By collapsing the items before combining, items with a broader range of response categories were weighted equally in the scale. This is a standard practice for scale development using items with differing response categories (cf. Gilligan et al., 2015; Suitor et al., 2011). Furthermore, the psychometric properties of collapsed versions of scales are similar to the original scale (Colvin & Gorgun, 2020).

Closeness. To create the measure of closeness between mother and the adult children, we combined the following three items: (a) Using any number from 1 to 7, where 1 is very distant and 7 is very close, what number would you use to describe the relationship between you and your (child/mother) nowadays?; (b) How often does your (child/mother) make you feel loved or cared for-very often (5), fairly often (4), sometimes (3), rarely (2), or never (1)?; and (c) Being with (your child/your mother) makes you feel happy-strongly agree (4), agree (3), disagree (2), or strongly disagree (1). To make the ranges consistent across the three items, we transformed the first two variables by collapsing the categories to adjust their ranges to 1-4. For these variables, we combined the categories at the low end of the range because these categories had a small number of cases, which is typical when using items capturing relational closeness. In this, we are following the lead of previous studies in which these items have been used to create a scale of relational closeness (Suitor et al., 2011, 2018b). The range of the combined scale was 3– 12, with higher scores indicating greater closeness. The closeness scales had Cronbach's alphas of .75 and .70, for mothers and children, respectively.

*Tension.* To create the measure of tension between mother and the adult children, we combined the following three items: (a) Sometimes no matter how close we may be to someone, the relationship can also at times be tense and strained. Using any number from 1 to 7, where 1 is not at all tense and strained and 7 is very tense and strained, what number would you use to describe how tense and strained the relationship between you and your (child/mother) is nowadays?; (b) How often would you say the two of you typically have disagreements or conflicts-very often (5), fairly often (4), sometimes (3), rarely (2), or never (1)?; and (c) Does your (child/mother) make too many demands on you-very often (5), fairly often (4), sometimes (3), rarely (2), or never (1)? To make the ranges consistent across the three items, we transformed the three variables by collapsing the categories to adjust their ranges to 1–4. For these variables, we combined the categories at the high end of the range because these categories had a small number of cases, which is typical when using items capturing relational tension. In this, we are following the lead of previous studies in which these items have been used to create a scale of relational tension (Suitor et al., 2011, 2018b). The range of the combined scale was 3-12, with higher scores indicating greater tension. The adult children's tension scales had Cronbach's alphas of .70 and .68, for mothers and children, respectively.

Ambivalence. In past research, ambivalence has been measured either directly (Pillemer, 2004; Pillemer & Suitor, 2002) or indirectly (Fingerman et al., 2006, 2008; Kiecolt et al., 2011; Wilson et al., 2003, 2006). Because research has shown that direct measures of ambivalence more strongly predict adult children's, especially sons', psychological wellbeing (Suitor et al., 2011) we used direct measures. To create the measure of ambivalence between mother and the adult children, we combined the following two items: (a) To what degree do you have mixed feeling for your (mother/adult child)—strongly agree (4), agree (3), disagree (2), or strongly disagree (1)? (b) How often do you feel torn in two directions or conflicted about your (mother/adult child)—very often (5), fairly often (4), sometimes (3), rarely (2), or never (1)? To make the ranges consistent across the three items, we transformed the second item by collapsing the categories to adjust their ranges to 1–4. We combined the categories at the high end of the range because these categories had a small number of cases, which is typical when using items capturing relational ambivalence. In this, we are following the lead of previous studies in which these items have been used to create a scale of relational ambivalence (Suitor et al., 2011, 2018b). The range of the combined scale was 2-8, with higher scores indicating greater ambivalence. The ambivalence scales had Cronbach's alphas of .76 and .64, for mothers and children, respectively.

# Independent Variables

We operationalized mothers' functional limitations at T2 using both the mothers' self-reports of their limitations and adult children's reports of their mothers' functional limitations. At T2, mothers and adult children were asked: "Do (you/your mother) have any health conditions or difficulties that limit (your/her) activities or things (you/she) can do?" If mothers or adult children reported limitations, they were asked with which of the following activities of daily living (ADLs) and instrumental activities of daily living (IADLs) the mothers experienced limitations: light housework, food shopping, walking, personal care, dressing/undressing, eating, bathing, and toileting. Activities mothers could do without help were coded as 0, whereas activities mothers need assistance with were coded as 1. Scores ranged from 0 (no limitations) to 8 (maximum limitations). We transformed the scale by combining scores of 4 and above to 4 so the final scale ranged from 0 to 4. There was high agreement regarding mothers' limitations between mothers and adult children; the mean score on the 0–4 ADL scale reported by mothers was .91, compared to 1.03 reported by adult children (t value = 1.36; n.s.).

One hundred forty-eight mothers (51.9%) reported having a limitation that impacted their ability to perform at least one of the ADLs. Of the mothers who reported limitations, the average number of limitations was 1.77. Exactly half (50.0%) of White mothers reported a limitation that impacted their ability to perform at least one of the ADLs compared to 58.2% of Black mothers. Of the mothers who reported limitations, White mothers had a mean of 1.48 activities that they required assistance with compared to a mean of 2.59 among Black mothers.

Three hundred seventy-two adult children (53.8%) reported that their mothers had a limitation that impacted their ability to perform at least one of the ADLs. Of the adult children who reported their mothers had limitations, the average number of limitations was 1.92. Approximately half (50.4%) of the White adult children reported their mothers had a limitation compared to 66.9% of Black children. Of the adult children who reported their mothers had limitations, White mothers were reported to have a mean of 1.70 activities that they required assistance with compared to a mean of 2.56 for Black mothers.

## Moderating Variables

Gender was coded as 0 = sons and 1 = daughters. Race was self-reported by mothers at T1 and coded as 0 = White and 1 = Black.

#### Controls

Throughout the analyses we controlled on several characteristics of mothers, adult children, and mother–child dyads that have been found to affect both mothers' health and relationship quality between mothers and adult children.

Mothers' Characteristics. Mother's marital status was coded as 0 = married, 1 = divorced or separated, or 2 = widowed at T2. Family size was measured using the number of living adult children in the family at T2. Mother's educational attainment was coded at T1 as 1 = less than high school graduate, 2 = high

school graduate, 3 = vocational school, 4 = 1 to 3 years in college, or 5 = college graduate or higher. Mother's psychological well-being was measured by the Center for Epidemiological Studies Depression (CES-D) Scale (Ross & Mirowsky, 1988) at T2. The CES-D asks respondents how often in the past week they have felt a certain way. The items composing the scale are as follows: (a) Everything I did was an effort; (b) I had trouble getting to sleep or staying asleep; (c) I felt lonely; (d) I felt sad; (e) I could not get going; (f) I felt I could not shake off the blues; and (g) I had trouble keeping my mind on what I was doing. The response categories for the scale are as follows: 1 = less than 1 day a week; 2 = 1 to 2 days a week; 3 = 3 to 4 days a week; and 4 = 5 to 7 days a week. The scale was created by summing the seven items resulting in a final scale ranging from 7 to 28.

Adult Children's Characteristics. Children's marital status was coded as: 0 = married, 1 = divorced or separated, or 2 = never married. Children's educational attainment was reported by their mothers at T1; categories were: 1 = less than high school graduate; 2 = high school graduate; 3 = vocational school; 4 = 1 to 3 years in college; 5 = college graduate or higher.Children's employment status was coded as 0 = unemployed, 1 = employed. Because mothers have been found to report greater closeness to last-borns and to prefer them as their future caregivers (Suitor & Pillemer, 2007; Suitor et al., 2013, 2016a), birth order was measured by a dichotomous measure 1 =last born and 0 =middle or first-born. Similarity of values between child and mother was coded as: 1 = very dissimilar views, 2 = dissimilar views, 3 = similar views, and 4 = very similar views. Children's psychological well-being was measured by the Center for Epidemiological Studies Depression (CES-D) Scale (Ross & Mirowsky, 1988) at T2.

# Analytic Plan

Throughout the multivariate analyses, the mother–child relationship, rather than the mother, was the unit of analysis. In other words, the 691 mother–child dyads were nested within the 285 mothers; thus, the observations were not independent. To take this factor into account, we used multilevel linear regression.

As noted above, we measured relationship quality from the perspectives of the mothers and the adult children. Therefore, we conducted separate analyses from the mothers' and adult children's perspectives. Mothers' self-reports of their functional limitations and their relationship quality with their children were used in the analyses of mothers, whereas children's reports of their perceptions of mothers' functional limitations and relationship quality with their mothers were used in the analyses of adult children. Similarly, for variables that reflect perceptions, we included only those from the generation under consideration in the models. For example, mothers' perceptions of value similarity were included in the analyses from the mothers' perspective, and children's perceptions of value similarity were included in the analysis from the children's perspective.

To test for differences by race and by gender, we conducted separate analyses for Black and White mothers and adult children and for daughters and sons and compared the coefficients for relationship quality across models (Paternoster et al., 1988). To test the hypothesis of generational differences between mothers' limitations and ambivalence, we conducted a SUEST test (seemingly unrelated estimation). A SUEST test is a post hoc sensitivity analysis which compares coefficients for the effects of different independent variables on the same dependent variable in two samples.

Listwise deletion was used to handle missing data on the independent variables because there were fewer than 2% missing on any variable in the analysis (see Allison, 2010). The analyses were conducted using SPSS 26.

# Results

# Mothers' Perspectives

Table 2 presents the multilevel linear regression analyses of mothers' reports of relationship quality with their adult children. As shown in the top row of coefficients, mothers' self-reported limitations did not predict closeness, tension, or ambivalence. Further, separate analyses testing whether gender or race moderated the association between mothers' self-reported limitations and intergenerational relationship quality revealed no differences (analyses not shown).

# Adult Children's Perspectives

Table 3 presents the multilevel linear regression analyses of adult children's reports of relationship quality with their mothers. As shown in the top row of coefficients, adult children's reports of mothers' limitations did not predict closeness or tension (Models 1 and 2). Further, separate analyses testing whether gender or race moderated the association between mothers' reported limitations and closeness or tension revealed no differences (analyses not shown). Although mothers' limitations predicted reports of tension in White families (b = .17; p < .05), the difference between the coefficients in Black and White adult children was not significant.

As shown in Model 3, adult children's perceptions of mothers' limitations predicted higher feelings of ambivalence toward their mothers (b = .12; p < .05). In other words, adult children who reported that their mothers had higher levels of limitations were more likely to report higher feelings of ambivalence toward their mothers. To test the hypothesis of generational differences in the association between mothers' limitations and ambivalence, we conducted a SUEST test. The test revealed that the difference between coefficients across the models (and samples) based on mothers' and adult children's reports was statistically significant at the .02 level.

	Model   Closeness		Model 2 Tension		Model 3 Ambivalence	
	В	SE	В	SE	В	SE
Mother characteristics						
Limitations	0.09	0.07	-0.03	0.09	-0.04	0.06
Divorced	-0.40	0.27	0.20	0.35	-0.4I	0.24
Widowed	0.05	0.17	0.07	0.22	-0.20	0.16
Number of children	-0.05	0.04	-0.06	0.06	-0.01	0.04
Education	$-0.10^{a}$	0.05	0.05	0.06	0.01	0.04
CES-D	-0.03	0.02	0.13 <sup>b</sup>	0.02	0.05 <sup>b</sup>	0.02
Black	0.28	0.22	-0.3 I	0.28	0.45ª	0.19
Similarity to Child	0.98 <sup>b</sup>	0.08	-0.92 <sup>b</sup>	0.10	-0.67 <sup>b</sup>	0.07
Child characteristics						
Daughter	0.22	0.12	0.25	0.15	-0.01	0.10
Divorced	-0.04	0.18	0.46 <sup>a</sup>	0.22	0.15	0.14
Never married	-0.09	0.17	0.64 <sup>b</sup>	0.21	0.25	0.14
Education	-0.02	0.05	0.01	0.06	-0.08ª	0.04
Employed	0.14	0.16	-0.66 <sup>b</sup>	0.19	0.24	0.13
Last-born	0.16	0.13	-0.17	0.16	-0.21ª	0.10
Constant	8.10 <sup>b</sup>	0.50	7.48 <sup>b</sup>	0.64	5.94 <sup>b</sup>	0.43

Table 2. Multilevel Model Results Predicting Mothers' Reports of Intergenerational Relationship Quality (N = 691 dyads nested within 285 families).

a = p < .05.b = p < .01.

Table 3. Multilevel Model Results Predicting Adult Children's Reports of Intergenerational Relationship Quality (N = 691).

	Model   Closeness		Model 2 Tension		Model 3 Ambivalence	
	В	SE	В	SE	В	SE
Mother characteristics						
Limitations	0.01	0.07	0.13	0.07	0.12 <sup>a</sup>	0.06
Divorced	-0.17	0.36	1.35 <sup>b</sup>	0.36	0.59 <sup>ª</sup>	0.27
Widowed	0.38	0.22	0.25	0.23	-0.02	0.17
Number of children	-0.01	0.06	-0.08	0.06	-0.04	0.04
Black	0.49	0.29	-0.16	0.29	-0.30	0.22
Child characteristics						
Daughter	0.18	0.16	0.28	0.16	0.54 <sup>b</sup>	0.13
Similarity to mother	0.61 <sup>b</sup>	0.11	-0.31 <sup>b</sup>	0.11	-0.28 <sup>b</sup>	0.09
CES-D	-0.03	0.02	0.06 <sup>b</sup>	0.02	0.04 <sup>b</sup>	0.01
Divorced	0.19	0.24	0.70 <sup>b</sup>	0.24	-0.06	0.19
Never married	0.24	0.23	0.92 <sup>b</sup>	0.23	0.24	0.18
Education	-0.16 <sup>b</sup>	0.06	0.07	0.06	0.04	0.05
Employed	-0.15	0.21	-0.10	0.21	-0.0I	0.17
Last-born	0.24	0.17	-0.10	0.18	-0.18	0.14
Constant	8.41 <sup>b</sup>	0.64	6.13 <sup>b</sup>	0.64	4.18 <sup>b</sup>	0.49

a = p < .05.

b = p < .01.

Counter to our hypothesis, gender did not moderate the association between mothers' limitations and ambivalence. As we hypothesized, race moderated the association between mothers' limitations and ambivalence. Specifically, analyses conducted separately by race revealed that White children reported greater ambivalence than did Black adult children when they perceived their mothers had a higher number of limitations (b = .20; p < .01 White children; b = -.06; p = n.s., Black children; table not shown). Comparison of the coefficients across models revealed that this difference was statistically significant (t value = 2.28; p <.05).

# Discussion

Theories of the life course and intergenerational solidarity (Bengtson & Allen, 1993; Bengtson et al., 2002; Elder, 1984), provide a basis for suggesting that the presence of mothers' functional limitations may pose a challenge to the quality of mother-adult child ties in later-life. However, the existing empirical literature on this topic does not provide a consistent set of findings regarding the impact of mothers' limitations on relationship quality (Fingerman et al., 2006, 2008; Hammersmith, 2019; Kaufman & Uhlenberg, 1998; Kiecolt et al., 2011; Wilson et al., 2003, 2006). Further, this line of research has not investigated whether the structural factors suggested by Bengtson and Allen's (1993) perspective on the life course moderate the association between mothers' limitations and mother-child relationship quality. Thus, the goal of the present article was to explore this association, with particular attention to the ways in which this association is moderated by generational position, gender, and race.

Our hypothesis that generational position shaped the impact of mothers' functional limitations on mother-child relationship quality was supported but only for intergenerational ambivalence. More specifically, adult children's perceptions of mothers' limitations predicted higher feelings of ambivalence. We might be tempted to explain the generational difference in the impact of mothers' limitations on ambivalence as reflecting the intergenerational stake hypothesis (Birditt et al., 2012; Suitor et al., 2016a). However, we must also consider alternative explanations. One possibility is the difference in effects on ambivalence may be due to differences in mothers' self-report of limitations versus the proxy measure of adult children's reports of mothers' limitations. However, we suggest that this finding may also reflect differences in the ways mothers and adult children assess the implications of mothers' health limitations. In a recent study examining the daily experiences of older parents and their adult children, when parents experienced greater functional limitations, adult children were more likely to perceive parents' behaviors as risky and unsafe (Heid et al., 2018). As such, older parents' health limitations can challenge the balance between autonomy and dependence in relationships between older parents and adult children, resulting in increased feelings of intergenerational ambivalence for adult children (Fingerman et al., 2006; Wilson et al., 2006). Perceiving such a shift in autonomy and dependence may also fuel adult children's anticipation of future caregiving, a role that is often accompanied by feelings of ambivalence (Losada et al., 2017; Wilson et al., 2003).

However, there remains the question of why perceptions of mothers' health limitations predicted adult children's reports of ambivalence, but not closeness or tension. The absence of effects of limitations on closeness are not surprising as other studies find that generally in relationships ambivalence is more sensitive to day-to-day interactions than is closeness (Harper et al., 2000; Totenhagen et al., 2012). Thus, any disruptions in patterns of day-to-day interactions between mothers and their adult children introduced by mothers' limitations could be expected to be more strongly associated with ambivalence than closeness. However, this account does not help explain why perceptions of mothers' limitations did not predict children's reports of tension. We hope that future studies will explore this question; perhaps qualitative approaches would allow a more nuanced examination of this question.

Surprisingly, child's gender did not moderate the association between limitations and relationship quality as reported by both mothers and offspring. Given the notable pattern in the broader literature regarding the more intense positive and negative ties between mothers and daughters compared to sons (Birditt et al., 2009; Suitor et al., 2013, 2016a, 2016b), and gender differences in caregiving expectations, preferences, and behaviors as reported by both generations (Leopold et al., 2014; Pillemer & Suitor, 2014; Suitor et al., 2013, 2016b) this non-finding is both surprising and deserving of attention in future studies. We suggest that perceptions of mothers' limitations and gender may be more likely to shape the quality of mother-child relations when mothers are actually receiving care, or when adult children perceive that they are expected to become caregivers by their mothers. We hope that future research will take these contextual factors into consideration when exploring the impact of mothers' health on intergenerational relations.

Our hypothesis regarding stronger effects of mothers' limitations on White than Black adult children's reports of relationship quality was supported, but again, only in the context of ambivalence. This pattern is consistent with Kiecolt and colleagues (2011) findings that White parents felt more ambivalent toward their adult children than did non-White parents. We suggest that this pattern reflects the close affectual bonds in Black families (Laditka & Laditka, 2001; Taylor & Chatters, 1991; Taylor et al., 2013), and Black caregivers' reports of positive feelings about caregiving (Pinquart & Sörensen, 2005; Suitor et al., 2018a; White et al., 2000).

The findings presented here also suggest several other directions for future studies. First, future studies should explore the effect of mothers' limitations on mothers' and adult children's perceptions of relationship quality using longitudinal data. Kaufman and Uhlenberg (1998) found based on adult children's reports as mothers' limitations increased with time, relationship quality declined. However, previous life course research suggests that relationship quality would improve across the life course (Rossi & Rossi, 1990; Umberson, 1992). We used cross-sectional data to explore the associations of mothers' limitations and relationship quality because the adult children were not asked about their mothers' functional limitations in the first wave of the study. We hope future research will use longitudinal data to assess whether changes in relationship quality occur as mothers' limitations change over time.

Second, the present study examined the effect of mothers' limitations on mother-adult child relationship quality but did

not consider fathers' limitations. Theoretical and empirical literature suggest that father-children ties are less close and positive than mother-children ties (Rossi & Rossi, 1990; Suitor et al., 2016b; Umberson, 1992; Ward, 2008); thus, the role of parents' limitations in parent-child relationship quality may differ by gender. Additionally, as wives typically care for their impaired husbands rather than the adult children (Suitor et al., 2016b) the dynamics between parents and children are likely to be affected differently by mothers' and fathers' limitations. The WFDS does not include data from fathers' on their relationships with their adult children at T2, so we were unable to address this theoretically important question. We hope that future research using data sets that include reports from both fathers and mothers as well as and their adult children will study this issue.

In sum, this article sheds new light on the role of mothers' health in shaping the quality of relationships between mothers and their adult children by highlighting the ways in which this association is moderated by the structural factors of generational position and race. These findings also highlight the multidimensional nature of intergenerational relationships, and that the factors that predict some aspects of relationship quality may not predict others. Thus, relying on only one dimension of relationship quality produces a flat image of intergenerational relationships and may not capture the complexity of these multifaceted relationships. Taken together, the patterns of findings also underscore the role of classic theories of the life course and intergenerational solidarity in extending understanding of the ways in which structural and contextual factors combine to explain relationships in later-life families. Professionals working with later-life families may want to consider the nuanced ways in which older mother's health limitations impact intergenerational relationships and tailor their approaches based on families' unique contextual characteristics. We hope that these findings will encourage future research on the ways in which health can shape intergenerational relations.

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## **ORCID** iDs

Catherine Stepniak https://orcid.org/0000-0002-5311-1869 J. Jill Suitor https://orcid.org/0000-0002-2956-8084 Megan Gilligan https://orcid.org/0000-0001-5321-5097

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# **Author Biographies**

**Catherine Stepniak** is a dual title PhD student in Sociology and Gerontology at Purdue University. Her research focuses primarily on health, parent–child relations, and sibling relationships in adulthood.

**J. Jill Suitor** is a Distinguished Professor of Sociology and a member of the Center of Aging and the Life Course at Purdue University. Her research focuses on patterns and health consequences of intergenerational relationships in adulthood. She is currently studying the effects of relationship history on bereavement following the deaths of the oldest family members.

**Megan Gilligan** is an Associate Professor of Human Development and Family Studies and a Faculty Associate of the Gerontology Program at Iowa State University. Her research focuses on family relationships and well-being, with particular interest in parent–child and sibling relationships in the middle and later years.