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Who Believes in Cross-Age Friendship?

Predictors of the Belief in Intergenerational Friendship Scale in Young Adults

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Data and Materials. Study materials (including the survey questions and R analysis code) and raw data are available at osf.io/cq59d/.

Abstract

Intergenerational contact is beneficial for both younger and older adults, but friendships that span across generations are uncommon. While this is partially due to situational factors, people's beliefs about the possibility of intergenerational friendship may also affect how they approach potential intergenerational interactions. In a sample of 209 students from a Canadian university, we validate the Beliefs in Intergenerational Friendship (BIGF) scale. Young adults were more likely to believe in intergenerational friendship if they had less ageist attitudes and if they were more conscientious, open, agreeable, and emotionally stable. Number of non-kin intergenerational social contacts (but not number of kin contacts) and closeness of an existing relationship with an older adult also predicted greater belief in intergenerational friendship. BIGF scores predicted willingness to regularly spend time with older adults and were a better predictor than either hostile or benevolent ageism. While not everyone believes that intergenerational friendships are possible, this novel scale may uniquely capture people's willingness to form relationships across generations.

Keywords: ageism, friendship, intergenerational, intergroup contact, social networks

Introduction

Social interaction between younger and older adults – known variably as cross-generational contact, intergenerational contact, or age integration – is beneficial for everyone involved. Older adults who regularly interact with younger adults can experience improvements to their physical, cognitive, and psychosocial health (Park, 2014; Zhong et al., 2020), while younger adults often show decreased ageism and more positive attitudes of aging (Christian et al., 2014; Wagner & Luger, 2021). The benefits of intergenerational interactions are broadly acknowledged; in one survey, 76% of respondents thought that closer interactions across generations would be beneficial (Unifying Generations, 2022). While social interaction – and even friendships – between people of different ages is advantageous for both individuals and society, intergenerational friendships seem relatively uncommon in Western societies, especially among non-kin and particularly within one’s closest circle. Only 28% of Europeans reported having at least two cross-age friendships (Dykstra & Fleischmann, 2016), and less than 10% of older Europeans in another large study included a cross-generational friend in their closest social network (Sun & Schafer, 2019). Despite their relative infrequency,¹ intergenerational friendships are enjoyed and valued by those who form them and are actively sought out by some (Elliott O’Dare et al., 2019a, 2021). Even as interventions to facilitate intergenerational contact are increasingly studied (Christian et al.,

2014; Zhong et al., 2020), research on intergenerational *friendship* is still scarce (review in Elliott O’Dare et al., 2019b).

Understanding who is open to forming intergenerational friendships – and, indeed, who believes that intergenerational friendship is even possible – is important to the applied fields of intergenerational contact and aging, and further broadens the literature on friendship (which tends to assume age homogeneity). Programs that organize intergenerational interactions are a key strategy to reducing the global problem of ageism (World Health Organization, 2021), but mere contact between younger and older adults is insufficient to provide either the benefits of reduced ageist attitudes or improved well-being – the *quality* of the interactions and resulting relationships matters (Christian et al., 2014). Thus, although rarely labelled as such, the goal of many intergenerational interaction programs is to facilitate the formation of intergenerational friendships. By capturing people’s belief in intergenerational friendship, we are capturing the extent to which people believe close, reciprocal, and trusting relationships *can* form between people of different generations, or, reversely, the extent to which intergenerational contact programs must fight against the belief that there are insurmountable barriers preventing these beneficial intergenerational relationships.

We here focus on intergenerational relationships that can be described as *friendships*. Definitions of friendship vary but typically include references to the relationship being voluntary and involving trust, closeness,

network of friends and acquaintances that do not appear when asking people for their closest 7 or even 20 social contacts.

Interestingly, in the same survey, only 38% of participants “said that they would be open to being friends with people of a different generation” (p. 11).

¹A recent large survey found that when directly asked whether they had a friend from a different generation, 50% of European respondents said yes (Unifying Generations, 2022). This higher estimate may have been subject to demand bias, or, alternatively, many people may have intergenerational friendships in their broader

and reciprocity (see Adams et al., 2000; Matthews, 1983 for further discussion). Some intergenerational relationships – for example, between grandparents and grandchildren – may be close and trusting but would not necessarily be labelled as a friendship by either person, given that the relationship may be driven by familial obligations and thus may not be considered voluntary. However, someone else may see their grandparent as a friend as well as family (Kemp, 2005). In the current study, we did not define friendship to our participants but instead allowed participants to use their own lay conceptions of friendship when deciding how to label their social contacts and when responding to questions about friendship.

Theories of Friendship Formation

While recent research shows that intergenerational friendships are relatively uncommon, the reasons for age homophily in friendship are not fully understood. Established theories show that one's interpersonal relationships – including one's intergenerational relationships – are a result of both (i) environmental or situational factors and (ii) one's personal motivations and interests in forming friendships. The role of environmental factors in friendship formation is largely captured by the proximity principle (Epstein, 1983; Festinger et al., 1950; Gitmez & Zárate, 2022), which describes how situational proximity between people is a key predictor of friendship formation. People are more likely to form friendships with people with whom they frequently interact, and closer proximity results in a higher rate of interaction. Friendships among dissimilar people – including intergenerational friendships – are especially strongly predicted by proximity (Gitmez &

Zárate, 2022), with most intergenerational friendships forming among people who live very close to one another (Nahemow & Lawton, 1975). At least some degree of proximity and interaction between individuals is a prerequisite for friendship formation; if someone wants to form an intergenerational friendship but has absolutely no opportunities to meet someone much older or younger than they are, then they would be unable to establish such a friendship.

While the environmental availability of intergenerational interaction is thus necessary for intergenerational friendship formation, it is not sufficient. If someone spends time with people from other generations but does not believe intergenerational friendship is possible – or thinks that such a friendship would have no value – then they would be unlikely to form an intergenerational friendship. Social exchange theory suggests that friendships are selected and maintained due to an analysis of the costs and benefits derived from the relationship (Epstein, 1983). People may perceive the costs and benefits of intergenerational friendships to be distinct from the costs and benefits of same-age friendships (Unifying Generations, 2022), and the perceived worthwhileness and viability of these friendships may vary as a result. Even individuals who volunteer with older adults may not consider potential friendship with these older adults as a reason to volunteer, instead noting other motivations for their involvement (Same et al., 2020). Ultimately, there is likely significant variability in people's perceptions of the potential of intergenerational friendships and in their ultimate motivation to pursue intergenerational interactions.

Predicting Intergenerational Relationships

People are not all equally likely to form intergenerational friendships; some are more likely to meet and interact with people from other age cohorts, and presumably only some are interested in forming resulting relationships. Most research on predictors of intergenerational friendship has focused on the situational factors that lead people to meet potential cross-age friends. Among older adults, younger intergenerational contacts are more prevalent among those with children and among those who participate in organized activities, including religious services, volunteer work, or paid work. Among younger adults, attending religious services increased the likelihood of having cross-generational friends, and volunteering also may be associated with intergenerational social contacts among young adults (Sun & Schafer, 2019), although this relationship has not always been found (Dykstra & Fleischmann, 2016). These predictors highlight the role of situational proximity in friendship formation.

While for older adults, better health is associated with cross-generational friendship, among younger adults, poorer health is associated with cross-generational friendships (Dykstra & Fleischmann, 2016). The mechanism for these relationships may also be environmental. Younger adults with poorer physical health may spend more time in places that facilitate the improvement of their health (including medical facilities and recovery groups) or that accommodate health limitations (such as low impact physical or social activities). Because the risk of chronic illnesses and disability increase with age, these places are primarily frequented by older adults. For example, young adults with cancer discuss

forming relationships through support groups with other cancer survivors, most of whom are significantly older (Kent et al., 2012). On the other side, older adults with better health are more likely to remain involved in workplace, religious, volunteer, or leisure activities where they may interact with younger adults, and healthfulness is especially important to maintain involvement in more demanding activities that are less commonly done by older adults (due to increasing rates of chronic illness and disability). For example, a 60-year old man who plays recreational hockey is likely to find himself primarily in the company of younger adults, and his involvement in hockey is predicated on his good health (Atwal et al., 2002). The relationship between health status and intergenerational friendship is thus likely also mediated by situation selection and interaction.

While environmental predictors of intergenerational friendships are often considered, to our knowledge, internal personality traits and motivations have not been examined as predictors of cross-aged friendship. However, personality traits are known to correlate with ageism; ageism is associated with lower agreeableness, lower openness to experience, and lower conscientiousness (Allan et al., 2014; Marzban, 2019). Similarly, conscientiousness and agreeableness also each negatively correlate with fear of old people (Gao, 2009; Harris & Dollinger, 2003). We thus hypothesize that belief in intergenerational friendships will be positively associated with the personality traits of agreeableness, openness, and conscientiousness. We also hypothesize that interest in intergenerational friendship will be higher among those with higher extroversion, given that extroverts are more likely to have

other types of cross-group friendships (Turner et al., 2014) and that extroversion may negatively correlate with ageism (Marzban, 2019).

We further hypothesize that young adults with existing intergenerational relationships will be more likely to agree that intergenerational friendships are possible. In particular, we hypothesize that younger adults who spend more time with older adults and have more existing cross-generational relationships will more strongly believe that intergenerational friendships are possible and will be more interested in forming future intergenerational friendships. Prior contact has been previously shown to influence future intentions for intergenerational contact; for instance, students who spend more time with older adults were more likely to be interested in working in gerontology (Chonody & Wang, 2014).

Aims of Current Study

The following study has two primary aims: (i) to create and validate a novel measure of Belief in Intergenerational Friendship (BIGF) and (ii) to investigate correlates of belief in intergenerational friendship among a sample of young adults. To establish convergent and divergent validity, we compare this new measure to existing measures of ageism (hostile ageism, ambivalent ageism, beliefs in intergenerational tensions). Next, we attempt to replicate associations between cross-generational friendships and religious service attendance and poorer health. We then explore what personality traits are associated with personal interest in or belief in intergenerational friendship. Lastly, we examine the extent to

which existing relationships with older adults predict beliefs in intergenerational friendship.

Research on cross-aged friendship has operationalized cross-aged friendships as requiring an age difference of at least 10 years (Sun & Schafer, 2019) to over 40 years (Dykstra & Fleischmann, 2016). Because of our focus on intergenerational friendship specifically, we looked to the typical length of a generation (approximately 20 to 30 years) and asked about contact with individuals 30 years older than oneself, as well as about contact with individuals 15 years older than oneself.

Methods

Study materials (including the survey questions and R analysis code) and raw data are available at osf.io/cq59d/. This study was not pre-registered. We report all measures, conditions, and exclusions, and have conducted no other study on this topic. This research was approved by the University of the Fraser Valley Research Ethics Board.

Participants

To have a minimum of 80% power to detect correlations of $r = .20$ or above (calculated with G*Power; Faul et al., 2009), we planned to collect a sample of at least 200 participants and continued data collection until the semester was over.²

A total of 209 students participated in this study and consented to their data being used (two additional people completed the study but requested that their data be deleted). All participants were enrolled in Introduction to Psychology classes at the University of the Fraser Valley and received course credit for

² Some interim data analyses were performed on the first 98 participants to allow the first author to complete course

requirements. Data were not analyzed again until the full sample was available.

their participation. Data was collected online between December 2021 and August 2022. The majority (78%) of students were female, and the average age was 21.84 years (range 18 – 46, $SD = 5.28$). Most participants had spent most of their lives in Canada (86%), with others having primarily lived in India (10%) or other countries (4%). Participants self-identified as White (38%), South Asian (35%), East Asian (7%), Aboriginal (3%), or other ethnicities (16%).

Procedure and Materials

After being informed of the general purpose of the study and providing informed consent, participants completed the six following questionnaires online in the order below. They were then shown a debrief, where we explained that the purpose of the study was to explore the factors that predict beliefs about intergenerational friendship. Analyses were conducted using R (R Core Team, 2021).

Social Network

Participants were first asked to give the first names, nicknames, or initials of the first 20 adults with whom they have had contact with in the last year (Stulp, 2021). The instructions further clarified that this could include family, friends, acquaintances, etc. These provided names or initials were then piped into the following two questions, where participants indicated the approximate age of each social contact (18–24, 25–29, 30–39, 40–49, 50–59, 60–69, 70–79, or 80 or older) and how they knew each social contact from a list of sixteen options, including friend, acquaintance, partner, parent, siblings, other relative, relative of partner, neighbor, from work, etcetera; multiple selections were allowed.

We later used the social network to count the number of close contacts that participants listed who were at least 15 years older than the participants and to count the number of contacts listed who were at least 30 years older than the participants. For instance, for a participant who was 18 years old, we counted all contacts in the 40 – 49 bin or above as 15 years or older and all contacts in the 50 – 59 bin as 30 years or older. Participants did not provide the exact ages of social contacts, so these are conservative estimates.

Existing Closeness with Older Adults

To approximate the closeness of existing intergenerational relationships, we asked participants how much contact they had with their grandparents over the last two years (from 1 – *none* to 6 – *constantly, multiple times per week*).

We then asked them to think of one person at least 30 years older than them (excluding their parents) and to answer six questions about the support both *received by* and *provided to* that person (three items selected from the Close Friend Support scale in Malecki & Elliott, 1999; “gives me advice”, “helps me when I need it,” and “understands my feelings”). We averaged these three items for each of the two variables, provided support and received support. Unlike for the social network measure (above) and the interest in future interactions questions (below) that used both 15 years older and 30 years older as the cut-offs for intergenerational contact, these questions about closeness were only asked once about one target individual using the more traditional definition of intergenerational.

Interest in Interacting with Older Adults in the Future

We next asked questions to capture participants' (i) willingness to form a friendship with someone 15 (or 30) years older than them, (ii) willingness to regularly spend time with someone 15 (or 30) years older than them, (iii) interest in volunteering for a program where you spend time talking to older adults who live in retirement homes, and (iv) interest in volunteering for a program where you provide practical assistance and help to people who live in retirement homes. We also asked the likelihood of forming a friendship with someone (15 or 30 years older than them) if they regularly spent time together.

Personality

Participants completed the 44-item Big Five Personality Inventory (John & Srivastava, 1999), which measured the personality traits of agreeableness (9 items; $\alpha = .77$), neuroticism (8 items; $\alpha = .80$), conscientiousness (9 items; $\alpha = .76$), openness (10 items; $\alpha = .71$), and extroversion (8 items; $\alpha = .86$).

Health

We asked participants to describe their current general health using two items, first in general terms (from 1 – *bad* to 6 – *excellent*) and then relative to others their age (from 1 – *much poorer than others* to 7 – *much better than others*). As expected, these two items were strongly correlated at $r = .56$, supporting our decision to average these two items into a single measure of current health.

We asked participants about their lifetime health using two questions: “To what extent have medical/health problems or concerns affected your life, compared to other

people your age? Consider your entire life to this point” (from 1 – *much more than others* to 7 – *much less than others*) and “Averaging across your lifetime, how often have you interacted with required healthcare services as a patient” (from 1 – *never* to 6 – *very frequently, monthly or more*). These two lifetime health items were strongly correlated at $r = .50$ and we thus averaged across these two items to create one measure of lifetime health.

The two resulting variables, current health status and lifetime health status, were correlated with one another, though only moderately ($r = .30$, 95% CI = [.17, .42]).

Belief in Intergenerational Friendship Scale

Participants responded to 11 questions that were created to capture beliefs in the possibility of intergenerational friendship (items and factor loadings in Table 1; $\alpha = .81$). Item content was informed by prior qualitative research on experiences with intergenerational friendship (Elliott O'Dare et al., 2019a, 2021).

Ageism Scales

Participants completed the SIC Intergenerational-Tension Ageism scale (North & Fiske, 2013), which has three subfactors: Succession (e.g., “Most older people don't know when to make way for younger people”; 7 items; $\alpha = .85$), Identity (e.g., “Older people shouldn't go to places where younger people hang out”; 4 items; $\alpha = .85$), and Consumption (e.g., “Doctors spend too much time treating sickly older people”; 3 items; $\alpha = .80$). The SIC Ageism scale also can be analyzed as an aggregate measure of ageism (full scale $\alpha = .84$).

They also completed the Ambivalent Ageism scale (10 items; $\alpha = .86$) and the Hostile Ageism scale (3 items; $\alpha = .71$; Cary et al., 2017).

Social Desirability and Demographics

Second to last, participants completed a four-item social desirability measure (Haghighat, 2007). Finally, the participants were asked to fill in the following demographic information: gender, age, ethnicity, the country where they have lived for the longest, religion, and frequency of attending religious services (*never, rarely, sometimes, or regularly*).

Results

We conducted four sets of analyses. As a first step of scale validation, we tested the internal reliability of the 11-item Beliefs in Intergenerational Friendship scale. Second, to provide evidence of the convergent and divergent validity of this new scale, we correlated beliefs in intergenerational friendship with potentially related measures of ageism and of participants' existing intergenerational relationships. Third, we tested for hypothesized correlations between beliefs in intergenerational friendship with demographic variables (religion, health status) and personality traits. Lastly, using regression analyses, we examined whether beliefs in intergenerational friendship may be a useful predictor of young adults' self-reported interest in spending time with older adults.

Internal Reliability of Belief in Intergenerational Friendship (BIGF) Scale

To determine whether the 11 questions of the Beliefs in Intergenerational Friendship

scale reflected a single unified concept or multiple (related) concepts, we conducted a principal component analysis. This analysis found that the items best fit a two-factor model³; as measured by this scale, beliefs in intergenerational friendship is not one concept but instead a set of two related beliefs. To see how individual items mapped on to these two factors (i.e., to determine which subscale each item belonged to), we conducted an exploratory factor analysis (using Promax rotation; loadings shown in Table 1). The first factor, which we labeled *Importance of Age*, captures the direct belief in the importance of age for friendships. The highest loading item was, "Even though friendships across different generations are less common, they can be just as strong as other friendships". The second factor, *Relatability*, captures whether relatability and similarity are perceived barriers to intergenerational interactions. The highest loading item was, "People generally get along best with those who are similar in age to themselves" Two items, BIGF 1 and BIGF 6, loaded weakly onto both factors, suggesting that these two items partially reflect both people's beliefs about *Importance of Age* and their beliefs about *Relatability* but are not a central part of either subscale.

While a two-factor structure emerged, the total scale also had good internal reliability ($\alpha = .81$). Item-total correlations for each item were at least .377 or above. Additionally, Cronbach's alpha, a measure of internal reliability, was not improved by the deletion of any item; we thus retained all items in the final scale.

Based on these analyses, we conclude that the Belief in Intergenerational Friendship

³ According to a principal component analysis of the 11 items, 35.8% of the item variability was explained by the

first component, 14.3% by the second, and less than 10% by each subsequent component.

scale has two subscales but that it is also appropriate to use the scale as a measure of overall belief. For the remainder of the analyses, we used the aggregate of all 11 scale items to capture people's holistic beliefs about intergenerational friendship.

Correlates with Belief in Intergenerational Friendship

Ageism

As hypothesized, participants who scored higher on any ageism scale – hostile ageism, benevolent ageism, or intergenerational tension beliefs (SIC) – were less likely to believe in intergenerational friendship. Correlations between BIGF and ageism scales were moderate (e.g., with benevolent ageism, $r = -.37$, 95% CI = $[-.48, -.24]$, $t(194) = 5.47$, $p < .001$; see Table 2 for all correlations). The moderate size of these associations suggests that beliefs about intergenerational friendship is not redundant with ageism but is instead a distinct concept. BIGF was most strongly correlated with the Identity subscale of the SIC ageism scale ($r = -.30$) compared to the other two subscales, suggesting that intergenerational tensions involving identity maintenance (thinking that older adults should “act their age”) are most closely related to beliefs that intergenerational friendships are not viable.

Existing Relationships with Older Adults

Social Networks. When asked to list 20 adults with whom they have had social contact in the last year (including friends, family, acquaintances), young adults in our sample primarily listed contacts who were similar in age to themselves. However, 77% of participants listed at least one contact who was at least 15 years older than themselves ($M = 3.89$, $SD =$

3.35) and 51% listed at least one contact who was at least 30 years older than themselves ($M = 1.57$, $SD = 2.10$). Most of these intergenerational contacts were parents or other relatives. Approximately half (53%) of participants listed at least one non-kin contact who was 15 years older than themselves ($M = 1.72$ non-kin contacts, $SD = 2.29$), and 28% listed a non-kin contact who was at least 30 years older than themselves ($M = 0.51$, $SD = 0.97$).

To determine the role of both kin and non-kin relationships, we conducted a linear model predicting BIGF with the number of kin contacts who were at least 15 years older than the participant, the number of non-kin contacts who were at least 15 years older than the participant, and the participant's age as a control variable. The number of non-kin social contacts significantly predicted BIGF ($b = 0.08$, $SE = 0.03$, $t(194) = 3.26$, $p = .001$, $r = .23$), but the number of kin relationships did not significantly predict BIGF ($b = 0.05$, $SE = 0.03$, $t(194) = 1.78$, $p = .077$, $r = .13$). We repeated this analysis using the number of contacts who were at least 30 years older than the participant and found the same pattern of results. Number of non-kin relationships significantly predicted BIGF ($b = 0.13$, $SE = 0.06$, $t(191) = 2.04$, $p = .043$, $r = .15$), but number of kin relationships did not ($b = 0.04$, $SE = 0.04$, $t(191) = 1.01$, $p = .314$, $r = .07$). Thus, a participant who listed more non-kin older adults in their social network was more likely to believe in intergenerational friendship but a participant who listed more older family members in their social network was no more or less likely to believe in intergenerational friendship.

There was also no significant relationship between BIGF and the frequency of

contact with one's grandparents ($r(201) = -.07$, $p = .320$), further suggesting that beliefs in intergenerational friendship are not strongly informed by kin relationships.

Social Support. The number of (non-kin) relationships with older adults predicted students' beliefs in intergenerational friendships, but does the *quality* of these relationships also matter? Provided and received support positively correlated ($r = .53$) so, to differentiate the unique roles of each, we entered both in one linear model as simultaneous predictors.

Support *received from* a close older adult did not significantly predict beliefs in intergenerational friendship ($b = -0.03$, $SE = 0.05$, $t(199) = -0.65$, $p = .513$). However, support *provided to* this older adult had a statistically significant, positive association with intergenerational friendship belief ($b = 0.12$, $SE = 0.06$, $t(199) = 2.11$, $p = .036$, $r = .15$). While only modest in effect size, this relationship held when controlling for participant age and number of close contacts at least 15-years older (with control variables, $p = .038$, $r = .15$).

Demographic and Situational Variables

Age of participant was a significant predictor of BIGF, with older students believing more strongly in the possibility of intergenerational friendships ($r(197) = .32$, $p < .001$). Note that the range of ages in the sample was limited, with only 9% of our sample over the age of 30 – however, this finding does preliminarily suggest that BIGF might evolve across young adulthood. BIGF did not vary by gender ($t(77) = 0.16$, $p = .872$).

Given prior research finding associations between intergenerational friendships (among younger adults) and both religiosity and health status, we investigated whether BIGF was

higher among those who were religious, attended religious services regularly, or had poorer health. Frequency of religious services attendance was not associated with BIGF ($r(200) = -.04$, $p = .530$), nor was belonging to a religion (versus identifying as atheist/agnostic/spiritual; $r(201) = -.07$, $p = .297$). We thus found no evidence for a relationship between intergenerational friendship beliefs and either religious attendance or identity. Current health status was also not significantly related to BIGF ($r(200) = .06$, $p = .389$). Lifetime health status was marginally correlated with BIGF beliefs in the predicted direction – where those with poorer health across their life were more likely to believe in intergenerational friendship – but this relationship did not reach statistical significance ($r(200) = -.12$, $p = .081$). Age of participant was also a confounding variable for this association; after controlling for age, the association between lifetime health status and BIGF was further reduced ($b = -0.03$, $SE = 0.02$, $t(195) = -1.24$, $p = .216$, $r = -.09$).

Personality

BIGF was correlated with four of the five Big Five personality traits. The strongest association was with conscientiousness, with more conscientious participants believing more strongly in intergenerational friendships ($r(193) = .27$, $p < .001$). Participants were also more likely to endorse intergenerational friendships if they were higher in openness to experience ($r(193) = .16$, $p = .030$), lower in neuroticism ($r(193) = -.18$, $p = .011$), and higher in agreeableness ($r(196) = .18$, $p = .010$). There was a nominally positive association between BIGF and extraversion, although it did not reach statistical significance ($r(194) = .14$, $p = .055$).

While most personality traits had comparable correlation coefficients to both BIGF and to the ageism scales, openness to experience was specifically associated with BIGF (but was not significantly associated with ageism; see Table 2).

Predicting Interest in Intergenerational Contact

Does BIGF relate to participants' actual future interest in engaging with older adults? We first explored whether BIGF predicted participants' self-reported willingness to spend time with older adults through testing the first order correlations. We then examined whether BIGF predicted willingness to spend time with older adults, above and beyond existing measures of ageism. We here present results from the items asking about willingness to spend time with someone 30 years older than the participant; results from the items asking about someone 15 years older show the same patterns.

BIGF significantly predicted willingness to regularly spend time with older adults ($b = 1.61, SE = 0.21, t(189) = 7.67, p < .001, r = .49$). BIGF remained a significant predictor even after controlling for all three ageism scales (benevolent, hostile, and SIC), age, social desirability, and the Big Five personality ($b = 1.55, SE = 0.25, t(140) = 6.30, p < .001, r = .47$).

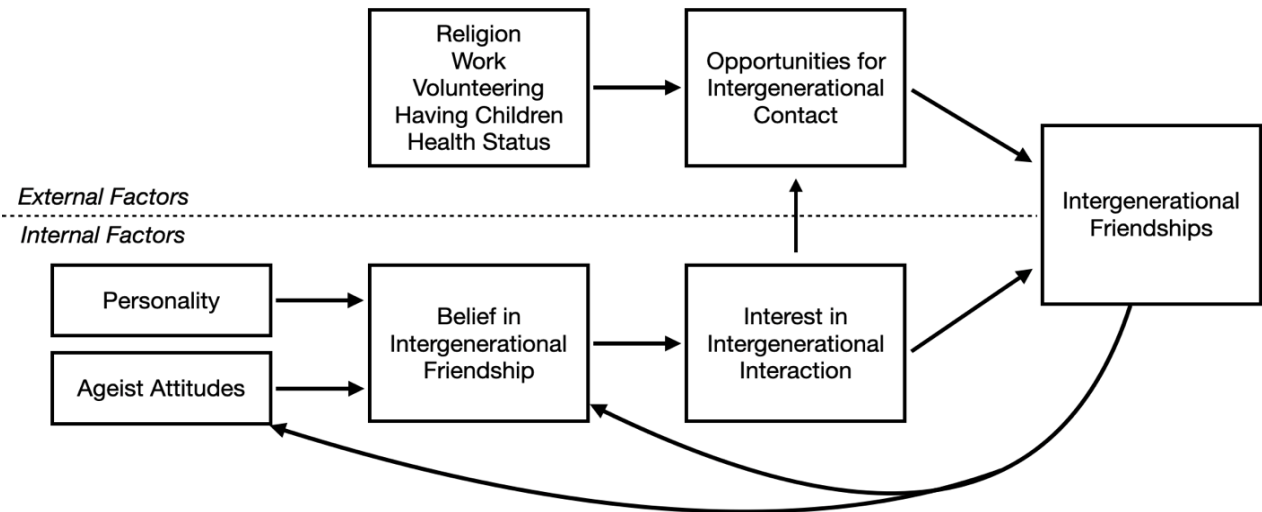
BIGF inconsistently predicted participants' self-reported interests in volunteering in retirement homes. While we had expected that BIGF might predict interest in volunteering for programs centered around "talking with older adults" more than programs involving "providing practical assistance and help", these two items were highly correlated

($r(191) = .80, p < .001$), and both items showed the same pattern of results – we thus present analyses for the average of the two items. Belief in intergenerational friendships predicted interest in volunteering for these programs as a sole predictor ($b = 0.52, SE = 0.23, t(187) = 2.25, p = .025, r = .16$). After including all other measures of ageism, personality, social desirability, and participants' age, this effect was similar in magnitude but was no longer statistically significant ($b = 0.45, SE = 0.29, t(136) = 1.56, p = .121, r = .13$). The only significant predictors of interest in volunteering were extroversion ($b = 0.66, SE = 0.29, t(137) = 2.29, p = .024, r = .19$) and either hostile aggression or SIC ageism (although not both as simultaneous predictors due to high shared variance).

Discussion

Intergenerational friendship can improve the well-being and health of older adults, foster positive attitudes of old age among younger adults, and ultimately benefit all parties. Despite the value in intergenerational friendship, these friendships are relatively rare, likely due to both situational and motivational factors. We here present an initial validation of the novel Beliefs in Intergenerational Friendship scale as a first step towards establishing young people's attitudes towards intergenerational friendship. As hypothesized, belief in intergenerational friendships was negatively correlated with existing measures of ageism and neuroticism and positively correlated with conscientiousness, agreeableness, and openness to experience. Number of existing non-kin intergenerational social contacts – but not number of kin social contacts – also predicted belief in intergenerational friendships.

Figure 1. Theoretical model showing the external factors (situations) and internal factors (beliefs and motivations) required for the formation of intergenerational friendship, along with some of their potential antecedents.



Additionally, quality of social support *provided* to an existing intergenerational contact – but not quality of social support *received* – predicted belief in intergenerational friendships, speaking to the role of equality and reciprocity in friendship. These findings suggest that personality, the quality, and type of existing relationships with older adults contribute to young people’s belief in whether friendships can form across generations.

Unlike research focusing on people’s existing number of intergenerational social contacts, we did not find correlations between beliefs in intergenerational friendships and religiosity or health status. Religiosity and health status both likely facilitate intergenerational friendship formation through providing venues where people are likely to have cross-age interactions (religious services, healthcare, or exercise facilities). In other words, religiosity and health status may contribute primarily to people having the *opportunity* to form intergenerational friendships. The belief in intergenerational

friendship scale instead captures one’s *motivation* for intergenerational friendship and is thus distinct from whether someone has situational opportunities to meet and form connections with other-aged individuals. People who have no or few situations to form cross-aged friendships may still believe in the possibilities of these friendships.

Of course, environmental and motivational prerequisites to friendship are not entirely independent; someone who is personally interested in forming intergenerational friendships is more likely to enter situations where intergenerational interactions are possible, and someone who frequents intergenerational environments is more likely to be interested in forming intergenerational friendships. Figure 1 presents a theoretical model, where both opportunity and intention are distinct from but potentially influenced by belief in intergenerational friendships, and both opportunity and intention are necessary to establish a friendship. This theoretical model is consistent with – although

not directly supported by – the results presented above; the current study is correlational and is thus unable to speak to causality.

Limitations and Future Directions

The Beliefs in Intergenerational Friendship scale was written with age-neutral language to be useable by both younger and older adults. However, it should be validated in samples of older adults prior to its use in such samples. We would expect some differences in the predictors of BIGF in the population of older adults; for example, among older adults, belief in intergenerational friendships may be uncorrelated – or even positively correlated – with ageism and may instead be negatively correlated with anti-youth attitudes (North & Fiske, 2013).

This study used a student sample from one Canadian university and is thus not representative of all young adults. While undergraduate students are often invited to volunteer for intergenerational programs and are thus a relevant population for this research (e.g., Hegeman et al., 2010; Marzban, 2019), they are not reflective of all potential younger adults. University samples can vary from the general population in unpredictable ways (Hanel & Vione, 2016). Characteristics such as socioeconomic status or social class, which were not measured here, may also affect beliefs in intergenerational friendship and should be considered in future studies. Additionally, people across cultures and countries have differing beliefs about older adults (North & Fiske, 2015), which may impact their belief in intergenerational friendship. In particular, future studies may examine how cultural traditions of filial piety and respect for one's elders affect beliefs about the possibility and appropriateness

of intergenerational friendships (Li et al., 2021; Sung, 2004).

All the measures in this study were self-reported and measured in a single session. Future research could consider examining the test-retest reliability of BIGF and explore how belief in intergenerational friendships changes after positive intergenerational interactions. For instance, we would predict that young adults would score more highly on the BIGF after a high-quality interaction with an older adult. Potentially, belief in intergenerational friendships may increase even after imagined contact with older adults (e.g., Fowler & Gasiorek, 2022). Additionally, initial BIGF may *moderate* the degree to which intergenerational interaction successfully results in the formation of cross-generational relationships, with individuals with stronger belief in intergenerational friendships being more likely to subsequently form friendships.

Future research could also explore the definitions of friendship that participants use when completing the BIGF survey and whether people think of intergenerational friendship as having the same or different characteristics as same-age friendships.

Conclusion

To encourage the development of high-quality intergenerational interaction, we want to understand the characteristics of young adults who believe – more or less strongly – that friendships can exist across generations. In this study, young adults who believe in the possibility of intergenerational friendships were more interested in engaging in intergenerational contact in the future. Critically, these beliefs in friendship were a unique predictor above and beyond existing measures of ageism. Measures

of ageism and negative beliefs about older adults may partially explain why some people are *not* interested in intergenerational contact, but they do not provide a positive motivation for why some young adults actively approach intergenerational interaction. Considering intergenerational interactions through the lens of friendship provides that missing piece. Young adults who are more open to experience, agreeable, and conscientious believe more strongly that people can form cross-generational friendships, as did those with more existing reciprocal, non-kin intergenerational relationships. These individuals are not only interested in interacting with older adults because of a lack of ageism but are likely also considering the potential benefits of

intergenerational contact – the possibility of forming mutually-beneficial friendships.

As a growing proportion of the population reaches older adulthood, research on intergenerational relationships becomes increasingly relevant. Intergenerational friendships have been shown to reduce ageist stereotypes, increase social cohesion, reduce loneliness, and improve well-being (Wagner & Luger, 2021; Zhang & Silverstein, 2022) – advantages that are felt both by individuals and by society as a whole. By moving beyond ageism and investigating people's positive beliefs about intergenerational friendship, we better understand the factors that motivate cross-aged interactions and the formation of relationships.

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Table 1. Item means and factor loadings for the BIGF scale

	Belief in Intergenerational Friendship (BIGF) Items	<i>M (SD)</i>	Factor 1 Loading	Factor 2 Loading
1	People from different generations can easily form friendships.	3.39 (1.50)	.218	.344
2	People generally get along best with those who are similar in age to themselves. (R)	5.35 (1.37)	-.220	.718
3	It is difficult to relate to people who are substantially different in age to me. (R)	4.14 (1.62)		.752
4	If I get along well with someone, their age is irrelevant.	2.49 (1.36)	.586	-.101
5	I am unlikely to have much to talk about with someone who is substantially different in age than me. (R)	3.56 (1.66)		.638
6	Even if we get along well, I probably wouldn't consider someone substantially older or younger than me to be my friend. (R)	3.34 (1.68)	.336	.265
7	I can easily imagine myself "connecting" with someone who is very different in age than me.	3.31 (1.44)	.456	
8	People are much more likely to have common interests with each other if they are similar in age. (R)	4.84 (1.47)	-.142	.677
9	A friendship between two people of different generations can be just as close as a friendship between two people of the same generation.	2.77 (1.53)	.724	
10	Being relatively similar in age is necessary for a friendship to survive.	3.18 (1.57)	.496	.143
11	Even though friendships across different generations are less common, they can be just as strong as other friendships.	2.35 (1.19)	.912	-.187

Note. (R) denotes that the item was reverse-scored. Items 1 and 6 are not included in either subscale but are included in the full scale.

Table 2. First order Pearson's correlations between the BIGF, ageism scales, personality, and demographics

Variable	M (SD)	HA	BA	SIC	SD	A	O	N	E	C	LH	RA	Gen.	Age
BIGF	4.48 (0.88)	-.30	-.37	-.35	.13	.18	.16	-.18	.14	.27	-.12	-.04	-.01	.32
Hostile Ageism	2.99 (1.18)		.48	.69	-.06	-.18	-.01	.02	-.14	-.19	.05	.09	-.08	-.25
Benevolent Ageism	3.26 (1.04)			.44	.09	-.03	-.09	.00	-.02	-.11	.16	.24	-.16	-.36
SIC Ageism	3.00 (0.90)				-.03	-.27	-.05	.06	-.19	-.25	.05	.11	-.16	-.24
Social Desirability	1.61 (0.26)					.34	.11	-.23	.17	.39	.13	.09	-.01	.08
Agreeableness	3.88 (0.63)						.08	-.21	.02	.39	.07	.05	.14	.04
Openness	3.50 (0.54)							-.09	.08	-.03	-.16	.02	-.16	-.07
Neuroticism	3.21 (0.76)								-.21	-.26	-.23	-.13	.24	-.17
Extroversion	3.20 (0.82)									.22	.00	.03	.06	.14
Conscientiousness	3.64 (0.62)										.02	.14	.12	.24
Lifetime Health	8.26 (2.75)											.03	-.04	-.11
Religious Attendance	2.38 (1.12)												-.01	-.16
Gender (Fem. = 1)	0.79 (0.41)													.13

Note. Correlations larger than $|.15|$ are significant at $p < .05$, and correlations larger than $|.18|$ are significant at $p < .01$.