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Sociodemographic Differences in Humility: The Role of Social Relations

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Abstract

The present research builds upon recent scientific developments in the field of social relations and ongoing advances in the study of humility. We examine whether gender, education, and racial/ethnic group are associated with humility as well as how social relations mediate the association between these sociodemographic variables and humility across the life course. Data are from the Detroit Community Study and were collected via a telephone survey focused on three groups prominent in the metro-Detroit area: Arab Americans, African Americans, and Non-Hispanic White Americans (N=907). Findings indicate that racial/ethnic group membership is associated with humility. Arab Americans and African Americans report greater humility than Whites. Further, social relations partially mediate this association, but only among Arab Americans. Arab Americans report a higher proportion of family than White Americans, which are associated with greater humility. Examination of whether these links depend on age indicates that the partial mediating role of social relations on the link between race/ethnicity and humility is replicated among older, but not younger adults. Findings are discussed within a developmental science perspective to consider the relational aspects of the individual and context over the life course.

Keywords

humility; social relations; socio-demographics

INTRODUCTION

Humility, a highly valued virtue (Landrum, 2011) and character trait, may serve as an important vehicle for neutralizing challenges of living in modern society. Despite strong cultural forces in the U.S. toward competition and individualism, there has been a substantial increase in the number of studies focused on humility (Worthington, Davis, & Hook, 2017). Research on the antecedents of humility largely focus on personality characteristics including, for example, conscientiousness, agreeableness, emotional awareness, the absence of narcissism, low self-esteem (Worthington, Davis, & Hook, 2017; Peterson & Seligman, 2004) and situations or contexts that may elicit humility (e.g., a job interview). Few studies have examined how sociodemographic characteristics (e.g., gender, education, race/

ethnicity) are related to a person being more or less humble. This is due in part to the lack of population-level data available to explore these links among diverse groups of individuals.

There has also been relatively little focus on the role of social relations as a potential factor in the development of humility. Some studies examine humility in the context of specific relationships (e.g., relational humility with spouse, friends, etc.), but few approach this topic from the tradition of pragmatism (Mead, 1934), which argues that social relations are the source from which the self develops. Social relations link the person to various others, situations, and larger contexts. We extend research that shows how personality traits can be shaped by context (Roberts, Caspi, & Moffitt, 2003) and can change and develop over the course of one's life (Roberts, Walton, & Viechtbauer, 2006) to investigate whether social relations influence the development of character traits such as humility. In this study, we examine links between sociodemographic characteristics, social relations, and humility using population-level survey data. Furthermore, we investigate how these processes vary across the life course.

Theoretical Framework

Convoy Model of Social Relations: Our study is grounded in the Convoy Model of Social Relations (Antonucci, 1990; Kahn & Antonucci, 1980), which conceptualizes the individual as part of a dynamic network of people that moves through time and across the life course surrounding and supporting the individual through multiple life experiences. This ego-centric, multidimensional conceptualization of and approach to the study of social relations differs from previous studies that seek to disentangle and partition the unique effects of a perceiver, target, and the relationship on a concept such as humility (Back & Kenny, 2010; Meagher, Leman, Bias, Latendresse, & Rowatt, 2015). The Convoy Model emphasizes that a person's group of close social relations are shaped by personal (i.e., socio-demographic characteristics such as gender, education, and race/ethnicity) and situational (e.g., role expectations) factors. Social partners form the convoy and, under ideal conditions, provide a secure base that allows the individual to learn about and experience the world. The protective base provided by convoy members leads to positive outcomes, such as better health and less psychological distress since it allows the individual to optimally grow, develop, and successfully meet life challenges. Convoys are also conceptualized to be multidimensional and can be characterized in terms of their structure (e.g., size, contact frequency, proximity, composition) and quality (positive and negative quality of the relationships). These aspects can impact individual development in unique ways.

Life Course Theory: The Convoy Model, as well as this study, are grounded in the life course perspective (Baltes, 1996; Elder, 1998; Fuller-Iglesias, Smith, & Antonucci, 2010). This perspective suggests that individual, family and life-span development is critical to understanding character development. Within the life course framework, cumulative advantage/disadvantage theory argues that age is associated with increasing heterogeneity and diversity (Dannefer, 1987; 2003). For example, Ross and Wu (1995) found that education-linked health disparities increase over the life course. This theory posits that diverse experiences and access to resources in later life are shaped by a lifelong process and

the intersection of social factors that provide some with greater advantages than others later in life.

Humility

With conceptual roots in religious teachings, philosophy, and psychology, humility is a multifaceted construct with multiple definitions (Tangney, 2000). Tangney (2000) argues the key components of humility include: accurate assessment of abilities and accomplishments; ability to acknowledge mistakes, imperfections, and limitations; openness to new ideas and advice; keeping abilities and accomplishments in perspective; understanding that one is part of something larger; and appreciation of others' contributions. Despite diversity in beliefs and practices across major world religions, humility is a common theme (Bollinger & Hill, 2012).

Specifically, in this study we focus on dispositional humility (Tangney, 2000) as a character trait or virtue, measured through self-report. We rely upon a definition and measure of humility informed by positive psychology (Peterson & Seligman, 2004) used in recent work linking humility to a number of individual and inter-personal characteristics including religion, negative interactions, and health (Krause, 2010; 2012; 2014; Krause & Hayward, 2014). According to this definition, humility includes the presence of positive attributes such as ability to see oneself (both strengths and limitations) accurately as well as absence of negative qualities such as pride (Peterson & Seligman, 2004; Krause, 2010).

Sociodemographic Characteristics and Humility

Despite Tangney's (2000) call for research exploring factors that account for individual-level differences in humility, little research has examined links between individuals' sociodemographic characteristics and humility. Peters and colleagues (2011) did not find a link between gender and self-reported humility, however, they did find that peers reported women to be more humble than men. Racial differences in the propensity to be humble have also been found. White Americans tend to be less humble than African Americans (Krause, 2010).

Race differences in humility may indicate a response to the experience of perceived unfair treatment. Arab Americans, who are 'not quite white' (Naber, 2000), may differ from Whites as do African Americans given their heightened visibility and increasing experiences with discrimination (Abuelezzam, El-Sayed, & Galea, 2017). On the other hand, race/ethnic differences may stem from socioeconomic patterns in the U.S. For instance, African Americans disproportionately live in poverty compared to Whites (LaVeist, 2005). Therefore, Whites have more opportunity to attribute their greater likelihood of higher socio-economic status, success, and accumulation of resources to their individual efforts, which may lead to less humility. Finally, to our knowledge previous studies have not found a link between socio-economic status and humility. Krause (2010; 2014) included education as a demographic control in his examination of religious involvement and humility among older adults and found no association. Prior to ruling out potential links between education and humility, however, an examination of the role of this sociodemographic characteristic across the life course is needed.

Given that resilience has been linked to greater humility (Dwiwardani et al., 2014) we expect groups in society more likely to experience discrimination or hardship compared to other groups (e.g., women, those with less education, and racial/ethnic minorities) will show greater humility. Further, to disentangle potential links between race/ethnicity, socio-economic status, and humility it is important to consider these factors together. Accounting for the effects of each allows us to determine their unique links to humility. Based on the above arguments we expect those who hold positions with less power; that is, women, those with lower levels of education, and racial and ethnic minorities (compared to Whites) will report greater humility.

Mediating Role of Social Relations

Theory and research in human development and social policy often share the belief that a person's character develops not in isolation, but within a wider social context (Mills, 1959; Blumer, 1969). Hence, special attention to social context and interactions holds promise for enhancing understanding of character development. Previous research has provided support for these arguments. For example, Dwiwardani and colleagues (2014) found a link between having an avoidant attachment style and less humility. Others have linked greater humility with less negative (Krause, 2014) and more positive social relations (Peters, Rowatt, & Johnson, 2011). We hypothesize that individuals with larger and more diverse (i.e., mix of friends and family) networks, greater contact frequency, more geographically proximate networks, more positive and less negative relationship quality will report greater humility.

Sociodemographic Characteristics and Social Relations: Previous studies have found evidence that the multidimensional aspects of social relations are associated with sociodemographic characteristics. For example, women have been found to have larger and more diverse networks with a greater mix of family and friends (Antonucci, Akiyama, & Lansford, 1998). In terms of education, those with lower levels tend to report smaller networks with a higher proportion of family members (Ajrouch, Blandon, & Antonucci, 2005). Social relations have also been found to vary by race and ethnicity, as African Americans report smaller less diverse networks and more frequent contact (Ajrouch, Antonucci, & Janevic, 2001). Arab Americans report more contact frequency than African Americans and Whites, as well as more racially and ethnically diverse networks (Ajrouch & Antonucci, 2017). Sociodemographic characteristics have also been linked to both the positive and negative quality of one's social relationships. In terms of gender, women report less positive and more negative relationships than men (Birditt & Antonucci, 2007). Some have argued that racial and ethnic minorities and those with lower levels of education may report less positive and more negative social relations due to the experience of discrimination and greater network demands, but empirical support for this is inconsistent (Antonucci, Akiyama & Lansford, 1998; Birditt & Antonucci, 2007). Based on these studies we hypothesize that women will report larger networks compared to men, whereas those with less education and racial/ethnic minorities will report smaller networks. We also hypothesize that women, those with less education, and racial/ethnic minorities will have less diverse networks (i.e., more family oriented), greater contact frequency and geographic proximity to network members, but also less positive and more negative relationship quality.

Life Course / Age Group Differences

Sociodemographic Characteristics and Humility Across the Life Course: Our application of cumulative advantage/disadvantage theory to humility posits that stressful experiences (e.g., discrimination, hardship) linked to sociodemographic characteristics accumulate over the life course, and therefore will matter more in terms of the development of humility later in life. These perspectives inform the present study's focus on competing hypotheses as they relate to links that vary by age. We examine if a) sociodemographic characteristics may have a greater influence on humility at younger ages (i.e., earlier life experiences hypothesis) when personality traits have been found to change the most (Roberts, Walton, & Viechtbauer, 2006) or, if b) these factors play a greater role in shaping humility later in life, when stressful life experiences linked to these factors (e.g., discrimination, hardship) have accumulated over time (i.e., cumulative advantage/disadvantage hypothesis).

Mediating Role of Social Relations Across the Life Course: Links between sociodemographic characteristics and social relations have also been found to vary across the life course (Ajrouch, Antonucci, & Janevic, 2001; Ajrouch, Blandon, & Antonucci, 2005). For example, women report less contact frequency among close social network members in mid and later life, a finding not found among men (Ajrouch, Blandon, & Antonucci, 2005). In contrast, racial differences in contact frequency and network diversity become less pronounced in later life (Ajrouch, Antonucci, & Janevic, 2001). Relationship quality also varies across the life course as older adults generally report less negativity in their relationships compared to younger adults (Birditt, Jackey, & Antonucci, 2009). However, there is less evidence showing how sociodemographic characteristics are linked to relationship quality across the life course. Given this we also focus on competing hypotheses as they relate to the mediating role of social relations in the links between sociodemographic characteristics and humility. We examine if a) social relations will play a stronger mediating role among younger adults as the self is in earlier stages of development (i.e., earlier life experiences hypothesis); or if b) given the heterogeneity of life circumstances and their association with sociodemographic characteristics, the mediating role of social relations become stronger as the advantages and disadvantages linked with this diversity accumulate over the life course (i.e., cumulative advantage/disadvantage hypothesis).

Present Study

Building on advances in the study of social relations and character development we focus on three research questions: 1) Are sociodemographic characteristics (i.e., gender, educational attainment, and race/ethnicity) associated with humility? 2) Do social relations structure and quality mediate the links between sociodemographic characteristics and humility? And 3) Do these links vary across age groups? We aim to test competing hypotheses (i.e., the earlier life experiences hypothesis and the cumulative advantage/disadvantage hypothesis) regarding the direct links between sociodemographic characteristics and humility as well as the mediating role of social relations.

METHOD

Sample

The sample was drawn from a recent primary data collection that we carried out entitled the Detroit Community Study. This study included a cross-sectional survey of social relations, forgiveness, humility, and health. The survey sampled residents from three racial/ethnic groups prominent in the Detroit Metropolitan Area: Arab Americans, African Americans, and Whites. Arab Americans are a hard-to-reach population (Ajrouch & Antonucci, 2017), requiring the need to implement several strategies to identify the sample. An Address-Based Sampling (ABS) method (American Association for Public Opinion Research, 2016) was used to select the overall study sample from the Detroit metropolitan area using telephone numbers that matched high-density ethnicity areas. Respondents were identified through a series of screening questions including: 1) race/ethnicity in one of the three designated groups; and 2) English proficiency. Surveys were conducted via telephone during 2015/16 using computer assisted interviewing and lasted on average just under one hour. For the Arab American population in this geography, “high-density” was defined as 20% or more of the population. The ABS method was supplemented with a surname matching algorithm to identify Arab American households. For African Americans, “high-density” was defined as 80% or more of the population in the area. Whites were sampled from both the high-density Arab American and African American stratum. There were significant challenges in identifying households that met the eligibility criteria. Nevertheless, once contacted, the overall cooperation rate among eligible households was 93%. The final sample of respondents included 335 Arab Americans, 302 African Americans, and 270 White Americans.

Measures

Humility was measured as a latent factor indicated with eight items developed by Peterson and Seligman (2004), which have demonstrated reliability (Davis, Worthington, & Hook, 2010), and validity (Rowatt et al., 2006). The items were further refined by Krause (2010; 2014). Example items included “I am honest with myself when I assess my own faults and limitations” and “Other people have talents, abilities, and accomplishments that are just as important as mine”. Items were asked on a scale ranging from strongly disagree (1) to strongly agree (4), so that higher scores indicate more humility.

Confirmatory factor analysis (CFA) was utilized to confirm the factor structure of humility. We retained items that loaded at .4 or above (Acocck, 2013). Results of the CFA with all eight items indicated that the model had less than adequate fit (RMSEA=.102; CFI=.830; SRMR=.064). In order to proceed with a humility factor with high content validity, four items with standardized factor loadings below .4 were dropped from the scale. After dropping the four items, one of the remaining item’s factor loading dropped to .38. Since we felt this item was a vital indicator and the model demonstrated good fit, we decided to retain this item. The four retained items with their standardized loadings are presented in Table 1. The CFA with the reduced items had acceptable model fit, $\chi^2(2, N = 856) = 4.539, p > .05$, CFI = .997, RMSEA = .039, SRMR = .015), and the reduced item scale had an alpha of .69.

Sociodemographic Characteristics: Gender was coded as male (0) and female (1). Education was measured as the highest grade of school or year of college completed (0–17+). Race/ethnicity was transformed into two dichotomous variables: Arab Americans (1) and African Americans or White Americans (0); and African Americans (1) and Arab Americans or White Americans (0); with the White Americans serving as the reference group. This allowed us to measure direct and indirect effects for Arab Americans and African Americans relative to Whites (Hayes & Preacher, 2014). Age was measured by subtracting date of birth from the interview date.

Network Characteristics: Network structure was assessed using the hierarchical mapping technique (Antonucci, 1986). Respondents were asked to name people in their first (inner) circle to whom they felt closest, people that it was hard to imagine life without. Then they were asked to name people they felt not quite that close to but who were still important in the second (middle) circle. Finally, respondents were asked to name people in the third (outer) circle who had not yet been mentioned but were still close and important enough that they should be included in their personal network diagram. Respondents were asked to include only people aged 13 years old and above.

Network size was measured as the total of people nominated across the three circles, and was capped at 20 due to a slightly skewed distribution (only 33 reporting more than 20 network members) and to be consistent with other studies using a similar network measure (Antonucci & Akiyama, 1987). Respondents were then asked a series of questions about the first 10 people listed in their network, including questions about *contact frequency and proximity*. Respondents were asked how often they were usually in touch with each network member on a scale ranging from irregularly/never (1) to every day (5). A mean composite of contact frequency across the first ten network members was created. Respondents were also asked if each network member lived within an hour's drive and could respond yes or no. The number of network members living within an hour's drive was divided by the total number of members in the network to create a proportion of the network living in close geographic proximity to the respondent, which was then multiplied by 100 to create a percentage score.

Network composition was measured by network members' relationship to the respondent. The *network proportion family* variable was created by dividing the number of immediate and extended family network members by the total number of network members, and then multiplied by 100 to create a percentage score.

Relationship Quality: Respondents were asked a series of questions about the quality of their relationships with specific people, including their mother, father, spouse/partner, child, and the first person in their network if they had not already been asked about this person. Positive quality was measured with five items, e.g., "I feel my (mother) supports me; that she is there when I need her" and "I can share my very private feelings and concerns with my (mother)". Negative quality was measured with 3 items, e.g., "My (mother) gets on my nerves" and "My (mother) makes too many demands on me". Items for positive and negative quality were asked on a scale ranging from disagree (1) to strongly agree (5). An average positive quality score and an average negative quality score was created for each relationship. All positive and negative quality scores were then averaged across relationships

to create an overall positive quality and negative quality score. Cronbach's alpha ranged from .74 to .89 for positive relationship quality and .67 to .72 for negative relationship quality.

Control Variables: Social desirability was included in models due to the valuation of humility as a desired personality trait and potential for impression management related to this concept. It was measured with a 5-item scale (Hays, Hayashi, & Stewart, 1989). Example items include, "I am always courteous even when people are disagreeable" and "There have been occasions when I took advantage of someone". Items are coded from 1 (definitely false) to 5 (definitely true). Items were dichotomized to reflect the original Marlowe-Crowne scale so that the extreme socially desirable response (either definitely false or definitely true, depending on the item) was coded as 1 and all other responses were coded 0. Items were then summed and the proportion of socially desirable responses was computed ($\alpha = .65$). Correlations between all study variables are presented in Table 2. A covariance matrix is available from the corresponding author upon request.

Analysis Plan

First, we conducted a Structural Equation Model (SEM) to examine the direct links between sociodemographic characteristics and humility, controlling for age and social desirability. We then conducted mediation models by adding indirect paths from sociodemographic characteristics to humility through network size, contact frequency, geographic proximity, network proportion family, positive relationship quality, and negative relationship quality. Models were estimated with 1,000 bootstrap samples generated by random sampling with replacement, which provided 1,000 estimates used to generate 95% bias-corrected bootstrap confidence intervals for the direct and indirect effects. When the 95% confidence interval for unstandardized estimates of significant direct and indirect effects did not include zero, it was concluded that the effect was statistically significant. These confidence intervals account for non-normality of the parameter estimate distribution as well as maintain reasonable control over Type I error when compared to the Sobel method for testing mediation (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; MacKinnon, Lockwood, & Williams, 2004). Finally, we conducted a multigroup SEM with two age groups (18–49 years; 50+ years) to determine if the mediation model was moderated or varied by age group. All models were estimated with full information maximum likelihood (FIML) using Mplus 7.4. Five percent of cases were omitted due to missing data on the social desirability scale. The pattern of missingness was similar across age groups (age 18–49: $n=28$ missing; 50+: $n=17$ missing).

To examine research question #3, we first conducted nested multigroup Confirmatory Factor Analysis (CFA) models to test for measurement invariance in humility across our two age groups. An equal form model where all parameters were freed across the two age groups was compared to an equal loadings model where the factor loadings were constrained to be equal across the two age groups. Comparison of the models yielded a non-significant chi-square difference, $\chi^2(4, N=840) = 4.205, p > .05$, indicating that the factor loadings were equivalent across the two age groups. We also tested a model where the intercepts were constrained to be equal and compared this model to the equal loadings model where the intercepts were freely estimated. Comparison of these models again yielded a non-

significant chi-square difference, $\chi^2(3, N=840) = 5.688, p > .05$, indicating the intercepts were equivalent across the two age groups. Based on these findings, we then conducted a multigroup SEM with factor loadings and intercepts constrained to be equal to test first the significance of direct effects and then indirect effects of sociodemographic characteristics on humility by age group. When significant direct or indirect effects were found in the multigroup analysis we conducted additional tests to examine if the slopes significantly differed across the two age groups. This was done by adding an interaction (age group x direct/indirect effect variable(s)) into the full model.

RESULTS

Descriptive statistics are presented for the full sample as well as by age group in Table 3. The age range for the sample was 18–94 years old with an average age of 51.2 (SD=19.1). Just under two thirds (65.4%) of the sample was female. Average education was 14 years (SD=2.2). The sample consisted of 37% Arab Americans, 33% African Americans, and 30% White Americans. On average, respondents gave a socially desirable response for 2 out of the 5 questions (M=0.4, SD=0.3). Average network size was 8.3 (SD=5.0). Contact frequency averaged around once a week or more (M=4.1; SD=0.6). Networks tended to be fairly proximate (75.4% within an hour's drive; SD=28.0) and were comprised on average mostly of family (72.6%; SD=29.6). Positive relationship quality was high (M=4.4, SD=0.6) and negative quality was moderate (M=2.3, SD=0.9). Examination of study variables by age group showed many significant differences. Younger respondents were more likely to be Arab American and older respondents were more likely to be African American or White. Younger respondents had lower social desirability, smaller networks, greater contact frequency, greater geographic proximity, lower positive relationship quality, and higher negative relationship quality compared to older respondents.

Are sociodemographic characteristics associated with humility?

Results of the direct effects model presented in Figure 1 indicated good fit, $\chi^2(20, N = 856) = 86.595, p < .001$, CFI = .922, RMSEA = .062, SRMR = .033. Race/ethnicity was the only sociodemographic characteristic found to be significantly associated with humility. In support of our hypothesis both Arab Americans ($B = .360, 95\% \text{ CI} = .144, .570, \beta = .164, p < .01$) and African Americans ($B = .330, 95\% \text{ CI} = .145, .535, \beta = .148, p < .01$) reported more humility than White Americans.

Do social relations structure and quality mediate the link between sociodemographic characteristics and humility?

Next, we conducted SEM to test the mediating role of social relations by adding indirect paths through the six social relations variables. Based on results from the initial model we revised the model by adding theoretically and empirically consistent correlations between the social relations variables. Results of the revised model indicated good fit, $\chi^2(46, N = 860) = 116.047, p < .001$, CFI = .957, RMSEA = .042, SRMR = .026. Path coefficients from the mediation model are presented in Figure 2, with only significant indirect paths shown.

Coefficients for the direct, indirect, and total effects from the mediation model are presented in Table 4. Below we report links between sociodemographic characteristics and social relations only in the context of a significant mediation (indirect) effect. There were no significant indirect effects for gender, education, or African Americans versus Whites. However, there was a significant indirect effect for Arab Americans compared to Whites operating through network proportion family. Arab Americans reported a greater proportion of family in their networks ($B = 10.983$, 95% CI = 5.00, 16.44, $\beta = .188$, $p < .001$) compared to Whites, and a greater proportion family was associated with more humility ($B = .005$, 95% CI = .00, .01, $\beta = .133$, $p < .01$). The total indirect effect of Arab Americans compared to Whites through all the mediators was marginal, yet it is still noteworthy that proportion family emerged as important for understanding the link between race/ethnicity and humility. Contrast estimates were added to the mediation model to assess how the indirect effect through proportion family compared to the other indirect effects (Preacher & Hayes, 2008). The indirect effect through proportion family was significantly different from the non-significant indirect effect operating through proximity (contrast = .057, $p < .05$) and negative quality (contrast = .057, $p < .05$), indicating the importance of proportion family for humility over and above network proximity and negative relationship quality for Arab Americans compared to Whites.

Does age moderate links between sociodemographic characteristics, social relations and humility?

Multigroup SEM was conducted to determine if the direct and indirect effects differed based on age of the respondent. The first SEM model testing the direct relationship between sociodemographic characteristics and humility had good fit, $\chi^2(47, N = 856) = 117.651$, $p < .001$, CFI = .919, RMSEA = .059, SRMR = .048. Comparison of model fit between the whole sample SEM and the multigroup with only direct effects revealed that the models were not significantly different ($\chi^2(27, N=856) = 31.056$, $p > .05$) indicating there were not major differences in direct effects across age groups.

Coefficients for the direct, indirect, and total effects from the multigroup mediation model are presented by age group in Table 5. One direct effect was observed for both age groups: Arab Americans reported greater humility compared to Whites (18–49 year olds: $B = .469$, 95% CI = .092, .846, $\beta = .213$, $p < .05$; 50–94 year olds: $B = .478$, 95% CI = .178, .751, $\beta = .160$, $p < .01$). Testing of an age group x Arab Americans versus Whites interaction indicated a significantly stronger association between Arab Americans and greater humility compared to Whites among the older sample ($B = .39$, $p < .05$, 95% CI = .04, .75).

There were also direct effects that varied by age. Among 18–49 year olds, African Americans reported greater humility compared to Whites ($B = .723$, 95% CI = .315, 1.110, $\beta = .288$, $p < .001$), which was not observed among the 50–94 year olds. Examination of the interaction term between age group x African Americans versus White Americans confirmed a significant difference across age groups ($B = -.54$, $p < .01$, 95% CI = $-.91$, $-.23$). Among 50–94 year olds, education was significantly associated with more humility ($B = .062$, 95% CI = .011, .112, $\beta = .130$, $p < .05$), which was not observed among 18–49 year olds. However, examination of the age group x education interaction indicated the slopes

were not significantly different indicating no differences in the link between education and humility by age ($B = .071$, $p = .067$, 95% CI: $-.004$, $.15$). This suggests that the finding among the older age group should be interpreted with caution. Gender was not significantly associated with humility for either age group.

Next, we conducted multigroup SEM to test if the mediating role of social relations varied across the two age groups. Results of the model indicated good fit, $\chi^2(99, N = 860) = 179.503$, $p < .001$, CFI = .948, RMSEA = .043, SRMR = .039. Comparison of model fit between the whole sample SEM with indirect effects and the multigroup SEM with indirect effects revealed that the models were not significantly different ($\chi^2(53, N = 860) = 63.456$, $p > .05$) indicating there were not major differences in indirect effects across age groups. Path coefficients from the multigroup model are presented in Figure 3, again with only significant indirect paths shown.

Findings revealed no significant indirect effects among 18–49 year olds. Among 50–94 year olds, there was a significant total indirect effect of race/ethnicity on humility through the set of mediators. Examination of the specific indirect effects showed that the indirect effect for Arab Americans on humility through proportion family was significant compared to Whites. Arab Americans reported a greater proportion of family in their network compared to Whites ($B = 15.219$, 95% CI = 6.88, 22.36, $\beta = .186$, $p < .001$) and proportion family was associated with more humility ($B = .005$, 95% CI = .00, .01, $\beta = .143$, $p < .01$). Testing of the interaction term between age group $\times$ Arab Americans versus Whites for the indirect effect confirmed a significant difference across age groups ($B = .063$, $p < .05$, 95% CI = .02, .14). Contrast estimates were added to the mediation model to determine how the indirect effect through proportion family compared to the indirect effects through the other mediators. The indirect effect through proportion family was significantly different from the non-significant indirect effect through proximity (contrast = .088, $p < .05$) and negative relationship quality (contrast = .085, $p < .05$). These results provide partial support for the first of our two competing (earlier life experiences v. cumulative advantage/disadvantage) hypotheses.

DISCUSSION

The study of humility has potential to move us towards better personal (Krause, 2010; Sapmaz, Yıldırım, Topçuoğlu, Nalbant, & Sızır, 2016) and societal well-being (Worthington, Davis, & Hook, 2017). A more complete understanding of factors associated with humility and how it can be fostered in individuals is critical to addressing problems at multiple levels, from micro to macro, including poor individual-level health outcomes, interpersonal tension and conflict, and poor inter-group relations. We discuss the significance of our findings for advancing life course/life span developmental theoretical perspectives around social relations and humility.

Sociodemographic Characteristics and Humility

Sociodemographic characteristics are valuable indicators of humility in the U.S. as they provide an indication of social position important for group and inter-personal interactions as well as pattern access to resources. Our findings build upon previous humility studies, to

expand beyond micro-level processes such as personality traits. We help to expand the conceptualization of humility development as a multi-level process with factors operating within and across micro and macro levels.

Interestingly, in our study only race/ethnicity linked to humility. This suggests the salience of racial/ethnic identity in the U.S. Our findings are consistent with the work of Krause and colleagues (2010) who found that minorities report lower self-esteem and higher prevalence of other character virtues (e.g., forgiveness) than Whites. Our study extends previous research by testing the link between race/ethnicity and humility among a minority group not previously examined. Arab Americans have a distinct experience as a U.S. minority group. In particular, while African, Native, and Asian Americans became racialized due to domestic U.S. policy, Arab American racialization emerges from U.S. foreign policy (Cainkar, 2009). This creates a unique historical context in which Arab Americans are viewed as a minority group. Also, Arab Americans are legally classified as White, masking their ethnic status in tandem with recent historical events (such as 9/11 and the war on terror) to provide a unique context in which to explore links to humility.

Our findings that both Arab Americans and African Americans report greater humility than Whites help to put Dwiwardani and colleagues' (2014) study linking humility to resilience in a broader context. Taken together, these findings suggest that humility arises as a positive response or coping mechanism in the face of stress that comes with unfair treatment because of racial/ethnic affiliations. An alternative explanation for the link between race/ethnicity and humility is tied to religious participation. For example, Krause (2012) found a link between religious participation and humility, and also found that African Americans experience more benefits from religious participation compared Whites. This study is a first step in understanding links between race/ethnicity and humility. Future studies can move beyond comparing minority groups to Whites, and instead explore heterogeneity within minority groups, as well as how gender, education, and race together shape experiences of discrimination, resilience, and humility. This will allow for a more nuanced examination of how experiences of minority groups shape one's sense of humility.

Mediating Role of Social Relations

Our focus on social relations as a multidimensional group of people that as a unit help to shape, develop, and socialize individuals adds a meso-level relational context in between societal (macro) and individual-level (micro) factors that may influence humility. Previous studies have focused on humility in the context of dyadic relations as well as individual preferences for certain attachment styles (Dwiwardani et al., 2014). We build on these findings by focusing on a broader set of social relations. Of the six multidimensional characteristics of the convoy examined in our study only one dimension (network proportion family) arose as important in understanding humility when comparing Arab Americans and White Americans.

We expected greater network diversity to be associated with more humility based on the premise that being surrounded by people of different backgrounds and experiences beyond one's family would be important in the development of humility. Instead we found the opposite, in that being surrounded by a higher proportion of family members was associated

with more humility. Yet, because this finding only arose with regard to Arab Americans (compared to Whites), the finding substantiates the central role of family in Arab American daily life (Beitin & Aprahamian, 2014). For Arab Americans, family ties are a strong source of identity (Aswad, 1997). One potential explanation for this finding is that networks comprised of mostly family tend to be smaller, very close emotionally, and a context for the provision of mutual aid, care but also criticism (Belle, 1983). A lack of humility in this context may be viewed as a threat or disruptive force or a sign of arrogance and therefore subsequently discouraged. As such, family influence may play an especially powerful role in character development for Arab Americans, having measurably more impact on character development than other relations.

Life Course Patterns

In our testing of competing hypotheses (i.e., earlier life experiences v. cumulative advantage/disadvantage) regarding the direct and indirect links between sociodemographic characteristics, social relations, and humility we found support for both hypotheses. When comparing African Americans and Whites, we found support for the earlier life experiences hypothesis suggesting that early experiences related to being a racial minority may be particularly influential in the development of humility among African Americans. In contrast, Krause (2010) found that among a sample of older adults (age 66+) African Americans reported greater humility compared to Whites. Our findings build upon these by including younger participants, and suggest the importance of examining and comparing links between race and humility across different points in the life course.

When comparing Arab Americans and Whites we found support for the cumulative advantage/disadvantage hypothesis. Though the link between being Arab American (when compared to Whites) and greater humility was present among both age groups, it was significantly stronger later in life. Moreover, proportion family mediated the link between being Arab American and humility only for older adults. These findings highlight that racial/ethnic context are important across the life course, and further shows that among older Arab Americans in particular, the link to humility operates in part through close social relations.

Limitations and Future Directions

This study has a number of limitations that we plan to address with our developing program of research. First, as Peterson and Seligman (2004) have noted, there are likely bidirectional links between humility and a person's social relationships. Future studies with data from two or more points in time can begin to investigate how humility changes and potential causal links with/between factors such as social relations. Second, future studies with larger life span samples, or even those with large samples of smaller age ranges can examine in greater depth at which point(s) in the life course factors such as sociodemographic characteristics and social relations are linked to humility. Third, since this study involved a large primary survey data collection, replication with additional samples was not feasible. Though consistency in results between ours and previous humility studies suggests promising trends in this direction, additional studies are needed to replicate findings that were unique to our study (e.g., for Arab Americans). Finally, a more nuanced examination of how and why race/ethnicity are important contexts for understanding humility may be better addressed by

including direct measures of unfair treatment, stress, and perceived discrimination across the life course.

Conclusion

Our study is a first step in trying to better understand how a character trait such as humility is linked with factors that are operating at multiple levels of influence. The availability of population-level data with a diverse sample provides this unique opportunity. Examination of factors that underpin humility can provide useful information to guide the development of interventions to help people cultivate this desirable character trait, which may have lifelong positive impacts. Furthermore, research to understand this process in a developmental context and across the life course can point to what ages some factors link most to humility. Identifying the ways that social relations encourage or obstruct the development of humility represents an important pathway upon which to advance a multi-level perspective on character trait development. Such an approach has the potential to inform the design of age specific interventions that can facilitate well-being for all ages and in different contexts.

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Figure 1.
Results from SEM direct effects model
Note. Standardized coefficients are reported.
*** $p < .001$, ** $p < .01$, * $p < .05$

Figure 2.

Results of SEM mediation model

Note. Standardized coefficients are reported. Only paths associated with significant indirect effects are shown.

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

Figure 3.
Results from SEM multigroup mediation model
Note. Standardized coefficients are reported. Only paths associated with significant indirect effects shown.
*** $p < .001$, ** $p < .01$, * $p < .05$

Table 1.

Standardized and unstandardized coefficients for confirmatory factor analysis

Observed variable	β	<i>B</i>	<i>SE</i>
<u>Humility</u>			
H1. I am always humble about the good things that happen to me.	.38	.25	.02
H2. I am honest with myself when I assess my own faults and limitations.	.77	.49	.02
H3. I am honest with myself when I assess my own abilities and achievements.	.87	.54	.02
H4. Other people have talents, abilities, and accomplishments that are just as important as mine.	.43	.27	.02

Table 2.

Correlations among study variables

	Age	Female	Educ	Arab Am	African Am	Net Size	Cont Freq	Prox	% Family	Pos Qual	Neg Qual	H1	H2	H3
Female	-.04													
Education	-.04	-.05												
Arab Am	-.53**	-.02	.00											
African Am	.18**	.14**	-.10**	-.54**										
Net Size	.12**	.12**	.18**	-.16**	.01									
Contact Freq	-.41**	.15**	-.02	.44**	-.17**	-.20**								
Net Proximity	-.16**	.08*	-.04	.11**	-.05	.05	.31**							
% Family	-.05	.08*	-.05	.13**	-.05	.14**	.17**	.27**						
Pos Quality	.14**	.02	-.06	.03	-.03	.02	.12**	-.02	.02					
Neg Quality	-.20**	.01	.03	.08*	-.00	-.02	.06	.04	.00	-.40**				
Humility 1	-.07*	.01	-.04	.04	.11**	.00	.04	.04	.03	.07*	-.05			
Humility 2	.04	.03	.00	.04	.06	-.04	.03	-.04	.07*	.10**	-.08*	.29**		
Humility 3	-.00	-.00	.01	.05	.09**	-.05	.03	-.02	.13**	.16**	-.09*	.31**	.66**	
Humility 4	-.01	.04	.16**	-.05	.06	.09**	-.00	.01	-.04	.08*	-.06	.21**	.31**	.38**

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

Table 3.

Sample characteristics

N=907	All (n=907)	18–49 year olds (n=394)	50–94 year olds (n=513)	t test/ χ^2
Age (<i>M, SD</i>)	51.2 (19.1)			
Female (%)	65.4 (593)	67.5 (247)	64.6 (319)	
Education (<i>M, SD</i>)	14.0 (2.2)	14.1 (2.1)	13.9 (2.3)	
Race				***
Arab Americans (%)	36.9 (335)	63.5 (250)	16.6 (85)	
African Americans (%)	33.3 (302)	23.6 (93)	40.7 (209)	
White Americans (%)	29.8 (270)	12.9 (51)	42.7 (219)	
Social desirability (<i>M, SD</i>)	0.4 (0.3)	0.4 (0.3)	0.5 (0.3)	**
Network size (<i>M, SD</i>)	8.3 (5.0)	7.6 (4.5)	8.9 (5.3)	***
Contact frequency (<i>M, SD</i>)	4.1 (0.6)	4.3 (0.5)	3.9 (0.6)	***
Network geographic proximity (<i>M, SD</i>)	75.4 (28.0)	78.9 (28.3)	72.7 (27.5)	***
Network proportion family (<i>M, SD</i>)	72.6 (29.6)	74.4 (28.0)	71.3 (30.7)	
Positive relationship quality (<i>M, SD</i>)	4.4 (0.6)	4.3 (0.6)	4.4 (0.6)	***
Negative relationship quality (<i>M, SD</i>)	2.3 (0.9)	2.5 (0.9)	2.2 (0.9)	***

 $p < .001$

**
 $p < .01$

*
 $p < .05$

Table 4.

Results of SEM: direct, indirect, and total effects from mediation model

	Sociodemographic Characteristics							
	Female		Education		Arab Americans v. White Americans		African Americans v. White Americans	
	β	B [95% CI]	β	B [95% CI]	β	B [95% CI]	β	B [95% CI]
Direct effect	-.03	-.07[-.24, .09]	.09	.04[.01, .08]*	.13	.29[.07, .52]*	.14	.32[.12, .53]**
Indirect effects through								
Network size	-.01	-.02[-.05, .00]	-.01	-.00[-.01, .00]	.01	.02[-.00, .06]	.01	.01[-.00, .04]
Contact frequency	-.01	-.01[-.06, .02]	.00	.00[-.00, .00]	-.01	-.03[-.10, .05]	.00	.00[-.01, .02]
Geographic Proximity	-.00	-.01[-.03, .00]	.00	.00[-.00, .01]	-.00	-.00[-.02, .01]	.00	.00[-.00, .03]
Network Proportion Family	.01	.02[.00, .06]	-.01	-.00[-.01, .00]	.03	.06[.02, .11]*	.00	.01[-.02, .04]
Positive Relationship Quality	.00	.01[-.01, .03]	-.01	-.00[-.01, .00]	.02	.04[.01, .09]	-.00	-.01[-.04, .02]
Negative Relationship Quality	.00	-.00[-.01, .00]	.00	.00[-.00, .00]	.00	-.00[-.02, .01]	-.00	-.00[-.03, .01]
Total indirect	-.00	-.01[-.06, .05]	-.02	-.01[-.02, -.00]	.04	.08[-.00, .17]	.01	.01[-.03, .06]
Total effect	-.04	-.08[-.26, .08]	.07	.03[-.01, .07]	.16	.37[.17, .59]**	.15	.34[.14, .55]**

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

Table 5.

Results of SEM by age: direct, indirect, and total effects from mediation model

	Sociodemographic Characteristics							
	Female		Education		Arab Americans v. White Americans		African Americans v. White Americans	
	β	B [95% CI]	β	B [95% CI]	β	B [95% CI]	β	B [95% CI]
18–49 year olds								
Direct effect	-.07	-.17[-.45, .12]	-.02	-.01[-.06, .05]	.21	.47[.05, .87]*	.30	.77[.31, 1.17]***
Indirect effects through								
Network size	.00	.00[-.04, .04]	.00	.00[-.01, .01]	.00	.00[-.06, .05]	.00	.00[-.06, .05]
Contact frequency	-.01	-.03[-.12, .04]	.00	.00[-.00, .01]	-.02	-.04[-.16, .05]	.00	.01[-.02, .09]
Geographic Proximity	-.01	-.02[-.08, .03]	.00	.00[-.00, .01]	.00	.01[-.02, .08]	.00	.01[-.02, .07]
Network Proportion Family	.02	.05[-.02, .14]	-.00	-.00[-.01, .00]	.02	.04[-.01, .13]	.01	.02[-.01, .12]
Positive Relationship Quality	.01	.02[-.01, .08]	-.01	-.01[-.02, .00]	.00	.01[-.04, .07]	-.03	-.06[-.20, -.00]
Negative Relationship Quality	.00	.00[-.02, .02]	.00	.00[-.00, .01]	.00	.00[-.03, .04]	.00	.00[-.06, .06]
Total indirect	.01	.02[-.11, .17]	-.01	-.00[-.02, .01]	.01	.01[-.13, .15]	-.01	-.02[-.15, .10]
Total effect	-.06	-.15[-.45, .14]	-.03	-.01[-.07, .05]	.22	.48[.09, .86]*	.29	.75[.30, 1.17]***
50–94 year olds								
Direct effect	.02	.05[-.19, .28]	.17	.08[.03, .14]**	.11	.35[.03, .64]*	.07	.17[-.07, .40]
Indirect effects								
Network size	-.01	-.03[-.08, -.00]	-.02	-.01[-.02, -.00]	.02	.05[.00, .11]	.01	.02[.00, .07]
Contact frequency	-.00	-.01[-.06, .02]	.00	.00[-.00, .00]	-.01	-.02[-.12, .07]	.00	.00[-.02, .02]
Geographic Proximity	.00	-.00[-.02, .01]	.00	.00[-.00, .01]	-.00	-.01[-.06, .02]	.00	.00[-.01, .03]
Network Proportion Family	-.00	-.01[-.04, .02]	-.02	-.01[-.02, -.00]	.03	.08[.03, .18]*	-.00	-.01[-.05, .02]
Positive Relationship Quality	.00	.00[-.03, .04]	-.00	-.00[-.01, .01]	.02	.05[.00, .14]	.01	.02[-.02, .08]
Negative Relationship Quality	-.00	-.00[-.04, .00]	.00	.00[-.00, .00]	-.00	-.00[-.05, .01]	-.00	-.00[-.04, .01]
Total indirect	-.02	-.05[-.13, .02]	-.04	-.02[-.04, -.00]	.05	.14[.03, .29]*	.02	.03[-.03, .11]
Total effect	.00	.00[-.22, .23]	.13	.06[.01, .12]*	.16	.49[.17, .78]**	.09	.20[-.06, .43]

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