

Reducing Age Bias and Turnover Intentions by Enhancing Intergenerational Contact Quality in the Workplace: The Role of Opportunities for Generativity and Development

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ABSTRACT

Based on socio-emotional selectivity and self-categorization theories, we developed and tested a model on how the interplay between employee age and opportunities for generativity and development predicts age bias and turnover intentions via intergenerational contact quality in the workplace. We hypothesized indirect effects of opportunities for generativity on outcomes through intergenerational contact quality among older workers only, whereas we expected that the indirect effects of opportunities for development are stronger for young compared with older workers. Data came from 321 employees in Belgium who responded to an online questionnaire. Results showed that age moderated the relationships of opportunities for generativity and development with intergenerational contact quality consistent with the expected patterns. Furthermore, age moderated the indirect effects of opportunities for generativity and development on age bias through intergenerational contact quality, but not on turnover intentions. Implications for future research and practical suggestions for managing intergenerational contact at work are discussed.

KEYWORDS: generativity, development, intergenerational contact, age bias, turnover

In the European Union (EU), the population of traditional working age (15–64 years) will shrink by 16% between 2004 and 2050, whereas the group of older people (+65 years) will grow by 77% (Carone & Costello, 2006). This demographic change is expected to lead to considerable increases in public spending in most EU member states. The impact on the welfare systems' sustainability will be severe, as older workers' activity rates are especially low in some countries. For example, in Belgium, only 41.7% of those aged 55–64 years were still working in 2013 (Higher Council for Employment [HCE], 2014).

Despite recommendations by the EU and the Organization for Economic and Cooperative Development (OECD) to introduce measures aimed at increasing the employment rate of workers older than 50 years, up to now little has been done in Belgium with regard to active aging. In fact, early retirement devices still appear to be widely used and age diversity practices are rarely implemented in organizations (Desmette & Vendramin, 2014). For instance, only 4.3% of employees who were hired in Belgium in 2003 were 55–65 years old.

In 2006, this proportion decreased to less than 2% (Vandenberghe, 2014). Perceptions of age discrimination in the workplace are higher among Belgian older workers compared with the average of 27 EU member states (Desmette & Vendramin, 2014).

However, not only older workers, also young workers can be targets of age discrimination (Finkelstein, Ryan, & King, 2013; Redman & Snape, 2002; von Hippel, Kalokerinos, & Henry, 2013). North and Fiske (2012) therefore recommended examining age prejudice from an intergenerational perspective. In the current study, we follow North and Fiske's recommendation and investigate young and older workers' age biases. We adopt a definition of *age bias* as the relative preference for ingroup (i.e., workers similar in age to oneself) compared with outgroup members (i.e., workers of different ages; Finkelstein, Burke, & Raju, 1995). As such, age bias is relevant to both young and older workers, in contrast to the concept of ageism which usually refers to older people only (Butler, 1980; Nelson, 2002). Moreover, because employers are concerned with older workers' intentions to retire

(Adams & Beehr, 1998) as well as with young workers' frequent job changes (Biemann, Zacher & Feldman, 2012; Ng & Feldman, 2009), this study investigates young and older workers' turnover intentions. *Turnover intentions* are defined as employees' voluntary intention to leave the organization permanently (Adams & Beehr, 1998; Zaniboni, Truxillo, & Fraccaroli, 2013).

We argue in this study that certain job resources interact with employees' age to reduce age bias and turnover intentions via the quality of intergenerational contact in the workplace. Socio-emotional selectivity theory (Carstensen, Isaacowitz, & Charles, 1999) suggests that as workers age, their priorities shift from striving for developmental goals to the pursuit of socio-emotional or generativity goals (Kooij, Lange, Jansen, & Dikkers, 2013). Based on this theoretical perspective, we assume that the effects of job resources that allow achieving generativity and development goals (i.e., *opportunities for generativity and development*) change with increasing age.

Job resources refer to those aspects of a job that are functional in achieving work goals and stimulate personal growth (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). We define *opportunities for development* as aspects of a job that are functional in achieving development goals. Based on Dweck (1986), development goals are defined as goals "in which individuals seek to increase their competence, to understand or master something new" (p. 1040). Applied to the work domain, opportunities for development involve job characteristics that relate to achievement and mastery, such as the possibility to engage in challenging work (Kooij et al., 2013). *Opportunities for generativity* refer to aspects of a job that are functional in achieving generativity-related goals. Generativity goals are related to the concern of adults to nurture and guide younger generations (Erikson, 1963; McAdams & de St. Aubin, 1992). In the workplace, opportunities for generativity consist of job features that pertain to teaching, training, and sharing skills with younger generations (Kooij et al., 2013).

Intergroup contact entails an "actual face-to-face interaction between members of clearly defined and distinguishable groups" (Pettigrew, 1998, p. 751, see also Allport, 1954). Intergroup contact is a central concept in self-categorization theory (Brown & Hewstone, 2005) and has been shown to be one of the most effective strategies for reducing prejudice and improving intergroup relations (Pettigrew & Tropp, 2006). In this study, we focus on the *quality of intergenerational contact*, that is, contact quality between different age groups (i.e., young and older workers). Research has shown that contact quality is more strongly associated with beneficial outcomes than contact frequency (Allport, 1954; Tam, Hewstone, Harwood, Voci, & Kenworthy, 2006).

Our goal in the present study is to examine interactions between employee age and opportunities for generativity and development as predictors of intergenerational contact quality which, in turn, is thought to negatively impact on age bias and turnover intentions. Our conceptual model is shown in Figure 1. Because generativity involves passing on knowledge and skills to the younger generation, we expect that opportunities for generativity positively predict intergenerational contact quality among older workers only, whereas we do not expect a relationship among young workers. Regarding opportunities for development, we assume that their positive effect on intergenerational contact quality is stronger for young compared with older workers. Intergenerational contact quality, in turn, is expected to negatively

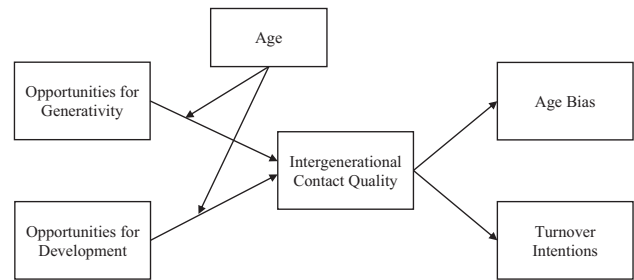


Figure 1. Conceptual model.

predict age bias and turnover intentions among both young and older workers.

With this study we aim to contribute to the growing literature on interactions between employee age and job characteristics and to provide empirical evidence for the proposition that the provision of certain job resources can have age-differentiated effects on workplace outcomes (Truxillo, Cadiz, Rineer, Zaniboni, & Fraccaroli, 2012). In this way, we contribute to the improvement of age management strategies in organizations (Naegele & Walker, 2012). Research on this topic is of particular importance as recent research has found that older workers react more negatively than young workers to a lack of fit between their needs and their job supplies (Krumm, Grube, & Hertel, 2013). In the following, we first review relevant theory and develop our hypotheses. Subsequently, we present and discuss the methods and results of an empirical study carried out in Belgium to test our hypotheses.

THEORETICAL BACKGROUND

Opportunities for Generativity and Development

The lifespan theory of socio-emotional selectivity (Carstensen et al., 1999) assumes that goals change with age, such that individuals' priorities increasingly shift from striving for gains in resources (e.g., information and broad social networks) to goals related to experiencing positive emotions which, for instance, can be achieved in close social relationships. Kessler and Staudinger (2007) suggested that these age-related goals are consistent with Erikson's (1963) psychosocial life stages. In order to form an identity and to prepare for future challenges, young people strive to acquire knowledge about the self and the world. Conversely, older people are more interested in generativity which contributes to personal fulfillment and a sense of immortality among people approaching the end of their lives (Lang & Carstensen, 2002).

Extending this lifespan perspective to the workplace, Truxillo and colleagues (2012) suggested that age moderates the effects of certain job characteristics on job attitudes. Several studies have examined interactions between age and job characteristics such as job complexity and job control (Zacher & Frese, 2009, 2011; Zacher, Heusner, Schmitz, Zwierzanska, & Frese, 2010), task variety and skill variety (Zaniboni, Truxillo, Fraccaroli, McCune, & Bertolino, 2014; Zaniboni et al., 2013), and job demands, control, and support (De Lange et al., 2010; Shultz, Wang, Crimmins, & Fisher, 2010). However, up to now, little is known about the role of job characteristics that specifically allow for generativity and development in the workplace. Nevertheless, several studies have provided support for propositions of socio-emotional selectivity theory. For example, Mor-Barak (1995)

showed that older adults especially value jobs providing opportunities for transfer of knowledge and experience to younger generations (i.e., opportunities for generativity).

In contrast, students perceive jobs as more satisfying when they teach them skills that are considered useful in their future work life (i.e., opportunities for development) (Loughlin & Barling, 2001). Moreover, Finegold, Mohrman, and Spreitzer (2002) found that the negative relationship between satisfaction with opportunities to develop technical skills and the willingness to change companies was stronger for young compared with older employees. In their meta-analysis, Kooij, De Lange, Jansen, Kanfer, and Dikkers (2011) showed that age was positively related to intrinsic motives such as connection with others, and negatively related to growth and extrinsic motives such as those involving compensation, benefits, and promotion. These findings also support generativity theory, which suggests that contributing to the society and helping others becomes more important with increasing age (Inceoglu, Segers, & Bartram, 2012; McAdams & de St. Aubin, 1992).

As a whole, these studies underline the necessity of considering how age interacts with job resources, because the fit between employees' age-related work goals and available job resources contributes to positive work outcomes such as low turnover intentions (e.g., Zaniboni et al., 2013). Moreover, older workers do not only have different work goals than young workers (Inceoglu et al., 2012), they also have been shown to react more negatively to a misfit between their needs and the available job supplies (Krumm et al., 2013).

Intergenerational Contact in the Workplace

Contact is one of the most effective strategies for reducing prejudice and improving intergroup relations (Allport, 1954). The contact hypothesis suggests that positive experiences with individual members of an outgroup (i.e., a group one does not belong to) can reduce prejudice towards the outgroup as a whole. Models of contact posit that, in the contact situation, groups are perceived to possess overlapping characteristics due to recategorization processes such as common identity (Gaertner & Dovidio, 2000) or dual-identity (Gonzalez & Brown, 2003). Consequently, groups are perceived as more similar to one another which, in turn, reduces outgroup bias (Gonzalez & Brown, 2006).

The contact hypothesis has received extensive empirical support in a variety of intergroup contexts, including settings with different age groups (Pettigrew & Tropp, 2006). For instance, after experiencing contact with older people, children and young people were less prejudiced toward older people (Allan & Johnson, 2009; Caspi, 1984; Harwood, Hewstone, Paolini, & Voci, 2005) and felt less anxious in the intergroup relationship (Hutchison, Fox, Laas, Matharu, & Urzi, 2010). Similar effects were found regarding older people: positive contact with young individuals contributed to reduced negative age-related attitudes toward young people as a group (Abrams, Eller, & Bryant, 2006; Pettigrew, Tropp, Wagner, & Christ, 2011; Tam et al., 2006).

Importantly, studies have shown that quality rather than quantity of contact leads to the most effective reduction in prejudice (Allport, 1954; Tam et al., 2006). The workplace in particular might contribute to the quality of contact between different age groups. For example, students' negative age-related attitudes have been shown to be reduced when they had contact with older people in the workplace, but not with

older relatives living at home (Allan & Johnson, 2009). According to Hutchison and colleagues (2010), students typically experience contact in the workplace positively because they perceive older workers (but not older relatives at home) as competent. Congruently, in two studies, Iweins, Desmette, Yzerbyt, and Stinglhamber (2013) showed that the more positive young workers' contact was with their older colleagues, the less negative their stereotypes and the more favorable their behavior were toward older workers. Supporting a dual-identity model, Iweins and colleagues (2013) also showed that effects of contact were mediated by a dual-identity combining an age-based identity and an organization-based identity (i.e., an inclusive identity).

Age Bias

According to social identity theory, individuals favor members of their ingroup over outgroup members in order to achieve a positive social identity (Tajfel, 1982). As one of the most salient cues for social categorization (Brewer & Lui, 1989; Dencker, Joshi, & Martocchio, 2007), age has been shown to induce prejudice and discrimination (North & Fiske, 2012). In the work context, meta-analyses showed that age bias is present among both young and older workers. For instance, young raters have been shown to be prejudiced toward older workers (Finkelstein et al., 1995; Gordon & Arvey, 2004). Conversely, older employers value older workers more than young workers, while this ingroup bias was not found among young employers (Forte & Hansvick, 1999). Supporting a general ingroup bias, Bertolino, Truxillo, and Fraccaroli (2013) showed that older raters assessed older workers more positively, whereas young raters favored young workers.

Turnover Intentions

Retaining older workers has become a challenge in industrialized societies, especially because of the wide use of early retirement devices in many organizations (Desmette & Vendramin, 2014; Tempest, Barnatt, & Coupland, 2002). Given the significant changes in mobility patterns (Ng & Feldman, 2009), it is also important to study how to retain young workers. Several studies reveal that job characteristics (Morgeson & Humphrey, 2006; Zaniboni et al., 2013) are important predictors of turnover intentions. Zaniboni and colleagues (2013) showed that increased task variety was related to lower turnover intentions for young workers and increased skill variety was related to lower turnover intentions among older workers. In a similar way, Liebermann, Wegge, and Müller (2013) found that intentions to remain in the same job until retirement were influenced by job demands, job resources, and health among older workers, while only job resources were significant predictors among young workers. Moreover, investigating intergenerational relationships in the workplace, Iweins and colleagues (2013) showed that the more young workers had positive contact with their older colleagues, the less they were willing to quit their job voluntarily. Extending these ideas, Iweins, Desmette, and Yzerbyt (2012b) showed that quality of intergenerational contact was negatively related to turnover intention among workers of all ages. As a whole, these studies lead to the conclusion that both young and older workers' turnover intentions may be reduced by specific job resources and intergenerational contact.

DEVELOPMENT OF HYPOTHESES

Socio-emotional selectivity theory suggests that knowledge-related and emotional goals change with increasing age, such that young

people prioritize development goals while older people focus on generativity goals (Carstensen et al., 1999; Kooij et al., 2013; Lang & Carstensen, 2002). Accordingly, young people may satisfy their development needs by seeking contact with older people, as these may be valuable sources of information due to their accumulated knowledge and expertise. In contrast, older people may satisfy their generativity needs through contact with young people to whom they can pass on their knowledge, skills, and experience.

Research showed that students better remembered a story when a narrative text was read by an older person rather than by college students or middle-aged persons (Mergler, Faust, & Goldstein, 1985). Complementing these findings, Adams, Smith, Pasupathi, and Vitolo (2002) observed that older women better recalled a story when the listener was a child rather than when the listener was the adult experimenter. In a similar vein Kessler and Staudinger (2007) showed that interactions between older adults and adolescents had positive consequences for both age groups when the context was made congruent with age-related needs. That is, when these researchers assigned the expert status to the older person in an intergenerational contact situation (i.e., when they supported older participants' generativity needs as well as young participants' identity formation needs), intergenerational contact resulted in more prosocial behaviors among adolescents and in higher cognitive performance among older adults. This was not the case when the young person was the expert in the situation (i.e., when neither young nor older participants' needs were fulfilled in the situation). As a whole, these findings suggest that providing resources that fulfill age-related needs (i.e., opportunities for development and generativity) has beneficial effects on the quality of contact between age groups and associated consequences.

Extending the propositions of socio-emotional selectivity theory to the work context, Truxillo and colleagues (2012) suggested that the relationship between social characteristics of the job and work outcomes is moderated by age. In particular, they proposed that opportunities to provide feedback to others (which is a concept similar to opportunities for generativity) should lead to more positive outcomes for older workers. Given that generativity involves passing on knowledge and skills to young workers, we expect that generativity opportunities will increase the quality of contact of older workers with young workers. With regard to young workers, we do not assume any relationship here as opportunities for generativity involve contact with relatively younger workers while intergenerational contact for young workers involves contact with older workers. Opportunities for development do not make a reference to either a young or an older age group, and thus they should be generally positively related to the quality of intergenerational contact of all workers. However, Truxillo and colleagues (2012) argued that receiving feedback from others (a concept similar to opportunities for development) should lead to more positive outcomes for young workers than for older workers.

Hypothesis 1: There is a positive relationship between opportunities for generativity and intergenerational contact quality among older workers.

Hypothesis 2: The positive relationship between opportunities for development and intergenerational contact quality is moderated by age, such that the

relationship is stronger for young compared with older workers.

Research further suggests that contact between age groups may reduce age bias (Pettigrew & Tropp, 2006). In two studies, Iweins and colleagues (2013) showed that the more often young workers had positive contact with their older colleagues in the department, the more favorable their stereotypes and their behaviors toward older workers as a whole. Moreover, effects of contact appear to be not limited to age bias reduction but to also extend to other workplace outcomes. Specifically, young and older workers' turnover intentions were lower when they had experienced positive intergenerational contact (Iweins et al., 2012b, 2013).

In sum, research suggests that fulfilling age-related needs (i.e., opportunities for generativity and development) leads to favorable workplace outcomes (Inceoglu et al., 2012; Zaniboni et al., 2013, 2014) due to improvements in intergenerational contact quality (Kessler & Staudinger, 2007; Truxillo et al., 2012).

Hypothesis 3: There are negative indirect effects of opportunities for generativity on (a) age bias and (b) turnover intentions through intergenerational contact quality among older workers.

Hypothesis 4: The negative indirect effects of opportunities for development on (a) age bias and (b) turnover intentions through intergenerational contact quality are moderated by age, such that the indirect effects are stronger for young compared with older workers.

METHOD

Participants and Procedure

Data for our study were provided by 321 French-speaking employees from Belgium. Of these participants, 236 (73.5%) were female and the average age was 41.17 years ($SD = 11.99$, range = 22–64 years). More specifically, 79 (24.6%) participants were between 22 and 29 years, 69 (21.5%) were between 30 and 39 years, 64 (19.9%) were between 40 and 49 years, 97 (30.2%) were between 50 and 59 years, and 12 (3.7%) were between 60 and 64 years. This distribution corresponds roughly with the age distribution of the Belgian workforce in 2013, which included 18.3% of workers aged 15–24 years, 62.6% of workers aged 25–54 years, and 19.1% of workers aged 55–64 years, HCE, 2014. The majority of participants held at least a high school degree (74.8%), worked in a white-collar occupation (79.8%), and worked as a permanent employee (81.3%) and on a full-time basis (71.9%). Participants worked in a broad array of sectors, including public administration (32.1%), public health (14.6%), and education (13.7%).

We collected data online using a snowball sampling procedure. An email with a link to the survey was sent to employees in various companies in Belgium (mainly in Wallonia). These employees were invited to forward the email to their colleagues. The email indicated that the purpose of the study was to understand the quality of life across the career, as well as the processes involved in improving well-being at work and quality of age management.

Measures

Opportunities for generativity and development

Opportunities for generativity and development were assessed with two scales adapted from Kooij and Van De Voorde (2011). Participants were asked to indicate how much their job provides them with opportunities for generativity and development. The opportunities for generativity scale included three items: “These days: you have had the opportunity to share your skills with younger colleagues,” “... you have had the opportunity to pass on your knowledge to the next generation,” and “... you have had the chance to teach and train others.” Cronbach’s α for the scale was .90. The opportunities for development scale included four items: “These days: you have had the opportunity to develop yourself professionally at work,” “... your job was challenging,” “... you have had the opportunity to learn something new at work,” and “... you have been able to fully use your skills and abilities at work.” Cronbach’s α was .91. Items on both scales were answered on 7-point scales ranging from 1 (*never*) to 7 (*always*), such that higher scores indicate greater opportunities for generativity and development.

Intergenerational contact quality

Based on the OECD (2006) classification that defines older workers as those aged 50 years and older, participants were asked to indicate their membership in one of two age groups. The “older workers group” included workers 50 years of age and older, and the “younger workers group” included workers younger than 50 years. To measure intergenerational contact quality, participants were asked to think about their co-workers that were members of the age group that was not their own.

Subsequently, quality of intergenerational contact was measured with five items from Iweins and colleagues (2013). Specifically, participants were asked to rate the extent to which their contact with co-workers from the respective other age group was positive, voluntary, natural, cooperative, and pleasant. Responses were provided on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), such that higher scores indicate higher quality of intergenerational contact. Cronbach’s α for the scale was .95.

Age bias

To measure age bias, we measured stereotypes about young and older workers with nine items each from scales developed by Fiske, Cuddy, Glick, and Xu (2002). These items measured perceptions toward outgroup (i.e., a group individuals do not belong to) and ingroup (i.e., the group individuals belong to) members. On 11-point scales ranging from 1 (0%) to 11 (100%), participants were asked to indicate

the extent to which they perceived young workers (i.e., aged less than 50 years) as competent (e.g., “How competent are young workers?”) and interpersonally pleasant (warmth; e.g., “How tolerant are young workers?”) ($\alpha = .90$). Similarly, participants were asked to rate the extent to which they perceived older workers (i.e., aged 50 years and above) on the competence and warmth items ($\alpha = .91$). Similarly to other studies on intergroup bias (Abrams et al., 2006; Iweins, Desmette, & Yzerbyt, 2012a), we computed the overall age bias score by subtracting participants’ mean outgroup members ratings (i.e., workers from the other age group) from the mean of their ingroup member ratings (i.e., workers from their own age group). Thus, higher scores indicate that participants evaluated ingroup members more favorably than the other age group.

Turnover intentions

We measured turnover intentions with four items from Iweins and colleagues (2013). An example item is “You want to leave your company.” Responses were provided on a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Cronbach’s α was .91.

Demographic and control variables

We measured participants’ age and a number of potential control variables, including gender, education, contract type, working time, industry sector, and working status, with single items. Results of analyses of variance indicated that the control variables were not significantly related to the dependent variables (age bias and turnover intentions), including the mediator (intergenerational quality). Thus, consistent with Becker’s (2005) recommendations, we did not include these variables in our analyses as controls.

Statistical Analyses

Our Hypotheses 1 and 2 are moderation hypotheses, and Hypotheses 3 and 4 are indirect effects hypotheses. We used the PROCESS macro (Hayes, 2012) to test these hypotheses. In addition to implementing moderated regression analyses, this macro uses bootstrapping to test the indirect effect for significance at different values of the moderator variable (i.e., age).

RESULTS

Table 1 shows the descriptive statistics and correlations of variables. Of note, age was positively related to opportunities for generativity ($r = .25, p < .001$) but not to the other variables. Opportunities for generativity correlated positively with opportunities for development

Table 1. Means, Standard Deviations, and Correlations of Variables

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Age	41.17	11.99	—					
2. Opportunities for generativity	4.44	1.62	.25**	(.90)				
3. Opportunities for development	5.07	1.33	.01	.41**	(.91)			
4. Intergenerational contact quality	5.40	1.22	.04	.27**	.36**	(.95)		
5. Age bias	0.07	1.56	.10	.02	-.10	-.28**	—	
6. Turnover intentions	2.91	1.74	.11	-.12*	-.52**	-.26**	.17**	(.91)

Note. $N = 321$. Reliability estimates (α), where available, are shown in parentheses along the diagonal.

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

($r = .41, p < .001$) and intergenerational contact quality ($r = .27, p < .001$), and negatively with turnover intentions ($r = -.12, p = .031$). Opportunities for development further correlated positively with intergenerational contact quality ($r = .36, p < .001$) and negatively with turnover intentions ($r = -.52, p < .001$). Intergenerational contact quality was also negatively correlated with age bias ($r = -.28, p < .001$) and turnover intentions ($r = -.26, p < .001$). Finally, age bias and turnover intentions were positively correlated ($r = .17, p = .003$).

Tests of Hypotheses

The results of the regression and indirect effect analyses are reported in Tables 2 and 3, respectively. In the first analysis, intergenerational contact quality was regressed on opportunities for generativity and development, age, and the two respective interaction terms. In the following two analyses, age bias and turnover intentions were regressed on opportunities for generativity and development, age, their interactions, and intergenerational contact quality. Table 2 shows that the predictor variables explained 16%, 10%, and 30% of the variance in

intergenerational contact quality, age bias, and turnover intentions, respectively.

According to Hypothesis 1, there is a positive relationship between opportunities for generativity and intergenerational contact quality among older workers. Table 2 shows that both opportunities for generativity ($B = .22, p = .033$) and the interaction between opportunities for generativity and age ($B = .16, p = .020$) significantly predicted intergenerational contact quality. We further probed the significant interaction effect by regressing intergenerational contact quality on opportunities for generativity at high (i.e., +1 *SD*) and low (i.e., -1 *SD*) values of age. Results of this simple slope analysis showed that the relationship between opportunities for generativity and intergenerational contact quality was positive among older workers ($B = .37, p < .001$) and nonsignificant among young workers ($B = .06, p = .491$). This interaction effect is shown in Figure 2. Together, these findings provide support for Hypothesis 1.

According to Hypothesis 2, the positive relationship between opportunities for development and intergenerational contact quality is

Table 2. Results of Regression Analyses Predicting Intergenerational Contact Quality, Age Bias, and Turnover Intentions

Predictors	Intergenerational Contact Quality	Age Bias	Turnover Intentions
Intercept	5.36 (.06)**	2.08 (.41)**	3.65 (.41)**
Opportunities for generativity	.22 (.07)**	.13 (.10)	.16 (.10)
Opportunities for development	.34 (.07)**	-.06 (.10)	-.94 (.10)**
Age	.00 (.07)	.15 (.09)	.17 (.09)*
Opportunities for generativity $\times$ Age	.16 (.07)*	.03 (.09)	.02 (.09)
Opportunities for development $\times$ Age	-.14 (.07)*	.06 (.09)	.12 (.09)
Intergenerational contact quality		-.37 (.08)**	-.14 (.07)
R^2	.16	.10	.30
F	12.44**	5.62**	22.71**

Note. $N = 321$. Unstandardized regression coefficients (B s) with standard errors in parentheses are shown. Predictors were z -standardized before computing the interaction terms.

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

Table 3. Conditional Indirect Effects of Opportunities for Generativity and Development on Age Bias and Turnover Intentions

Level of moderator	Indirect effect	Boot SE	Boot LL CI	Boot UL CI
Opportunities for generativity $\rightarrow$ Intergenerational contact quality $\rightarrow$ Age Bias				
Age - 1 <i>SD</i>	-.02	.03	-.10	.04
Mean age	-.08	.04	-.19	-.02
Age + 1 <i>SD</i>	-.14	.07	-.32	-.04
Opportunities for development $\rightarrow$ Intergenerational contact quality $\rightarrow$ Age bias				
Age - 1 <i>SD</i>	-.18	.07	-.34	-.08
Mean age	-.13	.05	-.25	-.05
Age + 1 <i>SD</i>	-.08	.05	-.21	-.01
Opportunities for generativity $\rightarrow$ Intergenerational contact quality $\rightarrow$ Turnover intentions				
Age - 1 <i>SD</i>	-.01	.02	-.05	.01
Mean age	-.03	.02	-.09	-.00
Age + 1 <i>SD</i>	-.05	.04	-.15	-.00
Opportunities for development $\rightarrow$ Intergenerational contact quality $\rightarrow$ Turnover intentions				
Age - 1 <i>SD</i>	-.07	.04	-.16	.01
Mean age	-.05	.03	-.12	.00
Age + 1 <i>SD</i>	-.03	.03	-.11	.00

Note. Number of bootstrap samples for bias corrected bootstrap confidence intervals: 5,000. Level of confidence for all confidence intervals: 95%. SE = standard error, LL = lower level, CI = confidence interval, UL = upper level, SD = standard deviation.

moderated by age, such that the relationship is stronger for young compared with older workers. Table 2 shows that both opportunities for development ($B = .34, p < .001$) and the interaction between opportunities for development and age ($B = -.14, p = .042$) significantly predicted intergenerational contact quality. A simple slope analysis showed that the positive relationship between opportunities for development and intergenerational contact quality was stronger for young workers ($B = .48, p < .001$) compared with older workers ($B = .21, p = .029$). This interaction effect is shown in Figure 3. These findings support Hypothesis 2.

Hypothesis 3 states that there are negative indirect effects of opportunities for generativity on (a) age bias and (b) turnover intentions through intergenerational contact quality among older workers. Table 2 shows that, overall, intergenerational contact quality had a negative effect on age bias ($B = -.37, p < .001$), but not on turnover intentions ($B = -.14, p = .063$). Bootstrap analyses (Table 3) showed that the indirect effect of opportunities for generativity on age bias was negative and significant for older workers ($-.14, p < .05$) and nonsignificant for young workers ($-.02$; the 95% confidence interval [CI] included zero). Similarly, the indirect effect of opportunities for

generativity on turnover intentions was negative and significant for older workers ($-.05, p < .05$) and nonsignificant for young workers ($-.01$; the 95% CI included zero). However, due to the nonsignificant effect of intergenerational contact quality on turnover intentions, the overall indirect effect was not significant. Thus, Hypothesis 3a was supported whereas Hypothesis 3b was not supported.

Hypothesis 4 proposes that the negative indirect effects of opportunities for development on (a) age bias and (b) turnover intentions through intergenerational contact quality are moderated by age, such that the indirect effects are stronger for young compared with older workers. The results of the bootstrap analyses in Table 3 indicate that the negative indirect effect of opportunities for development on age bias was stronger for young workers ($-.18, p < .05$) than for older workers ($-.08, p < .05$). In contrast, the indirect effects of opportunities for development on turnover intentions at different values of age were all nonsignificant (Table 3). These findings suggest that Hypothesis 4a was supported whereas Hypothesis 4b was not supported.

Finally, we note that opportunities for development ($B = -.94, p < .001$) and age ($B = .17, p = .049$) significantly predicted turnover intentions, suggesting that employees with higher opportunities for development and young employees were less likely to consider leaving their employer than employees with lower opportunities for development and older employees.

DISCUSSION

The goal of this study was to develop and test a model on the interplay between employee age and opportunities for generativity and development as a predictor of age bias and turnover intentions via intergenerational contact quality. Based on socio-emotional selectivity theory (Carstensen et al., 1999), we proposed that opportunities for generativity would be positively related to intergenerational contact quality among older workers only, and that the positive relationship of opportunities for development with intergenerational contact quality would be stronger among young compared with older workers (Hypotheses 1 and 2). Our results supported both assumptions. As expected, opportunities for generativity positively predicted intergenerational contact quality among older workers only. This suggests that opportunities for generativity are important to improve the quality of contact of older workers with young workers. Opportunities for development had a stronger positive effect on intergenerational contact quality among young compared with older workers. These findings suggest that both age groups experienced positive intergenerational contact when they had opportunities for development in the workplace, but that young workers benefited more from these opportunities than older workers. This is consistent with predictions by socio-emotional selectivity theory (Carstensen et al., 1999) and Erikson's (1963) theory on psychosocial life stages.

We further proposed that the interplay between age and opportunities for generativity and development would indirectly predict reduced age bias and turnover intentions via the quality of intergenerational contact (Hypotheses 3 and 4). Our assumptions were only supported for the outcome of age bias. On the one hand, higher opportunities for generativity were positively associated with intergenerational contact quality among older workers and, in turn, negatively predicted age bias against young workers. On the other hand, higher opportunities for development were more strongly positively associated with intergenerational contact quality among young workers and subsequently

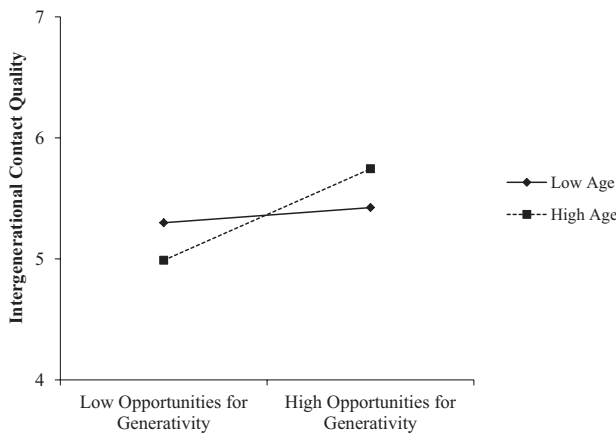


Figure 2. Relationship between opportunities for generativity and intergenerational contact quality moderated by age.

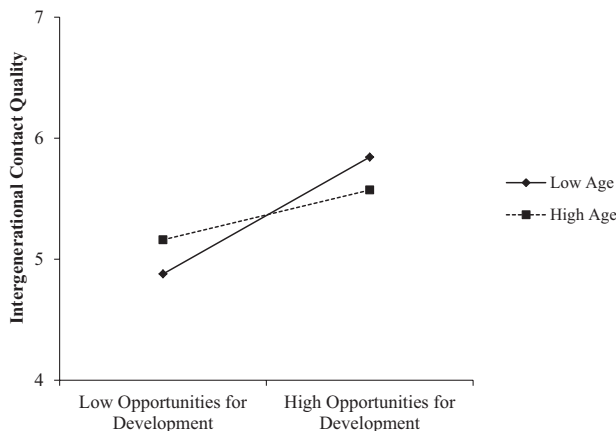


Figure 3. Relationship between opportunities for development and intergenerational contact quality moderated by age.

reduced age bias. In addition, we also found a weaker negative indirect effect of opportunities for development on age bias among older workers.

Opportunities for development were negatively associated with turnover intentions among both young and older workers. This finding is consistent with a study by [Maurer and Chapman \(2013\)](#), which found that organizational support for employees' learning and development significantly predicted work attitudes such as job and career satisfaction ten years later. Our study shows that, contrarily to common age stereotypes in the workplace (e.g., [Posthuma & Campion, 2009](#)), older workers seem to be still concerned with, and benefit from, opportunities for development. Moreover, even though the general effect of intergenerational contact quality on turnover intentions was not significant, we found a significant negative and indirect effect of opportunities for generativity on turnover intentions through intergenerational contact quality among older workers. In sum, our findings suggest that both opportunities for generativity and development are important contributors to active aging in the workplace.

Limitations and Future Research

Our study has a number of limitations that should be addressed in future studies. First, the cross-sectional design and self-report nature of our scales may raise concerns about common method bias. We attempted to address these concerns by ensuring respondent anonymity and reducing evaluation apprehension ([Podsakoff, MacKenzie, Lee, & Podsakoff, 2003](#)). In addition, significant interaction effects cannot be artifacts of common method bias ([Siemsen, Roth, & Oliveira, 2010](#)). The cross-sectional nature of our data also does not allow drawing conclusions about causality and age-related changes (aging) based on our data. Future research could examine our hypotheses experimentally or assess constructs at multiple measurement waves (i.e., several months, years, or decades apart).

Second, the nature of our sample (convenience sample of participants from different organizations) may be a limitation of the current study. Future research needs to replicate our findings and better control for potentially confounding individual and organizational characteristics. For instance, hierarchical level of employees engaging in intergenerational contact in the workplace may play a role, especially because relational demography (i.e., comparative similarity or dissimilarity in given demographic attributes of a superior and a subordinate; [Tsui & O'Reilly, 1989](#), p. 403) may affect job outcomes. In particular, being dissimilar (i.e., either young or older) in a subordinate position leads to more negative consequences (e.g., higher role ambiguity). Similarly, research on person-person fit suggests that age differences that violate age norms, such as situations where a young supervisor manages an older subordinate, may have negative implications for the quality of their relationships ([Perry, Dokko, & Golom, 2012](#)). However, when analyzing our data, we did not find significant relationships between intergenerational contact and variables related to organizational level (e.g., educational achievement, working status). This suggests that such demographic variables did not have a major impact on our findings.

Third, our definition and measure of opportunities for generativity was relevant for older workers only and prevented us from hypothesizing relationships between opportunities for generativity and other variables among young workers. As mentioned earlier, generativity refers to the concern of adults to nurture and guide younger generations ([Erikson, 1963](#)). Two out of the three items of our measure

of opportunities for generativity specifically asked participants to think about opportunities to do things for the younger generation. Therefore, the content of these items should not be related to the quality of young workers' contact with people from an older generation. Our measure of opportunities for generativity is thus limited in that it does not allow predictions and tests involving the group of young workers. We note, however, that we used the same measure of generativity as in previous studies (e.g., [Kooij et al., 2013](#)), thus contributing to this line of research on generativity in the work context. Indeed, additional analyses revealed that a large proportion of young workers in our sample also perceived opportunities to pass on knowledge to workers younger than themselves (i.e., more than 40% had an average score of 4 or higher on the measure) and also that there was substantial variance in this measure among young workers (i.e., $M = 3.69$, SD of 1.63 among workers aged 29 and younger; of note, $M = 4.87$, $SD = 1.56$ among older workers, Bonferroni post hoc all $p < .05$). These results suggest on the one hand that opportunities for generativity are also a relevant concept for young workers. On the other hand, our study supports [Erikson's \(1963\)](#) theory of psychosocial life stages and complements previous studies on generativity motives in the workplace (e.g., [Mor-Barak, 1995](#)) by showing that when the job context actually fulfills generativity needs, this has positive effects among older workers.

Future studies could explore effects of opportunities for generativity among young workers by measuring interpersonal contact more generally. In the present study, we examined intergenerational contact quality, as this construct has been shown to be one of the most effective ways to reduce age bias. However, socio-emotional selectivity theory suggests that young people, who prioritize knowledge-related over emotional goals, seek contact with a broad variety of other people. By contrast, older people prefer close social partners who elicit positive emotions ([Carstensen et al., 1999](#)). Consequently, young and older workers might seek and benefit from different kinds of social contact. In future studies, effects of generativity and development opportunities on different types of social contact (e.g., contact with another age group, contact with peer age group, qualitative and quantitative contact) and their consequences could be investigated.

Finally, another way to explore effects of opportunities for generativity among young workers might be to define the concept as involving opportunities to share knowledge and teach others without explicit reference to the younger generation. Recent research on reverse mentoring (i.e., when young workers teach older workers) likely is relevant in this regard ([Green, Eigel, James, Hartmann, & McLean, 2012](#)).

Theoretical and Practical Implications

Our findings extend current theorizing on age, age-differentiated job resources, and intergenerational contact in the following ways. First, they suggest that job-related opportunities for generativity and development should be taken into account in studies on successful aging at work ([Zacher, 2015](#)). Specifically, as suggested by [Truxillo and colleagues \(2012\)](#), job design models should take into account workers' changing needs across the lifespan when examining effects of job characteristics on work outcomes. Second, when the job context fulfills workers' development needs, turnover intentions for both age groups are reduced. This finding extends previous studies ([Zaniboni, Sarchielli, & Fraccaroli, 2010](#)), which found a negative relationship between opportunities for development on the job and early exit intentions among older workers. Future studies should focus on

mechanisms that might explain how opportunities for development may reduce turnover intentions in different age groups.

In addition, we contribute to the literature on age stereotypes and age bias. Studies on contact between different age groups have shown that contact leads to positive outcomes for both young and older adults (Abrams et al., 2006; Iweins et al., 2012b; 2013; Kessler & Staudinger, 2007). However, to the best of our knowledge, antecedents of positive intergenerational contact in the workplace had not yet been explored in the literature. Our study showed that opportunities for generativity and development, in combination with age, are associated with the quality of intergenerational contact.

This study may also have a number of practical implications that could help organizations implement efficient age management strategies. In particular, our findings highlight the importance of taking into account the moderating effects of age on the relationships between job characteristics and work outcomes. Therefore, organizations could attempt to fulfill age-related needs of young and older workers in order to reduce age biases at work through the improvement of intergenerational contact quality. Encouraging older employees to act as specialized experts and as mentors who pass on their experience and knowledge in the workplace might contribute to positive outcomes for all age groups. Indeed, these activities can fulfill generativity needs of older workers and, at the same time, development needs of young workers.

Moreover, organizations could generally pay increased attention to job design for older workers, because age was positively, albeit weakly, associated with turnover intentions and because older workers might react more negatively than young workers to a misfit between their needs and the available job supplies (Krumm et al., 2013).

CONCLUSION

In this study, we developed and tested a model of job-related opportunities for generativity and development, age, and intergenerational contact quality. We found that opportunities for generativity and development interacted with age in predicting intergenerational contact quality which, in turn, was negatively associated with age biases of both young and older workers. Future research could investigate additional work characteristics that might interact with age in predicting age biases and work attitudes as well as processes that mediate the relationship between opportunities for development and turnover intentions. Our findings contribute to practice by providing organizations with ideas on how to promote intergenerational contact quality and to reduce age bias and turnover intentions.

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