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**Knowledge Transfer in Age-Diverse Coworker Dyads in China and Germany:
How and When Do Age-Inclusive Human Resource Practices Have an Effect?**

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Abstract

Knowledge transfer between age-diverse employees is gaining importance because of demographic change. We took a relational perspective to examine the indirect effect of human resource practices on knowledge transfer through age-diversity climate in age-diverse coworker dyads, and contextualized our model by testing country difference and dyadic age difference as moderators. We used data from 159 age-diverse coworker dyads from China and Germany to test our hypotheses. We found that perceived age-inclusive human resource practices were positively associated with knowledge sharing and receiving through age-diversity climate. However, we did not find support for our hypothesis that these indirect effects differed when comparing China and Germany as examples of *collectivist* and *individualist* countries. Furthermore, we did not identify the proposed moderating effects of dyadic age difference as the indirect effects of age-inclusive human resource practices were not significantly different for age-diverse coworker dyads in which dyadic age difference was high (vs. low).

Keywords: age-inclusive HR practices, age-diversity climate, knowledge sharing, knowledge receiving, dyadic age difference

**Knowledge Transfer in Age-Diverse Coworker Dyads in China and Germany:
How and When Do Age-Inclusive Human Resource Practices Have an Effect?**

Knowledge transfer in age-diverse coworker dyads refers to the process whereby two employees who belong to different age groups exchange knowledge with each other, for example, via discussion, imitation, and cooperation (Gerpott, Lehmann-Willenbrock, & Voelpel, 2017). The topic has recently gained importance because demographic changes have altered the age composition of workforces (Shultz & Adams, 2007): First, age diversity is increasing, which means that, in some companies, members of up to four different generations are working side-by-side, thus providing numerous opportunities for interactions between age-diverse coworkers (King & Bryant, 2017; Meulenaere, Boone, & Buyl, 2016). Second, the number of older workers is increasing, requiring organizations to find ways to retain the valuable knowledge of older workers before they enter retirement (Burmeister & Deller, 2016).

However, while research on aging in the workplace has been burgeoning (Finkelstein, Kulas, & Dages, 2003), scholars have only recently begun to examine knowledge transfer in age-diverse workforces (Burmeister & Deller, 2016). Initial empirical evidence suggests that knowledge transfer between younger and older employees can be valuable as they can benefit from each other's diverse knowledge (Gerpott et al., 2017; Harvey, 2012). However, age diversity can also impede knowledge transfer (Williams, 2016) as individuals have a natural tendency to prefer interactions with peers that are similar to them (Tajfel & Turner, 1986), especially with regard to their socio-demographic characteristics such as age. Thus, age differences can hamper communication, cooperation, and knowledge transfer (Ellwart, Bündgens, & Rack, 2013; Luring & Selmer, 2012). Accordingly, knowledge transfer among age-diverse coworkers is a difficult process that needs to be facilitated by organizations.

With our study, we aim to contribute to the current literature in four ways. First, we extend the current theorizing on the mechanisms through which HR practices affect employee behavior, by building on the relational perspective of HR practices (Mossholder, Richardson, & Settoon, 2011). We argue that relational climate, more specifically age-diversity climate (i.e., shared perceptions of equal treatment of employees from all age groups), explains the link between age-inclusive HR practices (i.e., bundles of HR practices aiming to provide equal opportunities for employees of all age groups with regard to recruiting, training and development, promotion, and managerial support) and knowledge transfer. Past theorizing has primarily employed a social exchange perspective (Blau, 1964) to understand effects of HR practices on employee behavior (e.g., Allen, Shore, & Griffeth, 2003). Moving beyond current theorizing, we suggest that a context-specific relational climate (here: age-diversity climate) that is initiated by HR systems (Miles & Snow, 1984) can facilitate coworker-directed behavior, such as knowledge transfer.

Second, we extend the relational perspective of HR practices (Mossholder et al., 2011) to the dyadic level by studying age-diverse coworker dyads. Focusing on the dyadic level is particularly relevant because knowledge transfer is a dyadic and relational process (Connelly, Zweig, Webster, & Trougakos, 2012). In situating our study at the dyadic level of analysis, we focus on the effect of mutually perceived HR practices (Kaše, Paauwe, & Zupan, 2009) rather than intended or implemented HR practices at the organizational or unit level (Nishii & Wright, 2007; Wright & Nishii, 2007). Focusing on the effect of mutually perceived HR practices is particularly useful when studying relational outcomes, such as knowledge transfer behavior, because such behavior is more likely to be driven by the joint experience of one's shared organizational environment (Kaše et al., 2009).

Third, we attempt to contribute to cross-cultural research on human resource management (HRM), by taking into account plausible country-level differences between

China and Germany, as two exemplary countries of more collectivist and individualist countries, respectively. In more individualist countries, such as Germany, compared to more collectivist countries, such as China (Hofstede, 1980; House, Javidan, Hanges, & Dorfman, 2002), individuals value independence rather than community, are motivated by pursuing their individual goals, and engage in a cost-benefit analysis before interacting with others (Triandis, 1995). These country differences may be important for shaping knowledge transfer as an extra-role behavior that requires employees to invest time and effort above and beyond their normal work duties to benefit others (e.g., coworkers or one's work group) by making their valuable knowledge available (Cabrera & Cabrera, 2002; Kwok & Gao, 2016). The effect of cultural differences can be examined at the country level or the individual level of analysis (Hofstede, 1980). We focused on the country level of analysis because this provides an unbiased indication of cultural affiliation and allows us to provide a first indication of the extent to which our findings generalize across two different cultural contexts.

Fourth, building on self-categorization theory (Tajfel & Turner, 1986; Turner, 1982) and Byrne's similarity-attraction paradigm (1971), we further contextualize the propositions made by the relational perspective by testing whether dyadic age difference shapes the positive indirect effect of perceived age-inclusive HR practices such that this effect is less pronounced if dyadic age difference is high (vs. low). Accordingly, individuals have a natural tendency to prioritize interactions with similar others, which can make interactions with dissimilar others more difficult. As a result, the development of a joint positive interpretation of HR practices should be less likely to develop, which might inhibit the positive indirect effect of perceived age-inclusive HR practices. Generating an understanding into how age differences may shape the influence of age-inclusive HR practices on knowledge transfer in age-diverse coworker dyads is useful for practitioners, who aim to offer these practices to

coworker dyads that can benefit these most. We present our hypothesized research model in Figure 1.

*** Please insert Figure 1 about here ***

Theory and Hypotheses

Knowledge Transfer as a Challenging Dyadic Process

While engaging in knowledge transfer can benefit employees in several ways, for example, by feeling valued and connected to others, and by being able to generate more creative ideas (Burmeister & Deller, 2016; Černe, Nerstad, Dysvik, & Škerlavaj, 2014), knowledge transfer is a challenging process. Specifically, knowledge transfer may conflict with individuals' self-interest due to the sacrifices and risks associated with sharing and receiving knowledge. First, sharing valuable knowledge may be perceived as diminishing one's individual competitive advantage as shared knowledge is no longer someone's exclusive resource (Bock, Zmud, Kim, & Lee, 2005). Second, receiving knowledge is associated with considerable time investments, and the willingness to admit knowledge gaps, which might be perceived as a reputational risk (Bender & Fish, 2000).

The Relation between Human Resource Practices and Knowledge Transfer

We draw on the relational perspective of HR practices (Mossholder et al., 2011) to understand the effect of perceived age-inclusive HR practices on knowledge transfer in age-diverse coworker dyads. The relational perspective of HR practices is situated in the behavioral perspective of strategic HR, which suggests that HR systems can affect organizational performance through influencing employee behavior (Jackson, Schuler, & Rivero, 1989; Miles & Snow, 1984). In line with this perspective, previous studies have argued that HR practices can positively affect knowledge transfer (Cabrera & Cabrera, 2005). More specifically, age-inclusive HR practices that are targeted at age-diverse employees can facilitate positive work behavior of employees from all age groups, such as knowledge

transfer, because they foster employees' knowledge, skills, and abilities, and provide them with opportunities to perform (Boehm & Dwertmann, 2015; Boehm, Kunze, & Bruch, 2014). Employees from all age groups may be more likely to engage in knowledge transfer because they feel accepted by their organization and are motivated to realize their potential at work. For example, rather than inhibiting older workers' access to training and development activities or limiting younger workers' opportunities to be promoted into leadership positions, age-inclusive HR practices ensure that employees of all age groups have equal opportunities.

***Hypothesis 1.** Age-inclusive HR practices are positively related to dyadic knowledge sharing (H1a) and to dyadic knowledge receiving (H1b).*

A Relational Perspective of HR Practices: The Mediating Role of Age-Diversity Climate

In line with the relational perspective of HR practices (Mossholder et al., 2011), we hypothesize that perceived age-inclusive HR practices have a positive effect on age-diversity climate.¹ HR systems can influence the climate perceptions of employees by providing the overarching frame in which employees engage in sense-making processes to interpret the meaning of implemented HR systems (Bowen & Ostroff, 2004; Ferris et al., 1998; Rousseau, 1995). Through these sense-making processes, collective norms and interpretations emerge, which can shape employee behavior and their interactions. For example, experienced HR practices were identified as positive predictors of the quality of interpersonal relations in coworker dyads (Kaše et al., 2009). Furthermore, perceived age-inclusive HR practices, including age-neutral recruiting and equal access to training, had a positive effect on age-diversity climate, which, in turn, facilitated collective perceptions of social exchanges in organizations (Boehm et al., 2014).

¹ In proposing a relational perspective of HR practices, Mossholder et al. (2011) highlight the collective social effects of HR systems and argue that employee behavior that is directed towards coworkers in the organization (e.g., helping behavior) can be explained by relational climates that, in turn, originate from HR systems. Relational climates represent socio-cognitive environments and can be defined as "shared employee perceptions and appraisals of policies, practices, and behaviors affecting interpersonal relationships in a given context" Mossholder et al. (2011, p. 36).

***Hypothesis 2.** Perceived age-inclusive HR practices are positively related to age-diversity climate.*

We further hypothesize that age-diversity climate is positively associated with dyadic knowledge sharing and receiving in age-diverse coworkers dyads. Age-diversity climate reflects a shared understanding that age is not a hindering factor that may limit one's progress within the organization, such that both older and younger workers feel free from age-related discrimination (Boehm et al., 2014). Such an age-neutral environment should motivate both older and younger workers to develop their full potential and contribute to organizational goals by engaging in knowledge transfer. To that end, knowledge transfer provides employees from both age groups with the opportunity to learn by receiving knowledge and to establish their expertise by sharing their knowledge with others (Gerpott et al., 2017). In addition, age-diversity climate may facilitate knowledge transfer by creating an environment in which contributions such as knowledge from all age groups are encouraged (Boehm et al., 2014). As a result, employees working in an age-diverse climate may be more likely to focus on the possible contribution they can make by sharing their knowledge with peers, rather than on the potential risks of transferring knowledge, such as being ridiculed for knowledge that others perceive as not relevant or valuable (Bock et al., 2005; Cabrera & Cabrera, 2002; Cabrera & Cabrera, 2005). Empirical research has provided initial evidence that relational climate is positively associated with knowledge transfer (Collins & Smith, 2006).

***Hypothesis 3.** Age-diversity climate is positively related to dyadic knowledge sharing (H3a) and to dyadic knowledge receiving (H3b).*

Taken together, we propose that perceived age-inclusive HR practices can impact knowledge sharing and receiving in age-diverse coworker dyads through age-diversity climate. The proposed mediation mechanism is supported by past research that has shown that HR practices were positively related to favorable social and interpersonal climates,

which in turn can predict knowledge transfer (Collins & Smith, 2006; Kaše et al., 2009).

Thus, we hypothesize age-diversity climate as a mediator in our model:

***Hypothesis 4.** The positive relations between perceived age-inclusive HR practices and dyadic knowledge sharing (H4a) and dyadic knowledge receiving (H4b) are mediated by age-diversity climate.*

The Moderating Effect of Country Differences

We argue that country differences between China and Germany can shape the strength of the indirect effect of age-inclusive HR practices on dyadic knowledge sharing and receiving, such that the indirect effects are less pronounced in German compared to Chinese coworker dyads. One of the most promising dimensions for understanding cultural variations among different countries is individualism-collectivism (House et al., 2002; House, Hanges, Javidan, Dorfman, & Gupta, 2004; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988). In more collectivist countries, such as China, individuals are mainly motivated by the norms that are imposed by the in-group with which they identify and they tend to prioritize the achievement of collective rather than individual goals (Triandis, 1995). Within the Chinese context, one's organization is often regarded as an in-group such that employees are receptive to norms and practices that require behavior that benefits the group (Francesco & Chen, 2004), such as knowledge transfer (Wilkesmann, Wilkesmann, & Virgillito, 2009). Thus, employees in collectivist countries are more likely to react positively to age-inclusive HR practices that are group-oriented in that they aim to treat every employee in the organization in the same way, rather than benefitting particular individuals (Björkman & Lu, 1999). To contrast, in more individualist countries such as Germany, where individuals focus more strongly on independence and the achievement of personal goals (Hofstede, 1980; House et al., 2002), age-inclusive HR practices that emphasize community and equality are likely to have a less pronounced effect. As a result, age-inclusive HR practices that are not only

targeted at specific individuals but that also address the needs of all employees in an organization should exert a stronger effect on knowledge transfer in collectivist than in more individualist environments. As China and Germany are often seen as representative of *collectivist* and *individualist* countries respectively (Fung & Shuming, 1922; Naor, Linderman, & Schroeder, 2010), we have built on the assumed differences between the two countries to derive our hypotheses.

***Hypothesis 5.** The positive indirect effect of age-inclusive HR practices on dyadic knowledge sharing (H5a) and dyadic knowledge receiving (H5b) through age-diversity climate is moderated by country differences, such that the positive indirect effect is weaker for German age-diverse coworker dyads compared to Chinese age-diverse coworker dyads.*

The Moderating Effect of Dyadic Age Difference

We further contextualize the propositions made by Mossholder et al. (2011), by arguing that dyadic age differences between older and younger coworkers can shape the strength of the indirect effect of age-inclusive HR practices on dyadic knowledge sharing and receiving, such that the indirect effects are less pronounced when dyadic age difference is high (vs. low). Our argument is grounded in self-categorization theory (Tajfel & Turner, 1986; Turner, 1982) and the similarity-attraction paradigm (Byrne, 1971). According to self-categorization theory (Tajfel & Turner, 1986; Turner, 1982), individuals define and differentiate themselves from others based on easily observable characteristics such as age. In addition, the closely related similarity-attraction paradigm (Byrne, 1971), states that people are attracted to others who are similar to them because they assume that their attitudes and beliefs will be reinforced by like-minded individuals.

Research on HRM has applied these arguments to posit that employees' personal attributes, such as age, and their (dis)similarity to coworkers, may influence the extent to

which they can effectively process HR-related information (Nishii & Wright, 2007). Demographic dissimilarity can limit the frequency and quality of social interactions at work (Jiang, Hu, Liu, & Lepak, 2017), thereby increasing psychological distance and decreasing mutual trust among employees (Chattopadhyay, 1999; Wiersema & Bird, 1993). Under such circumstances, shared positive interpretations of HR practices are less likely to develop (Liao, Toya, Lepak, & Hong, 2009), and positive interactive work behavior such as knowledge transfer is less likely to be initiated by HR practices when dyad members perceive these HR practices differently. For example, in the context of our study, older workers might perceive age-inclusive HR practices positively, while younger workers might perceive them as an unnecessary resource investment of the company that is not relevant to them, thus not directing their behavior toward positive interactions through knowledge transfer. We therefore expect that the strength of the indirect positive effect of age-inclusive HR practices on dyadic knowledge transfer through age-diversity climate can be weakened in case of larger age differences.

***Hypothesis 6.** The positive indirect effect of perceived age-inclusive HR practices on dyadic knowledge sharing (H6a) and dyadic knowledge receiving (H6b) through age-diversity climate, is moderated by dyadic age difference such that the positive indirect effect is weaker if dyadic age difference is high (vs. low).*

METHOD

Sample and Procedure

Data were collected from age-diverse coworker dyads in Chinese and German companies operating in the financial industry (i.e., banking and insurance companies). We focused on China and Germany because these countries are particularly affected by the current demographic changes, which lead to an increase in the number of older workers and heightened age diversity in today's workforces (United Nations, 2013). In addition, we

collected data in only one sector to limit possible variance that might be attributable to industry differences. We focused on the financial industry because the industry is particularly knowledge-intensive (Kubo & Saka, 2002) and seriously affected by the challenges of an aging workforce (Posthuma & Campion, 2009).

Using our personal network, we contacted HR departments of private companies operating in the financial industry in China and Germany. Overall, more than a dozen medium to large banks and insurance companies participated in the study, however, due to data privacy concerns, especially in Germany, we were unable to match responses from dyads with their company membership. The HR departments identified age-diverse coworker dyads that matched our criteria and sent out the questionnaires. Age-diverse coworker dyads had to consist of co-located coworkers who regularly interacted face-to-face in a work-related context (at least once a week). We asked the HR departments that participated in our study to identify dyads consisting of coworkers who were not in a formal or hierarchical relationship, such as leader-follower or mentor-mentee. Nonetheless, we cannot rule out the possibility that dyad members were connected through informal mentoring relationships, in which an older coworker may, for example, support the career development of a younger coworker. Coworkers could work in different departments if they fulfilled all other criteria. Older dyad members had to be older than 44 years old while younger dyad members had to be younger than 36 years (Abrams, Eller, & Bryant, 2006; McCarthy, Heraty, Cross, & Cleveland, 2014). Although there is no clear definition of what constitutes an older worker, researchers often use 45 years old and above as the cut-off in organizational research (McCarthy et al., 2014). Our age-related criteria ensured a minimum age difference of 10 years within dyads.

We used an online questionnaire to obtain data from both dyad members, and their answers were matched via a personal code. Among the 191 age-diverse coworker dyads that were invited to participate, 159 dyads returned usable data, corresponding to an effective

response rate of 83.25%. Our sample consisted of 40% females, the mean age of younger dyad members was 29.70 years, and the older dyad members were on average 51.19 years old.

Measures

We followed the translation-back translation procedure by Brislin (1970) to translate the measures from English to Chinese and German. Unless otherwise noted, all variables were measured on 7-point Likert-type scales (1 = *strongly disagree*, 7 = *strongly agree*).

Perceived age-inclusive HR practices. Perceived age-inclusive HR practices were measured with the five-item scale from Boehm et al. (2014). Following the item stem “With how much intensity does your company...” (1 = *very low intensity*, 7 = *very high intensity*), five items were included in this measure: (1) ... offer age-neutral recruiting activities?; (2) ... offer equal access to training and further education for all age groups?; (3) ... offer equal opportunities to be promoted, transferred, and to make further career steps irrespective of one’s age?; (4) ... offer training and education for managers on how to deal with an age-diverse workforce and how to respond to the needs of different age groups?; and (5) ... foster the promotion of an age-friendly organizational culture? The average score of responses from dyad members was used to compute this measure. Coefficients of agreement empirically supported aggregation of individual-level data to the dyad level: $r_{wg(j)} = .85$ (James, Demaree, & Wolf, 1984), $ICC1 = .47$ ($F_{158, 158} = 2.78, p < 0.01$), and $ICC2 = .64$ (Bliese, 2000). Cronbach’s alpha was .90.

Age-diversity climate. We measured age-diversity climate with the four-item scale by Boehm et al. (2014). A sample item is: “Our company helps people of different age groups fit in and be accepted.” We computed this measure by averaging the responses from the dyad members. Empirical evidence supported aggregation of individual-level data to the dyad

level: $r_{wg(j)} = .82$ (James et al., 1984), $ICC1 = .32$ ($F_{158, 157} = 1.92, p < 0.01$), and $ICC2 = .48$ (Bliese, 2000). Cronbach's alpha was .82.

Country. The country variable was dummy coded, such that responses from China ($n = 103$) were coded 0 and responses from Germany ($n = 56$) were coded 1.

Dyadic age difference. Dyadic age difference was calculated as the absolute difference between dyad members' self-reported chronological age. Minimum age difference was 10 years and maximum age difference was 35 years ($M = 21.49, SD = 5.64$). As we intended to collect data from age-diverse coworker dyads, such a large average age difference could be expected.

Dyadic knowledge sharing. We measured dyadic knowledge sharing by adapting the four-item scale by Cabrera, Collins, and Salgado (2006). We exchanged references to other organizational members ("my colleagues") with a reference to the specific dyad member ("my colleague"). A sample item is: "When my colleague asks for information about the results of my work or my expertise, I do not hesitate to share this information with him/her." We computed this measure by averaging the responses from dyad members. Empirical evidence supported aggregation of individual-level data to the dyad level: $r_{wg(j)} = .81$ (James et al., 1984), $ICC1 = .34$ ($F_{158, 158} = 2.03, p < 0.01$), and $ICC2 = .51$ (Bliese, 2000). Cronbach's alpha was .71.

Dyadic knowledge receiving. We measured dyadic knowledge sharing by adapting the four-item scale by Cabrera et al. (2006). We exchanged references to other organizational members ("my colleagues") with a reference to the specific dyad member ("my colleague"). A sample item is: "I often ask my colleague for advice and information that can help me in my work." The average score of responses from dyad members was used to compute this measure. Coefficients of agreement empirically supported aggregation of individual-level

data to the dyad level: $r_{wg(j)} = .81$ (James et al., 1984), $ICC1 = .30$ ($F_{158, 158} = 1.85, p < 0.01$), and $ICC2 = .46$ (Bliese, 2000). Cronbach's alpha was .83.

Control variables. To rule out alternative explanations, we controlled for frequency of interaction because frequency of interaction can enable the development of trusting relationships, which is important to overcome the barriers associated with knowledge transfer. Both dyad members provided data on frequency of interaction using an item from Levin and Cross (2004): "To what extent do you typically interact with your colleague?" ($1 = to no extent, 7 = to a very great extent$). Empirical evidence supported aggregation of individual-level data to the dyad level: $r_{wg(j)} = .79$ (James et al., 1984), $ICC1 = .51$ ($F_{158, 157} = 3.09, p < 0.01$), and $ICC2 = .68$ (Bliese, 2000).²

Analytic Strategy

We tested our hypotheses using path analysis implemented in the *lavaan* package in R version 3.2.3 (R Core Team, 2015). We examined the mediation effects with the Monte Carlo method, which estimated the confidence intervals for the hypothesized indirect effects (Preacher, Zyphur, & Zhang, 2010). The Monte Carlo confidence interval method is useful because it simulates the sampling distribution from the model estimates and their asymptotic variances and covariances, instead of assuming a normal distribution (Preacher & Selig, 2012). Except for the dependent variables, we grand-mean centered all variables to increase interpretability.

Preliminary Analyses

To demonstrate the construct validity of our measures, we conducted a series of Confirmatory Factor Analyses (CFAs). First, as knowledge transfer consists of two distinct but interrelated elements—knowledge sharing and knowledge receiving—we compared the

² We thank an anonymous reviewer for the suggestion to test the robustness of our results by including gender difference as an additional control variable in our model. Gender difference was not significantly related to any of the variables in our model and the interpretation of our results remained the same when including gender difference.

fit of our proposed two-factorial model to a one-factorial model. The two-factorial model appeared to fit the data well ($\chi^2 = 42.95$, $df = 13$, $p < .001$, SRMR = .06, CFI = .96), and significantly better ($\Delta\chi^2 = 119.76$, $\Delta df = 1$, $p < .001$) than the one-factorial model ($\chi^2 = 162.70$, $df = 14$, $p < .001$, SRMR = .13, CFI = .79). Second, we tested the distinguishability of perceived age-inclusive HR practices and age-diversity climate due to their medium to high correlation ($r = .63$, $p < .01$). The two-factorial model fitted the data well ($\chi^2 = 84.84$, $df = 26$, $p < .001$, SRMR = .05, CFI = .93), and significantly better ($\Delta\chi^2 = 70.33$, $\Delta df = 1$, $p < .001$) than the one-factorial model ($\chi^2 = 155.17$, $df = 27$, $p < .001$, SRMR = .08, CFI = .85). Overall, the four-factorial model ($\chi^2 = 219.36$, $df = 98$, $p < .001$, SRMR = .07, CFI = .92) fit the data significantly better ($\Delta\chi^2 = 210.15$, $\Delta df = 5$, $p < .001$), than the two-factorial model ($\chi^2 = 429.51$, $df = 103$, $p < .001$, SRMR = .12, CFI = .80).

Results

Descriptive statistics, bivariate correlations, and the Cronbach's alphas for the studied variables are presented in Table 1. According to Table 2, perceived age-inclusive HR practices were positively related to both dyadic knowledge sharing ($\gamma = .20$, $p < .01$) and dyadic knowledge receiving ($\gamma = .27$, $p < .01$), herewith supporting Hypotheses 1a and 1b. Supporting Hypothesis 2, perceived age-inclusive HR practices were also positively related to age-diversity climate ($\gamma = .51$, $p < .01$). Age-diversity climate was positively related to dyadic knowledge sharing ($\gamma = .21$, $p < .05$) and dyadic knowledge receiving ($\gamma = .18$, $p < .05$), providing support for Hypotheses 3a and 3b. Using Monte Carlo method, we found that the first estimated mediating effect was .11 with a 95% CI of [.003, .213]. As zero was not included in the CI, this provided support for Hypothesis 4a. The second estimated mediating effect was .09 with a 95% CI of [.001, .172]. Again, zero was not included in the CI, so this provided support for Hypothesis 4b.

*** Please insert Tables 1 and 2 about here ***

To test Hypotheses 5a and 5b, we examined whether country differences moderated the indirect effects of age-inclusive HR practices on dyadic knowledge transfer. We found that the indirect effects of age-inclusive HR practices on dyadic knowledge sharing (95% CI = [-.118, .254]) and dyadic knowledge receiving (95% CI = [-.117, .255]) through age-diversity climate were not moderated by country differences, because the differences between the two estimated indirect effects were not significant.

To test Hypotheses 6a and 6b, we examined whether the indirect effects of perceived age-inclusive HR practices were moderated by dyadic age difference. Hypotheses 6a and 6b were not supported because the differences between the two estimated indirect effects of perceived age-inclusive HR practices on dyadic knowledge sharing (95% CI = [-.351, .129]) and dyadic knowledge receiving (95% CI = [-.145, .233]) were not significant.

Discussion

In this study, we aimed to better understand through which mechanisms and under which conditions perceived age-inclusive HR practices affect knowledge transfer in age-diverse coworker dyads. We built on the relational perspective as proposed by Mossholder et al. (2011), and tested whether perceived age-inclusive HR practices influence dyadic knowledge sharing and dyadic knowledge receiving through age-diversity climate. We found support for both our mediation hypotheses. However, we neither found support for the proposed moderation of the indirect effects by country difference (i.e., China vs. Germany) nor by dyadic age difference (i.e., high vs. low age difference). Interestingly, we found meaningful main effects of country difference on dyadic knowledge sharing and receiving.

Theoretical Implications

Our findings contribute to the literature in four ways. First, we have shown that knowledge transfer between age-diverse coworkers can be stimulated by perceived age-inclusive HR practices that evoke a constructive age-diversity climate. In doing so, we

complement research that has indicated that general HR practices can elicit positive interpersonal climates (Miles & Snow, 1984), which in turn can facilitate high-quality interactions among coworkers (Kaše et al., 2009). We extend this stream of research by examining the relational mechanism proposed by Mossholder et al. (2011) in the context of age-diverse workforces. Our findings highlight that researchers can utilize other theoretical perspectives in addition to the predominantly used social exchange perspective (Blau, 1964), when theorizing explanatory mechanisms between HR practices and employee behavior (e.g., Allen et al., 2003). Thus, researchers can utilize the relational perspective and focus on a specific relational climate to explain the link between HR practices and other-oriented employee behavior (Mossholder et al., 2011).

Second, our results indicate that the HR practices – employee behavior link can be studied at the dyadic level of analysis, as the joint perception of age-inclusive HR practices by age-diverse coworkers appeared to affect their climate perceptions and their subsequent knowledge transfer behavior. By focusing on positive effects of perceived HR practices at the dyadic level rather than at the organizational, team, or individual level, we contribute to the HRM literature by suggesting that dyads are a useful unit of analysis for studying effects of HR practices on relational phenomena, such as knowledge transfer. Accordingly, our study is in line with research that identified the dyadic level as a valuable source of variability in HR practices (see also Kaše et al., 2009), thereby suggesting that the level at which HR practices are perceived, needs to be aligned with the outcomes that are studied.

Third, our finding that country difference did not influence the strength of the indirect effect of age-inclusive HR practices on dyadic knowledge transfer suggests that the proposed mediation model can be generalized across two different cultural contexts—China and Germany. Interestingly however, our findings indicate that German compared to Chinese age-diverse coworker dyads engaged significantly less in knowledge receiving but not less in

knowledge sharing. One potential explanation may be that employees from more collectivist countries are more inclined to react favorably to others' inputs to create harmonious social environments (Yuan, 2010), thus receiving more knowledge from others. In contrast, employees from more individualist countries may be more concerned with their own task fulfillment, therefore, being less willing to invest time and effort to receive others' knowledge. Future research could further explore potential differences in knowledge sharing and receiving in diverse cultural contexts. Overall, our theorizing and empirical findings contribute to the limited number of studies that examine the effects of HR practices on employee behavior from a cross-cultural perspective (Cooke, Veen, & Wood, 2017).

Fourth, our finding that dyadic age difference did not act as a boundary condition of the indirect effect of perceived age-inclusive HR practices, does not support our theoretical assumptions based on self-categorization theory and the similarity-attraction paradigm. One potential theoretical explanation for the non-significant effect may be found in social comparison theory (Festinger, 1954; Goodman, 1976; Jones & Regan, 1974). Accordingly, people are inclined to compare themselves to similar others (here: similar age), who are viewed as more meaningful (Pelled, Eisenhardt, & Xin, 1999). This might imply that in highly age-diverse dyads, members may still engage in high-quality interactions, as they are less hindered by rivalry and competition (Kearney, 2008). A plausible methodological explanation may be that range restriction in our data has been affecting the results as the minimum age difference was 10 years.

Practical Implications

Our findings have relevant practical implications. First, organizations should invest in age-inclusive HR practices to enhance the prevalence and quality of knowledge transfer. More specifically, recruitment, training and development, and career development practices should regularly be evaluated to determine whether they provide equal access to employees

from all age groups (Boehm et al., 2014). For example, practitioners could carefully evaluate the age distributions of participants of training and development activities to identify potential under-representation of older workers. Subsequently, practitioners ought to ensure that the course descriptions of training and development activities are inclusive to all age groups. In addition, they have to make sure that at least some of their training and development activities bare characteristics that are attractive to older workers, such as learning on-the-job rather than in classroom settings (Zwick, 2015). Second, all parties involved should invest in a relational climate that respects age-diversity and that acknowledges the contributions of employees from different age groups. As leaders play an important role in framing employees' perceptions of the value of age diversity and in creating a positive climate, they should receive leadership trainings that equip them with the necessary skills to manage an age-diverse workforce (Wegge et al., 2012).

Limitations and Future Research Directions

Our findings have to be interpreted in light of the study's limitations. First, we measured all variables at the same time, which prohibits us from drawing causal inferences. To establish causality, longitudinal designs with at least three measurements points (Chan, 1998; Ployhart & Vandenberg, 2009), and experimental studies that manipulate perceived age-inclusive HR practices are needed. Second, all data have been collected using online questionnaires, opening up the possibility of common-method bias. By using multi-source data and separating the independent from the dependent variables in the online questionnaires (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), we aimed to address this risk. Third, some of the obtained ICC2 values were below the simple heuristic cut point of .70 (LeBreton & Senter, 2008). Thus, the observed relationships might have been underestimated due to the lower reliability of the group means (Chen & Bliese, 2002; Kozlowski & Hattrup, 1992). Fourth, the use of country-level differences between China and Germany to test the cross-

cultural generalizability of the model is limited because individual-level variations in cultural values provide important additional information. Thus, future research should examine the role of individual-level individualism-collectivism (e.g., Kirkman, Chen, Farh, Chen, & Lowe, 2009). Fifth, it may be possible that the detection of moderator effects has been distorted because of our relatively small sample size, unequal sample size across moderator-based sub-groups, and measurement error (Aguinis, Beaty, Boik, & Pierce, 2005; Aguinis, Boik, & Pierce, 2001). In such typical research situations, power to detect moderator effects is typically only around .203 (Aguinis et al., 2001, p. 306). Future research should therefore replicate our proposed moderating effects using more highly-power research designs.

Our findings provide several points of departure for future research. First, as our study operated at the dyadic level, future studies can complement our results by taking a multilevel perspective and studying the effects of age-inclusive HR practices on individual-level knowledge transfer in age-diverse workforces. For example, researchers may find that individual differences, such as age (Burmeister, Fasbender, & Deller, 2018), shape the strength of the effect of age-inclusive HR practices. Second, research on *perceived* similarity versus *actual* similarity constitutes a promising avenue for future research because “people react on the bases of perceptions of reality, not reality *per se*” (Ferris & Judge, 1991, p. 464).

Conclusion

In this study, we found that the relational perspective of HR practices provides a useful theoretical lens to understand how age-inclusive HR practices affect dyadic knowledge transfer in age-diverse coworker dyads. We also generated preliminary evidence about the cross-cultural generalizability of the proposed mechanism using China and Germany as examples of collectivist and individualist countries, respectively. Furthermore, we conceptualized dyadic age difference as a challenging boundary condition, but did not find that it inhibited the positive effects of age-inclusive HR practices. Our findings are especially

relevant for researchers and practitioners who are interested in the interaction of HRM, aging at work, and knowledge management.

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Table 1

Means, Standard Deviations, and Correlations of Studied Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Frequency of interaction	5.31	1.45							
2. Age-inclusive HR practices	4.24	1.01	.04	(.90)					
3. Age-diversity climate	5.05	0.86	.15	.63**	(.82)				
4. Country ^a			.08	-.04	-.02				
5. Dyadic age difference	21.49	5.64	-.08	.16*	.17*	.11			
6. Dyad knowledge sharing	5.32	0.84	.12	.39**	.40**	-.15	.02	(.83)	
7. Dyad knowledge receiving	4.83	0.90	.04	.38**	.33**	-.47**	-.18	.42**	(.71)

Note. *N* = 159 dyads. ^a0 = 103 Chinese dyads, 1 = 56 German dyads. Cronbach's alphas displayed on diagonal. **p* < .05, ***p* < .01, two-tailed.

Table 2

Modeling Results Predicting Age Diversity Climate and Dyadic Knowledge Transfer between Age-diverse Coworkers

Variable	Age-diversity climate		Dyadic knowledge sharing		Dyadic knowledge receiving	
	Estimate	SE	Estimate	SE	Estimate	SE
Frequency of interaction	.07*	.03	.04	.05	.02	.04
Age-inclusive HR practices	.51**	.06	.20**	.08	.27**	.07
Age-diversity climate			.21*	.11	.18*	.08
Country ^a	-.01	.11	-.20	.14	-.90**	.13
Dyadic age difference			-.00	.01	-.02	.01
Age-inclusive HR practices x Country	.13	.18				
Age-diversity climate x Dyadic age difference			-.02	.02	.01	.02
<i>R</i> ²	.41		.22		.43	

Note. *N* = 159 dyads. ^a0 = China, 1 = Germany. * *p* < .05, ** *p* < .01.

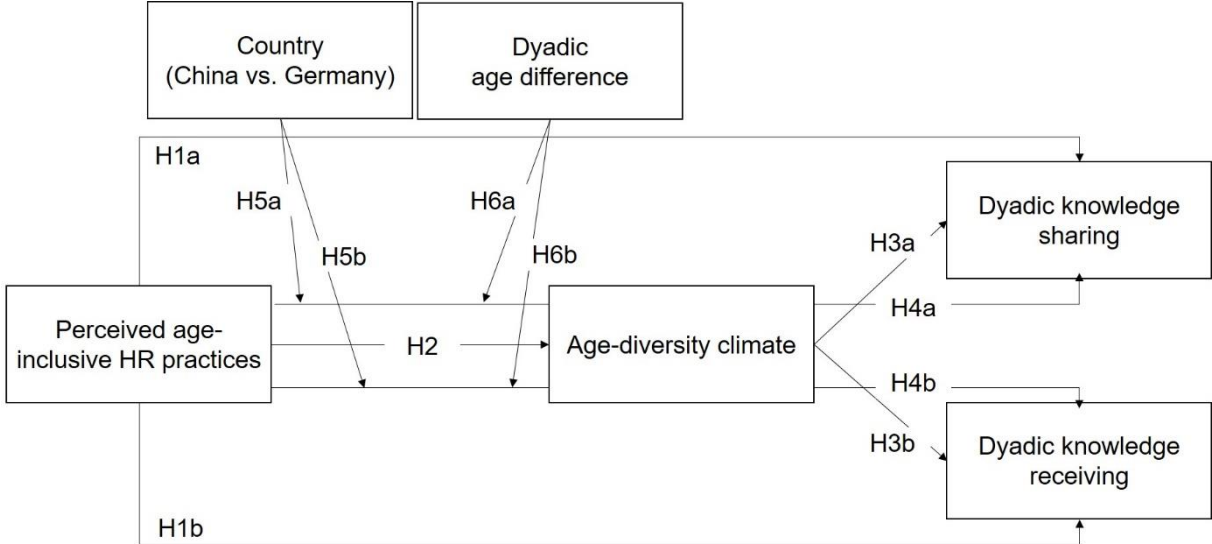


Figure 1. Hypothesized Research Model

Note. H = Hypothesis