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## Young adults' contact experiences and attitudes toward aging: age salience and intergroup anxiety in South Korea\*

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### ABSTRACT

From the theoretical perspectives of communication accommodation and intergroup contact, this study examined South Korean young adults' ( $N=301$ ) perceptions of their communication experiences with a frequently-contacted grandparent, as well as attitudes toward older adults and own aging. Findings from structural equation modeling indicated that the participants' attitudes towards older adults were positively predicted by contact frequency with the grandparent and negatively predicted by perceptions of the grandparent's non-accommodative communication. Analyses of indirect effects revealed that young adults' intergroup anxiety explained these associations. Although the direct effects of contact frequency and the grandparent's non-accommodation on attitudes toward own aging were nonsignificant, the indirect effects through intergroup anxiety were significant. Moderation analysis indicated that these direct and indirect associations between non-accommodation and aging attitudes were significant only when age salience was low – a finding contrary to existing theory and research. Results are discussed in terms of intergenerational communication and culture, and theories of intergroup contact.


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South Korea; grandparent-grandchild communication; age salience; intergroup anxiety; non-accommodation; aging attitudes

Age is an important social identity and a defining characteristic of specific family relationships (Harwood, Giles, & Ryan, 1995). Although positive stereotypes of older adults do exist, young adults tend to hold negative stereotypes and attitudes toward older adults (Bonnesen & Hummert, 2002), which can lead to patronizing speech that in turn has negative effects on the physical and psychological well-being of older adults (Ryan, Giles, Bartolucci, & Henwood, 1986). Young adults are stereotyped and patronized by older adults as well, and are especially dissatisfied with older adults' non-accommodative behaviors such as non-listening, complaining, disapproving, over-parenting, and bossy behaviors (Giles & Williams, 1994; Lin, Zhang, & Harwood, 2004; Zhang, 2004). These problematic aspects of intergenerational relationships have been uncovered in Western and Eastern cultural contexts (North & Fiske, 2015; Zhang & Hummert, 2001), and 'are likely to be

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perceived in intergroup terms' associated with age and aging (Williams & Nussbaum, 2001, p. 104).

Indeed, communication plays a central role in our social construction of age and aging attitudes: the quality of intergenerational communication to and from old and young constitutes intergenerational relationships (Giles, Davis, Gasiorek, & Giles, 2013). Due to various reasons (e.g. longevity, family structure, lifestyle changes), intergenerational contact both inside and outside of the family is more frequent (albeit still low) than in the past (Giles, Ryan, & Anas, 2008). As such, a greater effort to study the grandparent-grandchild (GP-GC) relationship is needed as it is the most frequent, meaningful, and enduring intergenerational relationship, and one that is important for both young and older adults (Lin, Harwood, & Bonnesen, 2002; Williams & Giles, 1996; Williams & Nussbaum, 2001).

One specific line of research in GP-GC relationships has focused on the influence of young adults' contact with grandparents on the grandchildren's attitudes toward older adults and feelings about their own aging (Soliz & Harwood, 2003, 2006). In general, findings indicated that young adults' positive relationships with their grandparents, which are rooted in GP-GC communication quality, could mitigate their negative attitudes toward older adults in general (e.g. Harwood, Raman, & Hewstone, 2006; Soliz & Harwood, 2006). The majority of these studies have been conducted in the West. Contributing to the growing literature on; communication in the family context, the current research examines GP-GC relationships in South Korea, where a traditional Confucian norm, *Xiao* (i.e. filial piety or respect of older adults), is strongly upheld (Zhang, Harwood, & Hummert, 2005; Zhang & Hummert, 2001). The concept of filial piety is not only linked collectivism, but also an explicit age-related norm emphasizing elder respect in intergenerational relationships, which are quite different in the East as compared to the West (Williams & Nussbaum, 2001).

The tradition of elder respect is based on Confucian teachings of filial piety, which is an age-based collectivistic value originated in P.R. China but spread to neighboring cultures in East Asia (Sung, 1998; Zhang & Hummert, 2001). In these societies, older adults are supposed to be revered and valued, never alienated (Sung, 1990; Zhang & Hummert, 2001). In South Korea, for example, 'growing old represents signs of grace, respect and piety, and age is the first consideration when Koreans communicate with each other' (Park & Kim, 1992, p. 399). Older adults in general, who were traditionally perceived as having wisdom, experience, and authority, perform their roles and duties as protectors and governors of youngsters (Song & Youn, 1989). That said, in contemporary South Korea, along with the urbanization and globalization movements, two cultural values tend to collide with each other; hence, conflicts between young and old generations have deepened (Song & Youn, 1989). Specifically, prior research (Youn & Song, 1992) revealed that age of the elderly Koreans was positively associated with negative perceptions of intergenerational communication (e.g. unpleasantness in communication, disrespect, and alienation from family young adults). In addition, younger family members did not attempt to understand their parents (Song & Youn, 1989), and contact between grandchildren and grandparents has declined (Choi, 1996). Furthermore, grandchildren today are less likely to live with their grandparents and they visit each other less often (Rhee, 1996). Given these cultural changes, research demonstrated that both collectivism and individualism coexist in Asian societies, and that filial piety is still strongly upheld and practiced in

both traditional and modern forms in intergenerational communication (Zhang et al., 2005). While 'bossy superiors' are not appreciated, elder respect is still a desired value for both young and older adults and a major source of intergenerational harmony (Zhang & Hummert, 2001).

Using intergroup contact and communication accommodation theories, the current study examines how contact frequency with grandparents, and grandparents' non-accommodation (i.e. over-/underaccommodation) influence Korean young adults' attitudes towards aging. Our work builds on prior theory concerning intergroup and specifically intergenerational contact as well as examining a key moderator (age salience) and mediator (intergroup anxiety) of the effects.

### ***Intergroup contact theory***

Allport's (1954) contact hypothesis argues that prejudice can be reduced most effectively through direct contact under optimal conditions (equal status, cooperative interaction, common goal, acquaintance potential and institutional support). Pettigrew and Tropp's (2008) meta-analysis of 515 studies showed that intergroup contact generally reduces intergroup prejudice. A variety of mechanisms explain why contact 'works': It can reduce anxiety associated with outgroups simply by increasing their familiarity, it can disconfirm stereotypes, it can increase knowledge about the outgroup, and it can provide 'practice' in how to effectively communicate with 'them' (for a review see Pettigrew, 1998; Pettigrew & Tropp, 2008).

Nonetheless, intergroup contact must provide the participants with the opportunity to establish positive relationships in order to generate cross-group empathy and reshape intergroup boundaries (Pettigrew, 1998; Pettigrew & Tropp, 2008). Given the ageist and age-segregated nature of the Western society, young adults' contact with older adults might be characterized by low frequency and poor quality (Drury, Hutchison, & Abrams, 2016). Hence, recent contact research in the nonfamily intergenerational context, for example, indicated that frequency of intergenerational contact was not directly (but only indirectly through anxiety) predictive of attitudes toward older adults (Drury et al., 2016). Indeed, intergenerational family relationships, which include both intergroup (e.g. when age identity is salient) and intragroup components (which shared family identity is salient), are closer and more interdependent than intergenerational nonfamily relationships (Giles et al., 2003; Soliz & Harwood, 2006). In addition, young adults' contact with family elders is more frequent than with nonfamily elders (Giles et al., 2003). Thus, frequent contact is essential to developing close relationships, including those between grandchildren and grandparents (Harwood, Hewstone, Paolini, & Voci, 2005). Young adults who had more frequent contact with their grandparents developed more closeness with them (Harwood, 2000; Lin & Harwood, 2003). Close intergroup relationships are particularly powerful in reducing uncertainties and anxieties from intergroup contact and are associated with more positive attitudes toward the outgroup (Pettigrew & Tropp, 2006). The current study focused on contact with the grandparent with whom the grandchild had the most frequent contact so as to explore within the most fertile ground for effective intergroup contact.

In addition to studying effects on attitudes about older adults, we also investigate the influence of contact on young adults' attitudes about their own aging. The

intergenerational context is unique in that young people have the opportunity to develop attitudes about a group to which they will eventually belong. The extent to which attitudes about old people translate into young people's perceptions of their own older adulthood is therefore of considerable theoretical and practical interest, especially in an Eastern culture where the ethic of filial piety is evident.

H1a: South Korean young adults' contact frequency with a grandparent with whom they had the most frequent contact is positively associated with positive attitudes toward older adults and own aging.

### **Communication accommodation theory**

Communication accommodation theory (CAT; Giles, Coupland, & Coupland, 1991) provides an important theoretical construct as a proxy of contact for the current study (e.g. Soliz & Harwood, 2006). CAT explains the ways speakers modify their communication to manage social distance from their conversational partners. For example, when individuals converge to their conversational partners, they make their verbal and/or nonverbal communication styles similar to those of their partners to gain social approval or seek identification. On the other hand, individuals diverge from their partners by making communication styles different when they want to emphasize own group membership or show positive distinctiveness.

Most critically for this study, CAT defines specific intergroup *non-accommodative* patterns, which is a form of negative intergroup contact. Overaccommodation is a 'category of miscommunication in which a participant perceives a speaker to exceed the sociolinguistic behaviors deemed necessary for synchronized interaction' (Shepard, Giles, & LePoire, 2001, p. 38): the speaker goes too far in accommodating the recipient. Underaccommodation is 'a category of miscommunication in which a speaker is perceived to insufficiently utilize the sociolinguistic behaviors necessary for synchronized interaction' (Shepard et al., 2001, p. 39): the speaker doesn't go far enough. Speakers overaccommodate to one another when they excessively depend on their stereotypes, and they underaccommodate when they insufficiently pay attention to their speaking partners' actual needs. Nonetheless, appropriate accommodation enhances interpersonal solidarity, and thus is associated positively with interpersonal salience (Giles, 2016; Shepard et al., 2001; Williams & Giles, 1996); communication that is perceived as intergroup in nature, such as *non-accommodation*, differentiates social groups and accentuates group salience (Williams & Nussbaum, 2001).

Guided by CAT, intergenerational research has revealed many dissatisfying old-to-young under- (e.g. painful self-disclosure) and overaccommodative (e.g. patronizing, condescending, over-parenting, disapproval, critical) communication in both Western and Eastern cultural contexts (Williams & Giles, 1996; Zhang & Hummert, 2001). These are associated with negative views of older adults (Bonnesen & Hummert, 2002; Fowler & Soliz, 2010). Similarly, research on GP-GC relationships has indicated that perceived grandparent non-accommodation (over- and underaccommodation) was negatively associated with communication satisfaction within the relationship (Harwood, 2000) and positive attitudes toward older adults (Harwood et al., 2005). On top of contact frequency, the current study considers contact as essentially communicative behaviors. Specifically, from the intergroup contact lens and in line with prior literature in GP-GC

communication, the current study examines the influences of perceived grandparent non-accommodation (as a form of negative contact: see Pettigrew, Tropp, Wagner, & Christ, 2011) on attitudes toward older adults and own aging among young adults in South Korea.

H1b: South Korean young adults' perceptions of their grandparent's non-accommodation are negatively associated with positive attitudes toward older adults and own aging.

### ***Age salience as a moderator***

Group salience has been emphasized as an additional facilitating condition to allow people to generalize from individual contact to the group as a whole (Hewstone & Brown, 1986). Hewstone and Brown (1986) defined group salience as an individual's awareness of group memberships and respective group differences in an intergroup encounter. Group salience is important for generalization from one contact experience to perceptions of the overall outgroup (Brown, Vivian, & Hewstone, 1999; Hewstone & Brown, 1986). When group membership is not salient, individuals are viewed in interpersonal terms, and contact with them will have no effect on attitudes towards the group as a whole (Hewstone, 1996). Substantial data now support this theoretical claim (Brown & Hewstone, 2005). However, negative intergroup contact can increase group salience with negative consequences for intergroup perceptions: the combination of negative contact and high salience is the worst-case scenario for attempting to improve attitudes (Paolini, Harwood, & Rubin, 2010). As discussed by Levy, Slade, Kunkel, and Kasl (2002), attitudes toward own aging have significant practical consequences on personal well-being, but they have not been investigated extensively. As the GP-GC intergenerational context provides young people the opportunity to develop expectations and attitudes about older adults (Drury et al., 2016), we also included attitudes toward own aging in examining the moderator effect of age salience (Soliz & Harwood, 2006). South Korea is a collectivistic culture where older age 'should be' valued, respected, and honored. We are specifically interested in examining how age salience (e.g. higher and lower) likely triggers a participant's cultural normative responses in making positive versus negative attributions about older adults.

H2a: Age salience moderates the associations between South Korean young adults' contact frequency and attitudes toward older adults and own aging. The associations are stronger when age salience is high.

H2b: Age salience moderates the associations between South Korean young adults' perceptions of the grandparent's non-accommodation and attitudes toward older adults and own aging. These associations are stronger when age salience is high.

### ***Intergroup anxiety as a mediator***

Intergroup anxiety is defined as the uncomfortable feeling and discomfort that come from contact with someone from another group (Stephan, 2014; Stephan & Stephan, 1985). Prior research has demonstrated that intergroup anxiety mediated the relationship between contact and intergroup attitudes as contact reduces anxiety by increasing knowledge about and familiarity with the outgroup, and chances to establish affective ties with outgroup members; these processes then transfer to positive perceptions of the outgroup as a whole (Pettigrew & Tropp, 2006). Evidence supporting this process has been reported in a variety of cultural contexts (e.g. Greenland & Brown, 1999; Islam & Hewstone, 1993;

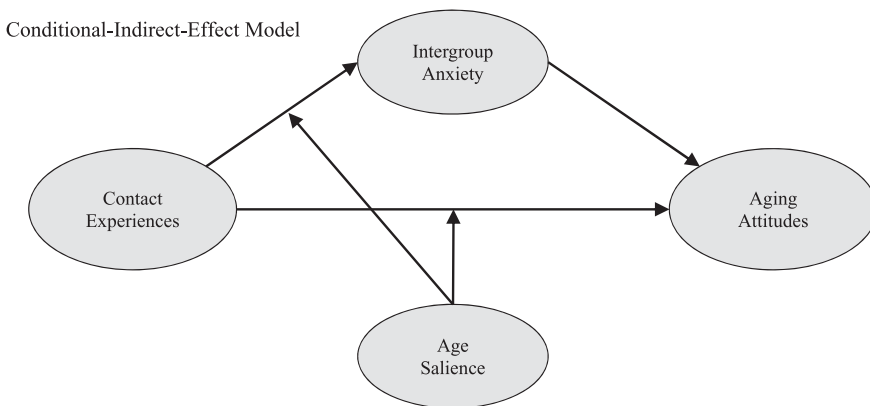
Shim, Zhang, & Harwood, 2012). Intergroup anxiety is a key mediator in intergroup contact research (see Pettigrew & Tropp, 2006), but its mediating role has not been examined adequately in the intergenerational context across cultures (cf. Bousfield & Hutchison, 2010; Drury et al., 2016; Harwood et al., 2005; Shim et al., 2012). Hence, the current study expands the intergroup contact literature by examining mediating functions (indirect effects) of intergroup anxiety in family intergenerational relationships in South Korea, where collectivism and an explicit age-norm of *Xiao* or filial piety are valued (Zhang & Hummert, 2001; Zhang et al., 2005). As findings in prior research support an effect of experiences with grandparents on both attitudes toward older adults and own aging (Soliz & Harwood, 2006), the current study considers both attitudinal measures in examining the explaining mechanism of intergroup anxiety between contact and aging attitudes.

H3a: Intergroup anxiety mediates the relationships between Korean young adults' contact frequency with the grandparent and positive attitudes toward older adults and their own aging.

H3b: Intergroup anxiety mediates the relationships between Korean young adults' contact perceived grandparent non-accommodation and positive attitudes toward older adults and their own aging.

We also explore a conceptual model testing the conditional indirect processes (see Figure 1). Statistically, this model includes the moderating effect of age salience on two predictive paths: first, the direct path between contact experiences (i.e. contact frequency and perceived grandparent non-accommodation) and South Korean young adults' aging attitudes (i.e. toward older adults and own aging); second, the direct path between contact experiences and intergroup anxiety (the mediator).

Empirical support for this model can be found in Voci and Hewstone (2003; Study 1: Italian college students' attitudes toward African immigrants), Harwood et al. (2005; Study 2: British college students' attitudes toward older adults), Pagotto, Voci, and Maculan (2010; Italian hospital workers' attitudes toward foreign patients), and Voci and Pagotto (2010; Italians' attitudes toward immigrants). In Harwood et al.'s (2005) study the moderated mediation (conditional indirect effects) analysis showed that the mediation effects



**Figure 1.** Conditional-indirect-effect model.

Note. This conceptual model is equivalent to (the latent versions of) Model 8 described by Hayes (2013).



of perspective taking, anxiety, and accommodation between GP-GC contact quality and GC attitudes toward older adults were significant only when group salience was high. In a more recent study on Italians' attitudes toward immigrants, Voci and Pagotto (2010) compared the mediated moderation model with the moderated mediation model (Conditional-Indirect-Effect Model in the current study). Voci and Pagotto's research found support for the moderated mediation model and concluded that 'contact is able to positively influence attitudes when known immigrants are perceived as prototypical of their group, and this moderation is mediated by intergroup anxiety, as the relation between contact and anxiety is moderated by prototypicality' (p. 46). Hence, we propose the following research hypothesis in this study.

H4: Age salience moderates the indirect effect of contact on positive aging attitudes through intergroup anxiety.

## Method

### *Participants and procedures*

Three hundred and one participants were recruited from four universities in South Korea (188 females;  $M_{\text{age}} = 21.90$ ,  $SD = 1.79$ ). Three participants did not report their sex. Participants completed a paper-pencil survey in Korean. The survey was first created in English and then translated into Korean. Back translation, Korean to English, was conducted by bilingual Korean Ph.D. Students studying in the United States to ensure semantic validity of the translation in the Korean cultural context.

There are three sets of questions in the current study: 1) questions related to participants' demographic information; 2) questions on attitudes and anxiety toward older adults, and attitudes toward one's own aging; and 3) questions regarding grandparents. To make sure there was no order effect, about half of participants ( $n = 156$ ) were randomly assigned to answer questions regarding grandparents first. The rest of the participants answered questions related to their attitudes toward older adults and own aging, and intergroup anxiety toward older adults first. There were non-significant differences between the two groups in terms of the major measures.

For questions related to grandparents, participants were asked to think about and list the grandparents they had contact with during their life regardless of the nature or length of the relationship. Participants were then asked to select the grandparent with whom they had the most frequent contact (Grandparent  $M_{\text{age}} = 76.68$ ,  $SD = 8.20$ ; age range: 60 to 96). Finally, respondents answered a series of questions about this grandparent concerning contact frequency with the grandparent and perceived grandparent non-accommodation, as well as age salience during contact.

## *Measures*

### *Contact frequency*

Three items ( $\alpha = .88$ ;  $M = 3.86$ ,  $SD = 1.49$ ) measured frequency of contact with the grandparent. The items were adapted from Spencer-Rodgers and McGovern (2002; e.g. 'How often do you talk to and engage in informal conversation with this grandparent?'; 1 = not frequently at all – 7 = very frequently).



### **Grandparent non-accommodation**

Sixteen items ( $\alpha = .94$ ;  $M = 2.85$ ,  $SD = 1.19$ ) measured the grandparent's non-accommodative communication (e.g. 'My grandparent negatively stereotypes me as a young person'; 'Talks down to me'; 'My grandparent complains about his/her health'; 1 = strongly disagree – 7 = strongly agree). The items, which reflected older adults' typical non-accommodative communicative behaviors, were adapted from prior work on GP-GC communication in both Eastern and Western cultural contexts (Cai, Giles, & Noels, 1998; Lin & Harwood, 2003; Soliz & Harwood, 2003).

### **Attitudes towards older adults**

Nine items ( $\alpha = .90$ ;  $M = 4.91$ ,  $SD = .98$ ) measured attitudes toward older adults. Participant indicated their feelings toward people older than 65 *other than their grandparents* on 7-point semantic differential scales. Six items were from Knox, Gekoski, and Johnson's (1986) scale (e.g. foolish-wise). Three items were from Wright, Aron, McLaughlin-Volpe, and Ropp (1997) and Tropp and Pettigrew (2005) (e.g. cold-warm). Higher numbers represent more positive attitudes.

### **Attitudes towards one's own aging**

Nine items ( $\alpha = .76$ ;  $M = 3.96$ ,  $SD = .92$ ) measured attitudes towards one's own aging. Participants indicated their overall feelings and outlook (i.e. positive or negative) toward their own aging (e.g. 'Once you get to a certain age, life inevitably goes downhill'; 'There is a lot to look forward to when you are older'; 'I really do not like the thought of growing older'; 1 = strongly disagree – 7 = strongly agree). These items were adapted from the Attitudes Towards Aging scale (Braithwaite, Lynd-Stevenson, & Pigram, 1993). Higher numbers represent more positive attitudes.

### **Age salience**

Three items ( $\alpha = .82$ ;  $M = 3.72$ ,  $SD = 1.43$ ) measured age salience. Participants reported their awareness of the grandparent's age and age difference between themselves and the grandparent (e.g. 'How much do you think about this grandparent's age when communicating with him or her?'; 1 = a little bit – 7 = a great deal). These items were developed based on Harwood et al.'s (2005) study.

### **Intergroup anxiety**

Seven items ( $\alpha = .73$ ;  $M = 3.38$ ,  $SD = .89$ ) adapted from intergroup contact research (Turner, Crisp, & Lambert, 2007; Voci & Hewstone, 2003) measured intergroup anxiety. Participants reported their feelings of unease or discomfort in conversation with older adults (e.g. 'I might feel awkward if I were to meet an older adult'; 1 = not at all – 7 = a great deal). Higher numbers represent more anxiety.

## **Results**

Structural equation modeling (SEM; Mplus Version 7.31; Múthen & Múthen, 2015) was used to analyze the data. Results are presented in four sections: 1) measurement evaluation; 2) hypothesis testing for direct and moderated associations (H1 & H2); 3)

hypothesis testing for indirect effects (H3); and 4) answering research question on conditional indirect effects.

### Measurement evaluation

Prior to the structural analyses, a confirmatory factor analysis (CFA) model was estimated to examine the indicator-loading patterns and the correlation structure of six constructs. Three balanced parcels (Hau & Marsh, 2004; Little, Rhemtulla, Gibson, & Schoemann, 2013; Matsunaga, 2008) were created per construct (see Table 1 for descriptive statistics and factor loading estimates). The variance of each factor was fixed to 1, and factor loadings and correlations were freely estimated (see Table 2 for factor correlations<sup>1</sup>). The unstandardized factor loadings ranged from .71 to 1.47 with an average of 1.05. This CFA model showed close absolute fit,  $\chi^2_{(df=120, N=301)} = 180.59$ ,  $p = .001$ , RMSEA = .04<sub>(.03-.05)</sub>, SRMR = .04, and close comparative fit, CFI = .98, TLI/NNFI = .97.

### Direct associations and moderation effects testing (H1 & H2)

#### GP-GC contact frequency and age salience (H1a and H2)

To test the direct associations between GP-GC contact frequency and Korean young adults' aging attitudes, as well as the moderation effect of age salience, the model in Figure 2 was specified with six predictive paths. Korean young adults' attitudes toward

**Table 1.** Factor loadings, standard errors, and residual variances of parceled items for the seven constructs.

Constructs/Parceled items	<i>M (SD)</i>	Factor loading	<i>S.E.</i>	Residuals
<i>Contact frequency</i>				
CF 1	3.93 (1.32)	1.10	.07	.50
CF 2	3.74 (1.69)	1.39	.08	.91
CF 3	3.64 (1.76)	1.47	.09	.90
<i>GP Non-accommodation</i>				
NC 1	2.93 (1.21)	1.16	.05	.13
NC 2	3.04 (1.27)	1.15	.06	.28
NC 3	2.61 (1.33)	1.14	.06	.44
<i>Attitude toward older adults</i>				
AO 1	4.90 (1.11)	.94	.05	.34
AO 2	4.85 (1.03)	.95	.05	.15
AO 3	5.03 (1.09)	.87	.05	.43
<i>Attitude toward one's own aging</i>				
AA 1	3.89 (1.22)	.92	.08	.65
AA 2	4.04 (1.06)	.78	.07	.51
AA 3	3.85 (1.25)	.71	.08	1.10
<i>Age salience</i>				
AS 1	4.14 (1.68)	1.14	.09	1.51
AS 2	3.67 (1.67)	1.47	.09	.63
AS 3	3.37 (1.65)	1.31	.09	1.00
<i>Intergroup anxiety</i>				
IA 1	3.63 (1.13)	.87	.07	.51
IA 2	3.09 (1.02)	.74	.08	.49
IA 3	3.35 (1.10)	.72	.07	.68

Note. The reported statistics are unstandardized estimates. The fixed-identification method was used for this model (factor correlations are reported in Table 2). This model showed close absolute fit,  $\chi^2_{(df=120, N=301)} = 180.60$ ,  $p = .001$ , RMSEA = .04<sub>(.03-.05)</sub>, SRMR = .04, and close comparative fit, CFI = .98, TLI/NNFI = .97.

**Table 2.** Factor correlations estimated with parceled items.

Constructs	(1)	(2)	(3)	(4)	(5)	(6)
(1) Contact frequency	–					
(2) GP Non-accommodation	.08	–				
(3) Attitude toward older	.16*	–.19**	–			
(4) Attitude toward own aging	.13	–.03	.14 <sup>†</sup>	–		
(5) Age salience	.01	.39***	–.03	–.04	–	
(6) Intergroup anxiety	–.20**	.27***	–.42***	–.31***	.19**	–

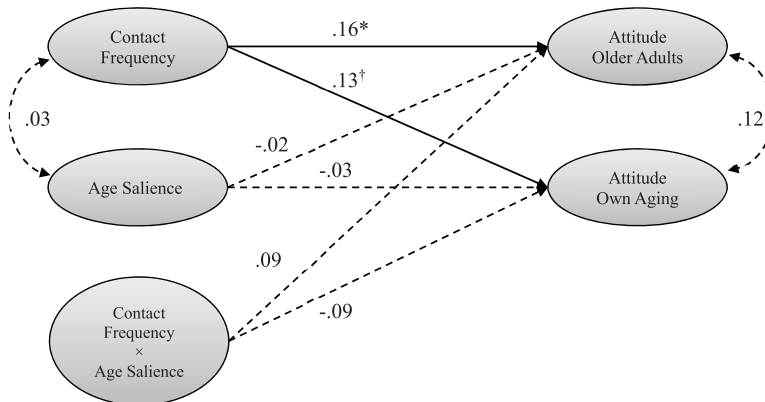
<sup>†</sup> $p < .06$ .  
 \* $p < .05$ .  
 \*\* $p < .01$ .  
 \*\*\* $p < .001$ .

older adults and their attitudes toward own aging were predicted by GP-GC contact frequency, age salience, and a latent interaction term of the two predictor variables. The Latent Moderated Structural Equations approach (LMS/quasi-maximum likelihood estimation; Klein & Moosbrugger, 2000; Klein & Múthen, 2007) was used to create the latent interaction term, and variance of each factor was fixed to 1. In addition, two demographic variables, sex and age of the participants, were included in this model (and for all the subsequent structural models) as controls.

The model estimation terminated normally ( $N = 294$ ,  $AIC = 10409.70$ , sample-size adjusted  $BIC = 10444.54$ ). Supporting H1a, the model results showed that contact frequency positively predicted both Korean young adults’ general attitudes toward older adults ( $b = .16$ ,  $SE = .07$ ,  $p = .03$ , 95%  $CI = [.01, .30]$ ) and own aging (approaching significance:  $b = .13$ ,  $SE = .07$ ,  $p = .06$ , 95%  $CI = [–.01, .13]$ ). The other hypothesized predictive paths including the latent interaction term were not statistically significant, and hence H2a was not supported.

**Perceived grandparents’ non-accommodation and age salience (H1b and H2)**

The test of H1b followed the same analysis strategy for H1a. As shown in Figure 3, Korean young adults’ perceptions of grandparents’ non-accommodation, age salience, and a latent



**Figure 2.** Direct effects of contact frequency and age salience, and the interaction effect on aging attitudes.

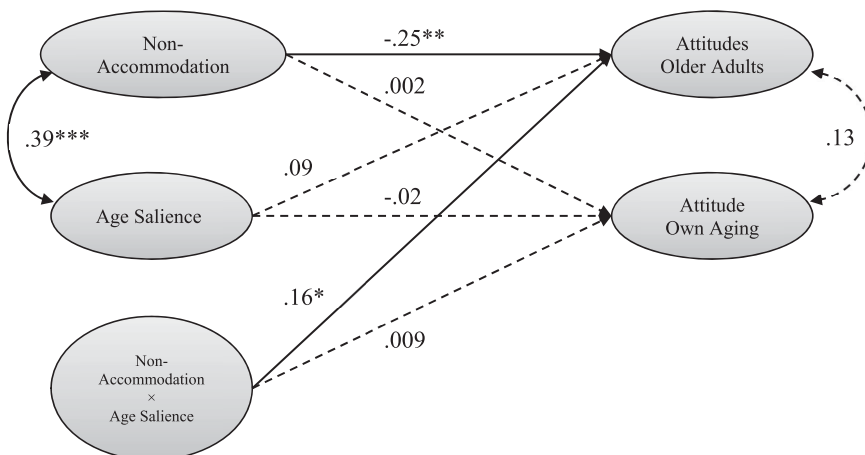
Note. <sup>†</sup> $p < .06$ . \* $p < .05$ .

interaction term of these two variables were specified to predict their attitudes toward older adults and own aging. Variance of each factor was fixed to 1. Supporting H1b, results (Figure 3) showed that the grandparent's non-accommodation significantly and negatively predicted attitudes toward older adults ( $b = -.25$ ,  $SE = .08$ ,  $p < .01$ , 95% CI =  $[-.41, -.09]$ ). The association between non-accommodation and attitudes toward own aging was nonsignificant ( $b = .002$ ,  $SE = .08$ ,  $p = .80$ , 95% CI =  $[-.16, .17]$ ). The latent interaction term significantly predicted attitudes toward older adults ( $b = .16$ ,  $SE = .07$ ,  $p = .02$ , 95% CI =  $[.02, .31]$ ), but not attitudes toward own aging ( $b = .01$ ,  $SE = .08$ ,  $p = .98$ , 95%CI =  $[-.15, .17]$ ).

To decompose the interaction effect (Figure 4), associations between grandparent's non-accommodation and attitudes toward older adults were estimated at five latent levels of age salience ( $-2SD$ ,  $-1SD$ ,  $M = 0$ ,  $+1SD$ , and  $+2SD$ ). The estimated conditional effects revealed that the grandparent's non-accommodation had significant negative effect on Korean young adults' attitude toward older adults when age salience was at an average level and below. However, when age salience was above the average level ( $+1SD$  and  $+2SD$ ), the negative effect of grandparents' non-accommodation on Korean young adults' attitude toward older adults was non-significant. Hence, overall, H2b was not supported; the reverse pattern emerged.

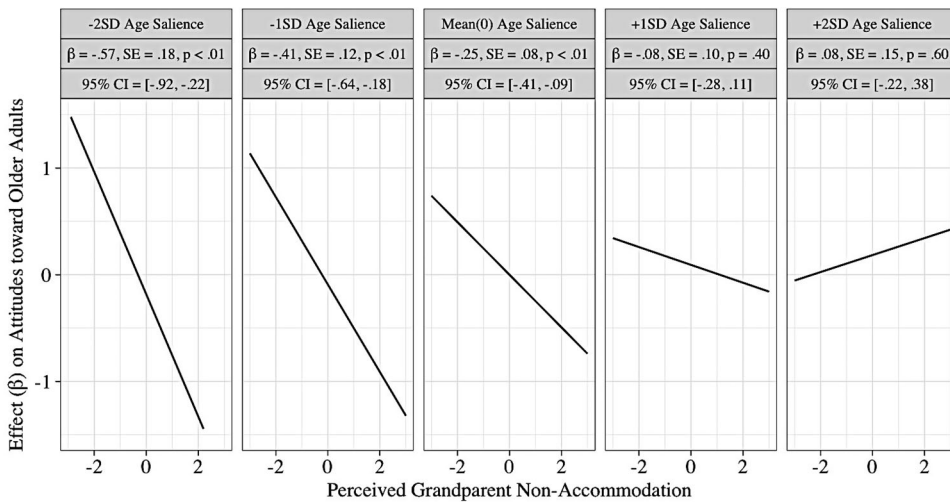
### Indirect effects testing (H3)

To test the potential mediator role of intergroup anxiety (H3) in the relationships between contact experiences and aging attitudes, a structural model (Figure 5) was specified. The model contained four direct IV-DV paths, along with four indirect effects through intergroup anxiety. Bootstrapping with 1000 iterations (Preacher & Hayes, 2008) was conducted. The model showed close absolute fit,  $\chi^2(df = 80, N = 294) = 106.73$ ,  $p = .02$ , RMSEA =  $.03_{(.01-.05)}$ , SRMR =  $.03$ , and close comparative fit CFI =  $.99$ , TLI/NNFI =  $.98$ . The model results (Table 3; Figure 5) showed that the four indirect effects through intergroup



**Figure 3.** Direct effects of non-accommodation and age salience, and the interaction effect on aging attitudes.

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



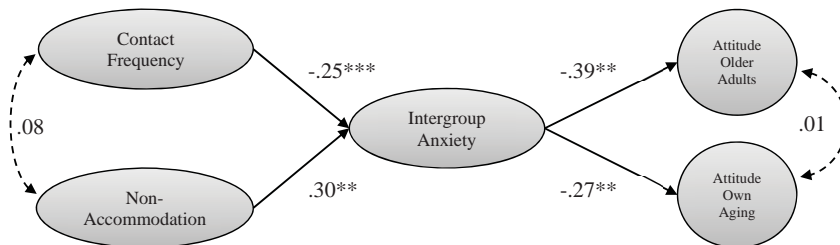
**Figure 4.** Plot graphs of simple slopes representing the significant interaction between grandparents' non-accommodation and age salience on attitudes toward older adults.

Note. The significant latent interaction effect (Figure 3), between perceived grandparent non-accommodation and contact age salience on young adults' attitudes toward older adults, was probed and plotted at five latent levels of age salience.

anxiety were statistically significant, and intergroup anxiety fully explained the four predictive paths (H3 was supported); none of the direct IV-DV paths was significant in this model.

**Conditional indirect effects (H4)**

The conditional-indirect-effects model (Figure 1) was estimated to test if age salience moderates the indirect effect of the grandparent's non-accommodation on attitudes toward older adults through intergroup anxiety. The estimation of the model used LMS and bootstrapping (1000 iterations) techniques. Parameter estimates indicated that the indirect effect process was conditional on the level of age salience. The indirect effect in the model was estimated at five levels of age salience (-2 SD, -1SD, M, +1SD, +2SD). Results showed that the negative effect of non-accommodation on attitude toward older



**Figure 5.** Indirect Effects of Contact Frequency and Non-Accommodation Through Intergroup Anxiety on Aging Attitudes.

Note. This figure shows the direct IVs-mediator and mediator-DVs associations. The estimated indirect effects are reported in Table 3. None of the direct IV-DV associations are significant in this model. \* $p < .5$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Table 3.** Estimated indirect effects of contact frequency and grandparents’ non-accommodation on grandchild’s attitude toward older adults and toward own aging through intergroup anxiety.

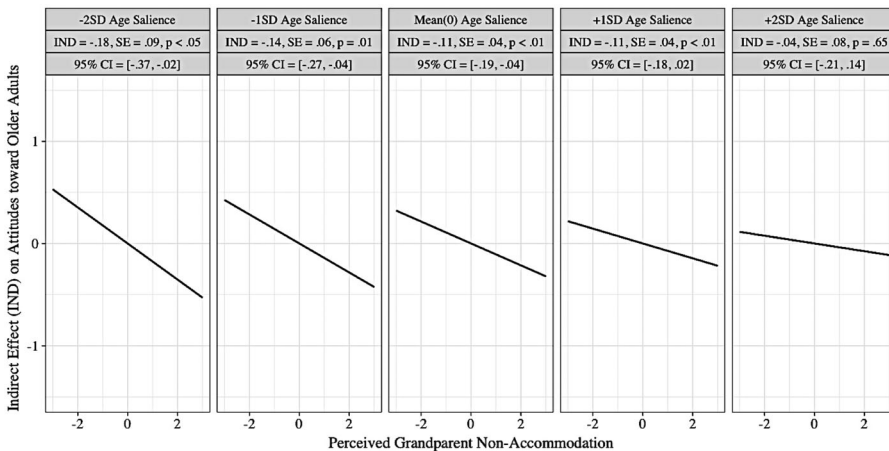
Indirect effects	Estimates (SE)	p	95% Confidence Intervals
Through intergroup anxiety			
Contact frequency to Attitude toward older adults	.10 (.04)	<.05	[.03, .20]
Contact frequency to Attitude toward one’s own aging	.07 (.04)	.06	[.02, .16]
GP non-accommodation to Attitude toward older adults	-.12 (.04)	<.01	[-.21, -.06]
GP non-accommodation to Attitude toward one’s own aging	-.08 (.04)	.02	[-.17, -.03]

Note. Four indirect effects were estimated (Figure 5).

adults through intergroup anxiety was significant when age salience was at or below the mean, but not above the mean (see Figure 6).

### Discussion

Using a survey design, this study investigated the associations between South Korean young adults’ contact experiences with their most-frequent-contact grandparent and their attitudes toward older adults and their own aging. Partially supporting H1a and H1b, SEM analyses showed significant direct associations between both grandparent-grandchild contact quantity and negative contact (i.e. non-accommodation) and attitudes toward older adults. The direct effects were nonsignificant with regard to attitudes about one’s own aging. Moderation analyses showed a significant interaction effect between perceptions of the grandparent’s non-accommodation and age salience during contact on attitudes toward older adults. Decomposition of the interaction effect revealed that the direct negative relationship between grandparents’ non-accommodation and attitudes toward older adults was significant only when age salience was *low*, which is contradictory to the H2b prediction.



**Figure 6.** Indirect effects of grandparents’ non-accommodation on grandchild’s attitude toward older adults through Intergroup Anxiety (IA) at five values of age salience.

Note. Significant conditional indirect effect (Figure 1 Conditional-Indirect-Effect Model) was probed and plotted at five latent levels of age salience. When age salience during contact was at the average or below, perceived grandparents’ non-accommodation increased grandchild’s intergroup anxiety toward older adults, which in turn led to more negative attitudes toward older adults in general.

We also tested the potential mediator role of intergroup anxiety in the relationship between contact and aging attitudes. Supporting H3, indirect effect analyses showed that the direct paths between contact and attitudes were completely eliminated by inclusion of intergroup anxiety. Specifically, more contact frequency was associated with reduced intergroup anxiety which in turn predicted more positive attitudes toward older adults in general and one's own aging. On the other hand, increased non-accommodation by the grandparent was related to increased intergroup anxiety and hence more negative attitudes. Additional probing of the moderation role of age salience indicated that the interaction pattern between the grandparent's non-accommodation and age salience remained the same after inclusion of intergroup anxiety as a potential mediator. In other words, the indirect effect of the grandparent's non-accommodation through intergroup anxiety on attitudes toward older adults was significant when age salience was at or below average.

The above findings overall reveal two major themes related to intergroup anxiety as an explaining mechanism between contact and aging attitudes and the moderator role of age salience. Unlike our predictions, moderation analyses revealed that age salience functioned in the opposite direction as hypothesized. A similar pattern was observed with anxiety entered as the mediator. In other words, the direct and indirect (through anxiety) negative relationships between grandparents' non-accommodation and attitudes toward older adults were significant only when age salience was below or at average. These two themes are discussed below with a focus on functions of age salience with regard to boundary conditions and the cultural context of Korean family intergenerational relationships.

### ***Contact, intergroup anxiety, and aging attitudes***

Supporting our hypotheses, mediation analyses demonstrated significant indirect associations between contact frequency and aging attitudes through intergroup anxiety. In addition, Korean young adults' contact with the grandparent with whom they had the most frequent contact directly contributed to positive attitudes toward older adults. These findings in general concur with those in the broader contact literature (Brown & Hewstone, 2005; Islam & Hewstone, 1993), in nonfamily intergenerational (Bousfield & Hutchison, 2010; Drury et al., 2016) context, and especially in family intergenerational contexts (Harwood et al., 2005, 2006; Soliz & Harwood, 2003, 2006). Thus, findings in this study, which examined family intergenerational relationships in an East Asian cultural context, have demonstrated the applicability and validity of intergroup contact theory in explaining overall aging attitudes.

On the one hand, contact frequency with the most frequent grandparent-contact reduces intergenerational communication anxiety, directly enhances attitudes toward older adults, and indirectly enhances aging attitudes through intergroup anxiety. In this respect, the current study has demonstrated the critical and positive role contact frequency plays in intergenerational communication in Korean family context in the generalizations of cross-group (family member to nonfamily member) and cross-level association (a specific older adult to older adults in general). In the family context, both age and interpersonal relationship play a role in young adults' construction of aging attitudes. It is possible that relational closeness with the grandparent (as compared to most frequent elder contact) is a salient factor in influencing aging attitudes. In other words, frequent



contact with grandparents at the minimal provides more opportunities for intergenerational communication exchanges, thus leading to more knowledge and familiarity about aging and closer GP-GC relationships. These factors are negatively associated with intergroup anxiety and positively associated with perspective taking or intergroup empathy, and thus more positive attitudes toward older adults and one's own aging (Harwood et al., 2005, 2006; Soliz & Harwood, 2003, 2006). This finding is promising in that GP-GC contact frequency has the capacity to battle ageism and negative aging attitudes indirectly through reduction of anxiety. Hence, it is essential to have adequate contact (especially positive contact) between Korean young adults and their grandparents in order to improve aging attitudes. Although the Korean culture is becoming increasingly more modern, more age-segregated (e.g. only 8% young adults lived with the grandparent in this study), and globalized, the age-related norm of filial piety, which requires frequent visit of older family members, might still serve as a major cultural facilitator of positive aging attitudes (see Zhang & Hummert, 2001).

On the other hand, supporting H1b, results showed significant direct negative association between grandparents' non-accommodation (i.e. negative contact) and attitudes toward older adults. On top of the direct effect, grandparents' non-accommodation also had significant indirect effects on aging attitudes through anxiety. These findings indicate that young adults in South Korea who repeatedly experience negative intergenerational communication with their grandparents are more likely to develop negative attitudes toward older adults and own aging either directly or indirectly through anxiety. According to CAT (Giles, 2016), interactions are dynamic and usually shift between high or low intergroup and interpersonal orientations based on accommodative stance, group vitality, and discourse management. Nonetheless, non-accommodation in general is associated with relational dissatisfaction, high group salience, and negative intergroup attitudes (Giles, 2016). In intergenerational contexts, young people tend to perceive dissatisfying conversations in more intergroup terms (see Paolini et al., 2010) than satisfying ones (Williams & Giles, 1996; Williams & Nussbaum, 2001). Hence, non-accommodation occurs to some extent when the elderly and the young see each other in terms of their respective age group and rely on age stereotypes to guide their interactions. These inappropriate forms of accommodation include making angry complaints, negatively stereotyping youth, complaining about health, and talking down to the young. Scholars consider reluctant young accommodation to these non-accommodative behaviors as dissatisfying communication such as restraining themselves by 'biting their tongues' and 'putting a cap' on their emotions when older people are patronizing to youth and stereotyping the young as irresponsible and naïve (Williams & Giles, 1996). From this regard, the age-based norm of filial piety may empower Korean older adults to perform these non-accommodative acts thus making the age-based norm as a debilitating factor as well to intergenerational relationships in general. Future research should explore both the negative and positive functions played by filial piety in GP-GC communication and relationships, and aging attitudes. Anxiety measured in the current study essentially focused on intergroup contact or communication anxiety. Future intergenerational contact research should be expanded to include multiple dimensions (e.g. Fear of Old People, Psychological Concerns, Physical Appearance, and Fear of Losses; Allan & Johnson, 2009; Lasher & Faulkender, 1993) of aging anxiety to better understand the mediating effects of anxiety that is more specifically relate to the intergenerational context instead of a global measure of anxiety.

### ***The moderator effect of age salience***

The most intriguing finding from our research is the moderation pattern involving age salience. In accord with previous research and theorizing, we hypothesized that the association between contact with grandparent and age-related attitudes would be strongest under conditions of high age salience. Consistent with Brown and Hewstone (2005), age salience should increase the accessibility of age-related cognitions, and strengthen links between perceptions of the specific grandparent and older adults as a group. In contrast to that prediction, the association between the grandparent's non-accommodation and attitudes toward older adults was significant only when age salience was *low*. This interaction pattern held following inclusion of intergroup anxiety as a mediator: high age salience still blocked the generalization of individual-level intergroup communication experiences to group-level attitudes. In Korean intergenerational communication, age salience during conversation appears to prevent negative intergroup contact from being generalized to the outgroup as a whole.

Our explanation for this unexpected finding is grounded in understandings of Korean culture (e.g. collectivism and elder respect) and processes of subtyping and subgrouping (Richards & Hewstone, 2001). *Subtyping* occurs when an individual is viewed as an 'exception' to typical group perceptions: such a person is excluded from the cognitive representation of the group (discounted) and does not influence broader group perceptions. *Subgrouping* occurs when perceptions of a larger group involve an amalgamation of various subgroups (e.g. in the West, older adults are often subgrouped into types such as 'severely impaired' or 'perfect grandparent': Hummert, Garstka, Shaner, & Strahm, 1994).

Korean culture is collectivistic (Kim, 2002), and conformity to social norms is expected. According to Kim, the Eastern self is primarily interdependent – sustained and formed by its social environment. Hence, Korean young adults' age identity might be more in line with their roles, positions, and normative relationships with older adults rather than their internal attributes. Prior research in intergenerational communication in the East has established that filial piety is both a facilitating and debilitating factor for intergenerational relationships. It is a facilitating factor as filial piety enhances family solidarity and relational closeness with family elders (Song & Zhang, 2012). Filial piety is a debilitating factor as it empowers older adults by legitimizing older adults' 'bossy' and non-accommodative behaviors (Zhang & Hummert, 2001), while simultaneously constraining the emotional breadth of intergenerational relationships for younger people (Lin & Harwood, 2003).

We suggest that Korean young adults who are more aware of their grandparents' age and age differences might also be more aware of the aged-based norm of filial piety and its associated old-to-young non-accommodations. Such perceptions legitimize older non-accommodation as a normative communicative practice. From such a cognitive orientation, generalization from grandparent non-accommodation to negative ageist attitudes would not follow, because the older adults' 'negative' behaviors derive from a positive cultural value, and represent *positive* aspects of aging (i.e. the freedom to act in this manner, and the constrained ability for the recipient to respond negatively). These young adults may also cognitively weigh the Confucian age-based hierarchy more heavily. If so, again, their dissatisfying intergroup communication experience with

grandparents should not translate to their attitudes toward older adults: people with high status are allowed (indeed even expected perhaps) to act this way. Grandparents behaving in a more accommodative (warm, friendly) manner are exceptions to Confucian norms; when such norms are salient these individuals are likely to be discounted ('subtyped') and hence not influence general attitudes (Richards & Hewstone, 2001).

In a culture where older age 'should be' valued, respected, and honored high age salience likely triggers a participant's social normative response (subconsciously) that I 'ought' to continue to think of elders in a positive light ('respect of old age' regardless of what happens) and hence the normative category does not shift. Whereas when age salience is low, participants are not operating on what they 'ought' to think. Instead, if age salience is low in a cultural context in which age identity is very important, then participants are 'free' to make other attributions of the behavior that are not so steeped in cultural norms of elder respect. Then categorical distinctions can be made because the individual is not breaking a cultural or social role by making negative attributions about an age group.

Among young adults for whom age was less salient, we suspect that a *subgrouping* process might explain generalization from the grandparent's non-accommodation to more general attitudes. In our case, younger Koreans who are less immediately concerned with filial piety norms might operate in terms of subgroups of older people who either 'merit' filial piety, or who do not. When age is not particularly salient, it might indicate the presence of an older person who does not fit the filial-piety-worthy subgroup, and hence whose behavior reminds one of a subgroup of less positively or respectfully perceived older adults. Considering such a subgroup would thus activate less positive perceptions of older adults as a whole.

Broadly, then, our work suggests a boundary condition for the Brown and Hewstone (2005; Hewstone & Brown, 1986) generalization paradigm. Valence of intergroup contact is more likely to generalize to global group perceptions when group salience is high. However, when intergroup norms strongly prescribe specific forms of behavior, generalization from behavior conforming to those norms will be *lower* when group salience is high, specifically because high group salience will enhance awareness of group-based norms and their application in judging the behavior. We might expect similar departures from Hewstone and Brown's predictions in other situations where cultural norms or values prescribe behaviors for groups. Those with a strong endorsement that 'boys will be boys,' for instance, might not be particularly strongly influenced by a specific boy's bad behavior – he's just being a boy. A good boy is similarly discounted as an 'exception to the rule.' However, when group salience is low (and hence the tendency to judge boys strictly from the 'boys will be boys' norm is less strong), a particular boy may be judged with regard to broader perceptions of what boys are like. In that scenario, an observer might have the option of understanding a particular boy as part of a subgroup of 'rowdy' boys, or a subgroup of 'good' boys. A misbehaving boy would raise awareness of the 'rowdy' subgroup, and hence general perceptions of boys would be made more negative as a result of his behavior.

Future research should explore further the moderating functions of age salience between contact and age stereotypes in situations of strong group-relevant norms – including in situations where endorsement of such norms could be manipulated so as to more precisely test the components of our explanation and to attempt to replicate our effects. Future research should also further consider how to integrate group salience

with closely related theoretical concepts such as norms and values (e.g. filial piety), group typicality, and normative fit. The current study included only Korean college students, who are mostly in their early 20's, thus this study is limited in terms of sampling and generalization. As age of young adults ranges from 20's and late 30's, future studies should include more diverse samples of Korean young adults by recruiting them from different age groups (e.g. young adults in their 30's), regions, universities, and work settings. In addition, future studies should examine or control for the fixed effects at the level of university, region, or study site if students at different study sites are reasonably heterogeneous. Indeed, in terms of our intergenerational context should extend to other East Asian cultural contexts to see if this effect holds in other locations endorsing similar values. Self-construal should be considered in future research in that how we define ourselves in relation to others decides our attitudes toward outgroups. Those with interdependent self-construal and those with independent self-construal might differ in attitudes toward aging. Finally, longitudinal work and experimental studies would help us understand more precisely the causal connections in our findings.

Broadly, we hope to have advanced theorizing on intergroup contact by suggesting a boundary condition to the Brown and Hewstone (2005) model of generalization from specific intergroup contact to broader intergroup attitudes. We also hope to have provided some new thoughts on how intergroup accommodation, cultural values, group attitudes, and family relationships intersect, even in close family relationships.

## Note

1. Correlation matrix of the parceled items is available upon request, for readers interested in replicating the analysis.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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