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**Retaining an age-diverse workforce through HRM:
The mediation of work engagement and affective commitment**

Short title: Retaining an age-diverse workforce through HRM

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Abstract

An aging population and an increasingly age-diverse workforce exemplify the complex challenge that age represents for most managers today. For that reason, research has shown the importance of designing and implementing human resources (HR) practices that meet age-related differences in workers' motives and needs. Drawing on signaling and social exchange theories, the current study investigated a first stage moderated parallel multiple mediation model. We examined the mediating roles of work engagement and affective commitment in the relationship between age-diversity practices and turnover intention, as well as the moderating role of work centrality in these mediated relationships. Using a sample of 802 Portuguese workers, the study supported the parallel multiple mediation hypotheses. Further, the findings revealed that work centrality moderated the relationship between age-diversity practices and turnover intention via work engagement, but not via affective commitment. Age-diversity practices may motivate those workers who place less importance on work to be more engaged, which, in turn, reduces their intentions to leave the organization. Moreover, all workers, regardless of the importance that work plays in their life, are more emotionally attached to the organization and more willing to stay when there are age-diversity practices. Thus, to retain a healthy and productive age-diverse workforce, organizations should implement age-diversity practices. Empirical and practical implications are discussed.

Keywords: age-diversity practices, turnover, commitment, work engagement, structural equation modeling

Introduction

The population is aging across the world as birth rates decrease and longevity improves. The age structure of the workforce is also shifting, as older workers represent a growing percentage of the working population and younger workers entering the labor market are insufficient to replace workers leaving into retirement (Alley and Crimmins, 2007; European Commission, 2017). The expectations of labor and skills shortages in the short term threaten the sustainability of organizations, increasing the pressure to attract younger workers and to retain older workers (Chand and Tung, 2014; Kulik et al., 2014).

These socioeconomic and political changes, combined with changes in the nature of work, have been drawing the attention of managers and researchers to an age-diverse workforce. Age-diverse workforces show a multitude of different knowledge, skills, experiences, values, and preferences that must be effectively managed in order for organizations to seize the potential of their best human capital (Backes-Gellner and Veen, 2013; Rabl and Triana, 2014). Human Resource Management (HRM) can have a fundamental role in age-diversity management by creating and adapting organizational policies and practices that contribute to the alignment between workers' needs and the organization's strategy and mission (Hertel et al., 2013; Riach, 2009). In fact, previous investigation has shown that workers' age has an effect on the associations between perceived human resources (HR) practices and job attitudes and behavior (Innocenti et al., 2013; Kooij et al., 2010; Kooij et al., 2013). Researchers have been especially striving to understand how organizations can encourage older workers to stay active for longer and to postpone retirement (e.g., Armstrong-Stassen and Ursel, 2009; Bal et al., 2012; Pak et al., 2019). Retaining the ever-greater number of older workers, who are the repositories of important knowledge and skills for organizational success, is an important strategy to minimize the looming impact of skill shortage.

Although research on these topics has been prolific, rarely has it focused on younger and middle-aged workers. In a time of shortage in the labor force, it is necessary that this retention strategy be extended to all workers, regardless of their age, to promote the sustainability of organizations, as well as to proactively tackle age barriers that can affect all workers. Instead of focusing only on late-career phases, HRM should create a workplace for successful aging at work for all workers (Zacher and Yang, 2016). In this manner, workers will have opportunities to achieve physical, social, and mental well-being in their workplace and to continue contributing positively to organizational performance, throughout their entire life (Zacher, 2015). In this paper we propose that age-diversity practices (bundles of age-sensitive HR practices) can help to retain the talent of all workers in organizations, regardless of their age.

Moreover, empirical research shows consistently that organizations that aim to retain their talents have to increase the engagement and commitment of the workforce (e.g., Marescaux et al., 2013; Mercurio, 2015). Indeed, according to Holtom and colleagues (2008), the key to organizational success is to acquire, develop, and retain high-quality employees, which can be achieved through HR policies and practices that contribute to higher levels of energy and dedication towards the job and the organization. Hence, grounded in signaling theory (Connelly et al., 2011; Spence, 1973) and social exchange theory (SET; Blau, 1964), we argue that work engagement and affective commitment may be important mediating mechanisms through which age-diversity practices affect turnover intention (i.e., a conscious and planned willingness of the worker to leave his or her current organization; Griffeth et al., 2000; Tett and Meyer, 1993).

Furthermore, identifying moderators in the relations between age-diversity practices, engagement and commitment may extend the knowledge about who benefits most from these practices. Given the interindividual differences in the importance that work plays in people's

lives, this study focuses on work centrality. Work centrality has been considered an important aspect of individuals' career trajectories as it influences their predisposition to behave in a certain way in relation to work (Uçanok and Karabatı, 2013). Such centrality can lead people to be more involved in work processes, more committed to the organization, and to invest more effort to achieve individual and organizational goals (e.g., Hirschfeld and Field, 2000). Therefore, we investigate the moderating role of work centrality in the relation between age-diversity practices and turnover intention through work engagement and affective commitment.

With this study, we aim to contribute to the literature in several ways. First, this investigation answers Truxillo and colleagues' (2015) call to consider the needs of workers of all ages, by examining the relevance of age-diversity practices, bundles of organizational practices that can accommodate and develop workers' skills, preferences, and goals, without targeting a particular age group. This study highlights the importance of adjusting HR practices to an age-diverse workforce as a mechanism to motivate workers to stay in the organization.

Second, this investigation extends previous research on the impact of age diversity management on individual and organizational outcomes (Ali and French, 2019). This study increases our knowledge of the processes underlying the relationship between age-diversity practices and turnover intention, uncovering the mediating role of work engagement and affective commitment in this relationship.

Finally, our study provides further understanding of how personal differences might affect the relationship between organizational practices and work engagement, by examining the moderating role of work centrality in the organizational setting. Thus, this study also contributes to the literature by explaining the extent to which work centrality can buffer the

effect of age-diversity practices on work engagement, as these practices can be especially relevant for the engagement of those workers who attribute less importance to work.

Theoretical Background and Hypotheses

The growing recognition that age-diversity needs to be included in HRM has triggered organizational initiatives to welcome workers of all ages and create a sustainable work environment that supports individuals in engaging and remaining in work throughout an extended career. In particular, HR practices might be used to accommodate and leverage age differences as well as to communicate to internal and external clients that the organization is concerned with fairness and inclusion of workers. Thus, in order for all workers to reach their full potential in a sustainable manner, HRM should create, communicate, and implement practices that support and promote the development of workers of all ages, that is, age-diversity practices (Bieling et al., 2015; Boehm et al., 2014). Age-diversity practices refer to workers' perceptions that organizational practices, policies, and procedures are age-inclusive and age-sensitive, as well as accommodative to age-related changes in workers' needs, preferences, and goals (Boehm et al., 2014; Kunze et al., 2013; Sousa et al., 2019). According to the framework proposed by Parker and Andrei (2020), age-diversity practices can be understood as a set of integrative, inclusion, and individualized strategies. Age-diversity practices involve integrative strategies through which all individuals can contribute to the organization with their abilities, knowledge, skills, and motivation, making them feel valued (Hertel et al., 2013; Truxillo et al., 2015). For example, Burmeister and colleagues (2018a) found that contexts where diversity is valued can facilitate knowledge transfer in age-diverse coworker dyads. In addition, age-diversity practices rely on inclusion strategies that aim to remove age barriers in recruitment, training, and career development. Since age discrimination can affect workers of all ages, these practices do not target a specific age group

(i.e., non-age biased), but rather are implemented to create a comprehensive age-inclusive workplace where all workers fit in, are accepted and fairly treated. Simultaneously, and building on a life-span perspective, age-diversity practices also require individualized strategies to adapt the work to the unique needs and goals of each person (e.g., work design).

The way that HR practices are perceived and interpreted by workers may not be in line with how managers intend to implement them (Khilji and Wang, 2006). Therefore, perceived age-diversity practices are the focus of the present paper since those practices are viewed by workers as a signal of the organizations' commitment to them (Den Hartog et al., 2004). Age-diversity practices elicit affective reactions in individuals toward their job and their organization as part of a sensemaking process that can be explained by signaling theory (Spence, 1973) and SET (Blau, 1964). Building on these theories, we develop the mediation hypotheses of this study.

Signaling and social exchange theories: The impact of age-diversity practices on turnover intention

Signaling (Spence, 1973) and social exchange (Blau, 1964) theories are frequently invoked in organizational behavior and HRM research to explain how organizational practices influence individuals' attitudes and behaviors at work (e.g., Alfes et al., 2013; Marescaux et al., 2013). These theories focus on the interdependent transactions between workers and employers to uncover the circumstances through which HR practices can influence workers' intentions to stay or leave the organization.

As interactions among people take place under conditions of uncertainty, the interpretation of signals is very important for individuals to decide if the other party can be trusted. Signaling theory is fundamentally concerned with how actors interpret the cues or signals sent by other actors (e.g., individuals, groups, organizations) to decide about their

trustworthiness (Connelly et al., 2011). Building on the work of Spence (1973), and considering an employer-worker relationship, individuals use signals from the organization to make conclusions about its intentions toward them. According to Connelly and colleagues (2011), the organization (i.e., the signaler) takes actions to deliberately communicate positive organizational attributes to the worker (i.e., the receiver). These signals are then interpreted by receivers, and translated into perceived meaning (Connelly et al., 2011). Thus, when organizational practices are implemented, workers interpret these as a signal of the level of investment the company is making in its workers (Den Hartog et al., 2004).

At its core, SET refers to a series of interdependent and contingent interactions established by an individual with another party (Blau, 1964). Social exchanges involve unspecified obligations in which the actors expect to receive something from the counterparty when they supply a benefit – the principle of reciprocity (Cropanzano and Mitchell, 2005). However, as these interactions focus essentially on socio-emotional aspects (e.g., support, influence), individuals do not know the exact nature of the return, i.e., how and when the counterparty will reciprocate (Shore et al., 2006). For this reason, the development of trust between the parties is critical for establishing a long-term relationship.

Tsui and colleagues (1997) examined the reciprocal interdependence that characterizes social exchanges from the employers' perspective. The authors found that in a balanced worker-organization relationship there is a comprehensive consideration of an individual's well-being and a mutual investment from both parties. Conversely, in an underinvestment relationship, the worker is fully committed to the organization that reciprocates with essentially monetary rewards (Tsui et al., 1997). Hence, according to SET, when organizational initiatives are in place, workers will feel trusted and supported by the organization, and they will likely reciprocate with attitudes valued by the counterparty, establishing high-quality exchange relationships (Cropanzano et al., 2017; Tsui et al., 1997).

Taken together, these theories indicate that HR practices are perceived as signals of the organization's concerns with workers' well-being, initiating a relationship based on social exchanges: the more the worker trusts the good intentions of the organization, the more he or she tends to reciprocate with favorable attitudes and behaviors. In fact, in the last two decades and drawing on these theories, researchers have proposed and demonstrated that HR practices are an important mechanism to retain the best talents, identifying these practices as an important predictor of the desire to remain in the organization and turnover intentions (e.g., Allen et al., 2003; Kehoe and Wright, 2013; Kuvaas, 2008).

In this study, we argue that age-diversity practices, as a set of specific HR practices, can also be an important antecedent of turnover intention. According to the principles of these theories, age-diversity practices can be perceived by workers as a set of opportunities for maintaining their physical and mental health, developing skills and knowledge, and advancing their career. This individual interpretation will be a signal that the organization cares for workers' well-being and is interested in keeping the best human capital, regardless of their age, leading to greater motivation to stay in the organization.

By implementing age-diversity practices, organizations are recognizing and valuing their workers, who in response will likely show fewer turnover intentions. We propose that the relationship between age-diversity practices and turnover intention can be explained by two processes: work engagement and affective commitment. The first one is job-related and refers to a persistent, positive state of mind at work that is characterized by vigor (i.e., being charged with energy), dedication (i.e., being enthusiastically involved in work), and absorption (i.e., being fully concentrated and engrossed in work) (Bakker et al., 2008; Schaufeli et al., 2002). The second process is organization-related and can be defined as the psychological attachment the worker develops toward his/her organization mainly due to his/her previous work experiences (Mathieu and Zajac, 1990; Meyer and Allen, 1991).

Work engagement and affective commitment are established as two related but clearly different concepts (Hallberg and Schaufeli, 2006; Schaufeli and Bakker, 2010). Work engagement represents perceptions that are based on the work itself (i.e., one's formal role), whereas affective commitment refers to an emotional attachment to the organization as a whole (i.e., a person's attitude toward the organization) (Christian et al., 2011; Hallberg and Schaufeli, 2006). For example, people can be fulfilled with energy and motivated to put forth a lot of intensity and attention in their jobs, but they may not have an emotional connection to the organization. In this study we propose that both concepts can mediate the influence of age-diversity practices on turnover intention, but work engagement and affective commitment have different roles in this relationship.

The mediating role of work engagement

The topic of work engagement has attracted growing interest over the past two decades due to the competitive advantage it represents to organizations. In fact, engagement has become a term often used in the discourse of practitioners because of the findings that show the influence of work engagement in individual (e.g., work-related attitudes, turnover intention) and organizational outcomes (e.g., team performance, organizational performance) (Bailey et al., 2017; Christian et al., 2011).

The relevance of this topic to explain organizational success prompted research to identify the antecedents of employee engagement. One trend in the literature is the investigation of the impact of HRM systems on work engagement. Findings show that the implementation of HRM policies, practices, and procedures create conditions for people to fully invest their physical, cognitive, and emotional resources in their work roles (Alfes et al., 2013; Bal et al., 2013). Moreover, HR practices engender positive experiences at work by satisfying needs of autonomy, belongingness, and competence (Marescaux et al., 2013).

Consequently, workers find their work more motivating and fulfilling and feel obliged to invest their personal energy in their tasks (Van den Broeck et al., 2008).

Following this reasoning, we argue that age-diversity practices are an important predictor of work engagement by showing that the organization is focused on maintaining a healthy and productive workforce. Age-diversity practices provide all workers, regardless of their age, with resources that facilitate their job tasks. For example, work should be adjusted to workers' levels of functioning, which can change over time, such as changes in job design (e.g., reduction of workload, job enrichment). Also, age-diversity practices can help individuals to develop the skills and knowledge needed to achieve a good performance, driving workers to focus their energy on their work. Training programs are beneficial to the sense of competence of individuals if these activities are age-sensitive and respond to specific needs. This means that a younger worker could benefit, for instance, from training in soft skills (e.g., communication, conflict management), while for an older worker it might be more important to receive training about a new software.

In line with signaling theory, age-diversity practices may be a signal to workers that the organization is trustworthy and willing to protect their resources, whereas the lack of these practices may signal that the organization is not concerned with the workers' well-being and retention. This strategy can, according to SET, be interpreted by workers as an investment of the organization in a long-term relationship in which there is continuous trade of benefits and resources from the organization (age-diversity practices) for an individual effort (work engagement) (Cropanzano and Mitchell, 2005; Cropanzano et al., 2017). If workers perceive that there are age-diversity practices in their organization, they will likely invest more energy and effort to perform their tasks, and be more involved and fully concentrated in their work.

While age-diversity practices will likely contribute to an engaged workforce, work engagement is expected to influence turnover intentions. In line with previous research (e.g.,

Halbesleben, 2010; Marescaux et al., 2013), individuals who manifest increasing levels of energy, and involvement in their work and feel passionate about what they do are more willing to stay in the organization. By implementing age-diversity practices, organizations communicate to workers that they are willing to empower, develop, and manage them according to their age-related needs and goals. As repayment for the resources they receive from the organization, workers show their willingness to dedicate their efforts and abilities to the work task, and to remain in the organization. On the other hand, in the absence of age-diversity practices, workers will likely feel less involved, enthusiastic, and empowered at work, and more likely to leave the organization (Tsui et al., 1997).

Building upon the theories of signaling and social exchange, we argue that age-diversity practices, which are age-sensitive HR practices, are positively related to work engagement that, in turn, will be negatively linked to turnover intention. Therefore:

Hypothesis 1: Work engagement mediates the relationship between age-diversity practices and turnover intention.

The mediating role of affective commitment

While work engagement has attracted considerable attention in the latest HRM literature, the topic of affective commitment has a long and rich tradition in this field. Affective commitment has the strongest and most consistent relationship with organizational citizenship behavior, absenteeism, turnover, and performance (Meyer et al., 2002; Solinger et al., 2008), compared to continuance commitment and normative commitment. Due to its importance, theoretical and empirical research has explored the causes and trends in the development of affective commitment (Gao-Urhahn et al., 2016). Particularly, research has demonstrated that HR practices are positively related to high levels of affective commitment (e.g., Kooij and Boon, 2018; Morrow, 2011).

In this study we argue that when organizations implement age-supportive practices, that recruit, develop, recognize, and reward workers of all ages, they promote and reinforce commitment. Thus, following the principles of signaling theory and SET, we propose that age-diversity practices will have a positive impact on affective commitment. Through initiatives that facilitate the acceptance of people from different age groups, age-diversity practices can help to increase emotional attachment to the organization by providing workers with a sense of support and fair treatment. Also, age-diversity practices can enhance workers' perceptions of career planning and promotion opportunities within the organization. For example, the implementation of a performance evaluation system that is age-sensitive will increase the perception of justice among colleagues and attenuate negative age stereotypes within the organization such as the belief that older workers are less motivated and less productive than younger workers (Posthuma and Campion, 2009). Thus, it is important for organizations to create a sense of inclusion and appreciation of diversity, signaling workers of all ages that they are welcome and valued in the organization, which will result in higher levels of affective commitment.

We also expect that affective commitment is an important predictor of turnover intention as demonstrated by previous research (e.g., Mercurio, 2015). The perception that there are age-diversity practices convey the organizations' concern for the individuals' well-being, which creates a greater obligation of workers to return the investment. Workers will likely feel more identified with and involved in the organization, and be more inclined to stay in the organization. However, if workers feel HR practices are not accessible to individuals of all ages, they will likely show a decreasing level of emotional attachment to the organization that might result in a greater desire to leave it. Therefore, we propose:

Hypothesis 2: Affective commitment mediates the relationship between age-diversity practices and turnover intention.

The moderating role of work centrality

The importance of work to the human being has been a topic debated in disciplines ranging from economics to psychology, from sociology to medicine. The assumption that work plays a fundamental role in individuals' life has received empirical support, leading researchers to establish the concept of work centrality (Mannheim et al., 1997; MOW, 1987). Work centrality is defined as the beliefs that individuals have about the value and importance of work in their lives, regardless of one's current job (Hirschfeld and Feild, 2000; Uçanok and Karabatı, 2013). Individuals who have high work centrality perceive work as a main component of their life, which is related with more positive attitudes at work such as relational psychological contracts (Bal and Kooij, 2011), and outside of it such as work-family conflict (Michel et al., 2011). Higher levels of work centrality are also associated with increased work engagement and commitment, and reduced turnover intention (Bal and Kooij, 2011; Hirschfeld and Feild, 2000; Mannheim et al., 1997). For example, a study from Arvey, Harpaz, and Liao (2004) revealed that lottery winners who considered work as a core component of their lives were less likely to quit working than those who viewed work as less important in their lives.

We argue that work centrality buffers the positive relationships of age-diversity practices with work engagement and affective commitment. People who consider work as a core component of their life are already more predisposed to invest time and energy in the job and in their relationship with the organization (Bal and Kooij, 2011). Hence, it is expected that these individuals are less responsive to various work experiences such as age-diversity practices than are individuals with low work centrality. Conversely, people who score low on work centrality perceive age-diversity practices as a motivational mechanism to invest building a mutual relationship with the employer, which will result in higher work engagement and affective commitment. Individuals with low work centrality attach little

value to work, and the presence of age-diversity practices can trigger an increased sense of obligation for workers to invest more energy, be more enthusiastic and immersed in their work, and become more involved with the organization (Hirschfeld and Feild, 2000; Sharabi and Harpaz, 2010).

We argue that age-diversity practices are especially important to the work engagement and affective commitment of those workers who see work as less central in their lives.

Therefore, we propose the following hypotheses:

Hypothesis 3: Work centrality moderates the relationships of age-diversity practices with a) work engagement and b) affective commitment, such that these positive relationships will be weaker for high (vs. low) levels of work centrality.

Finally, we assert that work centrality will also moderate the indirect effects of age-diversity practices on turnover intention through work engagement and affective commitment. Age-diversity practices encourage workers to feel energized, enthusiastic, engrossed in what they do, and therefore are more inclined to stay in the organization, even when work plays a minor role in the lives of people (Bal and Kooij, 2011; Cropanzano and Mitchell, 2005). Also, such practices create an emotional bond between the worker and the organization, which is particularly important for individuals with low work centrality, and results in the individual's desire to remain in the organization (Kooij et al., 2010; Mannheim et al., 1997).

Thus, we argue that when individuals attach little value to work, the effect of age-diversity practices on turnover intention via work engagement and affective commitment will be greater than when people consider work as central in their lives. Therefore, we hypothesize that:

Hypothesis 4: Work centrality moderates the relationships between age-diversity practices and turnover intention via a) work engagement and b) affective

commitment, such that these indirect effects will be weaker for high (vs. low) levels of work centrality.

The conceptual model of the study is represented in Figure 1.

INSERT FIGURE 1 ABOUT HERE

Method

Sample and Procedures

The data used in the present study were part of a larger survey about work attitudes of an age-diverse workforce in Portugal. Participants took about 15 minutes to complete the questionnaire that had both an online and a paper and pencil version. Several organizations from different industries and both private and public sectors were invited to participate in this study. The research team sent an e-mail to the HR department of each of these organizations explaining the purpose of the study and asking for their collaboration by disseminating the questionnaire among their workers. Data were also collected by a group of students enrolled in undergraduate and master programs at XXXXX, through their personal contacts and in their workplaces and internship places. Students participated in this research as part of their academic training and received credits for doing so.

The sample consisted of 802 Portuguese workers, aged between 18 and 72 years old ($M = 38.42$, $SD = 12.82$). Of the total respondents, 55.6% were female, 56.4% completed higher education, and 29.5% graduated from high school. About 41.8% had worked for more than 20 years, and 28.3% for less than five years. Most of the participants worked in the private sector (63.5%). Fifteen percent of the participants worked in the health and social support sector, 13.1% worked in sales, and 12.6% in education and training. About 49% of the respondents

had been in the organization for a maximum of five years, and 23.1% were in the organization for more than 20 years.

Measures

All participants were fluent in Portuguese, which required the questionnaire to be developed in the Portuguese language. The work centrality scale was originally developed in the Portuguese language by Lobo, Gonçalves, and Tavares (2016). The work engagement scale had already been adapted and validated for Portugal (Sinval et al., 2018), as had the affective commitment scale (Nascimento et al., 2008). For age-diversity practices and turnover intention, the translation-back-translation process (Brislin, 1970) was followed, taking into consideration the recommendations of van de Vijver and Hambleton (1996). Unless otherwise noted, participants answered on a six-point agreement scale ranging from 1 (strongly disagree) to 6 (strongly agree).

Age-diversity practices

Age-diversity practices were measured using a seven-item scale (Sousa et al., 2019). This scale assesses the extent to which workers perceive an inclusive and non-discriminatory treatment of workers of all ages regarding age-sensitive HR practices. Example items include: “Employees are developed (i.e., training) and advanced without regard to the age of the individual” and “Experience, skills, and knowledge of workers are recognized, irrespective of their age”. The Cronbach’s alpha showed good internal reliability ($\alpha = .87$).

Work centrality

Work centrality was assessed using ten items from Lobo and colleagues (2016). It refers to people’s beliefs regarding the degree to which the work role is central in their lives. A

sample item is: “The most important things that happen to me involve my work”. The internal consistency coefficient for this scale was good ($\alpha = .86$).

Work engagement

Work engagement was measured using the short version of the Utrecht Work Engagement Scale with nine items (UWES-9) (Schaufeli et al., 2006; Sinval et al., 2018). The scale assesses a positive, fulfilling work-related state of mind (Schaufeli et al., 2002). An example item is: “I am enthusiastic about my job”. Participants indicated how often they felt the way described in the statements, answering on a seven-point rating scale that ranges from 0 (never) to 6 (always). In this study, since the focus is on the overall concept of engagement, the UWES-9 scale was used as a unidimensional scale (Hallberg and Schaufeli, 2006). The scale revealed very good internal consistency ($\alpha = .94$).

Affective commitment

Workers’ affective commitment was assessed using a six-item measure from Allen and Meyer (1990; Nascimento et al., 2008). The scale captures workers’ emotional attachment to, identification with, and involvement in the current organization. Example items are: “This organization has a great deal of personal meaning for me” and “I do not feel like ‘part of the family’ at my organization” (reverse). The Cronbach’s alpha showed good internal consistency ($\alpha = .84$).

Turnover intention

Turnover intention was assessed through a three-item scale. It refers to individuals’ desire to leave the organization that includes thinking frequently about it, actively seeking a new job in a different organization, and thinking about leaving in the following year. One

item was adapted from Landau and Hammer (1986): “I am currently searching for a job in another organization”. Two items were developed: “I often think about leaving this organization” and “About my future in this organization, I think of leaving within the next year”. The Cronbach’s alpha revealed good internal reliability ($\alpha = .84$).

Control variables

Age, measured in years, was included in the model as a control variable. Previous research shows that age may affect perceived HR practices (e.g., Kooij et al., 2010), work engagement (e.g., Kim and Kang, 2017), organizational commitment (e.g., Mathieu and Zajac, 1990), and turnover intention (e.g., Cotton and Tuttle, 1986).

Analytical Strategy

A Confirmatory Factor Analysis (CFA) was conducted to validate the full measurement model with the proposed five factors of the study: age-diversity practices, work centrality, work engagement, affective commitment, and turnover intention. Moderated mediation models were tested through Structural Equation Modeling (SEM). The analyses were conducted with Analysis of Moment Structures (AMOS, v. 25; Arbuckle, 2017). To test direct and indirect effects, bootstrapping was used to create confidence intervals (CIs) (Cheung & Lau, 2008).

In SEM, to define the products that represent the latent interaction (moderation), the matched-pair strategy of Marsh, Wen and Hau (2004) was followed. This strategy is appropriate for this model considering the great number of indicators involved in the moderation, which can result in an under-identified model (Cortina et al., 2001). First, all the indicators of age-diversity practices (independent variable) and work centrality (moderator) were standardized. Second, the multiplicative terms of the latent interaction factor were

created, by matching the items in terms of their quality. Seven matched-pair products were created as age-diversity practices had seven items and work centrality had ten. All seven indicators of age-diversity practices were matched with the best seven indicators of work centrality: the best indicator of age-diversity practices' scale was matched with the best indicator of work centrality's scale (Marsh et al., 2004). Third, we proceeded with the test of the research hypotheses.

Measurement Model

The measurement model was evaluated based on multiple goodness-of-fit measures: the chi-square test (χ^2), the normed chi-square (χ^2 / df), the comparative fit index (CFI), the Tucker-Lewis index (TLI), the root mean squared error of approximation (RMSEA), and the standardized root mean square residual (SRMR) (Hair et al., 2010; Hu and Bentler, 1999). The measurement model reached acceptable fit, $\chi^2 (df) = 1545.44 (528)$, $p < .001$, $\chi^2 / df = 2.93$, CFI = .94, TLI = .93, RMSEA = .05, SRMR = .06. This five-factor measurement model was compared with a range of models with fewer factors, as showed in Table 1.

INSERT TABLE 1 ABOUT HERE

Since there was a large correlation between work engagement and affective commitment (latent $r = .75$) (Cohen, 1992), a four-factor model (model 2) in which these two constructs were combined into a single factor was also examined. Model 2 showed an acceptable fit, $\chi^2 (df) = 1979.56 (532)$, $p < .001$, $\chi^2 / df = 3.72$, CFI = .92, TLI = .91, RMSEA = .06, SRMR = .07, but still a significantly poorer fit than the five-factor model ($\chi^2_{dif} (df) = 434.12 (4)$, $p < .001$). The results also showed that the hypothesized five-factor model yielded a better fit than any alternative three- or two-factor model.

Common Method Variance

To address concerns of common method variance (Podsakoff et al., 2003), the Harman's single factor test and the common method latent factor were tested. As shown in Table 1, a single-factor model revealed a poor fit to the data. Also, the goodness-of-fit of the full-measurement model and the model with the common method latent factor were compared by calculating CFI-difference (Byrne, 2016). The difference between model 1 (full-measurement model) and the six-factor model was .021, which was below the rule of thumb of .05 suggested by Bagozzi and Yi (1990). These results support that common method variance did not influence the validity of the factor structure.

Finally, following the recommendations of Richter, Sinkovics, Ringle, and Schlägel (2016), the potential effects of multicollinearity in the full-measurement model were also examined. The variance inflation factor (VIF) ranged between 1.33 and 1.79, which is below the rule of thumb of 5, and the values of tolerance ranged from .56 to .75, which is greater than 0.1 (Hair et al., 2010). The highest value of condition index was 12.49, which is lower than the threshold value of 30 (Cohen et al., 2003). Also, all correlations were lower than 0.90, meaning that variables were not highly correlated (Tabachnik and Fidell, 2013). Thus, multicollinearity does not affect model fit or the predictions of the model.

The data were collected from a single source (i.e., workers) using self-reported measures. Note that as the focus of this study was workers' perceptions of age-diversity practices and their work-related outcomes, it was not adequate to obtain the information from alternative sources such as colleagues or supervisors.

Results

Table 2 presents the descriptive statistics of the variables under study. As anticipated, age showed significant correlations with all constructs: it was negatively related to age-

diversity practices ($r = -.09, p < .05$) and turnover intention ($r = -.36, p < .001$), and positively associated with work centrality ($r = .10, p < .05$), work engagement ($r = .15, p < .001$), and affective commitment ($r = .34, p < .001$). All the variables in the study were significantly correlated.

 INSERT TABLE 2 ABOUT HERE

Structural Model

The hypothesized moderated mediation model showed an acceptable fit, $\chi^2(df) = 2228.05(822), p < .001, \chi^2/df = 2.71, CFI = .92, TLI = .92, RMSEA = .05, SRMR = .06^1$. Hypothesis 1 predicted that work engagement mediated the relationship between age-diversity practices and turnover intention. As shown in Table 3, results revealed that the indirect effect was significant ($B = -.10, 95\% \text{ Boot CI} = -.16, -.05$), providing support for Hypothesis 1. Findings also supported Hypothesis 2, which proposed that affective commitment would mediate the relationship between age-diversity practices and turnover intention ($B = -.24, 95\% \text{ Boot CI} = -.33, -.17$). The more age-diversity practices were perceived by workers, the more engaged in their work and committed to their organization they were, which in turn decreased turnover intention. Without the control variable, the results for the indirect effects via work engagement ($B = -.11, 95\% \text{ Boot CI} = -.17, -.05$) and affective commitment ($B = -.30, 95\% \text{ Boot CI} = -.38, -.22$) were very similar. The direct effect became not significant with the introduction of the two mediators ($B = -.07, p > .05, 95\% \text{ Boot CI} = -.19, .06$).

¹ Although the focus of this study is the overall concept of engagement, several authors use the three-factor solution of the UWES-9 and, therefore, that alternative was also tested. However, in this study the moderated mediation model with a three-dimensional representation of work engagement did not achieve good-fit indices ($\chi^2(df) = 3298.58(816), p < .001, \chi^2/df = 4.04, CFI = .87, TLI = .85, RMSEA = .06, SRMR = .07$). The Akaike Information Criterion (AIC) increased from 2562.05 to 3558.58, yielding a worse fit.

Hypothesis 3a stated that work centrality moderated the relationship between age-diversity practices and work engagement. Results supported the hypothesis ($B = -.16$, $t = -3.68$, $p = .001$, 95% Boot CI = $-.26, -.06$). Therefore, post-hoc probing was conducted to test the main effect of age-diversity practices on work engagement at specific levels of work centrality. The interaction effect was plotted using one standard deviation below (-1SD) and above (+1SD) the mean of work centrality (Aiken and West, 1991; Preacher et al., 2006).

 INSERT TABLE 3 ABOUT HERE

As can be seen in Figure 2, the relationship between age-diversity practices and work engagement is weaker when work centrality is high ($B = .31$, $t = 4.63$, $p < .001$, 95% Boot CI = $.18, .44$) and stronger when work centrality is low ($B = .62$, $t = 9.52$, $p < .001$, 95% Boot CI = $.50, .75$). Hence, these results supported Hypothesis 3a. Hypothesis 3b proposed that work centrality would moderate the relationship between age-diversity practices and affective commitment. Unexpectedly, this hypothesis was not supported by the findings ($B = -.07$, $t = -1.51$, $p = .171$, 95% Boot CI = $-.17, .03$).

 INSERT FIGURE 2 AROUND HERE

Hypothesis 4a posited that work centrality would moderate the indirect relationship between age-diversity practices and turnover intention via work engagement. The significant index of moderated mediation was 0.03 (95% CI = $.01, .07$), showing that as work centrality decreases, the indirect effect of age-diversity practices on turnover intention via work engagement increases (Figure 3). The simple slopes test provides further support for Hypothesis 4a ($B_{\text{low}} = -.13$, $t = -3.39$, $p = .001$, 95% Boot CI = $-.21, -.06$; $B_{\text{high}} = -.06$, $t = -2.78$, $p = .001$, 95% Boot CI = $-.12, -.03$).

INSERT FIGURE 3 ABOUT HERE

Finally, hypothesis 4b stated that the indirect relationship between age-diversity practices and turnover intention via affective commitment is moderated by work centrality. Since there is no significant moderation effect of work centrality on the relationship between age-diversity practices and affective commitment, this hypothesis was also not supported. The index of moderated mediation was 0.03 (95% CI = -.19, .06).

The results of the moderated mediation model are depicted in Figure 4. The predictors of turnover intention included in this model explain 49.9% of its variance.

INSERT FIGURE 4 ABOUT HERE

Discussion

A great challenge for contemporary organizations is how to attract, recruit, and retain workers, and specifically how to keep them motivated and productive without compromising their health. The present study examined the mediating effects of work engagement and affective commitment in the relationship between age-diversity practices and turnover intention, as well as the moderating role of work centrality in these mediated relationships.

The findings show that both work engagement and affective commitment mediated the relationship between age-diversity practices and turnover intention. This evidence is supported by signaling theory and SET (Blau, 1964; Connelly et al., 2011), which postulate that workers view HR practices as an indicator of the organization's investment in them and as recognition of their contributions, triggering the desire to reciprocate through positive attitudes. Although previous research has already demonstrated the relevance of engagement and commitment as determinants of the intention to continue in the organization (e.g., Allen

et al., 2003; Marescaux et al., 2013), this study demonstrates the value of implementing a strategy of age-diversity management to motivate workers of all ages.

In a context of an age-diverse workforce, HR practices that are sensitive to individuals' aging can be especially important to retain the best talents. Age-diversity practices are a set of flexible practices that can support workers throughout the life span, by accommodating and leveraging age differences (Sousa et al., 2019). Age-diversity practices can promote work engagement, a form of job-focused involvement that encourages workers to stay in the organization. Workers who perceive that there are age-diversity practices in their organizations are more energetic, immersed and dedicated to their work, and thus show less intention to leave the organization. Work will engender positive experiences that individuals will seek to maintain by staying in the organization (Alfes et al., 2013).

Age-diversity practices can also foster affective commitment, a form of involvement with the organization as a whole. Workers are more emotionally attached to the organization when employers offer good career prospects and opportunities for skill development, provide job security, and promote the necessary adaptations in the work, thereby making workers less likely to leave the organization (Morrow, 2011). Therefore, age-diversity practices are perceived as age-supportive practices that encourage workers to embrace the organizational membership as an important part of their identity.

Work centrality moderated the indirect effect of age-diversity practices on turnover intention via work engagement but not via affective commitment. The results suggest that individuals who assigned less importance to work understood age-diversity practices as a mechanism to create an inclusive and supportive workplace where a worker can perform successfully their tasks, which motivates the desire to stay (Bal and Kooij, 2011). For instance, a 40-year-old worker who attaches less value to work may perceive that an adjustment in his or her work arrangement (e.g., working from home, compressed hours due

to parental responsibilities) is a long-term investment by the organization. Age-diversity practices are less important for people who have higher work centrality because work is something to be engaged in for its own sake. If a person sees work as a core component of his or her life and is energetic, passionate about, and immersed in the job, he or she might give less importance to the organization's practices as a motivation to stay in the organization.

Contrary to what one might expect, work centrality did not moderate the mediated effect of age-diversity practices on turnover intention through affective commitment. This suggests that workers, regardless of the role that work plays in their life, perceive age-diversity practices as a signal that the organization is investing in them and reciprocate through increasing their levels of affective commitment, and are more willing to stay in the organization. An individual who assigns minor importance to work in his/her life can interpret the implementation of age-diversity practices as a sign that the organization intends to retain the best talents. Similarly, those individuals who consider work as a crucial part of their life also feel valued by the organization that develops age-diversity practices and, consequently, show more emotional attachment to the organization (Mannheim et al., 1997). A possible explanation for the absence of the moderation effect is the target of the individual's attitude in work centrality. While work centrality refers to the domain of the relationship between the individual and the work in general, the relationship between age-diversity practices, commitment, and turnover focuses on the individual-organization bond. This suggests that the attachment of workers to the organization is of great importance for their retention.

The present study contributes to the HRM literature by revealing how organizations can motivate their workers of all ages, that is, by exposing the underlying processes through which age-supportive HR practices negatively affect turnover intention. At the same time, the findings also show when these processes (i.e., work engagement and affective commitment) work, i.e., what is the role of work centrality in these relationships. Despite work centrality

being an individual and relatively stable belief about work, organizations can play an important role in the engagement of those individuals who attach less importance to work, with the implementation of age-diversity practices. Such practices are a novel construct in the literature and the findings suggest that they are important to promote a healthy and effective age-diverse workforce while encouraging individuals to invest in the relationship with their organization.

The findings also underscore the need for age-diversity management. Most research on the aging workforce focuses on implementing organizational practices that motivate older workers to stay at work (Pak et al., 2019; Truxillo et al., 2015). However, as claimed by the life-span perspective, younger and middle-aged workers may have different values, needs, motives, and goals (Kooij et al., 2011) that organizations should also meet to retain their knowledge and skills. Further, younger and middle-aged workers are tomorrow's older workers, and thus organizational practices to support people during their career are critical. Age-diversity practices should therefore be implemented to motivate workers of all ages instead of targeting only the group of older workers.

In addition, older workers may not be a homogenous group, as important intra-individual changes occur during later adulthood (Kanfer and Ackerman, 2004). Since adult development and work experiences throughout life influence motivational patterns at work, organizational practices should be flexible and inclusive.

This study also extends previous results beyond the Anglo-Saxon cultural contexts, as data were collected in Portugal. The Portuguese context is especially suited to understand the impact of age-diversity practices in work attitudes in light of the rapid aging of the workforce in that country.

Implications for Practice

The findings of this study offer practical contributions with managerial implications. First, age-diversity practices have the potential to increase work engagement and affective commitment, which can lead to higher levels of retention. The empirical evidence provided by this study may help employers and managers to go beyond a non-discrimination policy toward a strategy focused on capitalizing age diversity, which values workers of all ages.

Indeed, age-diversity practices communicate to workers what the opportunities for development and advancement are in the organization, according to individuals' preferences, goals, and needs. A 55-year-old worker might be motivated to continuously develop his or her skills and knowledge that, when recognized, will facilitate career progression (i.e., promotion to a senior position). A different worker of the same age might have increased generativity motives and show preferences for teaching, training, and sharing skills with younger workers or newcomers (Kooij and Van de Voorde, 2011). The recognition of these experience and skills can prompt internal mobility, placing the worker in a department or project in which he or she will have the opportunity to transfer knowledge to others. Also, age-diversity practices can meet the needs of workers who for various reasons (e.g., age-related changes, work injuries, health problems) have lower levels of functioning.

Creating age-supportive workplaces can promote workers' motivations and well-being, while showing that the organization values their membership and is committed to them. The way people experience and react to this organizational investment can be realized in high levels of commitment. Affective commitment plays a fundamental role in the results of this study because of its effect as a strong predictor of turnover intention for all workers, regardless of the importance they attach to work. In a time when organizations compete to attract and retain key skills and talent (Chand and Tung, 2014), managers should create, monitor, and reinforce an employment relationship based on trust and loyalty. It is therefore important that the implementation of age-diversity practices be followed by an assessment of

workers' perceptions about how suitable they are to respond to their needs and to motivate them. Also, direct supervisors should be aware of how individuals are reacting and adapting to age-related changes (e.g., work ability, health) (Robson and Hansson, 2007). To gather this information, organizations could, for example, develop a tool for assessing age diversity management that includes an annual questionnaire directed to all workers and an individual interview for workers who are at risk.

Finally, the implementation of an age-diversity strategy cannot occur in a cultural vacuum, but needs to be accompanied by a commitment from the top management to diversity management. The senior management must share a clear vision of inclusion and diversity values, and role model those values in order for the age-diversity strategy to gain organization-wide acceptance. Introducing age-diversity practices should be a top-down management decision, but the support of all workers is crucial to the success of these initiatives.

Limitations and Avenues for Future Research

The findings of this study should be considered in the light of some limitations. We focus on only one of the three commitment components proposed by Allen and Meyer (1990) – affective commitment – since it has the strongest association with turnover intention. Considering the importance of this construct in the findings, we suggest that future research could include continuance (i.e., individuals need to stay in the organization) and normative (i.e., workers feel they ought to remain) commitment in the model. Also, job satisfaction, identified by previous research as a relevant predictor of turnover intention (e.g., Fasbender et al., 2019), could be included in future studies.

A second limitation concerns the nature of the sample used in this study. Participants were recruited using a non-probabilistic sampling process, limiting the generalizability of the

results. Finally, the study presents a cross-sectional design to examine a parallel mediation model, which can generate biased estimates and prevents us from drawing conclusions regarding causality among the variables. Although we provided solid theoretical arguments for the direction of the relationships, we cannot rule out the possibility of a reverse relationship, and we encourage future researchers to replicate our findings with longitudinal data. A longitudinal design could also provide an important and deeper understanding of possible changes in the role of age-diversity practices to explain positive work-related outcomes.

We believe that the HRM literature would benefit from a more complete picture of the relationship between age-diversity practices and turnover intention if future research explores potential differences across professional groups or industries, especially those that have high turnover rates (e.g., nurses, hotel staff, agents in call-centers). Moreover, other sets of variables in addition to the socio-demographic status, such as organizational sponsorship (e.g., organization size) and human capital (e.g., type of contract), can be included as statistical controls in future studies (Ng et al., 2005). For example, controlling for organization size, as a proxy of the amount of resources an organization has available to support workers, may be important in studies with multiple organizations.

As age-diverse workforces can bring a multitude of different knowledge, skills, and experiences to the workplace, knowledge retention and knowledge transfer between younger and older workers constitute important lines of future research. For example, the results of Burmeister and colleagues (2018b) showed that perceived ability and motivation to receive/share knowledge mediate the effects of age on knowledge transfer. Thus, future research can investigate the role of age-diversity practices in knowledge receiving and sharing behaviors. Also, future studies might incorporate organizational performance as a final output in the model, as in earlier investigations (e.g., Kunze et al., 2013), using both subjective

ratings and objective financial performance measures. A multilevel perspective can shed light on the effects of age-diversity practices for individuals and organizations.

Conclusion

This study investigated the mediating role of work engagement and affective commitment in the effect of age-diversity practices on turnover intention. Empirical evidence supported the assumption that individuals perceiving the existence of age-diversity practices were more engaged and committed with the organization and, in turn, showed lower turnover intention. This investigation also examined the moderating role of work centrality in the indirect effects of age-diversity practices on turnover intention via work engagement and via affective commitment. It was found that the relationship between age-diversity practices and turnover intention through work engagement was stronger for individuals with low work centrality than for those with high work centrality. For the indirect effect via affective commitment, the moderation effect was not significant. These results together highlight the importance of implementing an age-diversity strategy to retain an age-diverse workforce.

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Table 1
Fit indices for measurement model comparisons

Models	Five-Factor – Model 1 (Full measurement model)	Model 2 ^{a)}	Model 3 ^{b)}	Model 4 ^{c)}	Model 5 ^{d)} (Harman's single factor)
χ^2 (df)	1545.44 (528)	1979.56 (532)	2560.91 (535)	3520.73 (537)	4029.53 (538)
χ^2 / df	2.927	3.721	4.787	6.556	7.490
CFI	.94	.92	.88	.83	.80
TLI	.93	.91	.87	.81	.78
RMSEA	.05	.06	.07	.08	.09
SRMR	.06	.07	.07	.09	.09
χ^2_{dif} (df)		434.12 (4) ***	1015.47 (7) ***	1975.29 (9) ***	2484.09 (10) ***

Note: N = 802; χ^2 – chi-square; df – degrees of freedom; χ^2/df – normed chi-square; CFI – comparative fit index; TLI – Tucker–Lewis index; RMSEA – root mean square error of approximation; SRMR – standardized root mean square residual; χ^2_{dif} – chi-square difference.

*** $p < .001$

^{a)} Work engagement and Affective commitment combined into a single factor.

^{b)} Work engagement, Affective commitment, and Turnover intention combined into a single factor.

^{c)} Age-diversity practices and Work centrality combined into one factor; Work engagement, Affective commitment, and Turnover intention combined into a second factor.

^{d)} The five factors combined into a single factor.

Table 2
Means, standard deviations, correlations, and reliabilities

	M	SD	1	2	3	4	5	6
1. Age	38.42	12.82						
2. Age-diversity practices	3.82	1.13	-.09*	(.87)				
3. Work centrality	2.96	.86	.10*	.38***	(.86)			
4. Work engagement	4.33	1.28	.15***	.56***	.57***	(.94)		
5. Affective commitment	4.00	1.14	.34***	.58***	.66***	.75***	(.84)	
6. Turnover intention	2.38	1.43	-.36***	-.40***	-.34***	-.56***	-.79***	(.84)

Note: N = 802. Reliability coefficients are reported in parentheses.

* $p < .05$ *** $p < .001$ (two-tailed test).

Table 3
Multiple regression results for work engagement, affective commitment, and turnover intention

Variables	Work engagement			Affective commitment			Turnover intention		
	<i>Coeff</i>	<i>SE</i>	95% CI	<i>Coeff</i>	<i>SE</i>	95% CI	<i>Coeff</i>	<i>SE</i>	95% CI
<i>Total effect</i>									
Age-diversity practices (<i>predictor</i>)							-.40***	.05	-.51, -.31
<i>Direct effects</i>									
Age (<i>control variable</i>)	.11***	.02	.07, .15	.24***	.02	.19, .29	-.15***	.03	-.21, -.09
Age-diversity practices	.47***	.04	.38, .55	.50***	.03	.44, .57	-.07	.06	-.19, .06
Work centrality	.50***	.04	.44, .57	.61***	.05	.51, .71			
Age-diversity practices x Work centrality	-.16***	.05	-.26, -.06	-.07	.05	-.17, .03			
Work engagement (WE)							-.21**	.06	-.33, -.10
Affective commitment (AC)							-.48**	.07	-.62, -.35
<i>Indirect effect via WE (H1)</i>							-.10**	.03	-.16, -.05
<i>Indirect effect via AC (H2)</i>							-.24***	.04	-.33, -.17
<i>Conditional indirect effect via WE</i>									
Low (-1SD) Work centrality							-.13***	.04	-.21, -.06
High (+1SD) Work centrality							-.06***	.02	-.12, -.03

Note: N = 802. Standardized coefficients are reported and were estimated using SEM. All estimates for the moderated mediation were also tested for significance using bias-corrected (BC) confidence interval from 5,000 bootstrap samples.

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

Figure 1

Proposed conceptual model

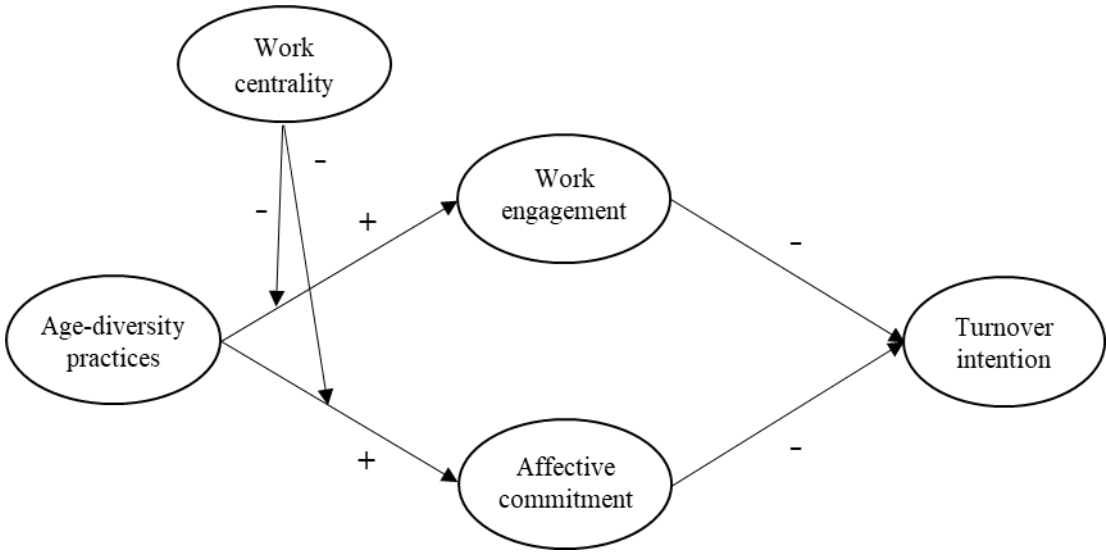


Figure 2

Moderating effect of work centrality on the relationship between age-diversity practices and work engagement

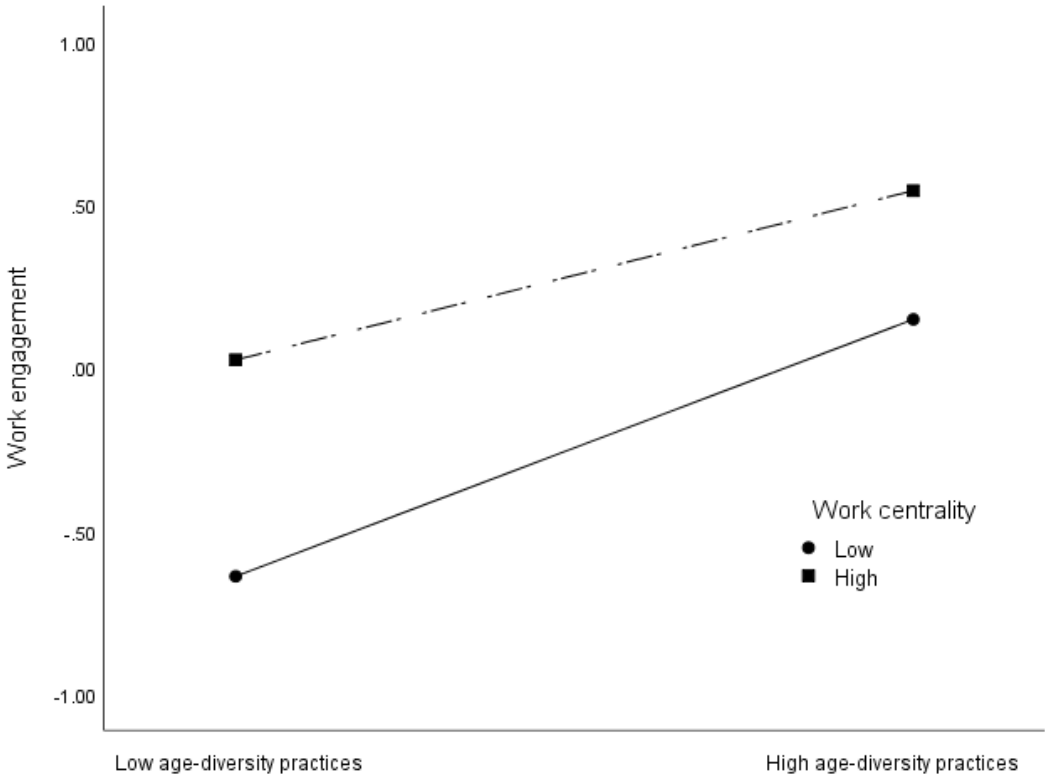


Figure 3

The conditional indirect effect of age-diversity practices on turnover intention via work engagement

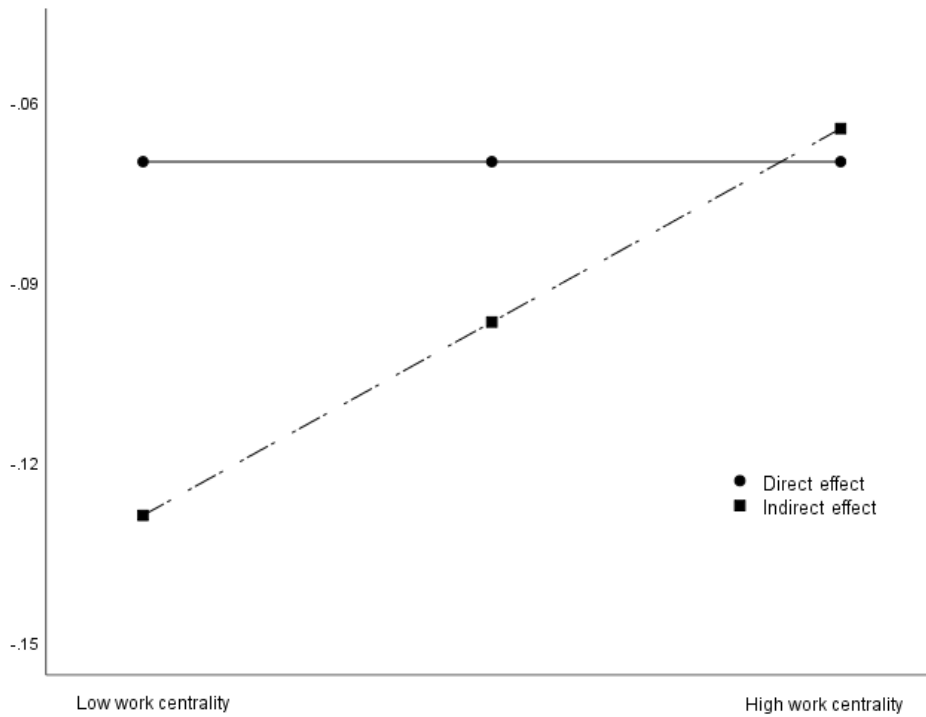
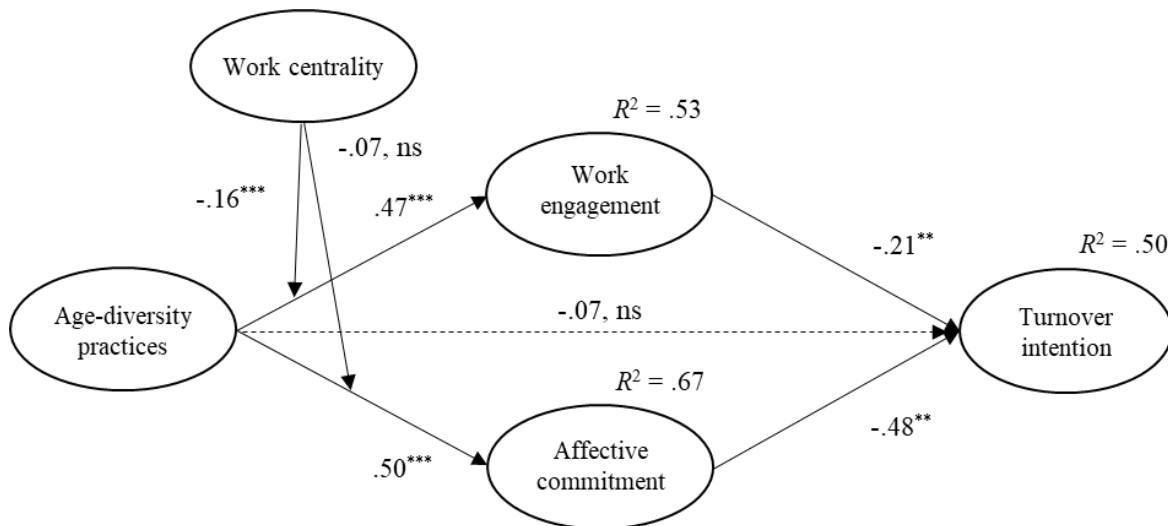


Figure 4

Results of the moderated parallel multiple mediation model



Note: Standardized coefficients are reported and were estimated using SEM. All estimates for the moderated mediation were also tested for significance using bias-corrected (BC) confidence interval from 5,000 bootstrap samples. Indicators of latent factors are omitted for clarity. ns: not significant; ** $p < .01$ *** $p < .001$