



## Which HRM practices enhance employee outcomes at work across the life-span?

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### ABSTRACT

Based on the social exchange theory and on ageing and life-span theories, this paper aims to examine: (1) the relationships between perceived availability and use of HRM practices, and employee outcomes (i.e. work engagement and employability); and (2) how employee age moderates these relationships. Using a sample of  $N_{\text{maximum}} = 1589$  employees, correlational analyses and multiple hierarchical regression analyses were conducted. First, confirming our hypotheses, results showed predominantly positive relationships between work engagement and both perceived availability and use of development HRM practices, such as HRM practices related to learning, development, and incorporating new tasks. The study outcomes opposed, however, our hypotheses with predominantly negative relationships between work engagement and perceived availability and use of maintenance HRM practices. Predominantly positive relationships were furthermore found, as was hypothesized, between employability and perceived availability and use of development as well as maintenance HRM practices. Generally speaking, these results were not more pronounced for any of the age groups. That is, age appeared to not play any significant moderating role. Research limitations, implications for practice and directions for future work are also discussed.

### KEYWORDS

HRM practices; employee outcomes; age groups; work engagement; employability

## Introduction

Scholarly research indicates that having an engaged and employable workforce can lead to several beneficial outcomes, such as employee well-being and performance

(Van De Voorde, Paauwe, & Van Veldhoven, 2012). HRM is aimed at increasing individual well-being, productivity and overall firm performance (Truss, 2001). Research on the social exchange theory (incorporating the norm of reciprocity) (Blau, 1964; Gouldner, 1960) supports the assumption that mutual benefits for both the employer and the workforce can be the result of positive social and economic exchanges (Gould-Williams & Davies, 2005; Shore, Tetrick, Lynch, & Barksdale, 2006). As such, organizations may provide HRM practices reflecting different forms of exchange relationships (Shaw, Dineen, Fang, & Vellella, 2009) to manage human resources. In doing so, organizations aim to facilitate the development of firm-specific competencies that produce complex social relations to maintain competitive advantage (Minbaeva, 2005). In particular, organizations provide HRM activities that refer to 'all those activities associated with the management of people in firms' (Boxall, Purcell, & Wright, 2008, p. 1), such as regular training and development programs and participation in decision-making. These HRM practices signal managers' commitment to and trust in employees (Guzzo & Noonan, 1994). Against this backdrop, in this contribution, HRM practices are defined as systems that attract, develop, motivate, and retain employees to ensure that an organization's human capital contributes to the achievement of organizational objectives (see also Tan & Nasurdin, 2011). Yet, due to a changing labour market, it is questionable whether these HRM practices should be targeted at all categories of employees, more specifically as regards their age group in a similar way. For that reason, in addition to the relationships between HRM practices and employee outcomes, the impact of employee age on that relationship has been investigated in this study.

Most developed countries face a changing labor environment involving the 'age quake' (Tempest, Barnatt, & Coupland, 2002, p. 489), which refers to the simultaneously shrinking and graying workforce, resulting from low birth rates and increased longevity of life (Kunze, Boehm, & Bruch, 2011; Truxillo & Fraccaroli, 2013). In European countries, the proportion of workers aged 55–64 year old has increased from 36.9% in 2000 to 46.3% in 2010, with an average annual growth rate of 2.3% (European Commission, 2011). Moreover, projections to the year 2050 indicate that the world's older population is expected to grow to even 25% of the working age population; this percentage will by then outnumber the young working age population (aged from 15 to 24) (Hedge & Borman, 2012). Obviously, these demographic developments comprise a major challenge for politicians, managers, HRM practitioners, and social scientists alike to find ways to enhance employee outcomes at work throughout the life-span (Korff, Biemann, Voelpel, & Kearny, 2009; Shultz & Adams, 2009).

However, only 21% of the employers have made some attempts to implement policies and practices aimed at retaining older workers (Armstrong-Stassen & Ursel, 2009; Kluge & Krings, 2008; Manpower Report, 2007). The Manpower report concluded that employers are not doing more to retain older workers simply because they have difficulties finding best practices, and implementing

adequate interventions. Though the amount of research on the impact of HRM practices on employee outcomes of older workers is expanding (Conen, Henkens, & Schippers, 2012; Herrbach, Mignonac, Vandenberghe, & Negrini, 2009; Kooij, De Lange, Jansen, Kanfer, & Dikkers, 2011; Kooij, Jansen, Dikkers, & De Lange, 2010; Leisink & Knies, 2011; Rau & Adams, 2005), there has been some debate as to whether HRM actually benefits diverse employee age groups in a similar way (Khilji & Wang, 2006; Kuvaas, 2008; Von Bonsdorff, 2011). Therefore, a main challenge is to determine which HRM practices, targeted at different age groups, can be regarded, from an employee point of view, as effective in accomplishing enhanced employee outcomes for distinct age groups.

Contemporary views on HRM advocate that management should safeguard that the aim for employee outcomes is sustainable. In this manner employees are enabled to continue to make positive contributions to organizational performance across their entire life-span. Therefore, in this study, a multi-dimensional approach is taken by distinguishing among two types of employee outcomes: (a) work engagement which can be described as an overall quality of an employee's experience and functioning at work (Warr, 1987); and (b) employability which refers to the 'continuous fulfilling, acquiring, or creating of work through the optimal use of one's competences' (Van der Heijde & Van Der Heijden, 2006, p. 453). As such, this empirical work incorporates employee outcomes that refer to positive sustainable states (van der Klink & Van der Wilt, 2016) that contribute to optimal functioning.

Social psychological ageing theories, such as the Socio-emotional Selectivity Theory (SST) (Carstensen, 2006) give rise to the assumption of changes in humans', and therefore in workers' lives. More details of these social psychological ageing theories are provided later in this article, but a brief introduction of SST can help explaining how older people differ from younger people in motivation and behavior, as well as in explaining the impact of age on working behaviors (Bal, De Lange, Jansen, & Van Der Velde, 2013; Kooij et al., 2011). The SST (Carstensen, 1992, Löckenhoff & Carstensen, 2004) found differences between older and younger workers as regards needs and motives. As people age, time boundaries are perceived differently, and the more present-oriented goals related to emotional meaning are prioritized over future-oriented goals that are aimed at information acquisition and expanding horizons. The SST shows that as people age, they gradually change from a mainly growth- and future-oriented focus to a mainly maintenance- and present orientation involving changes in work related needs and motives. Accordingly, this theory brings us to the proposition that distinctive HRM practices should be targeted at distinctive age groups.

The research discussed above suggests that the relations between both the perceived availability and actual use of HRM practices by employees, on the one hand, and employee outcomes (in this study work engagement and employability), on the other, are moderated by age. Throughout this paper we refer to three

meaningful age groups: younger (< 35 years), middle aged (35–50 years), and older ( $\geq 50$  years) (Van Dalen, Henkens, & Schippers, 2010b; Van der Heijden, 2001).

To address the aforementioned issues, this paper aims to examine: (1) the relationships between perceived availability and use of HRM practices, and employee outcomes (i.e. work engagement and employability); and (2) how age moderates the relationship between perceived availability and use of HRM practices on the one hand, and employee outcomes on the other hand.

## Literature review and hypotheses development

### *Relationships between perceived availability and use of HRM practices, and employee outcomes*

According to the social exchange theory (incorporating the norm of reciprocity) (Blau, 1964; Gouldner, 1960), mutual benefits are a result of positive social and economic exchanges (Gould-Williams & Davies, 2005; Shore et al., 2006) for both the employer and the employees. Therefore, organizations may provide HRM practices reflecting different forms of exchange relationships (Shaw et al., 2009), and that signal managers' commitment to and trust in employees (Guzzo & Noonan, 1994). Over the last decades, employers more and more want to know what will enhance employee outcomes. Employees, on the other hand, want to know what organizations will do for them in terms of HRM. To better understand the relationship between HRM practices and employee attitudes and behavior at work over the past years, several empirical studies have been conducted (Van De Voorde et al., 2012; Wright & Nishii, 2007). Guest (1987), Huselid (1995) and Pfeffer (1998) paved the way and considered HRM practices including training, participation in decision-making, and flexible work arrangements as performance-enhancing examples of good practices. These HRM practices were supposed to increase employee outcomes, such as greater job satisfaction, lower employee turnover, higher productivity, and better decision-making, all of which help to improve organizational performance (Becker, Huselid, Pickus, & Spratt, 1997). Over time, scholars in this knowledge domain have tried to relate HRM practices to organizational performance (i.e. Lepak, Takeuchi, & Snell, 2003), but a lack of understanding of the employee factors involved in the HRM – performance linkage still remains (Zhang & Morris, 2014). Previous extensive research has shown that employee perceptions of organizational efforts such as the provision of HRM practices increased employee outcomes (James, McKechnie, & Swanberg, 2011). Although it is widely accepted that employee outcomes are vital for business success (Kennedy & Daim, 2010), up to now too little attention has been paid to which specific HRM practices are most important for enhancing employee work engagement and employability (Zhang & Morris, 2014).

Work engagement and employability are critical requirements for enhancing employee outcomes at work (Fugate, Kinicki, & Ashforth, 2004; Rothwell & Arnold, 2007; Van der Heijden, De Lange, Demerouti, & Van der Heijde, 2009).



Work engagement may be defined as a positive, fulfilling, work-related state of mind characterized by vigor, dedication, and absorption (Schaufeli & Bakker, 2004, p. 295). It appears to be a relatively stable individual difference variable (Salanova, Schaufeli, Llorens, Peiro, & Grau, 2000) that is argued to be relevant for employee's well-being for several reasons. Firstly, being engaged into one's work is a positive experience itself (Schaufeli, Salanova, González-romá, & Bakker, 2002). Secondly, work engagement is related to good health and positive work outcomes (Demerouti, Bakker, de Jonge, Janssen, & Schaufeli, 2001). Thirdly, engagement contributes to organizational commitment (Demerouti et al., 2001) and is expected to affect employee performance in a positive way (Kahn, 1990). Concrete, engaged employees have high levels of energy, are enthusiastic about their work, and are immersed in it, which leads to being in a state of flow (Macey & Schneider, 2008).

The second type of employee outcomes that is included in this study is employability, which comprehends the ability to obtain a job and to keep employment, within or outside one's current organization, for one's present or new customer(s), and with regard to future prospects (Van der Heijden et al., 2009, p. 156). As regards employability, both employee and employer benefits are at stake; that is to say, employability enables both career success at the individual level and sustained competitive advantage at the organizational level (Van der Heijde & Van Der Heijden, 2006). Employable workers deliver more numerical and functional flexibility, and thus are better able to meet their organization's necessity to manage fluctuating demands. Moreover, their competencies go beyond having domain-specific occupational expertise only, and, therefore, they are better able to cope with fast changing job requirements (Van der Heijden et al., 2009).

Previous HRM research not only suggests a significant impact of HRM practices (whether labeled as high-performance, high-involvement work systems, or high-commitment management practices [see also Boxall & Macky, 2009]), upon the competitive advantage of organizations (Arthur, 1994; Boselie, Paauwe, & Janzen, 2000; Combs, Liu, Hall, & Ketchen, 2006; Guest, 1997; Huselid, 1995), but also upon individual employee outcomes, such as employee trust and perceived job security (Boselie, Hesselink, Paauwe, & Van der Wiele 2001), work engagement (Bal, Kooij, & De Jong, 2013), and employability (Nauta, Vianen, Heijden, Dam, & Willemsen, 2009). For instance, training participation leads to more engagement and, through the ignited feeling of being more competent, to employability, resulting into higher levels of organizational effectiveness (Salanova, Agut, & Peiró, 2005). In a world wherein people need to stay longer in the workforce (Bal, Kooij et al., 2013; Kalshoven & Boon, 2012), it is of utmost importance that they remain engaged and employable (Fugate et al., 2004; Van der Heijde & Van Der Heijden, 2006), herewith helping organizations to keep a competitive advantage (Bakker, 2009). In the current study, we study the association between perceived availability and actual use of HRM practices by employees, on the one hand, and the two types of valued employee outcomes, i.e. engagement and employability.

To evaluate the impact of HRM on employee outcomes, we support, in line with Guest and Peccei (1994), the view that the most sensible and the most important indicator of HRM effectiveness is the judgments of particular stakeholders, in particular the employees themselves. This judgment can take various forms as will be outlined below.

Earlier research has indicated that it is important to distinguish between intended, perceived and actually used HRM practices (Den Hartog, Boselie, & Paauwe, 2004; Kooij et al., 2010). Much of HRM research has been conducted at the top management levels or within HRM departments, which at best captures the outcomes of intended HRM instead of perceived or implemented policies (Khilji & Wang, 2006). Wright and Nishii (2007) conceptualized intended HRM policies as being the outcome of the development of a HRM strategy that seeks to design a HRM practice, and that can function as 'signals' of the organization's intentions towards its employees. In contrast, 'implemented' HRM practices refer to those practices actually operationalized in organizations and perceived by employees (Khilji & Wang, 2006). In order to better understand the relationship between HRM practices and employee outcomes, we argue in line with Kooij et al. (2010) that HRM practices should be measured as subjective interpretations of individual employees. In this study, elaborating on Gratton and Truss (2003), we will go beyond the implementation dimension that represents the degree to which HR strategy is put into effect through day-to-day experiences. We not only investigate employees' perceptions of (the availability) of HRM practices but also the actual use (i.e. employee's behaviors (Purcell & Hutchinson, 2007). As stated by Dyer and Reeves (1995) these distinct measures may vary based on the proximity to HRM practices. It is note-worthy to stress that the actual use of HRM is even more proximal to employee outcomes than the perceived availability and will therefore be likely to have a stronger affect employee outcomes. After all, over and above the functional purpose of each HRM practice, it is the actual use that influences organizational effectiveness of firm performance (see Fulmer, Gerhart, & Scott, 2003; Gerhart, 2005; Ostroff & Bowen, 2000). Hence, we hypothesize the following:

*Hypothesis 1:* There are positive relationships between perceived availability of HRM practices and work engagement (H1a) and employability (H1b).

*Hypothesis 2:* There are positive relationships between actual use of HRM practices and work engagement (H2a) and employability (H2b).

### **HRM practices, work engagement, and employability: age as a moderator**

Before elaborating on the relationship between HRM, employee outcomes and the role age plays in this regard, we firstly set out population and workforce demographics, and the changing work and occupational trends. Secondly, we explain two life-span theories that underlie our age-related hypotheses.

As the world's population is ageing rapidly due to falling fertility and greater life expectancy, a demographic perspective provides context for the focus on changing work and occupational trends (Hedge & Borman, 2012). As Bloom, Boersch-Supan, McGee, and Seike (2011) note that the size and nature of current global and economic shifts are unprecedented, past trends will be unlikely to provide reliable guidance. It will be key to understand the interrelationships between population ageing and employee outcomes across the life-span. Therefore, a closer examination of older employees in relation to younger ones and appertains here. Therefore we delve into two life-span theories. Following the socio-emotional selectivity theory (Carstensen, 2006) and the regulatory focus theory (Higgins, 1997), work-related motives, and thus the impact produced by the perceived availability as well as the actual use of HRM practices, is expected to change with age.

Firstly, the SST (Carstensen 1992; Löckenhoff and Carstensen 2004) states that people's needs and motives change as they age. As people age, perceived time boundaries change, and the more present-oriented goals related to emotional meaning are prioritized over future-oriented goals that are aimed at information acquisition and expanding horizons. Therefore, Carstensen (2006) proposed that younger individuals perceive their remaining time in life as expansive, and that they will prioritize more long-term goals aimed at optimizing the future. Secondly, and more specifically, the Regulatory Focus theory (Higgins, 1997) argues that individuals attain their goals through two distinct regulatory foci (self-regulatory strategies). Individuals with a promotion focus self-regulate primarily by striving to fulfill their 'ideal self', and aspirations. They strive to maximize positive outcomes and focus on possibilities for growth and development. In contrast, individuals with a prevention focus are primarily concerned by fulfilling their 'ought self', their obligations and responsibilities. They strive to minimize negative outcomes. People can thus be motivated to attain gains (promotion focus) or to avoid losses (prevention focus). Both approaches can be beneficial depending on the fit between an individual's environment and their individual focus (Higgins, 2001). Adopting one or the other approach is a function of dispositional and situational factors (Brockner & Higgins, 2001), but overall, ageing individuals focus less on promotion and growth, and more on maintenance and prevention (Ebner, Freund, & Baltes, 2006). As can be seen, as a common denominator in the two theories a certain shift in work and life orientations is postulated to manifest itself when people become older: a stronger orientedness on what has been achieved, rather than on what still may be developed, a focus on present day concerns, rather than on prospects for the future. The assumption that underlies the hypotheses about the moderating role of employee age on HRM effectiveness in the present study is that this particular shift affects the effectiveness of HRM practices.

Earlier, the meta-analysis of 86 studies of Kooij et al. (2011) already combined HRM and age-related changes and revealed that work-related motives change with age, specifically, from a stronger focus on extrinsic growth-related motives among younger workers to more intrinsic work-related motives for older workers.

As a result, from a HRM perspective, a prolonged working life of older workers may be facilitated by stressing those HRM practices that match the more intrinsic motives of older workers, such as autonomy, challenging work assignments, and job security. As such, earlier research on age differences in HRM has not only revealed that older people differ significantly from younger people in terms of their motivation, but in terms of their behavior as well (Bal, De Lange et al., 2013; Kooij et al., 2011).

Moreover, since ageing involves both personal gains and losses, for instance, gains in general knowledge and losses in physical abilities (Kanfer & Ackerman, 2004), we aim to extend the work of Kooij et al. (2011) in further analyzing the relation between age and HRM effectiveness. Particularly, according to life-span theories, and as a result of changes in physical as well as mental reserves as workers grow older (Kanfer & Ackerman, 2004), ageing workers are expected to strive to minimize further losses instead of maximizing the gains whereas younger workers are assumed to prefer to maximize gains, by expanding horizons, growing, and developing.

In order to formulate hypotheses dealing with the distinctions of the perceived availability and the actual use of HRM practices across different age groups, we need to categorize these practices into conceptually meaningful ones. Building upon the aforementioned life-span theories (i.e. Carstensen, 2006; Higgins, 1997), we envisage that people allocate different resources throughout their life-span development. These life-span goals are often 'translated' (Kooij et al., 2010, p. 1115) into goal orientations with a focus on more prevention or more promotion, as distinguished by regulatory focus theory (Higgins, 1997). This distinction between the prevention and promotion focus forms the basis for our hypothesizing and is fairly similar to the distinction often used in HRM between maintenance and development HRM practices. Therefore, in this study and in line with the theoretical frameworks as explained above, two types of HRM bundles are distinguished: maintenance (prevention) HRM practices and development (promotion) HRM practices.

Maintenance HRM practices are conceptualized as those practices that are related to protection, prevention, and safety, and may help workers to maintain their current levels of functioning, or to return to previous levels after a loss. Development HRM practices are those practices that are related to advancement, growth, and accomplishment, and may help individuals to achieve higher levels of functioning (Kooij et al., 2010). Since workers' goal focus and their needs may change with age from a promotion focus characterized by growth needs to a prevention and maintenance focus with security needs, we expect the usefulness of maintenance HRM practices as well as development HRM practices to change as workers age.

To relate HRM with employee outcomes, herewith incorporating the role of age, we use existing theories to build on. Some studies have elaborated on either the relationship between age and employee outcomes, or on the relationship between

age and HRM practices. For instance, small significant positive relations were found between age and work engagement (Schaufeli, Bakker, & Salanova, 2006). In addition, from a positive perspective, Siu, Spector, Cooper, and Donald (2001) found that older employees may have accumulated coping resources throughout their professional lives that contribute to effective use of job and personal resources, thus fostering work engagement. Also, quite optimistic results of a meta-analysis on the effects of an ageing workforce on personnel costs were found, indicating that older workers are not particularly vulnerable to health problems (Ng & Feldman, 2013). Van der Heijden et al. (2009) found significant differences between younger and older workers in the employability-career success relationship; for younger workers, both self- and supervisor ratings of employability related significantly to objective career success outcomes. However, for their older counterparts, self-rated employability related positively to promotions throughout the career, while the corresponding supervisor ratings related negatively to overall promotions. The explanation of these outcomes was sought in age-related stereotyping. In a similar vein, Van Dalen, Henkens, and Schippers (2010a) found that organizations tend to invest little in training and education of older workers in comparison with younger colleagues. The results of Vandenberghe, Waltenberg, and Rigo (2013) indicate a negative impact of larger shares of older workers on productivity that is not compensated by lower labor costs, resulting in a lower productivity-labor costs gap. In sum, whether based on stereotypes or facts, we expect that HRM practices may have a different impact on employees, depending on their age.

Researchers have seldom examined age as a factor that may moderate the influence of HRM on employee's work outcomes (De Lange et al., 2010; Schalk et al., 2010), except from a few studies (i.e. Bal, De Lange et al., 2013). For instance, Conway (2004) found that broad (e.g. formal, re-training or on-the-job) training (to support employability) was more strongly associated with affective commitment in the older age group ( $\geq 41$  years) in comparison with the middle (31–40) and younger age group ( $\leq 30$ ). Finegold, Mohrman, and Spreitzer (2002) examined the moderating role of age in the association between employment relationship and employee commitment and their willingness to change companies. They found that satisfaction with job security was most strongly related to commitment among older workers. On the other hand, satisfaction with opportunities to develop skills, and satisfaction with one's salary relative to individual performance had a stronger negative relationship with intention to leave among individuals aged under 30 (Kooij et al., 2010). Kooij et al. (2010) also found that employees' perceptions of HRM practices are positively related to their work-related attitudes, and that age influences this relationship largely. Taking into account these research outcomes, and building on the postulate of older people's gradual shift from a promotion focus grounded in growth needs to a prevention and maintenance focus grounded in security needs, the following hypotheses have been formulated:



*Hypothesis 3:* Age moderates the positive relations between perceived availability of HRM practices and work engagement (H3a) and employability (H3b), such that the relationships between maintenance HRM practices and work engagement respectively employability strengthen as employees age.

*Hypothesis 4:* Age moderates the positive relations between perceived availability of HRM practices and work engagement (H4a) and employability (H4b), such that the relationships between development HRM practices and work engagement respectively employability weaken as employees age.

*Hypothesis 5:* Age moderates the positive relations between actual use of HRM practices and work engagement (H5a) and employability (H5b), such that the relationships between maintenance HRM practices and work engagement respectively employability strengthen as employees age.

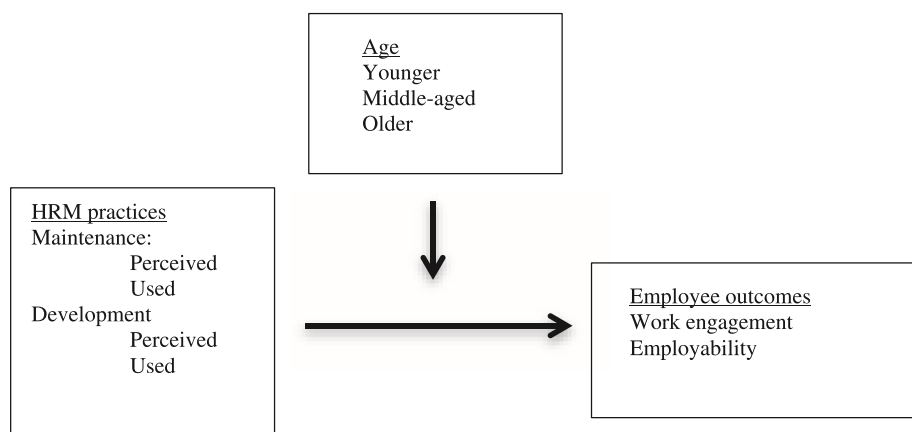
*Hypothesis 6:* Age moderates the positive relations between actual use of HRM practices and work engagement (H6a) and employability (H6b), such that the relationships between development HRM practices and work engagement respectively employability weaken as employees age.

Hypotheses 1 to 6 are summarized in Figure 1.

## Method

### Procedure

The data ( $N_{\text{maximum}} = 1589$ ) collection was based on an on-line survey that was administered between May and June 2012 among 6000 employees working in three Dutch organizations from three different sectors: transport, health care, and education & research. In May 2012, a total of 1,589 workers responded to the survey, representing a response rate of approximately 26%. The questionnaires were distributed using a web-based tool (Qualtrics) among employees for whom the mail addresses were provided by representatives of each organization. The



**Figure 1.** Conceptual framework: The moderating effect of age on the relationship between HRM practices and employee outcomes.

questionnaire was sent to all employees including employees working as managers. The participants were assured confidentiality, were informed about the added value of the research, and were offered some rewards in recognition of their participation. Such rewards consisted of feedback regarding the outcomes on the perceived availability and use of HRM practices, and work engagement and employability of their employees by means of clear reports and advice to the participating organization. Furthermore, one respondent per organization (i.e. three in total) could win an activity voucher. Moreover, an additional way to help to positively influence the response rate, namely sending reminders, was used as well.

### **Participants**

The distinction between younger and older employees is often based on the respondent's chronological or calendar age (De Lange et al., 2010). However, the meaning of the term 'older worker' may vary from workers aged 40–75, depending on the specific purpose of the organization as well as the needs of the worker (Collins, 2003). Although the cut-off point between younger and older workers is not fixed (Shultz & Adams, 2009), throughout this paper, we will use the meaningful threshold of 50 years to refer to older employees vs. younger or middle-aged workers (Greller & Stroh, 1995). As we are particularly interested in retaining employees of all ages, we decided to make a comparison of three successive age groups of working population. In this way, we will examine whether older workers ( $\geq 50$  years) differ significantly from younger ( $\leq 35$  years) and middle-aged workers (35–50 years) regarding the perceived availability and the use of HRM practices as well as the reported psychosocial work characteristics. In this way, the whole professional career has been covered by comparing these three age groups (cf. Van der Heijden, 2001). The age distribution in the final sample of individual employees was as follows: younger worker (age  $< 35$ ) 15.0% ( $n = 176$ ), middle-aged (35–50) 39.6% ( $n = 464$ ) and older workers ( $\geq 50$ ) 45.4% ( $n = 532$ ) (see Table 1). The mean age of the respondents was 46.9 years ( $SD = 10.2$ ), and 72.9% of the respondents were female. Among the respondents, 21.1% had a management position, 32.1% secondary vocational education, 17.9% lower, and 45.7% higher, 4.3% other. Of the respondents 72.7% worked part-time and their average tenure was 12.73 years ( $SD = 10.29$ ) for their current company. Mean job tenure was 8.65 ( $SD = 8.94$ ). Most of them were married (including cohabiting and partnership) (82.3%) and 77.7% had children. As Table 1 shows there are some significant differences between the age groups. To mention the most notable ones: in the  $\geq 50$  category we see more men, more widows and widowers, and more divorced and full-time workers. In the  $< 35$  category we see more unmarried, less parents, and more higher vocational educated employees. The 35–50 category included most employees who are married (cohabiting or having a partnership), and completed secondary vocational education. The  $\geq 50$  category had the most managers whereas the  $< 35$  category had the least employees with a supervisory role.

**Table 1.** Characteristics of the sample.

	Total	<35	35–50	>50	$\chi^2$	df	p
<i>Gender</i>	1152	168	457	527	45.37	2	<.001
Male	311 (27.0)	26 (15.5)	93 (20.4)	192 (36.4)			
Female	841 (73.0)	142 (84.5)	364 (79.6)	335 (63.6)			
<i>Marital status</i>	1167	176	461	530	64.12	6	<.001
Unmarried	118 (10.1)	43 (24.4)	34 (7.4)	41 (7.7)			
Married/cohabiting/ partnership	961 (82.3)	130 (73.9)	396 (85.9)	435 (82.1)			
Divorced	79 (6.8)	3 (1.7)	31 (6.7)	45 (8.5)			
Widowed	9 (0.8)	0 (0.0)	0 (0.0)	9 (1.7)			
<i>Children</i>	1162	173	462	527	164.27	2	<.001
Yes	903 (77.7)	70 (40.5)	397 (85.9)	436 (82.7)			
No	259 (22.3)	103 (59.5)	65 (14.1)	91 (17.3)			
<i>Highest completed education</i>	1171	176	463	532	37.39	12	<.001
Elementary school	5 (0.4)	0 (0.0)	2 (0.4)	3 (0.6)			
Lower vocational edu- cation	47 (4.0)	1 (0.6)	17 (3.7)	29 (5.5)			
Secondary school	149 (12.7)	13 (7.4)	50 (10.8)	86 (16.2)			
Secondary vocational education	370 (31.6)	66 (37.5)	171 (36.9)	133 (25.0)			
Higher vocational edu- cation	259 (22.1)	49 (27.8)	93 (20.1)	117 (22.0)			
Academic education	291 (24.9)	40 (22.7)	110 (23.8)	141 (26.5)			
Other	<b>50 (4.3)</b>	7 (4.0)	20 (4.3)	23 (4.3)			
<i>Contract</i>	1158	176	458	524	20.63	2	<.001
Part-time	842 (72.7)	145 (82.4)	348 (76.0)	349 (66.6)			
Full-time	316 (27.3)	31 (17.6)	110 (24.0)	175 (33.4)			
<i>Management</i>	1152	161	456	535			
(line/staff/project)	243 (21.1)	8 (5.0)	100 (21.9)	135 (25.2)			
Non-management	909 (78.9)	153 (95.0)	356 (78.1)	400 (74.8)			

Note: Cell entry of columns 2 to 5 denote *ns* and percentages between brackets.

## Measures

*Work engagement* (Cronbach's  $\alpha = .93$ ) was assessed with the work engagement scale that consists of nine items. This measure comprised three 7-point rating scales ('never' to 'always') (vitality, dedication, and absorption) from the Utrecht Work Engagement instrument (Schaufeli et al., 2002). Examples of the items of each scale include: 'When I get up in the morning, I feel like going to work' (*vitality*), 'I am enthusiastic about my job' (*dedication*), and 'When I am working, I forget everything else around me' (*absorption*).

*Employability* (Cronbach's  $\alpha = .93$ ) was measured using a 6-point Likert scale that has proven to have sound psychometric qualities (see also Van der Heijden et al., 2009) with 47 items in total. Examples of scale extremes are 'not at all', and 'to a considerable degree', and 'never', and 'very often', ranging from 1 to 6 (Van der Heijde & Van Der Heijden, 2006). Examples of the items of each scale include: 'I consider myself competent to engage in in-depth, specialist discussions in my job domain' (*employability*), 'How much time do you spend improving the knowledge and skills that will be of benefit to your work?' (*anticipation and optimization*), 'How easily would you say you can adapt to changes in your workplace?' (*personal flexibility*), 'I am involved in achieving my organization's/department's mission' (*corporate sense*), and 'I suffer from work-related stress' (*balance*).

To measure the *HRM practices*, 28 HRM practices (see Appendix 1) were incorporated. This list of HRM practices was mainly based on Kooij et al. (2010). After having conducted a pilot of this study using ten HRM and non-HRM workers, we complemented this list with HRM practices related with flexibility, health, and care. An example item was: Please indicate whether you perceive/make actually use of the following practices in your company: 'Is part-time work available to you?', with the answer alternatives 'yes' or 'no'. The perceived availability of these HRM practices in the respondents' current organization was referred to as 'perceived available HRM practices'. When the respondents perceived the availability of a HRM practice (this was the case with 12 to 88% of the respondents, depending on the HRM practice involved), they were asked to respond to the question whether they made use of this HRM practice. The range of answers was as follows: this practice does not apply to me; I do not use this practice and I do not want to; I do not use this practice but I would like to; I use this practice. The first three categories were aggregated into one answering category referring to 'not used HRM practice'. The fourth category was referred to as 'used HRM practice'.

Based on Boselie, Dietz, and Boon (2005), we conceptually pre-specified our HRM practices by distinguishing between maintenance and development HRM practices. Maintenance HRM practices are conceptualized as those related to protection, prevention, and safety that help workers to maintain their current levels of functioning, or to return to previous levels after a loss. Development HRM practices are those practices related to advancement, growth, and accomplishment that help individuals to achieve higher levels of functioning (Kooij et al., 2010). Our differentiation is largely consistent with Zaleska and De Menezes (2007) who stated that development HRM practices have 'the emphasis on learning and on a variety of opportunities for development, which should encourage people's mobility and flexibility in the market' (p. 989). Based on the previously validated bundles as distinguished by Kooij et al. (2010), we categorized our 28 practices as either maintenance or development HRM practice (see also Table 2).

Age in years was calculated by subtracting year of birth from 2012 (year of data collection). Subsequently, age groups were differentiated: younger (<35 years), middle aged (35–50 years), and older (=0 years).

Given the outcomes of previous studies (see also Ng, Eby, Sorensen, & Feldman, 2005), we decided to include gender (0 = male, 1 = female), organizational tenure (in years), job tenure (in years), and educational level (ranging from 1, elementary school, to 6, academic education) as *control variables* in the subsequent analyses. For instance, the moderator analyses with gender showed complex moderator results, indicating a required critical approach as regards gender (Ng et al., 2005).

## Statistical analyses

Firstly, correlational analyses were conducted to obtain insight into the co-variation of the perceived availability and the actual use of HRM practices with work

**Table 2.** Means, standard deviations, reliability coefficients, and correlations between study variables.

	<i>M</i>	<i>SD</i>	(1)	(2)	(3)	(4)	<i>M</i>	<i>SD</i>	(1)	(2)	(3)	(4)
Work engagement (1)	5.53	1.03										
Employability (2)	4.26	0.44	.41**									
Age (3)	46.92	10.24	.01	.03								
Gender (4)	1.73	0.45	.08**	-.08**	-.23**							
			Perceived available HRM practices									
Part-time work	0.87	0.33	-.12**	-.06	-.05	.20**	Maintenance HRM practices					
Compressed work week	0.31	0.46	-.09**	.07*	.03	-.01	0.10	0.30	-.04	-.08**	-.06*	.36**
Flexible work	0.61	0.49	-.04	.09**	-.02	-.08*	0.65	0.48	-.02	.12**	.06	-.03
Telecommuting	0.41	0.49	-.12**	.16**	.06*	-.14**	0.47	0.50	-.09*	.14**	.12**	-.08*
Additional leave	0.64	0.48	-.03	.04	.34**	-.03	0.49	0.50	.04	-.03	.53**	-.08*
Exemption from overtime working	0.20	0.40	-.01	.06*	.05	-.05	0.12	0.32	.02	-.04	.04	-.07
Early retirement	0.29	0.46	-.03	.11**	.17**	-.09**	0.04	0.20	-.02	-.05	.21**	-.10**
Part-time retirement	0.24	0.43	-.07*	.09**	.17**	-.13**	0.03	0.18	-.08*	-.07	.14**	-.07
Long career break	0.37	0.48	-.15**	.11**	.08**	-.08*	0.04	0.19	.02	.02	.04	-.03
Variable remuneration	0.12	0.32	-.03	.08**	.00	-.05	0.09	0.29	-.00	.11**	.04	-.03
Flexible labor conditions	0.43	0.50	.02	.10**	.00	.03	0.11	0.31	.08	.05	.01	.03
Ergonomic adjustment	0.45	0.50	-.16**	.09**	.05	-.02	0.14	0.34	-.05	.01	.05	.04
Regular training	0.76	0.43	.04	.10**	.03	-.04	0.70	0.46	.11**	.14**	-.05	.04
Demotion	0.23	0.42	-.12**	.06	.04	-.09**	0.04	0.20	-.12**	-.07	.09*	-.03
Reduced workload	0.33	0.47	-.09**	.08**	-.01	-.01	0.15	0.75	.01	-.03	-.02	.02
Attention for health	0.44	0.50	-.05	.11**	.06*	-.09**	0.28	0.45	.04	.02	.01	-.01
Sport facilities	0.53	0.50	-.09**	.10**	.05	-.11**	0.23	0.42	.04	.04	.09*	-.11**
Childcare	0.27	0.45	-.11**	.08**	.11**	-.10**	0.03	0.18	-.06	-.04	-.05	.01
Paid parental leave	0.44	0.50	-.14**	.07*	.04	-.07*	0.09	0.19	-.09**	-.09*	-.18**	.02
Paid care leave	0.46	0.50	-.12**	.08**	.06	-.04	0.04	0.19	-.01	.05	.00	.05
			Development HRM practices									
Job development interviews	0.86	0.35	-.00	.09**	-.01	.07*	0.89	0.31	.05	.06*	.00	.07*
Career planning	0.50	0.50	-.13**	.12**	.00	-.01	0.23	0.42	-.09**	-.00	-.03	.04
Continuous development	0.54	0.50	.07*	.20**	.00	-.01	0.55	0.50	.17**	.19**	-.04	.04
Promotion	0.38	0.48	-.05	.17**	-.03	-.02	0.17	0.37	.13**	.14**	-.05	.01
Sideways job movement	0.44	0.50	-.09**	.13**	.06*	-.02	0.21	0.41	-.01	.03	.09**	.03
Task enrichment	0.59	0.49	.01	.21**	-.05	.01	0.49	0.50	.10**	.22**	-.04	.06
Second career	0.41	0.49	-.09**	.08**	-.02	-.03	0.10	0.30	.06	.03	.03	.09*
Participation in decision-making	0.52	0.50	-.02	.20**	.11**	-.14**	0.46	0.50	.05	.24**	.10**	-.09*

Notes: Gender: 1 = male; 2 = female. Work engagement 1–7; Employability 1–6. Perceived available HRM practices: 0 = not available; 1 = available. Used HRM practices: 0 = no use; 1 = use.  
*n* Perceived available HRM practices varied between 1235 and 1589; *n* Used HRM practices varied between 774 and 1350. Correlations of the HRM practices (perceived available and used) and work engagement, employability, and age respectively, are point biserial.  
 \*  $p < .05$ ; \*\*  $p < .01$ .



engagement and employability. In addition, we performed correlational analyses with age and gender. To analyze the relationship between perceived availability and the use of HRM practices, on the one hand, and work engagement and employability, on the other hand, in more depth, we conducted multiple hierarchical regression analyses, and extended these with the age groups as moderators in the interaction between the used HRM practices as predictors of work engagement and employability.

## Results

### *Descriptive statistics*

Table 2 presents the correlations between the different measures including the perceived availability and the use of HRM practices. In general, we found significant negative correlations between perceived availability and use of HRM practices, on the one hand, and work engagement, on the other hand. More specifically, in 15 cases the availability of a practice (e.g. part-time work, ergonomic adjustments) and in 5 cases the use of a practice (e.g. telecommuting, paid parental leave) were negatively correlated with work engagement. In contrast, employability showed in 97% (23 perceived available and 9 used) of the cases significant results in the expected, positive direction. Only ‘continuous (on the job) development’ and the actual use of ‘regular training’, ‘promotion’, and ‘task enrichment’ appeared to have positive correlations with work engagement. These are categorized as development HRM practices, except ‘regular training’. Table 2 reveals solely positive significant correlations between perceived availability of HRM practices and employability. Fewer significant correlations, yet indicating predominantly the same picture, could be discerned concerning the used HRM practices, except ‘part-time work’ and ‘paid parental leave’ (both maintenance HRM practices).

It turned out that, overall, the older employees perceived the availability of maintenance and development HRM practices to be higher in comparison to their younger counterparts. Similar results were found for the actual use of HRM practices. However, the use of maintenance HRM practices ‘part-time work’ and ‘paid parental leave’ showed negative correlations with employee age.

As regards gender, a couple of negative correlations were found; males appeared to be more aware of the availability and made more use of HRM practices, in comparison with females, except for ‘part-time work’, ‘job development interviews’, and the use of ‘starting a second career’.

### *Regression analyses*

Table 3 presents the outcomes regarding the influence of both perceived available and used HRM practices on work engagement and employability.

**Table 3.** Regression results testing the relationships between work engagement and employability and perceived available and used maintenance and development HRM practices.

Variables	Perceived available HRM practices						Used HRM practices					
	Work engagement (n = 941)			Employability (n = 962)			Work engagement (n = 287)			Employability (n = 299)		
	B	SE	$\beta$	B	SE	$\beta$	B	SE	$\beta$	B	SE	$\beta$
Maintenance HRM practices												
Part-time work	-.29	.10	-.09**	-.16	.04	-.12***	.04	.20	.02	-.08	.05	-.08
Compressed work week	-.10	.09	-.04	-.05	.04	-.06	-.01	.13	-.00	-.01	.10	-.00
Flexible work	.11	.08	.05	-.00	.03	-.00	-.13	.26	-.06	.10	.06	.11
Telecommuting	-.23	.09	-.11**	.08	.04	.09*	-.22	.16	-.10	.10	.06	.10
Additional leave	.03	.08	.01	-.02	.03	-.03	.12	.14	.06	.06	.05	.07
Exemption from overtime working	.13	.09	.05	.03	.04	.02	.15	.24	.04	-.03	.09	-.02
Early retirement	.30	.10	.13**	.11	.04	.12*	.36	.46	.06	.22	.19	.08
Part-time retirement	-.06	.11	-.02	-.05	.05	-.05	.02	.52	.00	-.13	.21	-.05
Long career break	-.17	.10	-.08	.04	.04	.04	-.30	.42	-.05	-.07	.17	-.02
Variable remuneration	.08	.11	.02	.04	.05	.03	-.21	.32	-.04	.10	.13	.05
Flexible labor conditions	.10	.07	.05	.02	.03	.02	-.15	.25	-.04	-.04	.10	-.03
Ergonomic adjustment	-.21	.10	-.10*	.00	.04	.00	-.35	.19	-.11	-.02	.08	-.02
Regular training	.15	.09	.06	.04	.04	.04	.25	.15	.12	.11	.06	.12
Demotion	-.24	.10	-.10*	-.05	.04	-.05	-.47	.41	-.07	.09	.16	.03
Reduced workload	.04	.10	.02	-.08	.04	-.09*	-.20	.23	-.06	-.13	.09	-.09
Attention for health	-.00	.08	-.00	.01	.04	.01	.13	.16	.05	-.02	.06	-.02
Sport facilities	-.04	.09	-.02	.02	.04	.02	.22	.16	.09	.11	.06	.10
Childcare	.00	.10	.00	-.02	.04	-.02	-.89	.41	-.15*	-.37	.16	-.14*
Paid parental leave	-.21	.10	-.10*	-.06	.04	-.06	-.23	.29	-.05	-.08	.12	-.04
Paid care leave	.04	.10	.02	-.01	.04	-.01	.13	.40	.02	.03	.16	.01
Development HRM practices												
Job development interviews	.07	.11	.02	-.01	.05	-.01	-.10	.19	-.04	.03	.07	.02
Career planning	-.19	.10	-.09*	-.00	.04	-.01	-.20	.17	-.07	-.05	.07	-.05
Continuous development	.31	.08	.15***	.09	.03	.10**	.32	.16	.15	.03	.07	.03
Promotion	.07	.09	.03	.07	.04	.07	.33	.22	.09	.11	.09	.07
Sideways job movement	-.06	.09	-.03	.00	.04	.00	-.04	.19	-.02	-.10	.08	-.08
Task enrichment	.20*	.09	.10*	.11	.04	.12**	.06	.17	.03	.09	.07	.10
Second career	-.04	.09	-.02	-.03	.04	-.04	-.04	.24	-.01	.04	.10	.02
Participation in decision-making	.11	.08	.05	.11	.03	.13**	.09	.15	.04	.17	.06	.19**
R <sup>2</sup> change			.12			.11			.16			.23
Adjusted R <sup>2</sup>			.09			.08			.17*			.15
F			4.37***			4.00***			1.74*			2.85***

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

The total group analysis in Table 3 showed significant relationships between perceived availability of HRM practices and work engagement, however, in 67% (6 out of 9) of the cases in a negative direction. Therefore, Hypothesis 1a is mainly rejected. Concerning the used HRM practices, 'childcare' has a significant negative relationship between both work engagement and employability. As regards employability, nine significant relationships between both perceived availability and use of HRM practices and employability were revealed. The relationships showed three times a negative direction ('part-time work', 'reduced workload', and 'childcare'). Though, overall, used HRM practices appeared to be associated significantly with employability ( $F(28, 298) = 2.85^{**}, p < .001$ ), only two specific HRM practices ('childcare' and 'participation in decision-making') showed significant results by themselves. Therefore, Hypothesis 1a appeared to be only supported for the development practices 'continuous development' and 'task enrichment', while Hypothesis 2a was not supported at all, whereas Hypotheses 1b and 2b were mainly supported.

### ***Hierarchical regression analyses***

Table 4 elaborates on the statistically significant results derived from Table 3 and includes the interaction variables to test moderating effects of the factor employee age. It reveals that the perceived availability of the maintenance HRM practice 'part-time work' affected work engagement and employability negatively, regardless of age group. On the contrary, the perceived availability of development HRM practices 'continuous on the job development' appeared to have a positive relationship with both work engagement and employability, again, regardless of age group. No significant moderating effects of age groups were shown, except one. The relationship between the perceived availability of 'participation in decision-making' and employability turned out to be negatively moderated by the contrast between the <35 and the ≥35 age group. This means that the relation between the participation in decision-making' and employability appeared to be less positive in the <35 group, compared to the ≥35 group.

The outcomes as regards the use of HRM practices are slightly different from the ones with regard to the availability of practices. They reveal a mixed picture. Regarding 'childcare', negative relationships between the actual use and both work engagement and employability were found, with no significant ageing moderating effect. The actual use of 'participation in decision-making' appeared to have a significant positive relationship with employability, irrespective of age group. Therefore, concerning Hypotheses 3–6, only one ageing statement about the relationship between the perceived availability of 'participation in decision-making' and employability, can be made. We conducted additional analyses with age as a continuous variable. These results showed the same picture as the results of the analyses based on distinguished age groups. Hence, whatever relations were found between availability and/or use of HRM practices and employee outcomes, none

**Table 4.** Hierarchical multiple regression analyses predicting work engagement and employability from the perceived available and used HRM practices including

[illegible]





Table 4. (Continued).

Work engagement	Model 1			Model 2			Model 3			Employability			Model 1			Model 2			Model 3		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β	B	SE	β	B	SE	β	B	SE	β
Childcare				Maintenance HRM practices									Maintenance HRM practices								
Childcare × < 35 group				−.80*	.33	−.15*	−.94*	.44	−.18*	Childcare			−.30*	.15	−.13*	−.31	.20	−.14			
Childcare × 35–50 group							.57	.71	.07	Childcare × < 35 group						.05	.34	.01			
							−.45	1.05	−.03	Childcare × 35–50 group						−.28	.48	−.04			
													Development HRM practices								
										Participation in decision-making			.29***	.07	.30***	.31	.09	.32**			
										Participation in decision-making × <35 group						.06	.20	.02			
										Participation in decision-making × 35–50 group						−.06	.11	−.05			
F																					
R <sup>2</sup> (Adjusted R <sup>2</sup> )	2.24 .04 (.02)			3.02* .06 (.04)			2.30* .06 (.04)						1.71* .03 (.01)		4.75*** .12 (.09)	2.94** .12 (.10)					
ΔR <sup>2</sup>	.04			.02			.00					.03		.09		.01					

Note: Model includes standardized regression coefficients of control variables and overall significant HR practices on work engagement and employability.

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$  (two-tailed). <sup>a</sup>Control variables include gender (male = 0, female = 1), organizational tenure, job tenure, educational level.

of those relationships appeared to be moderated by the factor employee age. In short: age apparently does not matter.

## Discussion

Two objectives, translated into a series of hypotheses, underlied the study presented in the preceding sections. The first objective of this study was to examine the relationships between perceived availability and use of HRM practices, and employee outcomes, such as work engagement and employability. Building upon the social exchange theory (Blau, 1964; Gouldner, 1960), it was expected that the perceived availability and the use of HRM practices would have positive associations with work engagement and employability. The second objective of this study was to examine whether employee age moderates these relationships. More specifically, the aim was to get an insight in the relationships between both the maintenance practices (i.e. protective practices enabling older workers to continue functioning the way they do) and the development practices (i.e. supportive practices enabling older workers to achieve new levels of functioning) that were perceived to be available and/or actually used by three meaningfully distinguished age groups, and employee outcomes.

First, our descriptive, and (hierarchical) regression analyses showed positive associations of development HRM - in particular 'continuous development', 'task enrichment' - with both work engagement (herewith partly supporting Hypotheses 1a and 2a) and employability. Bakker, Schaufeli, Leiter, and Taris (2008) showed that high work engagement goes along with the application of resources. In a similar vein, this study shows that employee outcomes appeared to be enhanced through the application of - in particular - development HRM practices. A similarity is looming between the work characteristic 'job resources', having motivating potential (Hackman & Oldham, 1976, 1980; Llorens, Schaufeli, Bakker, & Salanova, 2007), and the more distal development HRM practices. This current study provides evidence that the more distal development HRM practices show similar reciprocal benefits for both the employer and the employees just as the widely acknowledged impact of resources on employee outcomes (Hakanen, Perhoniemi, & Toppinen-Tanner, 2008; Llorens et al., 2007; Mauno, Kinnunen, & Ruokolainen, 2007; Schaufeli & Bakker, 2004), as a result of social and economic exchanges (Gould-Williams & Davies, 2005; Shore et al., 2006).

Second, the analyses showed significant positive results (largely confirming our Hypotheses 1b and 2b), as regard the relationship between of HRM and employability. The scarce negative ones are associated with maintenance HRM practices 'part-time work', 'paid parental leave', and 'childcare'. A possible explanation regarding the first two types of HRM practices is that an organization that is receptive to life-stage dependent preferences for HRM practices, such as 'part-time work' and 'paid parental leave', might endanger the workers' employability. Employees in such organizations could feel being assessed less attached to their

work, and career opportunities. The use of 'childcare' appeared to have negative associations with both employee outcomes. It seems that in the life-stage wherein many employees are engaged in raising little children, their work engagement and employability decrease. Therefore, managers of organizations could assess the provision of HRM practices as a condition of good employer ship, but they should not expect unambiguously higher work engagement nor employability. It would be extremely unwise for anyone to argue that any particular HRM practice automatically enhances work engagement or employability (see also Boxall & Macky, 2009).

Differences between the relationships between HRM and work engagement and employability are also existent. For instance, 'telecommuting' works out negatively for work engagement, and positively for employability. That is to say, being in a state of enthusiasm, immersion, and flow might (i.e. work engagement) requires actually being in one's working environment, whereas this flexible enhancing practice appears to be beneficial in the light of the individual worker's capability growth (Van der Heijden et al., 2009). In addition, in our study we found perceived available HRM practices having more significant, though less strong, associations with work outcomes than the actually used HRM practices. This might partly be the result of the larger prevalence for availability: more employees perceive the availability of HRM practices than employees use these. Nevertheless, the sample of the used HRM practices is large enough to draw valid conclusions. Therefore, given the positive significant relationship between the perceived availability of HRM and employee outcomes, we could state that marketing of the availability of development HRM practices in particular, already pays off. The relationships of the actual use of HRM practices, however, are stronger than the perceived availability. As already stated by Wright and Nishii (2007), the effect of HRM is dependent on its stage in the chain of intended, actual, and perceived HRM practices. That means that the more distal perceived availability of HRM practices expected to have a less strong impact in comparison with the more proximal actually used HRM practices in terms of employee outcomes. In accordance, empirical results from our study showed fewer but stronger results for the actually used HRM practices. The HR value chain could therefore be extended with a distinction in perceived, in terms of availability, and perceived, in terms of actually used impact of an HRM practice.

Regarding age, we hypothesized that the positive relations between maintenance HRM practices and employee outcomes would strengthen with age, whereas we expected the positive relations between development HRM practices and employee outcomes to weaken as workers age. Contrary to our Hypotheses (3–6), with one exception, we have found no significant relationships between perceived available nor used HRM practices and neither work engagement nor employability, moderated by age groups. As regards the exception, the perceived availability of development HRM practice, 'participation in decision-making' has positive associations with employability, and seems to increase in strength with

age. This outcome could be explained by the fact that years of work experience add essential value to the ‘participation in decision-making’. The latter gives a more nuanced picture of the exchange theory (Blau, 1964; Gouldner, 1960).

The findings above show a diffuse picture concerning the life-span theories (Carstensen, 2006; Higgins, 1997), in combination with the meaningful distinction between maintenance and development HRM practices (Kooij et al., 2010). These theories showed goal focus and needs of workers change with age (Bal, Kooij et al., 2013; Carstensen, 2006; Ebner et al., 2006; Kooij et al., 2011). An explanation could be that workers who are already quite engaged and employable might be less dependent on HRM practices that are provided in the organization. Perhaps, regardless of age, they have greater access to resources within and outside their work environment, or to personal resources, such as optimism, self-efficacy, and resilience (Brenninkmeijer, Demerouti, Le Blanc, & Van Emmerik, 2010; Hobfoll, 1989, 2001). These outcomes contradict the results of Kooij et al. (2013). Their results showed that development HRM practices became less, and maintenance HRM practices became more important for the work-related well-being of ageing workers. This difference might be due to different conceptualizations of HRM practices. From the 8-item list used by Kooij et al. (2013) only five HRM practices corresponded with our 28-item list. In addition, our study has captured 28 HRM practices specifically associated with employee outcomes in which we see differences among practices in one category, whereas Kooij et al. bundled the 8 HRM practices measured. Another explanation might be that broad proxies such as age is not the variable we should focus on. In line with the results of Bal, De Lange et al. (2013) more specific strategies associated with losses due to age are more informative.

### ***Theoretical implications***

To the best of our knowledge, this study is (among) the first that addressed the specific relationship between perceived availability and use of HRM practices and employee outcomes, and the moderating role of age in these relationships. Especially with respect to the specific influence of age, up to now, only a few studies seem to have been conducted (e.g. Kooij et al., 2010). The perceived availability and actual use of HRM practices turned out to be positively related to employability. By showing that the associations between HRM practices and work engagement are not unambiguously positive, this study points to the relevance of broadening the research perspective in this field to more than only different forms of HRM practices.

Moreover, as the conceptualization of work engagement that has been used in our study refers to a persistent, pervasive and positive affective-motivational state of fulfillment in employees (Bakker et al., 2008; Schaufeli & Bakker, 2004; Schaufeli, Bakker, & Van Rhenen, 2009; Schaufeli et al., 2002), it comprises more than just work-related items. For example, neither high levels of energy and mental resilience, nor the persistence to face difficulties seem to be constricted to the

working context only. Therefore, we would like to call for further research in this field that goes beyond the working context.

Nevertheless, the driving power from, particularly, development HRM practices on both work engagement and employability is evident. Whereas previous theory was mostly focused on the relationship between job resources and employee outcomes (Guglielmi, Bruni, Simbula, Fraccaroli, & Depolo, 2016), we have shown that the relationship between HRM practices (which may be interpreted as more distant job resources) and employee outcomes is in line with a central proposition of the Job Demands-Resources model (JD-R), namely: job resources, in our specific case development HRM, foster employees' growth, learning and development (Bakker & Demerouti, 2007).

Overall, this empirical study adds to the existing literature with respect to the actual use of both maintenance and development HRM practices, next to the mere perceived availability of these HRM practices (Purcell & Hutchinson, 2007). As outlined in the former paragraph, the current study identified a new factor in the HR value chain. We investigated, next to the perceived availability, the impact of the actual use of HRM practices. The mini-chain of intended, actual, and perceived HRM practices (Wright and Nishii 2007) has been extended by a differentiation in the last stage. Our study has shown that associations of perceived availability and actual of HRM practices, on the one hand, and employee outcomes on the other, overall, do not vary, yet they differ in terms of strengths. The impact of the actual use of HRM practices turned out to have stronger impact in comparison with the impact of perceived available HRM practices. We therefore suggest to continuing research on perceptions of HRM practices wherein one distinguishes in terms of kinds of perception; perceptions of the availability, or perceptions after the actual use of an HRM practice.

With no moderating ageing effects -with one exception - of HRM practices on the employee outcomes, we could conclude that the provision of specific maintenance and development HRM practices is beneficial to all age groups. This study, therefore, indicates that a life-span view on effects of HRM practices in relation to employee outcomes cannot be recommended. Contrary to the life-span theories (Carstensen, 2006; Higgins, 1997) and ageing theories (Bal, Kooij et al., 2013; Kooij et al., 2011) that state that older people differ from younger people in motivation and behavior, our study does not support these theories implying that all kinds of HRM practices should be provided to all age groups. More specifically, in contradiction with the two life-span theories that we have used in our study, we may conclude that as far as our sample of ageing employees are concerned, the key notions of prioritization of present-oriented goals (Carstensen, 2006) and prevention focus (Higgins, 2001) are not supported with our data. The relationships between development HRM and employee outcomes were found to be predominantly positive for all workers, indicating that the assumptions stemming from life-span theories might stress inappropriate interventions for older workers. Notwithstanding our noteworthy outcomes with regard age, it remains



difficult to tell why these relationships are the way they are. Chronological age is a proxy measure for many changes related to ageing: biological, psychological, and social. In addition, the older people get, the more heterogeneous they become (Carstensen, 2006), resulting in a diminishing predictive value of chronological age. Therefore, the influence of age on the relationship between HRM practices and employee outcomes is highly complex and should be further investigated by capturing a broader focus, including functional, psychosocial, organizational, and life-span age (Kooij, De Lange, Jansen, & Dijkers, 2008). In addition, the available time individuals believe they have left in their future working life might also impact the relationship between perceived availability and actual use of HRM, on the one hand, and employee outcomes, on the other hand. Therefore, in line with the socio-emotional selectivity theory (Carstensen, 2006), we would like to suggest to include the employee's future time perspective in future research as well.

All in all, the knowledge deriving from this study may facilitate organizations facing age dynamics, by conducting appropriate, mostly development HRM practices, whether, 'age aware' or 'age free' (Brooke & Taylor, 2005, p. 427).

### **Limitations**

An important limitation of this study concerns its cross-sectional nature. Future approaches using a longitudinal design would give more insight into the causal relationships between HRM practices and the outcome variables, and the moderating influence of age. Another limitation comprises the fact that our study employed only self-report data and could therefore be vulnerable to common-method variance (Conway, 2002). That is, associations between variables could be (partly) attributed to shared variance with respect to the measurement method. We would recommend incorporating data in future research, such as registered sickness absence percentages or supervisor ratings of performance (Brenninkmeijer et al., 2010).

Further, although the distinction between maintenance and development HRM practices can be interpreted as innovative, this categorization is somewhat ambiguous (Kooij et al., 2010). Boselie et al. (2005) already noted that, up to now, there is no accepted theory for classifying various HRM practices into meaningful categories.

### **Practical implications and conclusions**

Our findings show that it is important to realize that there are mainly positive associations of maintenance and development HRM practices with employability, and of development HRM practices, such as 'continuous development' with work engagement. Therefore, HRM managers and organizations can indeed enhance employee outcomes by offering targeted HRM practices. Overall, our results reveal that HRM practices that are related to learning, development, and to

incorporating new tasks may have positive relationships with both work engagement and employability. No differences were found as regards the three distinctive sectors (i.e. transport, health care, and education & research) suggesting our study outcomes to be robust and thus transcending specific organizational contexts (Jenkins & Delbridge, 2013). Furthermore, the literature on life-span development demonstrated that goal focus and motivation change with age – shifting away from growth and development toward prevention and maintenance. Our empirical results highlight that the relationships between HRM and employee outcomes are not substantially moderated by age. As such, by preventing ageism resulting in unviable ‘plateauing’ (FERENCE, 1977), organizations should ensure the availability of particularly development HRM practices for all age groups and facilitate that these HRM practices will actually be used by all age groups to result in enhancement of positive employee outcomes at work.

### Disclosure statement

No potential conflict of interest was reported by the authors.

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**Appendix 1. List of complete names of HRM practices.**

Maintenance HRM practices	Development HRM practices
Part-time work	Job development interviews (potentially including job appraisal, minimum once a year)
Compressed (4 × 9) work week	Career planning
Flexible work (flexible working hours)	Continuous on-the-job development
Telecommuting (working from home)	Promotion (making promotion)
Additional leave (e.g. extra leave related to ageing)	Sideways job movement (job level remains the same)
Exemption from overtime working (and irregular hours)	Task enrichment (job extending with new challenging tasks, e.g. knowledge transfer)
Early retirement	Second career (including re-education within organization)
Part-time retirement	Participation in decision-making
Long career break (sabbatical)	
Variable remuneration (related to personal performance)	
Flexible labor conditions (e.g. possibility to buy or sell vacation days)	
Ergonomic adjustment (e.g. adapted workplace)	
Regular training or education (minimum once a year)	
Demotion (function reduction)	
Reduced workload (demanding tasks are taken out of job responsibilities)	
Attention for health (e.g. health checks)	
Sport facilities	
Childcare	
Paid parental leave	
Paid care leave	