

Grandparent–Grandchild Communication and Attitudes Toward Older Adults: Relational Solidarity and Shared Family Identity in China

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Guided by intergroup contact theory and communication accommodation theory, this study examined the direct and indirect effects of Chinese young adults’ ($N = 211$) intergenerational family communication on behavioral attitudes toward older adults. Results indicated that communication frequency with their most frequently contacted grandparent significantly predicted willingness to have future contact with older people. Frequent and positive communication experiences with the grandparent also improved attitudes indirectly through (sequentially) enhanced relational solidarity and shared family identity with the grandparent. The grandparent’s nonaccommodation was associated negatively with relational solidarity, which subsequently led to reduced shared family identity and attitudes. Findings in this study demonstrate the critical role played by grandparent–grandchild contact in generalization of the contact effect from a specific older family member to nonfamily older people in general. These findings are discussed regarding intergenerational communication, the Chinese norm of filial piety, and intergroup theories of communication accommodation and intergroup contact.

Keywords: Chinese culture, grandparent–grandchild, communication frequency, communication quality, intergenerational contact, relational solidarity, shared family identity, ageism

Older adults represent a growing demographic group in almost every nation, especially in Asia (United Nations, 2019), where the percentage of the population aged 65 years or over almost doubled from 6% in 1990 to 11% in 2019. In tandem with population aging, older adults face increasing challenges such

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as low social involvement, high prevalence of disability, and social stereotyping (North & Fiske, 2012; Ryan, Giles, Bartolucci, & Henwood, 1986; Williams & Nussbaum, 2001). Although positive stereotypes of older adults do exist, negative age stereotypes and attitudes are still prevalent (North & Fiske, 2012; Zhang, Hummert, & Garstka, 2002), which lead to problematic communication with and avoidance of older adults and have negative effects on the physical and psychological well-being of older adults (Lin & Giles, 2013; Ryan et al., 1986).

Motivated by demographic changes and concern for older adults' physical and psychological well-being, research on communication and aging in family and nonfamily contexts has increased in Western societies (Harwood, Hewstone, Paolini, & Voci, 2005; Williams & Nussbaum, 2001). It aims to understand contributors to ageism and improve intergenerational attitudes. Communication scholars have examined how the quality of intergenerational communication and relationships between younger and older adults socially construct attitudes toward older adults, especially in the family context (Giles et al., 2003; Harwood et al., 2005; Soliz & Harwood, 2006).

Age, as an important social identity, plays an important role in family relationships (Harwood et al., 2005). Intergenerational family relationships, especially grandparent–grandchild (GP–GC) communication, have been explored through interpersonal and intergroup lenses, as the GP–GC relationship possesses the dual traits of intragroup (belong to the same family) and intergroup (belong to different age groups) categorizations (Giles et al., 2003; Harwood et al., 2005; Zhang, Paik, Xing, & Harwood, 2018). In addition, the GP–GC relationship is a frequent and long-term family relationship that benefits both grandchildren and grandparents (Williams & Nussbaum, 2001). Hence, GP–GC communication has a great potential to shape grandchildren's attitudes toward older adults and also enhance the mental health of grandchildren and grandparents (Harwood et al., 2005; Lin & Harwood, 2003). Most of these studies, however, have been conducted in the West. Guided by intergroup contact theory and communication accommodation theory, the current research examines the influence of GP–GC communication and relationships on young adults' attitudes toward older adults in China, where the age-related norm of filial piety originated and where almost a quarter of all older people in the world currently live.

Filial piety is a collectivist Confucian value that specifies a hierarchical relationship between young and older adults based on age by placing younger adults at the lower end of the hierarchy (“百善孝为先; Filial piety is virtue of virtues”; Weng, Zhang, Kulich, & Zuo, 2021, p. 235). Young adults are mandated by the filial piety norm to value older adults' wisdom, hard work, contributions, and experiences by showing obedience, paying respect, and providing emotional and/or financial support to elders (Zhang & Hummert, 2001). Initially motivated by exploring the role of filial piety, research on Chinese intergenerational communication has increased (Gallois et al., 1996; Song & Zhang, 2012). This work shows both positive and negative roles of filial piety, perhaps reflecting a cultural hybrid of tradition and modernization (e.g., Noels, Giles, Gallois, & Ng, 2001).

On the positive side, Chinese older adults' wisdom, experience, and knowledge are valued, and communication to and from elders is conducted in a harmoniously respectful and mutually satisfying manner (Zhang & Hummert, 2001). Thus, filial piety has a positive impact on perceptions of older adults and intergenerational communication and relationships. Research, however, also indicates problematic elements

of intergenerational relationships in Chinese culture: Both younger and older adults report negative, dissatisfying, or nonaccommodative communication behaviors in intergenerational relationships within and outside the family context (Lin & Harwood, 2003; Zhang, 2004). Although filial piety is still prevalent in Chinese culture, negative images of family and nonfamily elders are common in Chinese media (Lien, Zhang, & Hummert, 2009). Repeated exposure to such images has the potential to amplify negative age stereotypes, such as perceptions that older adults are bossy, meddlesome, and controlling (Zhang et al., 2002). In recent decades, although multigenerational cohabitation has declined in China, resulting in reduced intergenerational communication in general, the fast-paced urbanization of China has caused many young and middle-age people to migrate to big cities. Often, they leave their children with grandparents, thus increasing GP–GC contact (Zhao & Yu, 2016). Growing individualism in the last 20 years means that Chinese young people tend to infuse the traditional norm of filial piety with some modern flavors: They increasingly desire independence and equal status in intergenerational relationships (Yue & Ng, 1999; Zhang, Harwood, & Hummert, 2005). As such, our research is timely and theoretically meaningful as China is a unique collectivistic culture, where the traditional age-explicit norm is upheld, but is also challenged by an influx of Western values of individualism (Gallois et al., 1996; Weng et al., 2021; Zhang & Hummert, 2011).

Intergroup Contact Theory

Allport's (1954) contact hypothesis presents four ideal conditions for when direct intergroup contact could reduce intergroup prejudice and biases (i.e., common goals, equal status, cooperative interaction, and institutional support). Pettigrew (1998) adds as a facilitating condition that the contact should be high quality and have friendship potential. Pettigrew also notes that research should examine the underlying processes of intergroup contact (i.e., communication). These contributions are critical as frequent and positive contact improves intergroup relations because such contact provides communication opportunities for in-group reappraisal, learning about and developing affective ties with the out-group, reduced intergroup anxiety and stereotyping, and increased intergroup empathy (Brown & Hewstone, 2005).

Both quality and quantity of contact positively predict relational solidarity and thus enhance intergroup attitudes (Imamura, Zhang, & Harwood, 2011; Paolini, Hewstone, Cairns, & Voci, 2004) and identification with the target outgroup (Ristić, Zhang, & Liu, 2019). Moreover, intergroup contact with specific out-group members (e.g., immigrants in Italian workplaces) is associated with better intergroup attitudes toward the immediate target out-group (e.g., immigrants in Italy), but also extended out-groups (e.g., immigrants in Europe; Voci & Hewstone, 2003). Contact research examines intergroup contexts such as culture, ethnicity, and religion (Pettigrew & Tropp, 2006). Scholars have investigated how young adults' contact experiences with older adults influence their attitudes toward older adults and found that intergenerational contact, especially contact quality, reduces ageism (e.g., Drury, Hutchison, & Abrams, 2016; Zhang et al., 2018). Findings concerning contact quantity, however, reveal some inconsistencies. Some scholars found that more contact with older adults is associated with more positive attitudes with older adults (Lou, Zhou, Jin, Newman, & Liang, 2013; Zhang et al., 2018), but others found no association (Boswell, 2012). Some studies found that the effects of contact quantity vary across contexts. For example, Allan and Johnson (2009) found that young people's contact at work, but not at home, was associated with more positive attitudes toward older adults. This might be due to variations in the quality of contact across

those contexts. These studies highlight the importance of investigating both frequency and quality of intergenerational contact.

In emphasizing the essential role of friendship potential in intergroup contact, Pettigrew (1998) points out that "intergroup contact requires time for cross-group friendships to develop" (p. 76). Hence, long-term, repeated, extensive, or frequent intergroup interactions provide the greatest opportunity for positive intergroup outcomes. Grandparents and grandchildren share a long-term intergenerational family relationship. Hence, studying GP–GC contact could illuminate the importance of cumulative contact in close relationships (Soliz & Harwood, 2003) in reducing age-related prejudice. Compared with nonfamily elders, young adults have more frequent, closer, and more long-term contact with family elders (Giles et al., 2003; Zhang & Lin, 2009). Thus, the GP–GC relationship provides both parties the opportunity to know and support each other and develop relational solidarity (Brussoni & Boon, 1998) and shared family identity (Lin & Harwood, 2003), which can lead to improved intergenerational attitudes (Pettigrew, 1998; Soliz & Harwood, 2006).

This study examines Chinese grandchildren's relationships with their most frequently contacted grandparent. We explore whether frequency and quality of communication with that grandparent influences willingness to have future intergenerational experiences (behavioral attitudes), guided by the following hypotheses.

- H1: Controlling for communication quality, Chinese young adults' communication frequency with their most frequently contacted grandparent positively predicts attitudes toward older adults.*
- H2: Controlling for communication frequency, Chinese young adults' communication quality with their most frequently contacted grandparent contact positively predicts attitudes toward older adults.*

Communication Accommodation Theory

Communication accommodation theory (CAT; Giles, 2016) provides explanations of how individuals adjust their communication to negotiate social relationships, both interpersonal and intergroup. Broadly speaking, CAT specifies two broad communication strategies (i.e., accommodation and nonaccommodation) in explaining motivations behind and consequences of interpersonal and intergroup interactions (Fowler, 2015; Zhang & Pitts, 2019). Accommodation (i.e., perceived appropriate communicative adjustments in an interaction) enhances effective communication, relational solidarity, and identification. However, nonaccommodation (i.e., perceived inappropriate communication such as overaccommodation and underaccommodation) hinders effective communication, amplifies intergroup differentiation, and increases social distance (Fowler, 2015; Gasiorek, 2016). Overaccommodation happens when communicators modify their communication in ways that exceed the perceived necessity or appropriateness, whereas underaccommodation features inadequate adjustment (Gasiorek, 2016; Giles, 2016).

Research using CAT has revealed many forms of older adults' inappropriate communication behaviors in the U.S. and Chinese culture (Lin & Harwood, 2003; Williams & Giles, 1996; Zhang, 2004). Some Chinese older adults, perhaps empowered by filial piety, are direct, critical, bossy, disapproving,

demanding, and/or meddlesome in intergenerational interactions with young people (Cai, Giles, & Noels, 1998; Gallois et al., 1996). Perceived grandparent nonaccommodation negatively predicts communication satisfaction with and intergroup attitudes toward older people (Fowler & Soliz, 2010; Harwood, 2000; Harwood et al., 2005) among grandchildren. Therefore, we proposed the following hypothesis:

H3: Perceptions of grandparents' nonaccommodation are a negative predictor of Chinese young adults' attitudes toward older people.

Relational Solidarity and Shared Family Identity as Mediators

We predict that the intergenerational contact effects predicted above occur via an escalating series of levels of abstraction: from concrete aspects of the contact situation (frequency, quality, nonaccommodation), through perceptions of the relationship, to perceptions of the relationship's position in the broader family system, and on to perceptions of age groups more broadly.

In searching for effective ways to reduce intergroup biases and prejudice, the common in-group identity model (CIIM; Gaertner & Dovidio, 2000) predicts that a shared or common in-group identity helps bridge intergroup differences and reduces intergroup antagonism. Supporting the CIIM, a shared group identity enhances interethnic attitudes in contact between White and Black Americans (Nier et al., 2001), in ethnically diverse school settings (Gaertner, Rust, Dovidio, Bachman, & Anastasio, 1994), and in Americans' contact with Mexicans (Eller & Abrams, 2004) or Chinese people (Imamura & Zhang, 2014). The family context provides an obvious common in-group identity for grandparents and grandchildren (Fowler, 2015; Rittenour, 2012; Song & Zhang, 2012): They belong to different age groups but the same family (Soliz & Harwood, 2006; Zhang, 2004). Increasing perceptions of shared group identity should reduce intergenerational antagonism among members of the GP–GC dyad.

Positive relationships within the family context should raise the salience of this shared identity. Positive relationships enhance self–other overlap and a broad sense of unity with other individuals (Harwood, 2000; Paolini et al., 2004). We focus particularly on relational solidarity, which consists of relational components such as “satisfaction and closeness, liking, commonality, and trust” (Imamura et al., 2011, p. 108; Rittenour, 2012) as a measure of relationship quality. If grandchildren experience high levels of relational solidarity with a grandparent, they will come to view the grandparent as similar to themselves, and thus should see more sources of shared identity with the grandparent, including, of course, the family identity. Whereas relational solidarity indicates a harmonious GP–GC relationship at the personal level, shared family identity represents broader group-based commonality. Specifically, as a form of common in-group identity, grandchildren's enhanced shared family identity with grandparents permits recategorization (we are not merely young vs. older adults, we also belong to the same family; Fowler, 2015). In the Chinese cultural context, age identity is relatively salient in any intergenerational communication because of the age-explicit norm of filial piety, something that is doubly true in grandparent–grandchild communication and given the relationship's inherent age-defined role relations. Hence, a shared family identity does not eliminate awareness of age; indeed, it might enhance awareness of positive age differences while diminishing the negative intergroup components of age awareness (we are family members belonging to different age groups; I love my grandparents who are older; see crossed-categorizations research; Migdal, Hewstone, & Mullen, 1998). Hence,

we hypothesized that perceiving a shared family identity with grandparents should result in broader positive orientations to older people as a group. Testing a sequential pathway from relational solidarity to shared family identity model is in line with collectivistic and relationship-oriented Chinese cultural characteristics (Zhang et al., 2005). To become a real “insider” (自己人, *Zi Ji Ren*, or shared in-group identity) of a group, you have to invest time and energy in building relational harmony and trust, consonant with the sequential order from relational solidarity to shared family identity that we test.

In Chinese culture, the age-related norm of filial piety encourages intergenerational contact and respect (Song & Zhang, 2012). Grounded in intergroup contact theory (Pettigrew, 1998), we argue that communication with grandparents enhances relational solidarity with grandparents (Brussoni & Boon, 1998; Rittenour & Soliz, 2009), and accommodative behavior leads to stronger relationships (Giles, Coupland, & Coupland, 1991; Zhang et al., 2018). As such, (non)accommodative moves in the GP–GC relationship constitute forms of contact that will (negatively) predict relational solidarity (Harwood, Raman, & Hewstone, 2006; Rittenour & Soliz, 2009). Thus, we hypothesized paths from specific intergenerational experiences (nonaccommodation, contact) through relational solidarity (individual) to shared family identity (group), and then to broader intergenerational attitudes (intergroup).

H4: Chinese young adults' frequency and quality of communication have significant positive indirect effects on their attitudes toward older adults through relational solidarity and shared family identity with the grandparent sequentially.

H5: Chinese young adults' perceptions of their grandparents' nonaccommodation have a significant negative indirect effect on attitudes toward older adults through relational solidarity and shared family identity with the grandparent sequentially.

Method

Participants and Procedure

Volunteers ($N = 211$) from two large Chinese comprehensive universities completed a paper-pencil survey in Chinese in Summer 2019. Data were collected in a Chinese city of 11 million people that has 35 major universities. The survey was originally created in English. A bilingual professor teaching English at a Chinese university translated the survey to Chinese, and a bilingual professor at an American university back-translated it. Semantic discrepancies were resolved in discussion among the two professors in consultation with two bilingual doctoral graduate students in the United States. Participants first answered demographic questions. All participants (123 women or 58%; M age = 21.04 years, $SD = 1.98$) self-identified as Han Chinese (M education = 14.79 years, $SD = 1.65$). Next, participants reported about their most frequently contacted grandparent (M age = 74.54 years, $SD = 7.98$; 164 or 77.7% were women), whether they had ever cohabitated with the grandparent (149 or 70.6% answered yes and 62 or 29.4% answered no), and the geographical region they were from: 148 (70%) were from rural areas and 63 (30%) were from urban areas. Then, participants completed the following measures. Table 1 presents descriptive statistics and zero-order correlations among the major variables. All questions were answered on 7-point Likert-type measures.

Major Measures

Predictor: Communication Frequency

Four items measured communication frequency ($\alpha = .82$, $M = 3.92$, $SD = 1.47$; e.g., “How often do you carry informal conversations with this grandparent?”; 1 = *not often at all*, 7 = *extremely often*). These items were adapted from Shim, Zhang, and Harwood (2012) by changing the original target of communication (i.e., “this person”) to “this grandparent” to fit the context of the study. Higher numbers represent more communication.

Predictor: Communication Quality

Three items measured communication quality ($\alpha = .92$, $M = 5.79$, $SD = 1.26$; e.g., “My communication with this grandparent is pleasant”; 1 = *strongly disagree*, 7 = *strongly agree*). Items were adapted from Shim and colleagues (2012) as described in the previous measure. Higher scores indicate more positive communication quality.

Predictor: Grandparent Nonaccommodation

Sixteen items measured communication nonaccommodation of the grandparent ($\alpha = .95$, $M = 2.53$, $SD = 1.10$; e.g., “My grandparent is very critical of me” and “My grandparent makes angry complaints”; 1 = *strongly disagree*, 7 = *strongly agree*). We used the items from Zhang and associates (2018) that reflect typical Asian older adults’ nonaccommodative communication reported in GP–GC literature (Cai et al., 1998; Lin & Harwood, 2003; Zhang, 2004). High scores represent more nonaccommodation.

Mediator: Relational Solidarity

Six items measured relational solidarity with the grandparent ($\alpha = .89$, $M = 5.45$, $SD = 1.11$). We adapted the items (e.g., “We are very close to each other,” “I trust this grandparent completely,” and “We share a lot in common”; 1 = *strongly disagree*, 7 = *strongly agree*) from previous research in the intercultural context (Imamura et al., 2011) by replacing “this person” with “this grandparent” when relevant. High scores represent more relational solidarity with the grandparent.

Mediator: Shared Family Identity

Six items measured participants’ perceptions of shared family identity with the grandparent (1 = *strongly disagree*, 7 = *strongly agree*; $\alpha = .94$, $M = 5.85$, $SD = 1.18$). Five of the items (e.g., “It is important to be in the same family as this grandparent”) were adapted from Soliz and Harwood (2006) by changing “this person” to “this grandparent.” One item, “I feel like we are members of separate groups,” was changed to “When others praise my grandparent, it brings honor to our family” to reflect Chinese people’s concept of collectivistic “face” (Song & Zhang, 2012, p. 64). Higher numbers indicate higher levels of shared family identity.

Outcome: Behavioral Attitudes Toward Older Adults

Five items measured behavioral attitudes toward older adults (1 = *not willing at all*, 7 = *extremely willing*; $\alpha = .84$, $M = 5.19$, $SD = 1.24$). These items (e.g., "I am willing to help an older person if they need help") were adapted from previous literature measuring behavioral tendencies (e.g., having an out-group member as a friend or boss, helping an out-group member) in engaging out-group members (Esses & Dovidio, 2002). Two items were removed from Esses and Dovidio's (2002) original seven-item scale as they did not fit the context of the current study (e.g., "I am willing to have a number of Black people move to my neighborhood" or "I am willing to choose to marry a Black person"). Higher numbers represent more positive attitudes.

Covariate: Filial Piety

At the end of the survey, we used nine items from Song and Zhang (2012) to measure participants' endorsement of filial piety (e.g., "Young people's sacrifice is worthwhile for the sake of being respectful and polite to older people"; 1 = *strongly disagree*, 7 = *strongly agree*; $\alpha = .84$, $M = 4.30$, $SD = .86$). High numbers represent stronger endorsement of filial piety.

Results

To test the hypotheses, we conducted bootstrap analyses with 10,000 iterations using PROCESS (Model 6; Hayes, 2013). In each of the three total models, one of the independent variables (communication frequency, communication quality, or nonaccommodative communication) was entered as the independent variable with the other two entered as control variables. The dependent variable in all analyses was behavioral attitudes toward older adults, and participants' relational solidarity and shared family identity with the grandparent were entered as the first and second sequential mediators. Preliminary correlational analyses were conducted to determine whether participant age, sex, education, whether they had cohabitated with the grandparent, filial piety, and sex and age of the grandparent were associated with the mediators and dependent variables. Results indicated that participant age was significantly associated with attitudes toward older adults, participant sex was associated with shared family identity and attitudes, and filial piety was associated with all the variables of interest. Hence, participant age, sex, and filial piety were included as covariates. Figure 1 reports the significant paths and the proportion of variance explained (R^2). Table 2 presents the indirect, direct, and total effects.

Hypotheses 1–3 predicted significant effects of communication frequency, communication quality, and nonaccommodation, respectively, on attitudes toward older adults. These predictions were supported in examinations of correlations (see Table 1). Within the mediated models, only Hypothesis 1 was supported: Communication frequency was a significant positive direct predictor of attitudes toward older adults, but communication quality and nonaccommodation were not.

Table 1. Descriptive Statistics and Zero-Order Correlations Among the Major Variables.

Variable	1	2	3	4	5	6
1. Filial piety						
2. Communication frequency	.31**					
3. Communication quality	.24**	.49**				
4. Nonaccommodation	-.18**	-.17*	-.48**			
5. Relational solidarity	.28**	.44**	.69**	-.53**		
6. Shared family identity	.34**	.42**	.68**	-.50**	.80**	
7. Attitudes toward older adults	.32**	.41**	.44**	-.28**	.52**	.62**

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

Hypothesis 4 predicted significant positive indirect effects of communication frequency and communication quality on attitudes toward older adults sequentially through relational solidarity and shared family identity with the grandparent. This hypothesis was supported for both predictors. Similarly, the grandparent's nonaccommodation had a significant negative indirect effect through the same mediators, supporting Hypothesis 5. Results are displayed in Table 2 and Figure 1.

Table 2. Indirect, Direct, and Total Effects of Communication on Attitudes Toward Older Adults (Y) Through Relational Solidarity (M_1) and Shared Family Identity (M_2).

Predictor (X)	M_1 & M_2 as serial mediators		Direct effect		Total effect	
	$X \rightarrow M_1 \rightarrow M_2 \rightarrow Y$		Effect	SE	Effect	SE
	Effect	SE	Effect	SE	Effect	SE
Communication quantity	.035*	.017	.183**	.059	.226***	.063
	[.008, .076]		[.067, .299]		[.102, .349]	
Communication quality	.121**	.041			.168*	.078
	[.054, .213]				[.014, .323]	
Grandparent nonaccommodation	-.077**	.033			-.113*	.047
	[-.169, -.042]				[-.266, -.040]	

Note. Only significant effects are reported. Numbers in brackets are 95% confidence intervals. Direct and indirect paths are significant ($p < .05$) when the 95% bias-corrected confidence interval for the effect does not contain zero (Hayes, 2013). Participant age, sex, and filial piety were included as covariates in the analyses, in addition to the other X variables (e.g., communication quality and grandparent nonaccommodation were both covariates in models with communication quantity as the focal predictor).

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

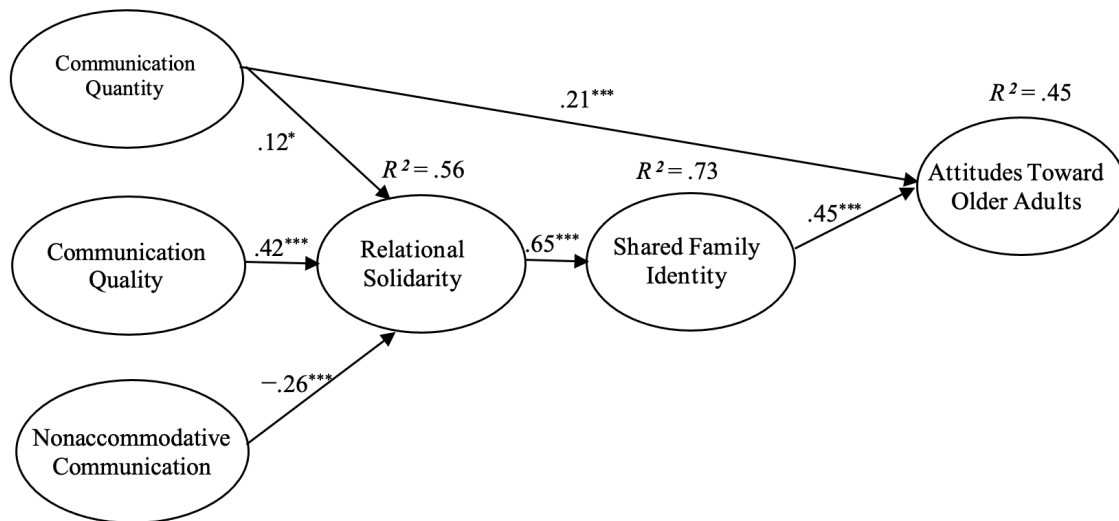


Figure 1. Direct and indirect effects of contact experiences on attitudes toward older adults. Participant age, sex, and filial piety were included as covariates in the analyses. * $p < .05$. ** $p < .001$.

Discussion

Findings demonstrated the central positive role played by communication frequency and quality with grandparents in developing relational solidarity and shared family identity with the grandparent and consequently shaping Chinese young adults' attitudes toward older people. The grandparent's nonaccommodation in intergenerational communication, on the other hand, was negatively associated with attitudes toward older adults indirectly through relational solidarity and shared family identity with the grandparent. These results extend previous findings on intergenerational communication and attitude change toward older people in the family context (Harwood et al., 2005; Zhang et al., 2018) both theoretically and in practical terms.

Theoretical and Practical Implications

First, controlling for contact quality and grandparents' nonaccommodation, we found that Chinese young adults' high-frequency communication with the most contacted grandparent was a direct positive predictor of willingness to engage older adults. Essentially, this finding suggests a positive potential of communication (quantity) with grandparents in bolstering attitudes toward older adults. As intergroup biases and prejudice are rooted in unfamiliarity, ignorance, and categorization (Allport, 1954), this finding highlights the positive role of communication frequency in improving intergroup relations. Stephan (2014) specifically explains that "low levels of contact may leave people with a limited understanding of outgroup's behaviors, traits, beliefs, and values" (p. 244). Although our study examined communication frequency in models in which communication quality was controlled, the effect does not extend to contact that is hostile or highly negative. As such, we are not making undifferentiated generalizations that more communication is always better.

The value of filial piety in Chinese culture mandates that young adults frequently visit and communicate with family elders. In addition, unlike other out-groups, young adults will eventually join the older adult group. Our study suggests that frequent contact with grandparents in the Chinese cultural context can be beneficial as it allows for increased knowledge of grandparents' personhood, thus promoting empathy and attitudes toward older adults (Pettigrew, 1998; Stephan, 2014). It has to be noted that the mean of communication frequency with the most contacted grandparent was not very high (i.e., 3.97 on a 7-point scale), which is possibly due to young adults' fewer opportunities to interact with their grandparents as they move away to attend college, although more than 70% the participants in the current study reported that they had cohabited with their grandparents.

Second, in addition to the positive direct effect, frequency of communication also had a positive indirect effect on attitude toward older people through relational solidarity and shared family identity with the grandparent sequentially. However, the correlation between communication quality and relational solidarity ($r = .69$) was significantly stronger than the correlation between communication frequency and relational solidarity ($r = .44$), Steiger's (1980) $z = 4.76$, $p < .001$, 95% CI[0.36, 0.14] (see Lee & Preacher, 2013, for calculation software). This finding indicates that communication quality plays a stronger role than communication frequency in facilitating relational solidarity with grandparents, which is positively associated with shared family identity and attitudes toward older adults.

Chinese older adults often express a strong desire for and appreciation of intergenerational respect and communication from young adults (Zhang & Hummert, 2001), and it appears that this has some collective benefits for them. Institutional support is a strong predictor of positive intergroup relations (Allport, 1954). Our findings suggest value in government and other forms of support for the age-based cultural value of filial piety in East Asia and related values in other cultures (e.g., respect and caring for older people). Cultural events such as "Grandparents' Day" could potentially enhance quality intergenerational interactions, which will lead to the reduction of ageism and age stereotypes and enhancement of older adults' well-being.

Third, our results showed a significant negative indirect association between grandparents' nonaccommodation and attitudes toward older adults through reduced relational solidarity and shared family identity. Nonaccommodative communication in family intergenerational relationships is cumulative and thus harms interpersonal solidarity (Gasiorek, 2016; Giles, 2016). Grandchildren's repeated experiences of dissatisfying intergenerational communication with their grandparents are likely to generalize to their negative sentiments toward older people as a whole because nonaccommodation hurts relationships, which consequently reduces shared family identity.

In intergenerational relationships, dissatisfying intergenerational conversations tend to be more defined in intergroup terms than satisfying ones (Harwood et al., 2006; Paolini, Harwood, & Rubin, 2010). Therefore, intergenerational nonaccommodation, which is frequently motivated by age stereotypes, is likely to occur in a context where the participants perceive or relate to each other in terms of their age identity. Nonaccommodation from older adults often includes angry complaints; overparenting; painful self-disclosure about health; and being bitter, meddlesome, and critical of the young (Fowler, 2015; Zhang et al., 2018).

These behaviors often co-occur with nonaccommodative behaviors by the young participants (e.g., communication avoidance or confrontation; Williams & Giles, 1996; Zhang, 2004).

The filial piety norm might be behind Chinese older adults' nonaccommodative acts. Unfortunately, we do not have measures of the grandparents' endorsement of filial piety; therefore, we could not explore this issue statistically. Thus, we observe the potential for filial piety to have both facilitating (see earlier) and debilitating roles in intergenerational relations in the family context. Negotiating these contradictory effects and understanding when each prevails is a challenge for future research. One silver lining here is that many Chinese older adults are aware of young adults' shift to less traditional values, and understand the ways both parties' face and identity should be appropriately negotiated in respecting filial piety (Zhang et al., 2005).

Fourth, since the inception of the contact hypothesis (Allport, 1954), numerous contact studies have been conducted in various intergroup contexts with a trend to focus more on intergroup processes instead of contact conditions (Pettigrew, 1998). However, in explaining why contact influences intergroup outcomes, prior studies tended to focus on negative mediating mechanisms such as intergroup anxiety. Contributing to the growing literature examining young adults' contact with older adults in explicating attitudes toward older adults and addressing the call from Pettigrew (1998) to include positive mediators, the current study examined two sequential positive mediators between contact and attitudes. Testing the sequential pathway from relational solidarity to shared family identity model between contact with grandparents and attitudes toward older adults is primarily in line with the common in-group identity model (Gaertner & Dovidio, 2000) and collectivistic and relationship-oriented Chinese cultural characteristics (Zhang et al., 2005). Grandparents and grandchildren are not only family members; they also represent two different age groups (Mansson, Floyd, & Soliz, 2017). Positive communication with a grandparent should have the potential to cultivate a close relationship and thus shared family identity with the grandparent. From the perspective of the common in-group identity model, shared family identity enhances person-centered close intergenerational relationships and thus may reduce perceived age difference or facilitate "recognition that the age difference need not be a barrier in intergenerational relationships" (Mansson et al., 2017, p. 97). In the Chinese cultural context, the age-explicit norm of filial piety makes age positively salient in intergenerational relationships, especially in the family context. Hence, positive relational dynamics of grandparent relationships could also be generalized to attitudes toward older adults through the salient (but positive) categorization process.

Our final key finding is the consistent two-step mediated effects. Our data suggest a pattern of increasing abstraction, from basic frequency and judgments about quality and nonaccommodation in interactions, to broader representations of relationships (solidarity), then to even more general perceptions of the relationship within the family system (shared family identity), and finally perceptions of older people as a whole. Our sequential model illustrates the critical role played by communication in close GP-GC relationships in building a common in-group identity (i.e., shared family identity) and improving attitudes toward older adults. Prior studies have not tested this sequential mediation pattern in the context of intergenerational family communication; thus, this study expands the literature on intergenerational contact. Furthermore, the omnibus effect sizes are notable; adjusted R^2 values for relational solidarity (.56), shared family identity (.73), and attitudes toward older adults (.45) indicate the strong explanatory power of the respective predictors, albeit these R^2 values include variance explained by the control variables.

Future research should explore this sequential pattern longitudinally to further confirm the sequence we hypothesized; it would also be helpful to explore similar patterns in other intergroup contexts (e.g., multifamily families: Morgan, Soliz, Minniear, & Bergquist, 2019). Furthermore, the link between shared family identity and attitudes toward older adults should be further explored in the future in relation to age salience. As a common in-group identity has the capability to induce decategorization, salient categorization, and recategorization (Gaertner & Dovidio, 2000; Pettigrew, 1998), future research should examine how shared family identity interacts with age salience to influence attitudes toward older adults.

Limitations, Future Research, and Conclusion

Our data are cross-sectional; hence, our conclusions reflect only concurrent associations, not causal effects over time. For example, it could be that grandchildren spend more time talking with the grandparents with whom they feel connected already. We also acknowledge the positive bias in the current study. Results reveal that young adults' most frequently contacted grandparent is also the grandparent with whom they have the most positive relationship as indicated by the high mean score of contact quality. Future research should also examine the influence of young adults' contact experiences with less frequently contacted and less positive grandparent relationships. In addition, the current study focused only on communication nonaccommodation as a negative form of contact; future study should examine accommodation or supportive communication as a proxy of positive contact (Soliz & Harwood, 2006).

Fundamentally, findings in this study demonstrate that young adults' contact frequency and quality with their most frequently contacted grandparents are associated with positive intergroup outcomes toward older adults. Supporting Pettigrew (1998), this study shows that personal relationships in intergroup contact have great potential to improve intergroup relations. China is generally a collectivistic culture and family, as a basic unit in the society, is highly valued (Song & Zhang, 2012). We demonstrate that those values can be leveraged in interesting ways toward easing intergenerational tensions.

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