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Intergenerational Relationship Quality Across Three Generations

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Objectives. Studies of intergenerational relationship quality often include one or two generations. This study examined within-family differences and similarities or transmission of positive and negative relationship quality across three generations.

Method. Participants included 633 middle-aged individuals (G2; 52% women, ages 40–60 years), 592 of their offspring (G3; 53% daughters; ages 18–41 years), and 337 of their parents (i.e., grandparents; G1; 69% women; ages 59–96 years).

Results. Multilevel models revealed differences and similarities in relationship quality across generations. The oldest generation (G1) reported greater positive and less negative quality relationships than the middle (G2) and the younger (G3) generations. There was limited evidence of transmission. Middle-aged respondents who reported more positive and less negative ties with their parents (G1) reported more positive and less negative ties with their own children (G3). Grandmother (G1) reports of more positive relationship quality were associated with G3 reports of more positive relationship quality with G2.

Discussion. Findings are consistent with the intergenerational stake hypothesis and only partially consistent with the theory of intergenerational transmission. Overall, this study suggests that there is greater within-family variability than similarities in how family members feel about one another.

Key Words: Children—Intergenerational relationship quality—Generation—parents.

PARENTS and grown children often describe feelings of love as well as tension with one another (Connidis & McMullin, 2002; Luescher & Pillemer, 1998). The intergenerational stake hypothesis suggests that these feelings vary within families by generation with older generations reporting greater positive quality and lower negative quality than younger generations (Bengtson & Kuypers, 1971). In contrast, family systems theorists propose that transmission of interaction patterns across generations leads to similarities in emotional experience among family members (Bowen, 1978; Fingerman & Bermann, 2000). For example, grandparents who feel highly negative regarding their middle-aged children may in turn foster feelings of negativity between their middle-aged children and their grandchildren. Yet, studies of intergenerational relationship quality typically examine only one or two generations (Fingerman, Pitzer, Lefkowitz, Birditt, & Mroczek, 2008; Pillemer & Suitor, 2002; Pillemer et al., 2007) and so have not tested hypotheses about differences or transmission across three generations of family members. This investigation is particularly relevant because relationship quality is associated with health and well-being and increases the likelihood that support will be available in times of need (Fingerman et al., 2008; Fingerman et al., 2011; Lowenstein, 2007; Luescher & Pillemer, 1998; Ward, 2008).

This study extends previous literature by examining possible generation differences or transmission of positive and negative relationship quality among three generations of family members. We use standard nomenclature in the social sciences and refer to the grandparent generation as G1, the middle generation as G2, and the children as G3.

Positive and Negative Qualities and the Intergenerational Stake Hypothesis

Prior to the late 1990s, the solidarity and interpersonal conflict perspectives dominated the intergenerational literature; these distinct perspectives examined positive or negative qualities of relationships in isolation (Bengtson, Giarrusso, Mabry, & Silverstein, 2002). According to solidarity theory, intergenerational relationships vary in levels of affective solidarity. That is, there is a range in positive feelings between parents and children, including the extent to which they experience feelings of love, caring, and understanding in the relationship. The concept of the intergenerational stake emerged from solidarity theory suggesting that parents are more emotionally invested in the relationship than are their children (Bengtson & Kuypers, 1971). Parents perceive their children as continuations of themselves and thus perceive more positive feelings in this tie. Children desire greater independence from parents and are more invested in enhancing differences. Previous research indicates that older and middle-aged parents typically report greater

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investment in the tie, greater closeness, and greater positive relationship quality regarding their children than do their children (Aquilino, 1999; Shapiro, 2004) and that these generation differences persist over time (Giarrusso, Feng, & Benjamin, 2004).

By contrast, researchers examining conflict recognize that the parent–child relationship often includes tensions and negative relationship quality (Clarke, Preston, Raksin, & Bengston, 1999). Negative relationship qualities include the extent to which parents and children get on one another's nerves, criticize the other, or make too many demands on one another. Research indicates that tensions in the relationship are commonplace (Birditt, Miller, Fingerman, & Lefkowitz, 2009; Clarke et al., 1999) and that reports vary by generation. Consistent with the intergenerational stake, Aquilino (1999) found that young adult children reported more arguments and tensions with their parents than did their parents. Similarly, Fingerman (2001) found that adult daughters reported more conflict and negative feelings with mothers than did their mothers. This study examined reports of both positive and negative relationship quality across three generations. Although it appears that the intergenerational stake exists within the parent–child tie with regard to how parents and children feel about one another, it is not clear whether the stake also exists between ties (G1–G2 vs G2–G3) in the same family or whether the stake is more prominent in some family ties than in others.

Intergenerational Transmission of Relationship Quality

Family systems theory suggests that there may be similarities among generations within a family. According to Bowen (1978), thoughts, feelings, and behaviors are family-level phenomena in which all family members share a similar experience or reality and these experiences are passed down from older to younger generations (Kerr & Bowen, 1988). Development occurs within, and is influenced by, the multigenerational family system (Bowen, 1978; Elder, 1981). As a consequence, individuals replicate the early parent–child relationship with spouses, children, and other significant relationships (Fingerman & Bermann, 2000). These theories of transmission typically focus on how specific parenting behaviors are transmitted across generations. We extend these theoretical perspectives to examine whether feelings about one another (i.e., relationship quality) are transmitted as well. It would stand to reason that how individuals feel about each other is communicated in some way (either verbally or behaviorally) and thus transmitted from one generation to the next. Indeed, research indicates that emotions are transmitted between family members via emotional contagion in the short term (Almeida, Wethington, & Chandler, 1999; Larson & Almeida, 1999), emotional reactions are transmitted from older to younger generations (Patterson, Bank, & Stoolmiller, 1990), and that subjective well-being may be transmitted from older to younger generations over the long term (Powdthavee & Vignoles, 2008). Research also shows that depression is associated across generations from G1 and G2 to G3, which may be the result of emotional transmission as well as other factors including genetics (Grillon et al., 2005; Warner, Weissman, Mufson, & Wickramaratne, 1999; Weissman et al., 2005).

The majority of work on intergenerational transmission of relationship qualities has focused on the transmission of negative and positive parenting behaviors. Overall, children exposed to negative parental behaviors (e.g., abusive, harsh, distant, rejecting) are more likely to behave in kind to their own children when they grow up (Brook, Whiteman, & Zheng, 2002; Pears & Capaldi, 2001; Straus, Gelles, & Steinmetz, 1980; Whitbeck et al., 1992). Similarly, positive aspects of the relationship are replicated from one generation to the next (Belsky, Jaffee, Sligo, Woodward, & Silva, 2005; Chen & Kaplan, 2001). For example, Belsky and his colleagues (2005) found that mothers who experienced more positive parenting engaged in warmer parenting with their own children. Parenting practices have implications for children throughout their development. Given the burgeoning literature regarding the implications of relationship qualities between adults and their parents for each party's well-being (Fingerman et al., 2008; Umberson, 1992; Ward, 2008), it is important to ask whether these qualities also are transmitted across generations.

Yet, there are no studies to our knowledge that examine generation differences or intergenerational transmission of relationship qualities across three generations. In the present study, we examined intergenerational differences and similarities in positive and negative relationship qualities. Due to the cross-sectional study design, we were not able to specifically test transmission, but transmission is a possible explanation for similarities across generations. Researchers hypothesize that emotions are transmitted via third factors (e.g., shared environment, personality), directly via empathy, and indirectly via behavior (Westman & Vinokur, 1998). Other possible explanations we consider are response sets and bidirectional associations. For example, middle-aged individuals may have similar feelings regarding the older and the younger generations because they have similar feelings regarding all of their relationships. In addition, two generations of family members may have similar reports regarding the middle-aged respondent because of factors associated with the respondent. Finally, younger generations may have important influences on the older generations and vice versa.

Differences in Intergenerational Transmission Between Grandmothers and Grandfathers

We also considered the possibility that generational differences and/or transmission vary between G1 grandmothers and grandfathers. Indeed, studies show that family members do not affect one another equally. Some studies

indicate that mothers have a greater impact on their children than fathers due to the greater amount of time spent with their children (Collins & Russel, 1991) and that adult children's well-being is more closely tied to the mother tie than the father tie (Umberson, 1992). Similarly, grandmothers tend to have more contact and report greater closeness with grandchildren than do grandfathers (Erber, 2010; Silverstein & Marenco, 2001). Thus, grandmothers may have a greater influence on the next generations' relationship qualities than do grandfathers.

By contrast, in a prior study of intergenerational ties, qualities of relationships with fathers were more strongly associated with offspring's well-being than qualities of relationships with mothers (Fingerman et al., 2008). Children also respect their father's opinions more than their mother's opinions (Thornton, Orbuch, & Axinn, 1995). The present study assessed whether G1 grandmothers or grandfathers had a greater impact on relationship quality of the G2–G3 relationship; we predicted grandmothers would have a greater effect than grandfathers.

Of course, we recognize that there are many other factors that predict relationship quality beyond transmission between generations. We attempt to control for some of those factors, and we discuss those in the following sections.

Other Factors Associated With Intergenerational Relationship Quality

Other factors that may influence parent–child relationship quality include each party's gender, race, marital status, education, self-rated health, neuroticism, and contact frequency between the parties. Women report more emotionally intense intergenerational relationships with more positive and more negative relationship qualities than do men (Fingerman, 2001; Smetana, Daddis & Chuang, 2003). Research and theory suggest that African Americans report lower quality intergenerational relationships than European Americans (Birditt, Rott, & Fingerman, 2009; Connidis & McMullin, 2002).

Individuals who are married or who are better educated also report better quality parent–child relationships (Fingerman, Chen, Hay, Cichy, & Lefkowitz, 2006; Pillemer & Suitor, 2002, 2005; Willson, Shuey, Elder, & Wickrama, 2006). On the other hand, scoring higher in neuroticism, having lower self-rated health, and reporting more frequent contact are associated with greater negative quality relations (Akiyama, Antonucci, Takahashi, & Langfahl, 2003; Birditt, Rott et al., 2009; Fingerman et al., 2006).

Present Study

The present study seeks to expand our understanding of intergenerational relationship qualities by examining positive and negative relationship quality across three generations. We first examined whether there were differences between the generations in reports of relationship quality followed by an examination of similarities across generations. In particular, we examined whether relationship qualities among the older generations (G1–G2) predict relationship qualities among the younger generations (G2–G3). We examined the effects of the grandmother and grandfather ties separately. According to the intergenerational stake, we predicted that the older generations would report greater positive and less negative quality relationships than the younger generations. Consistent with family systems theory and intergenerational transmission research, we expected that greater positive quality and negative quality in the grandparent (G1) and middle-aged children (G2) ties would predict greater positive quality and negative quality in the middle-aged parent (G2) and young adult children (G3) tie. We predicted that grandmother ties would have a greater effect than grandfather ties on the relationship quality of the younger generations.

Method

Participants

Middle-aged target sample (G2).—Middle-aged target participants were from the Family Exchanges Study, which included 633 mothers and fathers aged 40–60 years (302 fathers and 331 mothers from different families) who had at least one child aged 18 or older and at least one living parent. Middle-aged individuals were randomly selected from phone lists obtained through Genesys Corporation as well as random digit dialing in the Philadelphia Primary Metropolitan Statistical Area (five counties in southeastern Pennsylvania and four counties in New Jersey) and stratified by gender and age (40–50 years; 51–60 years; Pennsylvania State Data Center, 2001). Participants living in Philadelphia County, high-density minority neighborhoods, and lower socioeconomic status households were oversampled resulting in a total of 37% middle-aged minority participants (31% African American, 6% multiracial). See Table 1 for the sample description. Of the potential middle-aged participants contacted, 75% participated and all completed the interviews. We refer to these participants as the "target" sample because the additional samples of their children (G3; offspring) and their parents (G1; grandparents) originated from them, and all participants reported on their relationships with the target. See Table 1 for a sample description. A total of 235 targets had both parents alive (37%), 308 had only mothers alive, and 90 had only fathers alive. We refer to the G2 target's parents as G1 or the "grandparent" sample.

Child and grandparent samples (G3 and G1).—Target middle-aged participants provided contact information for adult offspring (G3) and grandparents (G1). Children and grandparents included biological, adopted, or stepfamily members. Of the total available focal children aged 18 years and older ($N = 1251$), middle-aged targets provided contact

Table 1. Characteristics of the Sample

Variable	Middle-aged target (G2; $N = 633$)	Children (G3; $N = 592$)	Grandparents (G1; $N = 337$)
Means and standard deviations			
Age	50.6 (4.99)	23.72 (5.07)	76.07 (6.31)
Years of education	14.18 (2.02)	13.80 (1.89)	12.71 (2.49)
Self-rated health	3.48 (1.07)	4.33 (0.92)	3.07 (1.12)
Neuroticism	2.63 (0.79)	2.67 (0.78)	2.29 (0.76)
Contact with children	5.65 (2.13)	—	5.28 (1.83)
Contact with parents	5.07 (2.01)	6.01 (1.95)	—
Percentages			
Gender (female)	52.3	55.1	69.4
African American	30.7	25.9	27.3
European American	63.2	67.9	65.6
Marital status			
Married	62.7	14.9	42.1
Remarried	7.1	0.5	5.0
Divorced/separated	17.7	2.2	13.4
Widowed	2.2	0.0	36.8

Note. Health rated from 1 (*poor*) to 5 (*excellent*). Contact frequency was rated: 1 (*less than once a year or never*), 2 (*once a year*), 3 (*a few times a year*), 4 (*monthly*), 5 (*a few times a month*), 6 (*weekly*), 7 (*a few times a week*), or 8 (*daily*).

information for 791 children, with 592 of the offspring completing interviews. Offspring ranged in age from 18 to 41 years.

A total of 37% targets ($n = 234$) had one offspring (G3) participate, 22% ($n = 137$) had two offspring participate, and 4% had three offspring participate. Targets with participating offspring did not differ from targets without participating offspring in terms of age, education, self-rated health, and gender. Offspring who participated were younger, had better self-rated health, lived closer to parents, were more likely to co-reside with parents, and were more likely to be sons than offspring who did not participate. Targets (G2) reported greater positive and negative quality relationships with offspring (G3) who participated in the study (mean [M] = 4.16, standard deviation [SD] = 0.73; $M = 2.15$, $SD = 0.87$) compared with offspring not in the study ($M = 3.90$, $SD = 1.02$; $M = 1.96$, $SD = 0.87$, $t = -5.03$, $p < .01$; $t = -3.82$, $p < .01$).

Of the total number of grandparents alive ($N = 864$), respondents provided contact information for 455 of them, and 337 grandparents completed interviews (234 grandmothers, 103 grandfathers). Grandparents ranged in age from 59 to 96 years. A total of 35% of targets ($n = 223$) had one grandparent (G1) who participated and 9% ($n = 57$) had two grandparents participate. Middle-aged individuals with a participating grandparent were younger, had better self-rated health, and were more likely to be women than middle-aged participants whose grandparents did not participate. Participating grandparents (G1) were younger and more likely to be women than nonparticipating grandparents. Targets reported greater feelings of positive quality regarding grandfathers and grandmothers who participated ($M = 4.16$, $SD = 0.70$; $M = 4.21$, $SD = 0.66$) than grandfathers and grandmothers who did not participate ($M = 3.61$, SD = 1.12; $M = 4.02$, $SD = 0.86$; $t = -4.56$, $p < .01$; $t = -2.84$, $p < .01$). There was no significant variation in negative relationship quality between G1 participants and nonparticipants.

All families had target participants (G2), and 221 (35%) families had both G1 and G3 participants; 59 (9%) families had G1 participants only (no G3), and 178 (28%) families had G3 participants only (no G1). The remaining 175 families (28%) included only target participants. It is important to note that the majority of families included reporters from at least two generations to examine within-family variations.

Procedure

Participants completed hour-long computer-assisted telephone interviews and received $30 for their time. Midlife target participants reported their relationship quality with up to three offspring over age 18 and each of their living parents (grandparents). Participants with more than three offspring (12%) reported on the child they provided the most support to, the child they provided the least support to, and a randomly selected child. The offspring and grandparents reported on the relationship quality with the middle-aged target.

Measures

Relationship quality.—Positive relationship qualities included two items: "Overall, how much does your (father/mother/child) love and care for you?" and "How much does your (father/mother/child) understand you?" Negative qualities included two items: "How much does your (father/mother/child) criticize you?" and "How much does your (father/mother/child) make demands on you?" These items are similar to those used in other studies of the parent–child tie (Silverstein, Gans, Lowenstein, Giarusso, & Bengtson, 2010; Umberson, 1992). Participants rated the items on a 5-point scale (1 = *not at all* to 5 = *a great deal*). We created mean scores of positive and negative relationship quality for the following reports: grandmother regarding target, grandfather regarding target, target regarding mother, target regarding father, target reports regarding each adult offspring, and each adult offspring reports regarding target. The positive and negative quality scales had moderate internal consistency (positive α ranged from .40 to .79; negative α ranged from .37 to .74). Although some of the coefficients appear low, scales with few items often have lower reliability and previous research using similar relationship quality scales finds similar coefficients (Birditt, Fingerman, & Zarit, 2010; Fingerman et al., 2008). Indeed, coefficient alphas often underestimate the reliability (Sijtsma, 2009) and they are influenced by the number of items as well as other factors (e.g., duplicated items, the number of dimensions in the scale; Huysamen, 2006).

Covariates.—Covariates included gender, marital status, age, race, education, self-rated health, neuroticism, and contact frequency (Fingerman et al., 2006). Gender was coded as 0 (*women*) or 1 (*men*). Marital status included a dichotomous score (0 = *not married*, 1 = *married or remarried*). We considered whether to include a more nuanced marital status variable; however, the categories (e.g., widowed) varied widely across the generations and thus could not be considered in the analyses including all generations. Target respondent race was used for all family members and coded as 0 (*not European American*) or 1 (*European American*). Years of education included the highest grade or year of college completed. Participants rated their physical health from 1 (*poor*) to 5 (*excellent*). Neuroticism included four items from the Midlife in the United States Study (MIDUS) in which participants rate how well each of four adjectives (moody, worrying, nervous, and calm) described themselves: 1 (*not all*) to 5 (*a lot*). Calm was reverse coded, and all items were averaged so that higher scores represent greater neuroticism. The scale had moderate internal consistency (α = 0.66, 0.73, and 0.65 among offspring, middle-aged targets, and grandparents, respectively). Contact frequency included "In the past 12 months how often have you seen (father/mother/child) in person?" being rated as 1 *(less than once a year or never*), 2 (*once a year*), 3 (*a few times a year*), 4 (*monthly*), 5 (*a few times a month*), 6 (*weekly*), 7 (*a few times a week*), or 8 (*daily*). It is important to note that the contact frequency did not include phone or other types of contact (e.g., email, texts), which may be a limitation.

Analysis strategy.—First, we calculated correlations among the study variables and among the family member reports of relationship quality. Next, because the data included multiple reports from individuals within the same family, we used multilevel modeling to address the issue of dependencies in the data (SAS PROC MIXED; Singer, 1998). These models account for the nested or clustered nature of the data.

We first examined the intergenerational stake hypothesis by assessing generational differences in reports of relationship quality. We estimated two multilevel models assessing differences in positive quality and negative quality. The models included two random effects that allowed for correlated errors within families and within generation. The outcomes were positive and negative relationship quality, and the predictor was family member. Family member was a combination of generation and gender and coded as 1 = grandmother (G1) re: target (G2); 2 = grandfather (G1) re: target (G2); 3 = target (G2) re: grandmother (G1); 4 = target (G2) re: grandfather (G1); 5 = target (G2) re: offspring (G3); 6 = offspring (G3) re: target (G2). Covariates included gender, race, marital status, education, self-rated health, neuroticism, and contact frequency. We did not include age as a covariate due to the high correlation between age and generation (r = .83) and the possible problems with multicollinearity. To examine differences between family members, we examined all pairwise comparisons of means with Tukey adjustments.

Next, we used multilevel models to examine whether relationship qualities are transmitted from the grandmother and grandfather relationships with middle-aged target (G1–G2) to the target–offspring relationship (G2-G3). The outcomes included "middle-aged target" and "offspring reports" of positive and negative relationship quality, and these outcomes were assessed in separate models. The models included one random effect for family. The models examined the grandmother–target relationship and the grandfather–target relationship as separate predictors, and the models were estimated in two steps as follows: (a) target reports of grandmother or grandfather (G1) as predictors, (b) grandmother or grandfather reports (G1) regarding target (G2) as predictors. Models predicting target reports controlled for target reports of age, gender, race, marital status, education, self-rated health, neuroticism, and contact frequency.

Similar models were used to examine offspring reports regarding targets. The models were estimated using the same two steps. The models controlled for race, and offspring's gender, age, marital status, education, self-rated health, neuroticism, and contact frequency. Models also controlled for the target reports of relationship quality regarding offspring because we were interested in effects of the older generations on the offspring beyond the perceptions of the target.

There were less than 1% missing data with regard to covariates and relationship quality. Multilevel models are ideal because families with missing data are not removed from the analyses, and the models are not affected by unbalanced data (i.e., in which some families include more member reports than others).

Results

Description of the Data

Correlation analyses revealed that positive and negative quality were negatively correlated (r = −.20, p < .01). Individuals who had more education, scored lower on neuroticism, who were men, who were European American, and who reported more frequent contact also reported more positive relationship quality. Individuals who were younger, who scored higher on neuroticism, who were women, who were unmarried, and who reported more frequent contact reported greater negative relationship quality.

Correlations between family members' reports of relationship quality revealed that target (G2) reports of grandmother and grandfather (G1) were moderately correlated (r = .21 for positive and .07 for negative). Grandmothers' and grandfathers' ratings of target (G2) were not highly

Table 2. Estimated Means (*M*) and Standard Errors (*SE*) of Relationship Quality by Family Member

	Positive quality	Negative quality
	M (*SE*)	*M* (*SE*)
Grandmother (G1) re: target (G2)	4.40 (0.06)[a]	1.72 (0.06)[a]
Grandfather (G1) re: target (G2)	4.41 (0.08)[a]	1.64 (0.09)[a]
Target (G2) re: grandmother (G1)	4.12 (0.04)[b]	2.13 (0.04)[c]
Target (G2) re: grandfather (G1)	3.87 (0.05)[c]	1.85 (0.05)[a]
Target (G2) re: offspring (G3)	4.01 (0.03)[b,c]	2.07 (0.03)[c,d]
Offspring (G3) re: target (G2)	4.10 (0.04)[b,d]	2.26 (0.05)[c,e]

Note. Means in the same column with different subscripts (a–e) were significantly different according to pairwise comparisons with Tukey adjustments ($p < .05$).

correlated ($r = .11$ for positive and −.03 for negative). Target (G2) and grandmother (G1) reports were moderately correlated ($r = .29$ for positive and .32 for negative). Target and grandfather reports were low to moderately correlated as well ($r = .08$ for positive, and .20 for negative). Target (G2) and offspring (G3) reports of one another were moderately correlated ($r = .34$ for positive and .25 for negative). Grandmother and grandfather reports had low to moderate correlations with target reports of offspring (grandmother [positive $r = -.08$; negative $r = .11$]; grandfather [positive $r = -.07$; negative $r = .12$]) and offspring reports of target (grandmother [positive $r = .13$; negative $r = .02$]; grandfather [positive $r = .01$; negative $r = .18$]).

Variations Among Generations in Relationship Quality

Our first research question pertained to the intergenerational stake and whether parents in either G1 or G2 generation reported more positive relationship qualities and less negative relationship quality than did their children. Multilevel models revealed that positive relationship quality varied among family members ($F(5, 1592) = 16.66$, $p < .01$; Table 2). As predicted, the oldest G1 generation reported greater positive quality than the middle (G2) and youngest (G3) generations. In particular, grandparents (G1) reported greater positive relationship quality with targets (G2) than targets reported about grandparents (G1). There was no significant difference between target reports of positive relationship quality with their offspring (G3) and their offspring reports (G3) of positive relationship quality with them.

Negative relationship quality also varied among family members ($F(5, 1594) = 19.19$, $p < .01$; Table 2). As predicted, the oldest generation tended to report the lowest negative relationship quality followed by middle-aged targets and their offspring. In particular, (G1) grandmothers reported significantly lower negative relationship quality than (G2) middle-aged targets about grandmothers. Significant differences in relationship qualities were not found for grandfathers and middle-aged targets.

Generational differences in negative relationship qualities also were evident for (G2) targets and (G3) their children. Middle-aged targets reported lower negative relationship quality regarding offspring than offspring reported about them.

Intergenerational Transmission of Relationship Quality

We then examined whether the relationship quality in the G1–G2 relationship predicted relationship quality in the G2–G3 relationship. First, we examined the predictors of target (G2) reports regarding their offspring (G3; see Table 3).

Table 3. Multilevel Models Examining Target Reports of Relationship Quality with Offspring (G3) as a Function of Relationship Quality in the G2–G1 Tie (as reported by Targets and Grandparents)

	Positive relationship quality												Negative relationship quality											
Variable	Grandmother tie						Grandfather tie						Grandmother tie						Grandfather tie					
	Step 1			Step 2			Step 1			Step 2			Step 1			Step 2			Step 1			Step 2		
Generation	*B*	*SE*		*B*	*SE*		*B*	*SE*		*B*	*SE*		*B*	*SE*		*B*	*SE*		*B*	*SE*		*B*	*SE*	
Target (G2) re: grandparent (G1)	.19	.04	**	.33	.08	**	.11	.04	**	.24	.10	*	.14	.03	**	.10	.05		.16	.04	**	.26	.08	**
Grandparent (G1) re: target (G2)				−.17	.07	*				−.19	.11					.07	.07					−.01	.09	
Target (G2) covariates																								
Age	.01	.01		.01	.01		.02	.01	*	.02	.01		−.01	.01		−.01	.01		−.02	.01	*	−.01	.02	
Gender	−.23	.06	**	−.37	.10	**	−.13	.08		−.08	.15		.05	.06		−.01	.09		−.05	.08		−.16	.15	
European American	.03	.07		.12	.12		−.06	.10		−.07	.18		.07	.07		.20	.11		.15	.09		.11	.19	
Marital status	−.08	.07		−.13	.12		.07	.10		.16	.18		−.01	.07		−.23	.11	*	−.07	.09		−.35	.18	
Education	.03	.02	*	.03	.03		.01	.02		.01	.04		.05	.02	**	.06	.02	*	.08	.02	**	.07	.04	
Self-rated health	.02	.03		−.00	.05		.08	.04	*	.06	.08		−.03	.03		−.04	.05		−.08	.04		.12	.09	
Neuroticism	−.08	.04	*	−.07	.07		−.10	.06		−.04	.09		.16	.04	**	.15	.06	*	.22	.05	**	.28	.10	**
Contact frequency	.14	.01	**	.15	.02	**	.13	.02	**	.14	.03	**	.08	.01	**	.10	.02	**	.07	.02	**	.09	.03	**
Variance between family	.26	.03	**	.26	.05	**	.27	.04	**	.22	.08	**	.23	.03	**	.16	.05	**	.21	.04	**	.30	.09	**
Variance within family	.41	.02	**	.50	.05	**	.41	.03	**	.44	.06	**	.46	.03	**	.49	.05	**	.41	.03	**	.34	.05	**
−2 Log likelihood	2496.8			1103.1			1497.6			481.1			2570.1			1049.0			1450.5			459.5		

Note. $*p < .05$. $**p < .01$.

As predicted, targets (G2) who reported greater positive relations with their mother and father (i.e., G1 grandmother and grandfather) reported more positive relationships with their own children (G3). When grandparent (G1) reports were added in the next step, the models revealed that higher grandmother (G1) reports of positive quality regarding targets (G2) were associated with lower target (G2) reports of positive relationship quality regarding their own children (G3).

The models predicting target (G2) reports of negative relationship quality regarding offspring (G3) revealed that, as hypothesized, middle-aged targets who reported greater negative relationships with their mothers and fathers (i.e., G1 grandmothers and grandfathers) reported more negative relationships with their own children (G3; Table 3). Grandparent (G1) reports of negative relationship quality were not associated with target reports (G2) regarding their offspring (G3).

The next set of models examined whether the G1–G2 relationship predicted the G2–G3 relationship as reported by the G3 participants (Table 4). The models examining positive relationship quality revealed that there were no main effects of target reports (G2) regarding grandparents on offspring reports (G3). The models that included grandparent reports revealed that grandmothers (G1) who reported greater positive relationship quality with their children (i.e., G2 targets) had grandchildren (G3) who reported more positive relationships with their middle-aged parents (i.e., G2 targets).

The models examining negative relationship quality revealed that there were no significant associations between target reports regarding grandparents or grandparent reports and the offspring reports.

Post hoc tests

Because the models examining the grandparent (G1) reports as predictors of G2–G3 relationship quality may have been affected by the inclusion of target (G2) reports, we reestimated the models with only grandparents (G1) as the predictors (along with covariates) and found no associations between grandparent (G1) reports and either target (G2) reports of children (G3) or children's (G3) reports of targets (G2).

We were also intrigued by the negative association between grandmother (G1) reports of positive relationship quality and target (G2) reports of positive relationship quality. The negative coefficient may imply that positive G2–G3 relationship quality is lower when G1 reports greater relationship quality than G2 (i.e., greater intergenerational stake). We explored this issue further by estimating additional multilevel models examining the difference between G1 and G2 reports (G1 − G2) as predictors of target (G2) reports and offspring (G3) reports. For positive quality, the difference score for grandmother and grandfather (G1) reports of positive relationship quality regarding target (G2) and middle-aged target (G2) reports regarding their parents (G1) was negatively associated with targets' (G2) reports of relationship quality regarding their children (G3; $b = -.24$, standard error [*SE*] = .06, $p < .01$; $b = -.22$, $SE = .08$, $p < .01$, respectively). This finding implies that the greater the difference between G1 and G2 reports (with G1 reporting

Table 4. Multilevel Models Examining Offspring Reports (G3) of Relationship Quality with Middle-aged Targets as a Function of Relationship Quality in the G2–G1 Tie (as reported by Target and Grandparents)

	Positive relationship quality								Negative relationship quality							
	Grandmother tie				Grandfather tie				Grandmother tie				Grandfather tie			
	Step 1		Step 2		Step 1		Step 2		Step 1		Step 2		Step 1		Step 2	
Variable	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*
Generation																
Target (G2) re: grandparent (G1)	−.07	.05	−.12	.08	.01	.04	−.05	.09	.05	.05	−.03	.10	.04	.06	−.02	.10
Grandparent (G1) re: target (G2)			.18	.07 *			.07	.09			−.03	.10			.12	.09
Target (G2) re: offspring (G3)	.34	.05 **	.42	.06 **	.34	.06 **	.53	.08 **	.18	.05 **	.29	.08 **	.24	.06 **	.34	.10 **
Offspring (G3) covariates																
Age	−.01	.01	−.01	.01	−.00	.01	.02	.01	−.04	.01 **	−.04	.02 **	−.01	.01	.01	.02
Gender	.01	.02	.03	.02	−.00	.02	.02	.03	−.10	.02 **	−.10	.03 **	−.10	.03 **	−.09	.04 *
European American	.25	.08 **	.23	.10 *	.23	.10 *	.18	.15	.03	.10	.07	.14	.12	.12	.20	.20
Marital status	−.04	.12	−.20	.16	.06	.13	.09	.17	.01	.14	.25	.21	−.61	.17 **	−.36	.28
Education	.05	.02 *	.03	.03	.05	.03	−.05	.03	−.02	.03	−.03	.04	−.05	.03	−.01	.05
Self-rated health	−.03	.04	−.00	.05	−.04	.05	.04	.07	−.00	.05	−.04	.08	.02	.06	−.06	.10
Neuroticism	−.13	.05 **	−.13	.06 *	−.09	.05	−.17	.07 *	.21	.06 **	.20	.08	.15	.07 *	.15	.11
Contact frequency	.07	.02 **	.06	.02 **	.06	.02 **	.00	.03	.05	.02 *	.01	.03	.06	.03 *	.05	.04
Variance between family	.09	.04 *	.15	.05 **	.11	.05 *	.14	.05 **	.15	.07 *	.17	.10	.00	.09	.00	.15
Variance within family	.45	.05 **	.33	.05 **	.36	.05 **	.19	.04 **	.69	.07 **	.67	.10 **	.76	.11 **	.70	.17 **
−2 Log likelihood	1137.3		588.6		675.2		248.1		1345.1		739.0		820.6		344.5	

Note. *$p < .05$. **$p < .01$.

greater positivity) the lower the quality of G2's relationship with their own children. There were no significant associations between the difference scores and offspring reports of positive quality.

For negative quality, there was a significant negative association ($b = -.14$, $SE = .07$, $p < .05$) between the difference score for grandfather reports (G1) and target reports (G2) predicting target reports of negative relationship quality regarding their own children(G3). This negative association implies that the larger the discrepancy between reports (with G1 reporting more negativity than G2) the lower the negativity in the G2–G3 relationship. There was no significant association between difference scores and offspring reports of negative relationship quality. Overall, these findings suggest that the developmental stake in the G1–G2 relationship predicts poorer relationship quality in the G2–G3 relationship.

Research indicates that the parent–child tie varies depending on whether adult children are living at home (Aquilino, 1991; Aquilino & Supple, 1991; Pillemer & Suitor, 1991). Sixty-five percent of targets had a least one adult child live at home in the past year. We conducted all analyses again controlling for coresidence of target with at least one adult offspring, and the findings were the same. Too few aging parents (G1) coresided with targets (G2) to conduct the analyses controlling for coresidence between the older generations.

Finally, research indicates that the parent–child tie varies depending on whether parents are divorced, remarried, widowed, or married (Aquilino, 1994; Booth & Amato, 1994; Kaufman & Uhlenberg, 1998; Rossi & Rossi, 1990; Umberson, 1992). We conducted all analyses again controlling for a four-category target marital status variable. The differences among family members in reports of relationship quality were similar after controlling for marital status. Two important exceptions were that negative relationship quality no longer varied between the G2 and G3 reports of one another and target reports regarding their children no longer varied by positive grandmother reports. Thus, it appears that marital status accounts for some of the variations and associations in relationship quality in the G2–G3 relationship. However, the results regarding marital status should be interpreted with caution, given the small number of target individuals who were widowed (2.2%) or remarried (7.1%).

Discussion

This study reveals the complexity of family relationships across three generations. Unlike previous studies, which have often included two generations of families, this study examined positive and negative dimensions of relationship quality within families across three generations. Overall, this study suggests that there is greater within-family variability than similarities in relationship quality. Findings are consistent with the intergenerational stake hypothesis and only partially consistent with the theory of intergenerational transmission.

Generational Differences and the Intergenerational Stake

Positive and negative quality varied across the three generations. Consistent with the intergenerational stake and previous research, grandparents reported higher positive quality than the middle-aged targets regarding grandparents. Interestingly, and extending the previous research, this study found no generation difference in reports of positive quality among the middle-aged targets and their offspring. The intergenerational stake may increase as parents and children grow older (Bengtson & Kuypers, 1971; Shapiro, 2004). Older adults may experience greater investment in the relationship with their middle-aged offspring when their middle-aged offspring have the least time to invest in the tie. Older adults, for example, have more time due to retirement and may need help due to health declines whereas middle-aged adults often have several demanding roles (e.g., children, spouses, and work) causing lower positive quality among middle-aged children regarding their parents (Birditt, Miller et al., 2009).

As predicted and also consistent with the intergenerational stake, the older generation members in families reported lower levels of negative relationship quality than the younger generations. In particular, grandmothers reported lower negative quality than middle-aged targets reported regarding grandmothers. In addition, middle-aged targets reported lower negative quality regarding their offspring than their offspring reported regarding the relationship. The generation differences show evidence of the stake in the older (G1–G2) and younger (G2–G3) generation relationships in which parents report lower negative relationship quality than children. These findings contribute to the previous work by moving beyond the parent–child dyad and showing that the intergenerational stake exists with regard to negative relationship qualities across three generations (Aquilino, 1999; Fingerman, 2001). Interestingly, these findings show evidence of the stake between grandmothers and their middle-aged offspring and not grandfathers and their offspring, which may be due to mother's greater contact and closeness with children than fathers (Rossi & Rossi, 1990).

Of course, because the data are cross-sectional, it is not clear what factors explain the variations in relationship quality by generation. The generation differences may not be due to relationship dynamics as suggested by the intergenerational stake hypothesis. For example, age-related improvements in emotion regulation and less attention and memory for negative information (Carstensen, 2006; Labouvie-Vief, 2003) may lead grandparents to report better quality parent–child relationships than middle-aged adults and their offspring. It is also possible that cohort differences contribute to how people appraise intergenerational relationships. Older generations may feel less comfortable

expressing negative feelings about family relationships than younger generations due to experiences specific to their cohort such as the Great Depression.

In addition, there is some selection bias in the reports of relationship quality as individuals with more positive relationships are more likely to participate. However, participating and nonparticipating grandparents did not vary in negative relationship quality, and children who participated were rated as more negative than nonparticipating children. Thus, the findings do appear to reveal actual variations between generations in reports that are not completely an artifact of who chooses to participate.

Transmission of Relationship Quality Across Generations

According to family systems theory, people reenact patterns of behaviors they learned as children in their relationships with spouses, children, and others (Bowen, 1978). We extended this theory to the concept of relationship quality and hypothesized that families would transmit feelings of positive and negative relationship quality from older to younger generations. The present study revealed limited evidence of transmission. Middle-aged individuals who reported better quality relationships with their mothers and fathers (i.e., G1 grandparents) reported better quality relationships with their own children (G3). The more stringent test of transmission involved the models examining grandparent reports as predictors, and we found few transmission effects when examining grandparent reports. This study revealed an association between grandmother positivity and the younger generations but no grandfather effects and no transmission effects for negative quality.

The associations between middle-aged respondent reports of their parents and children may be due to transmission, but we cannot rule out other competing explanations. One obvious consideration is that factors associated with the target (i.e., targets report similar relationship quality in all their relationships) might account for similarities in relationship quality of middle-aged adults with grandparents and offspring. We did control for target factors including personality, but we may not have been able to rule out other explanations for similar relationship quality.

Grandmother reports of positive relationship quality with their middle-aged children seemingly had dual effects. Grandmothers' higher ratings of positive relationship quality with their middle-aged children were associated with lower feelings of positivity among middle-aged targets regarding their offspring but greater offspring reports of positivity regarding the middle-aged parents. Thus, it appears that grandmother feelings of positivity regarding their own children may be transmitted to their grandchildren. This is consistent with research indicating that positive parenting practices (e.g., warm parenting) are replicated from one generation to the next (Belsky et al., 2005; Chen & Kaplan, 2001). The negative association between positive grandmother reports and middle-aged target reports was surprising. It is possible that middle-aged respondents experience more burden from close and positive relationships with their mothers than do their offspring. Indeed, middle-aged adults are often relied on for support and provide care to multiple generations of family members and often provide more than they receive (Fingerman et al., 2011; Levitt, Guacci, & Weber, 1992).

Interestingly, we also found evidence that the intergenerational stake in the G1–G2 relationship may have negative implications for the G2–G3 relationship. Greater intergenerational differences in the G1–G2 tie with G1 reporting greater positive quality and lower negative quality than G2 predicted lower relationship quality in the G2–G3 relationship (as reported by G2). A larger intergenerational stake may indicate that there is greater disagreement in the relationship, which may spill over into the G2–G3 relationship. The stake may also indicate that G1 are more demanding on G2, which may strain their relationships with their own children (G3). Indeed, Fingerman (2001) found that middle-aged daughters reported their mothers were intrusive and demanding when mothers rated the relationship as more important.

Thus, with regards to transmission, we found only partial evidence. These findings indicate that there is greater variation between generations in relationship quality than there are similarities. However, before abandoning the idea of intergenerational transmission of relationship quality, it is important to recognize that limitations in the study design may have prevented us from finding more evidence of transmission. For example, the grandparents who participated had more positive relationships with targets than those who did not participate. There may be more transmission in families with lower positive quality ties. There were fewer grandfathers who participated than grandmothers, which may have reduced the likelihood of finding transmission effects for grandfathers. In addition, this study included only one set of grandparents, and the transmission effects may occur with the nontarget parents.

This study also showed that intergenerational relationship quality is associated with other important personality and demographic factors. Greater neuroticism was associated with lower quality intergenerational relationships, which is consistent with previous research (Fingerman et al., 2006). Furthermore, women and individuals who had more contact reported greater positive and greater negative quality relationships (Akiyama et al., 2003; Fingerman, 2001). There were also findings that were not consistent across positive and negative relationship quality. Individuals with greater education and European American individuals reported greater positive relationship quality, which is consistent with previous research (Birditt, Rott et al., 2009). Similar to previous research, individuals who were

younger and individuals who were unmarried reported greater negative relationship quality (Birditt et al., 2010; Birditt, Jackey, & Antonucci, 2009).

Limitations and Future Directions

There are several limitations to the present study that provide directions for future research. Most importantly, because of the cross-sectional nature of the design, we cannot be sure of the stability or developmental nature of the effects. A longitudinal study is needed to examine generation differences and similarities over time. Furthermore, families in this study may not include particularly troubled parent–child relationships or families. We may have found more similarities across family member reports of relationship quality in more troublesome or abusive families. It is important to note, however, that participating children were rated as more negative than nonparticipating children, and there were no variations in negative relationship quality between participating grandparents and nonparticipating grandparents. Another consideration is that we did not include retrospective assessments of early childhood experiences. Although colored by current feelings, these retrospective reports may nonetheless provide some insight about long-term relationship dynamics. We also know little about the mechanisms that account for variations between family members or links among family members' perceptions of relationship quality. Future studies should consider dynamics between parents and children over time and examine how parents and children communicate their feelings toward one another. Finally, participants were asked to report on up to three children. Although the sample of adults who had more than three children was small (12%), we recognize that parents may have different quality relationships with those children who were not assessed.

Overall, this study shows that there is substantial within-family variation in relationship quality and that generation plays an important role in those variations. Indeed, generation differences appear to vary depending on the developmental stages of the parents and children. We found only partial evidence that intergenerational relationship quality may be transmitted from older to younger generations of families. We hope that this research encourages additional studies on multiple generations and relationship quality. These patterns of relationship quality most likely have implications for the health and well-being of the individual family members as well as the overall well-being and functioning of entire families.

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