

Putting Age in Context: Relational Age and Inclusion at the Workplace

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ABSTRACT

To date, there have been few empirical tests of the effects of relational age on work team members' assessments of their inclusion in team decision-making and information sharing. Relational age is the employee's perception of personal age relative to the age distribution of their work team. This study used a multi-worksites sample of 1,778 employees (aged 17 to 77 years) to examine the impact of relational age on perceived inclusion in decision-making and information sharing. Our results indicate that employees who felt they were age dissimilar from their work teams—where the majority of their team members are in a different age cohort—reported being less included in both decision-making and information sharing than those on age diverse work teams—where the work team is heterogeneous in terms of age without a clear age majority. We found variation across age groups; older workers perceived the highest levels of inclusion when they were in age diverse teams, whereas younger workers perceived the highest levels of inclusion when they were on age similar teams. Implications for social work are discussed.

Key words: Aging of the workforce, Age diversity, Inclusion, Relational demography

It is widely recognized that the global workforce is ageing (e.g., Bloom *et al.*, 2009; Ilmarinen, 2009; Maestas & Zissimopoulos, 2009). The increased presence of older adults in the workplace has fostered

interest in the effects of work team age diversity on workplace outcomes (Riach, 2009; Wegge *et al.*, 2008). Research on diversity in the workforce shows that problems arising from diversity are caused not only by the changing composition of the workforce itself, but also by the inability of employers to truly integrate and utilize a heterogeneous workforce at all levels of the organization (Mor Barak, 1999). In fact, Mor Barak (1999) suggests that “exclusion from organizational information networks and from important decision-making processes is one of the most significant problems facing today’s diverse workforce”.

The ageing of the workforce not only results in increased numbers of older workers but also increases the diversity of work teams’ age composition. The interests of both employers and employees are served when all employees are included in circles of influence and information sharing that enable them to fully contribute and benefit from work experiences. Age dissimilar employees—or employees working in teams where the majority of their team members are, or seem to be, in a different age cohort—may be at particular risk for feeling excluded. These issues are especially relevant to social work practitioners and researchers since understanding and addressing factors that lead to social exclusion have long been central to the profession’s mission.

To date, there have been few empirical tests of the effects of such dissimilarity on work team members’ assessments of their inclusion in team decision making and information sharing. Insights from relational demography suggest that individuals may feel themselves either ‘in the majority,’ (age similar compared to most of the others in the group) or ‘in the minority,’ (age dissimilar compared to most of the others in the group). Those who consider themselves in the minority will be less likely to feel that they are integrated group members (Riordan, 2000). The current study examined the impact of relational age on perceived inclusion in decision-making and information sharing. Relational age is conceptualized in this study as a team member’s perception of personal age relative to the age distribution of their work team. Employees could describe themselves as: 1) age similar to the majority of their team, 2) age dissimilar from the majority of their team, or 3) neither age similar nor dissimilar because of the age diversity in their work team. We also

explored whether this relationship varied for employees of different ages.

Theoretical Framework and Literature

Perception of Work Team Inclusion

The continuum of inclusion–exclusion refers to “the degree to which individuals feel a part of critical organizational processes such as access to information...and ... [the] ability to influence the decision making process” (Mor Barak & Cherin, 1998). In contrast to ‘diversity,’ which refers to characteristics that depict the homogeneity and heterogeneity of work groups, inclusion focuses on the extent to which individuals feel that they are treated like full members of a group with regard to opportunities for participation in formal and informal processes, as well as having access to job-related resources, such as information (Mor Barak, 1999).

Despite its currency in the diversity literature, the conceptualization of inclusion varies and there is little consensus about its theoretical underpinnings (Roberson, 2006; Shore *et al.*, 2010). In broad terms, however, it is possible to identify three core themes related to perceptions of inclusion: 1) feeling a sense of belonging or being part of a group, 2) feeling one’s uniqueness is respected, and 3) having unobstructed opportunities to participate and contribute to achieving communal goals.

Shore *et al.* (2010) emphasize that recognition of uniqueness is an important aspect of inclusion in addition to the feeling of belonging to a group. They define inclusion as “the degree to which an employee perceives that he or she is an esteemed member of the work group through experiencing treatment that satisfies his or her needs for belongingness and uniqueness”. An individual who perceives inclusion would therefore be treated and accepted as “an insider,” (Pelled, Eisenhardt *et al.*, 1999) and be allowed or encouraged to retain his or her uniqueness within the work group (Shore *et al.*, 2010). Perceived inclusion also refers to a sense of unobstructed opportunity to fully participate in and contribute to the organization (Roberson, 2006; Miller, 1998). Inclusion entails eliciting and valuing the contributions of all employees regardless of their socio-demographic characteristics or work status (Lirio *et al.*, 2008).

Research conducted over the past few decades indicate that greater perceived inclusion can be associated with various positive personal outcomes, including greater psychological well-being, social support, job opportunities and career advancement, as well as lower work related stress (Findler *et al.*, Wind & Mor Barak, 2007; Mor Barak & Cherin, 1998). Previous studies have also found that inclusion is positively associated with a variety of outcomes of interest to employers, such as organizational commitment, job performance, job satisfaction, and work engagement (Avery *et al.*, 2007; Cho & Mor Barak, 2008; Findler *et.al.*, 2007). Inclusion is believed to provide a “bridge between interpersonal differences and a person’s ability to contribute effectively to the organization” (Mor Barak & Cherin, 1998). For this reason, practitioners often view policies and practices that promote inclusion as having the potential to integrate diverse people into work teams and organizations, thereby helping teams to work more effectively and, promoting positive individual and organizational outcomes (Roberson, 2006; Thomas & Ely, 1996; Wentling & Palma-Rivas, 2000).

Theory of Relational Demography

Riordan and Wayne (2008) propose that “it is the degree of relative demographic similarity” between the individual and the referent group “that influences work-related attitudes and behavior”. Relational demography focuses on differences between the individual and the overall composition of the group to determine dissimilarity (Riordan, 2000; Tsui & O’Reilly, 1989) and builds on social psychological theories, such as the similarity-attraction paradigm, social categorization theory, and social identity theory (Riordan, 2000; Riordan & Wayne, 2008; Shore *et al.*, 2010). The similarity-attraction paradigm (Byrne, 1971; Newcomb, 1956) is based on the assumption that individuals who have similar attitudes or personal characteristics will be attracted to each other (Riordan, 2000), leading to increased social interaction and behavioral integration. However, this can have deleterious consequences for those in the minority and “can lead to exclusion from social networks and feelings of isolation or alienation” (Avery *et al.*, 2008).

Taken together, self-categorization theory (Turner, 1987) and social identity theory of intergroup behavior (Tajfel & Turner, 1979, 1985) explain the construction and meaning of an individual’s total identity

(personal and social identities combined) (Riordan, 2000). These theories propose that individuals classify themselves and others into social categories based on their personal identity (derived from observable characteristics such as age, race and sex, among other factors), and their social identity (derived from salient information about the groups to which they belong) (Schneider *et al.*, 1971; Adler & Adler, 1987; Ashforth & Mael, 1989). Membership in social categories forms the basis for distinctions that people make between similar and dissimilar others (Riordan, 2000; Mor Barak & Levin, 2002). Membership provides meaning, enhances the self-esteem and determines interaction with others from similar or different identity groups (Tajfel, 1982; Tajfel & Turner, 1986; Turner, 1987).

Relational Age

Demographic dissimilarity can be measured objectively and subjectively (Riordan, 2000; Riordan & Wayne, 2008). Objective measures capture *actual* dissimilarity by estimating the degree to which a person differs from a larger group with respect to demographic variables (e.g., gender, age). The most common measure of actual demographic dissimilarity is Euclidean distance measure (Wagner *et al.* (1984). Research using actual measures of dissimilarity assumes that differences are recognizable by team members (Riordan, 2000; Riordan & Wayne, 2008). In contrast, the subjective measure of dissimilarity focuses on perceived similarities and differences, thereby capturing individuals' perceptions of how different they perceive themselves to be from other team members (Riordan & Wayne, 2008). Given our theoretical focus on understanding perceptions of inclusion-exclusion, we rely on a subjective measure of dissimilarity.

Studies exploring perceived age dissimilarity have typically used questions similar to the following: "Think of those on your work team. How similar are you to them in terms of age?," with a response scale of: (0) "very similar" to (4) "very dissimilar" (Kirchmeyer, 1995; Riordan & Weatherly 1999; Williams *et al.*, 2007). The problem with such a measure is that it is unclear how individuals in teams without a discernable age majority would respond. Would a member of such a team perceive themselves as age similar or dissimilar; and, similar/dissimilar to whom?

The measure used by Avery *et al.* (2007) allows for three types of referent group situations: perceptions of being in the age minority (respondent dissimilar compared to the majority); perceptions of being in the age majority (respondent similar to the majority); and perceptions of belonging to a group which is balanced with regard to age (making the respondent neither similar nor dissimilar to the majority). We examine the outcomes associated with membership in these three different types of groups.

Hypotheses

This study explored the effects of relational age on perceptions of work team inclusion in decision-making and information sharing. Since dissimilar individuals will feel less integrated or feel excluded due to the effects of similarity-attraction, social categorization, and social identity formation, it is hypothesized that:

Hypothesis 1. Employees who perceive that they are age dissimilar to the majority of those in their work team will perceive less inclusion in team decision-making and information sharing compared to employees who perceive themselves as age similar to the majority in their teams.

Relational demography theories do not provide guidance about perceptions of inclusion in heterogeneous groups in which there is no perceptible 'in-group' or 'out-group.' However, studies that focus on strategies to reduce in-group/out-group boundaries provide insight into the intergroup consequences of "de-categorization," or separate individuals who are not members of any particular social category (Gaertner *et al.*, 1989). From these studies we learn that de-categorization diminishes perceived boundaries and intergroup bias (Ibid.). We could argue then that the lack of discernable social categories associated with team heterogeneity might create conditions whereby those demographic attributes which create diversity within the team (i.e., age) become less salient. It is therefore possible that in diverse teams, the effects of perceived dissimilarity on inclusion are minimized.

Accordingly, it is hypothesized that:

Hypothesis 2. Employees who perceive that they are age dissimilar to the majority of those in their work team will perceive less inclusion

in team decision-making and information sharing compared to employees who are in age diverse teams.

Extending this reasoning, differences may become so de-emphasized in diverse teams that individuals on such teams may feel just as included in decision-making and information sharing as individuals who are similar to the majority of their team members. Therefore, it is hypothesized that:

Hypothesis 3. Employees who perceive that they are age similar to the majority of those in their work team will perceive similar levels of inclusion in team decision-making and information sharing compared to employees who are in age diverse teams.

Several studies on relational demography have focused on potential moderators (e.g. gender, age, race) of the relationship between demographic dissimilarity and outcomes of interest, or “asymmetrical effects” (Tsui *et al.*, 1992; Chattopadhyay, 1999; Pelled, *et al.*, 1999; Lichtenstein & Alexander, 2000; Bacharach & Bamberger, 2004; Williams *et al.*, 2007). Tsui *et al.*, (1992) found, for example, that racial dissimilarity was negatively associated with psychological commitment, attendance, and intentions to stay with the employer, but that these effects were stronger for whites, as opposed to minorities, concluding that minorities could be desensitized to dissimilarity (relative to non-minorities) because they are accustomed to being underrepresented in most settings. With age, there is no clear underrepresented or minority group, however. Further, the literature is inconclusive with regard to whether the age dissimilarity-outcome relationship differs with age (i.e., an age-asymmetrical effect). For example, Chattopadhyay (1999) found that age dissimilarity had a negative effect on citizenship behavior among older workers, but a positive effect on citizenship behavior among younger workers. Williams *et al.* (2007), however, found no age differences in the relationship between age dissimilarity and within-team perspective taking (i.e., lower positive attributions and empathy). It is unclear whether relational age has a differential impact on perceptions of inclusion depending on an employee’s age. In the absence of consistent findings to guide hypotheses in this area, the following research question is proposed:

Research question 1. Does chronological age moderate the relationship between relational age and perceptions of inclusion in decision-making and information sharing?

Methods

Data and Sample:

We used data from the Age & Generations Study, a study conducted by the Sloan Center on Aging & Work at Boston College in 2007-2008, to test our hypotheses. The nine organizations participating in the study were affiliated with a range of industry sectors: education (2 organizations); health care (2); retail (1); finance and insurance (2); professional, scientific and technical services (1); and pharmaceuticals (1). All of the respondents worked in U.S. locations; all organizations had over 1,000 employees. Participating organizations selected one or two of its departments to take part in the study; employees were then invited to complete a survey during company time. In total, we collected responses from 2,210 employees from 13 departments within the nine organizations. Within-department response rates ranged from a low of 28.5 per cent to a high of 88.8 per cent, with an average response rate of 55.3 per cent. The analysis reported in this paper, however, was restricted to employees who had tenure at the organization of at least two months ($N=2,102$), to avoid low inclusion scores attributable to being 'very new' to the organization.

Employees in the sample were 60 per cent female, 40 per cent male, and 41 years old on average. Seventy-three percent were married or cohabiting; 43 per cent had children under age 19. Eighty-six percent worked full time and 14 per cent worked part time. The average organizational tenure was 8.5 years. Fifty-one percent of the employees were hourly; these workers earned \$22 per hour on average. Forty-nine percent were salaried employees earning an average of \$80,000 per year.

Measures

Perceived inclusion

The survey included seven items that were adapted from Mor Barak's (2005) Perception of Inclusion-Exclusion Scale. This scale

was reduced from its original length to take into account the limited time and resources that organizations could devote to the data collection effort. Respondents were asked to indicate the extent to which they agreed with each statement on a scale of (1) “strongly disagree” to (6) “strongly agree.” These items were subjected to an exploratory factor analysis using principal factors extraction and varimax rotation to assess their factorial structure in this sample. Results revealed two factors: three items related to inclusion in the decision-making process loaded together, (e.g., “I am able to influence decisions that affect my work group.”), as did two items related to inclusion in information sharing (e.g., “My coworkers openly share work- related information with me.”). All factor loadings of the items to their respective factors were greater than .52, and taken together the factors explained 72.8 per cent of the variance. The remaining two items did not load well onto any factor and were discarded from the measure. The items were averaged, and then squared to reduce skew. The alpha reliability coefficient for the inclusion in decision-making and inclusion in information sharing scales were .81 and .84, respectively.

Relational age

Employees were asked which of the following statements best describes the composition of their work team with respect to the similarities/differences in employees’ ages: 1) “The members of my work team are all about the same age as I am”; 2) “The members of my work team are different ages; however, most of them are young adults”; 3) “The members of my work team are different ages; however, most of them are midlife adults”; 4) “The members of my work team are different ages; however, most of them are older adults”; and 5) “The members of my work team are different ages, with a fairly balanced mix of employees of different ages.” Avery *et al.* (2007) found evidence to suggest that respondents did indeed interpret the word “mostly” to mean the majority, or roughly 65 per cent or more of the team. Using employees’ responses about the age composition of their work group in conjunction with a question that asked respondents whether they consider themselves a young adult, adult at midlife, or an older adult, we created a series of dummy variables representing the following three groups: team is age similar to self, team is age dissimilar to self, and team is age diverse (reference group).

Control variables

A range of personal and job-related characteristics that could potentially affect individuals' perceptions of inclusion were included in analyses as control variables. Personal characteristics included whether the worker was female; white; married or cohabitating; had a high school degree or less, a bachelor's or 2-year degree, or graduate degree (reference group); their chronological age at the time of survey; whether the worker had children age 18 or under; and whether the worker provided support to an elderly family member on a weekly basis. Job characteristics included whether the worker had supervisory responsibilities; was paid on a salary (as opposed to on an hourly basis); was full-time; and the logarithm of tenure, used to reduce skew.

Work team size was also included as a job characteristic, as previous studies have found that size affects the extent to which members communicate with one another (Zenger & Lawrence, 1989) and thus influences inclusion in information sharing and decision-making (Chattopadhyay, 1999; Pelled *et al.*, 1999). Workers were asked how many people were on their work team. The distribution of responses was heavily positively skewed (80.9% of workers reported team sizes of 20 or less). To remedy this, responses were collapsed into five categories using cut-off points consistent with findings from the span of control literature (Cathcart *et al.*, 2004): 1 to 3 team members, 4 to 7, 8 to 15, 16 to 40, and 40 or more. This new variable was then squared to correct for skew. Means, standard deviations, and ranges for all variables included in analyses are presented in Table 1.

Table 1. Means, Standard Deviations, and Ranges for Study Variables (N=1,778)

	Mean	SD	Range
Inclusion in decision-making	4.15	1.12	1-6
Inclusion in information sharing	4.86	0.92	1-6
Female ^a	0.59	0.49	0-1
White ^b	0.84	0.36	0-1
Married/cohabitating ^c	0.72	0.45	0-1
High school degree or less	0.18	0.38	0-1
Bachelor's or 2 year degree	0.5	0.5	0-1
Graduate degree	0.32	0.47	0-1

Age	40.88	11.99	17-77
Has no children d" age 18 d	0.57	0.50	0-1
Provides elder care e	0.16	0.37	0-1
Supervisory responsibilities f	0.36	0.48	0-1
Salaried g	0.48	0.5	0-1
Full-time h	0.87	0.33	0-1
Tenure	8.59	8.4	0.22-45
Work team size	2.94	1.09	1-5
Team is age similar to self	0.34	0.48	0-1
Team is age dissimilar to self	0.27	0.45	0-1
Team is age diverse	0.38	0.49	0-1

^aReference = male; ^bReference= non-white; ^cReference = not married or cohabitating; ^dReference = does not have children d" age 18; ^eReference = does not provide elder care; ^fReference = does not have supervisory responsibilities; ^gReference = non-salaried; ^hReference = part-time.

Analyses

Accommodating the nested data structure

A key assumption underlying standard regression techniques, such as OLS regression and path analysis, is that observations are independent. If non-independence of observations is present due to groups, such as departments or organizations, but not controlled for in appropriate statistical models, it can lead to biased results (Hox, 2002; Kreft & de Leeuw, 1998; Raudenbush & Bryk, 2002). Random effects models are the preferred method for dealing with nested data structures, as they take into account unit-specific effects in the estimation of coefficients and standard errors (de Leeuw & Kreft, 1995). Thus, similar to Civian *et al.* (2008), we used the software, Hierarchical Linear Modeling (HLM) Version 6, (Raudenbush *et al.*, 2004) to control for clustering, using a 2-level random effects model in which the employee-level intercept is allowed to vary freely across higher level units. All multivariate analyses were conducted using organization as the higher level unit and then replicated using department as the higher level unit¹. There were no substantive differences between the results of these models, so estimates presented here are those that control for organization level effects.

Missing data

In several instances the number of responses to a given item decreased because of the participants' failure to respond to all items in the survey. Using listwise deletion for the analyses in this paper would have resulted in a loss of 657 cases or 31.2 per cent of the sample. To address concerns about missing values, we used Stata IC, 10.1 (the ICE package, Royston, 2005) to implement the multivariate imputation by chained equations (MICE) method (van Buuren *et al.*, 1999) of multiple multivariate data imputation. In this approach, a series of conditional distributions are generated using models appropriate to the distributional assumptions of each variable being imputed (e.g., linear, Poisson, logistic, etc.). von Hippel (2007) advises that values imputed for the dependent variable during the process of multiple imputation be restored back to missing before proceeding with analyses. Therefore, those respondents who did not have complete data on the dependent variables were omitted from this analysis, resulting in a final N of 1,778 (84.6% of the original sample). The estimates presented for multivariate analyses have been averaged across the ten complete datasets using HLM's multiple imputation feature (see Raudenbush *et al.*, 2004, p. 180-182, for specific calculations).

Model-building strategy

Our models for inclusion in decision-making and information sharing were built in a series of steps, beginning with a null or empty model (unreported), followed by the addition of personal and job characteristics (Model 1), relational age (Model 2), and finally, interactions between age and relational age to assess age-asymmetrical effects (Model 3). All models were estimated using full maximum likelihood methods. Independent variables, with the exception of 0/1-coded dummy variables, were grand mean centered for analysis, a practice that produces more stable estimates, helps to reduce multicollinearity, and provides consistency across models (Field, 2009).

Results

The results of hierarchical linear models appear in Table 2. Models 1a and 1b indicate that while none of the personal characteristics were significantly related to inclusion in decision-making or information sharing, several of the job characteristics were². Being a supervisor, salary-paid, full-time, having a longer tenure, and having a smaller work team

was found to be associated with greater perceptions of inclusion in decision-making, while only being a supervisor and having a smaller work team was found to be associated with greater perceptions of inclusion in information sharing. In Models 2a and 2b, relational age is introduced.

Hypothesis 1—that employees who perceive that they are age dissimilar to the majority of those in their work team will perceive less inclusion in team decision-making and information sharing compared to employees who are age similar to their teams—was not supported. However, hypotheses 2—that employees who perceive that they are age dissimilar to the majority of those in their work team will perceive less inclusion in team decision-making and information sharing compared to employees who are on age diverse teams—was, in fact, supported. Hypothesis 3 was supported as well. Employees who perceived that they are age similar to the majority of those in their work team reported similar levels of inclusion in team decision-making and information sharing compared to employees on age diverse teams. A likelihood ratio test based on the deviance values of Model 1a/1b compared to Model 2a/2b suggested that there was a significant improvement in model fit that can be attributed to the addition of relational age to the model for inclusion in decision-making ($\chi^2 = 6.19$, $df = 2$, $p < .05$), however, there was no such improvement in model fit for information sharing ($\chi^2 = 3.67$, $df = 2$, $p > .05$) (Table 2).

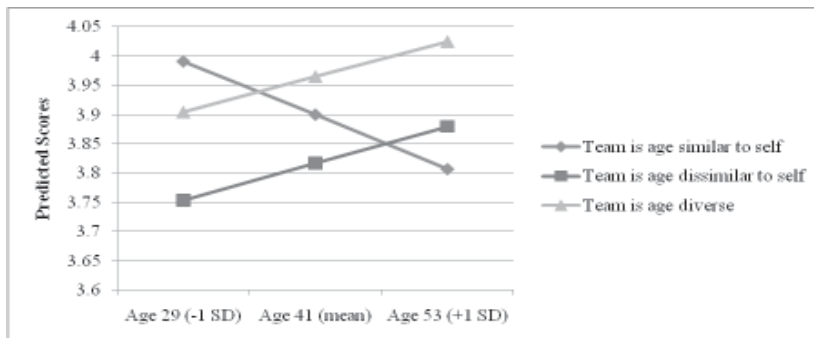
Finally, in Models 3a/3b interactions between relational age and chronological age were added. In response to research question 1, we did indeed find that chronological age moderated the relationship between relational age and inclusion in decision-making (see Figure 1). Specifically, among those who perceived that they were similar in age to the majority of their work team, there was a negative effect of age on inclusion in decision-making. In other words, young adults on a work team of mostly other young adults, felt more included in decision-making than older adults on a work team of mostly other older adults. An effect of age was not found within the age dissimilar or age diverse groups, however. The addition of these interaction terms represented a significant improvement in model fit over Model 2a ($\chi^2 = 10.84$, $df = 2$, $p < .01$). Overall, Model 3a explained 10.2% of the employee level variance and 74.8 per cent of the organization level variance in inclusion in decision-making, for a total of 31.1 per cent.

Table 2. Hierarchical Linear Model Results for Effects of Perceived Age Dissimilarity on Work Team Inclusion in Decision-Making and Information Sharing (Level-1 N = 1,778; Level-2 N = 9)

	Inclusion in Decision-Making			Inclusion in Information Sharing		
	Model 1a	Model 2a	Model 3a	Model 1b	Model 2b	Model 3b
Fixed Effects	Coef.(SE)	Coef.(SE)	Coef.(SE)	Coef.(SE)	Coef.(SE)	Coef.(SE)
Intercept	15.20(1.28)**	15.67(1.32)**	15.72(1.31)**	23.84(1.42)**	24.23(1.44)**	24.27(1.43)**
Female ^a	-0.44(0.48)	-0.51(0.48)	-0.44(0.48)	-0.82(0.47)±	-0.87(0.47)±	-0.80(0.47)±
White ^b	-0.32(0.57)	-0.27(0.57)	-0.31(0.57)	0.37(0.54)	0.41(0.54)	0.38(0.54)
Married/cohabitating ^c	0.47(0.43)	0.44(0.43)	0.48(0.44)	0.44(0.45)	0.41(0.45)	0.45(0.44)
High school degree or less ^d	-0.93(0.78)	-0.99(0.78)	-1.04(0.78)	-0.97(0.78)	-1.03(0.77)	-1.09(0.77)
Bachelor's or 2 year degree ^d	-0.36(0.54)	-0.38(0.54)	-0.40(0.54)	-0.43(0.52)	-0.45(0.52)	-0.46(0.52)
Age	0.01(0.02)	0.01(0.02)	0.04(0.03)	0.03(0.02)	0.03(0.02)	0.03(0.03)
Has no children ? age 18 ^e	-0.16(0.41)	-0.10(0.42)	-0.17(0.41)	0.61(0.44)	0.65(0.44)	0.59(0.44)
Provides elder care ^f	-0.69(0.51)	-0.67(0.51)	-0.69(0.51)	-0.78(0.54)	-0.77(0.53)	-0.78(0.53)±
Supervisory responsibilities ^g	3.82(0.43)**	3.83(0.43)**	3.81(0.43)**	1.09(0.43)*	1.09(0.43)*	1.08(0.43)*
Salaried ^h	2.99(0.68)**	2.97(0.68)**	2.90(0.68)**	0.02(0.68)	0.01(0.68)	-0.06(0.68)
Full-time ⁱ	1.22(0.60)*	1.19(0.60)*	1.21(0.60)*	0.40(0.60)	0.39(0.60)	0.43(0.60)
Tenure	0.70(0.21)**	0.68(0.21)**	0.69(0.21)**	-0.10(0.20)	-0.12(0.20)	-0.11(0.20)
Work team size	-0.91(0.17)**	-0.93(0.17)**	-0.97(0.17)**	-0.41(0.17)*	-0.43(0.17)*	-0.46(0.17)**
Team is age similar to self ^j		-0.37(0.44)	-0.51(0.44)		-0.41(0.43)	-0.53(0.43)
Age similar X age		-1.12(0.46)*	-1.15(0.46)*		-0.89(0.45)*	-0.95(0.46)*
Age dissimilar X age			-0.10(0.04)*			-0.06(0.04)±
Random Effects	Var. Comp. (SD)	Var. Comp. (SD)	Var. Comp. (SD)	Var. Comp. (SD)	Var. Comp. (SD)	Var. Comp. (SD)
Employee-level variance (σ^2)	56.32(7.50)	56.12(7.49)	55.84(7.47)	55.27(7.43)	55.15(7.42)	54.93(7.41)
Organization-level variance (τ_{00})	3.55(1.88)**	3.56(1.89)**	3.48(1.87)**	7.19(2.68)**	7.43(2.68)**	6.96(2.64)**
Employee-level $Pseudo-R^2$ ^k	0.094	0.097	0.102	0.017	0.019	0.023
Organization-level $Pseudo-R^2$ ^k	0.245	0.243	0.248	0.161	0.163	0.188
Total $Pseudo-R^2$ ^k	0.306	0.308	0.311	0.258	0.259	0.259

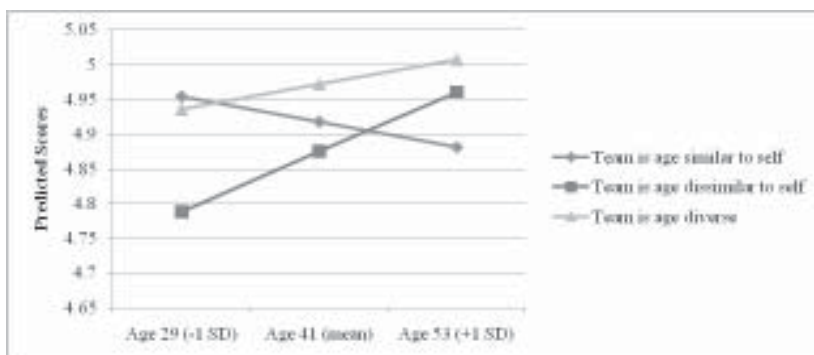
Note. All continuous variables in the model are centered on their grand means.^a Reference = male; ^b Reference = non-white; ^c Reference = not married or cohabitating; ^d Reference = graduate degree; ^e Reference = does not have children d[†] age 18; ^f Reference = does not provide elder care; ^g Reference = does not have supervisory responsibilities; ^h Reference = non-salaried; ⁱ Reference = part-time; ^j Reference = Team age diverse; ^k Compared to null model.

Figure 1. Interaction between Age and Relational Age Predicting Inclusion in Decision-Making



In Model 3b, age was found to moderate the relationship between relational age and inclusion in information sharing as well, but only at trend level ($p > .10$), such that there was a negative effect of age within the age similar group and no effect of age in either the age diverse or age dissimilar groups (see Figure 2). However, the addition of these variables did significantly improve model fit over Model 2b ($\Delta 2 = 9.22$, $df = 2$, $p < .05$). Overall, these variables explained 2.3% of the employee level variance and 18.8% of the organization level variance in inclusion in information sharing, for a total of 25.9%.

Figure 2. Interaction between Age and Relational Age Predicting Inclusion in Information Sharing



Discussion

This study explored the effects of relational age on perceptions of work team inclusion as measured by the extent to which individuals feel a part of the important organizational processes of decision-making (indicator of behavioral integration) and information sharing (social interaction). Results of our analyses indicate that after controlling for a variety of personal and job characteristics, employees who perceived themselves to be age dissimilar from their work teams felt less included in both decision-making and information sharing than those who were on an age diverse work team. Age dissimilar employees, however, did not feel significantly less included than age similar employees nor did age similar employees feel significantly less included than those in an age diverse work team. This effect was not consistent across age. In fact, we found that being age similar to one's work team had a differential impact on inclusion depending on employee age. The older age similar team members were, the less included they felt in decision-making and information sharing.

Interestingly, older workers perceived the highest levels of inclusion when they were in age diverse teams, whereas younger workers perceived the highest levels of inclusion when they were on teams that were made up mostly of other young adults. Conversely, younger workers felt the lowest levels of inclusion when they were on teams that were made up mostly of midlife or older adults, whereas older workers perceived the lowest levels of inclusion when they were on teams that were made up mostly of other older adults. Counter to previous research (Chattopadhyay, 1999) and theory, these findings suggest that while older adults benefit *most* from being on age diverse teams, they may benefit from being on teams with midlife or younger coworkers more than from being on teams that are mostly comprised of their age peers. Further, these results suggest that perceived age differences in the workplace might indeed become more salient when there is a clear age majority for part of a team (or organization), and that age differences may become deemphasized when there is age diversity within a team.

This study makes several important contributions to the literature. First, it suggests that there are important conceptual and measurement

distinctions to be made between teams where there is a perceived majority group and teams where there is no perceived majority group. In previous studies that have explored perceived age dissimilarity, it is not clear where individuals in age diverse teams would fall on a dissimilarity-similarity continuum (see Avery *et al.*, 2007 for an exception). This study addressed these distinctions and revealed important age asymmetries in the relational age-inclusion relationship that should be explored further in future studies. Secondly, some have criticized the literature on age-outcome relationships at the workplace, pointing out a variety of methodological and statistical issues that may contribute to conflicting findings, including: small or homogenous samples, the omission of potentially important statistical controls (e.g., tenure), and improperly modeling the form of the age-outcome relationship (Hochwarter *et al.*, 2001; Thomson, Griffiths & Davison, 2000). The current study addressed these concerns by: 1) employing a relatively large, heterogeneous sample of workers in the U.S. representing six different industry groups and a broad range of job types, 2) controlling for a variety of factors that could impact perceptions of inclusion, and 3) assessing the possibility of non-linear relationship between the continuous variables in the analyses and inclusion.

Implications for Social Work Practitioners

As the very large Baby Boomer generation ages, an increasingly larger proportion of clinical social workers' caseloads will be comprised of older adults (National Association of Social Workers, 2009). Many of these clients will be in the paid workforce and work-related experiences will affect their quality of life. Social workers will need to have a comprehensive understanding of what constitutes a quality employment experience for these workers and of the age-related factors that may affect their clients' abilities to successfully engage in work roles. We found in this study that work team age composition in relation to employees' own age may be associated with an employee's sense of inclusion or exclusion from circles of influence and information sharing at the workplace. Given the link between inclusion and various positive individual, group, and organizational outcomes found in previous studies, these findings can have important ramifications for overall employee well-being.

Secondly, as the realities of an aging workforce become more salient at workplaces, there is an emerging role for social workers who work in organizations (e.g., Employee Assistance Professionals and occupational social workers) to advocate for programs and policies that will enhance the employment experiences of older workers (Bates & Thompson, 2007; Mor Barak, & Bargal, 2000). Findings from this study could be used by social workers to develop innovative policies and programmes that could leverage the talents and experience of the multi-generational workforce and promote more inclusive work teams which could, in turn, help teams to work more effectively. Ultimately, inclusion policies and programs could promote positive individual and organizational outcomes (Roberson, 2006; Thomas & Ely, 1996; Wentling & Palma-Rivas, 2000). Findings suggest that such policies and practices might include promoting age diversity within work teams and across the organization, developing mentorship models within teams where older adults are paired with midlife and younger workers, or implementing age diversity training to support such endeavors.

Limitations

While our data have important strengths, there are also limitations. Due to employer-imposed limitations on the number of items permitted on the employee survey, only some items from Mor Barak's (2005) inclusion-exclusion scale could be included. While all three of the items referring to decision-making loaded well onto one factor, only two of the three items related to information sharing loaded well. An advantage of the items that factored out in our sample is that they were adapted to refer to the more proximal environment of work group only. We feel that this is a strength of the measure, as inclusion in the more proximal environments of supervisor and work group may be very different than inclusion in the more distal environments of higher management or the organization as a whole, especially in very large organizations, as were in this study. Although our measures did show strong internal consistency and factor loadings, future studies should seek to use more robust measures of inclusion and should assess whether inclusion within these various system levels differs in general and within different sized organizations. Additionally, the study relied on cross-sectional data. While a longitudinal design may have permitted stronger causal

inferences to be drawn about the existence of effects, sufficient longitudinal data was not available for this analysis.

Conclusion

The aging of the workforce is likely to have an impact on the dynamics of work teams. Findings from this study and others suggest that many aspects of the aging experience unfold in a social context. For instance, cultural norms about age-appropriate and age-expected roles may affect how individuals and groups interpret the aging experience. At the workplace, the subjective experience of aging can be co-constructed as workers interact with one another. Working in a group increases the salience of 'relative or comparative age' where individuals' subjective understanding of their own age can be affected by the extent to which they feel they are similar to or different from others in terms of age. It is important that gerontological social workers and other professionals concerned with the well-being of older adults consider the multiple contexts within which individuals age and construct their realities, including individual and shared social environments (relational age) and the physical environment (work).

Notes

- ¹ We assessed the proportion of variance to be explained at the employee, department and organization levels assuming a 3-level structure and found that the proportion at the department level was negligible for both dependent variables (decision-making intra-class correlation (ICC)= .019, $p=.007$; information sharing ICC= .002, $p>.05$.), indicating that a 2-level structure is more appropriate. ICCs for employees nested within organizations (decision-making ICC= .182, $p<.000$; information sharing ICC= .132, $p<.000$) and employees nested within departments (decision-making ICC= .170, $p<.000$; information sharing ICC= .180, $p<.000$) suggest that analytic adjustments were needed to account for nestedness at either the organization or department level to ensure that regression results were unbiased.
- ² Possible non-linear relationships between the continuous variables (age, tenure and work team size) and inclusion were tested by adding squared and cubed terms to the models, but none were found to be statistically significant.

- ³ In order to make this comparison, an identical unreported HLM regression analysis was run where the reference group for relational age was changed to represent the “team is age similar to self” group. For inclusion in decision-making, $B = -.75$, $t(1762) = -1.56$, $p > .05$, and for inclusion in information sharing, $B = -.48$, $t(1762) = -1.01$, $p > .05$.

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