The Driving Power of Development

HRM and Employee Outcomes Across the Life-Span

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Chapter 1

Introduction

1.1 Introduction

Most developed countries face a so-called ‘age quake’ (Tempest, Barnatt, & Coupland, 2002, p. 489), which refers to the simultaneously shrinking and graying global workforce, resulting from low birth rates and increased longevity of life (Kunze, Boehm, & Bruch, 2011; Truxillo & Fraccaroli, 2013). To manage this decreasing workforce, many developed countries introduced a large amount of legal changes to discourage early retirement In the Netherlands for instance (where the studies of this thesis have been conducted) the average retirement age at which Dutch workers retire increased from 61 in 2000 to 64.1 in 2014. As regards future developments, the official retirement age is increasing from 65 to 66 in 2020 (CBS, 2015). This retirement age is expected to increase further to 67 in 2025, as it is now linked with life expectancy. Since the introduction of state old-age pension in 1957, life expectancy has risen 5 years to 19.8 years after retirement age. The forecast predicts an increase of another 5 years by 2060. The proportion of employees who retire between 60 and 65 has dropped dramatically in recent years: from 70 percent in 2008 to 46 percent in 2013. Last year, even 48 percent of employees were 65 years or older at the moment of retirement. For the first time ever, this group is larger than the group of 60 to 65-year-olds who retire (CBS, 2015). In 2014, it was the first time that more than half of the people were 65 years or older at the moment they went into retirement. Projections of the year 2050 indicate that the world’s older population aged 65+ 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). An important effect is that employees have to work longer. Therefore, for governments, employers, and employees themselves it is increasingly imperative to know how to deal with the new reality of an extended working life.

In order to find ways to enable workers to prolong their working life, organizations might require adjustments in Human Resource Management (HRM) (De Lange, Kooij, & Van der Heijden, 2015). To this particular end, life-span theories (Baltes, Lindenberger, & Staudinger, 2006; Barnes-Farrell, & Matthews, 2007; Kanfer & Ackerman, 2004; Maurer, 2007) can be beneficial. These theories have shed light on changes in workers’ needs as they age. Moreover, these theories have laid the basis for the question of how managers may further develop and maintain an ageing and active workforce (Hedge, Borman, & Lammlein, 2006; Hertel, Van der Heijden, De Lange, & Deller, 2013; Shultz & Wang, 2011). However, only a few studies have examined how age affects the relationships between HRM and employee outcomes (such as work engagement, employability, and perceived health; Hedge et al., 2006; Staudinger, Rossnagel, & Voelpel, 2008). As a consequence, this thesis aims to gain knowledge on which and how HRM elicits desirable employee outcomes as workers age. More specifically, this PhD thesis investigates the role of HRM in contributing to enhanced employee outcomes in their life-span. The ageing process at work will be approached from the HRM perspective. Before discussing the role of age in the relationship between HRM and employee outcomes, I will first present a general conceptualization of the relationship between HRM and employee outcomes, including the factors that serve as mediators of this relationship. This chapter concludes with the key issues for this thesis and the dissertation overview.

HRM, Employee Outcomes and the Black Box

To better understand the relationship between HRM, employee attitudes and behavior at work, several empirical studies have been conducted (Harter, Schmidt, & Hayes, 2002; Van de Voorde, Paauwe, & Van Veldhoven, 2012; Wright, Gardner, & Moymihan, 2003; Wright & Nishii 2007). Scholarly research has looked at the so-called ‘black box’ of HRM (Becker & Gerhart, 1996; Boselie, Dietz, & Boon, 2005; Boxall & Macky, 2009; Guest, 1999, Paauwe, 2009) and has shown that HRM influences work outcomes, such as employee attitudes and behavior, through mediators (Combs, Liu, Hall, & Ketchen, 2006). Evidence suggests that work characteristics, such as job resources, have an impact on employees’ attitudes and behavior (e.g., Bakker, Demerouti, De Boer, & Schaufeli, 2003) and can therefore provide an explanation for the relationship between HRM and ageing employees attitudes.

Existing theories to understand the relationship between HRM and employee outcomes emphasize

that HRM reflects different forms of exchange relationships (Shaw, Dineen, Fang, Vellella, 2009), and that signal managers' commitment to and trust in employees (Guzzo and Noonan, 1994). First, the *social exchange theory* (comprising the norm of reciprocity) (Cropanzano & Mitchell, 2005; Blau 1964; Gouldner 1960) emphasizes that mutual benefits are a result of positive social and economic exchanges (Gould-Williams and Davies, 2005; Shore, Tetrick, Lynch, Barksdale, 2006; Tsui, Pearce, Porter, & Tripoli, 1997) for both the employer and the employees. This framework suggests that one party in the exchange relationship will reciprocate positively to the other party, and in doing so, this will improve the quality of the relationship. Thus, a solid theoretical basis is provided to imply that organization's investments in terms of HRM opportunities that are consequently perceived or actually used by employees, will be reciprocated by employees in terms of positive attitudes and behaviors (Shaw et al., 2009; Shore, Coyle-Shapiro, Chen, & Tetrick, 2009; Sun, Aryee & Law, 2007). Second, the *Job Demands-Resources model* (JD-R) (Bakker et al., 2003; Demerouti, Bakker, Nachreiner, Schaufeli, 2001a) suggests that, regardless of the specific occupation that is dealt with, two broad categories of work characteristics, can be distinguished: job demands (e.g., mental load, emotional load, pace and amount of work) and job resources (e.g., independence, learning opportunities, variety of work, support from supervisor, and support from colleagues). Job demands are those physical, social, or organizational aspects of the job that require sustained physical and/or psychological effort, and are, therefore, associated with physiological and/or psychological costs (Demerouti, Bakker, De Jonge, Janssen, & Schaufeli, 2001b; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). Job resources refer to those physical, psychological, social, or organizational aspects of the job that: (1) may reduce job demands and the associated physiological and psychological costs; (2) are functional in achieving work goals, and: (3) stimulate personal growth, learning, and development. According to the JD-R model, job resources have motivating potential (Hackman and Oldham, 1976, 1980; Llorens, Schaufeli, Bakker, & Salanova, 2007), and the impact of work environments, characterized by many resources, on employee outcomes has been widely acknowledged (Hakanen, Schaufeli, & Ahola, 2008; Hobfoll, 2001; Llorens et al., 2007; Mauno, Kinnunen, & Ruokolainen, 2007; Meijman and Mulder, 1998; Salanova, Agut, & Peiró, 2005; Schaufeli & Bakker, 2004). In addition, the JD-R framework (Bakker, Demerouti, Euwema, 2005; Demerouti et al., 2001) states that job resources play a vital role in the development of engagement (see Bakker & Demerouti, 2008; De Lange, De Witte, & Notelaers, 2008). In this thesis, the interrelatedness of job demands/resources and employee outcomes was extended with an HRM perspective, which is, in line with social exchange theory, assumed to function as a foundation of demands and resources. Across this thesis the impact of HRM is conceptualized in different ways. Two studies have focused on the impact of each distinctive HRM practice on employee outcomes (see also Huselid, 1995; Kooij, Jansen, Dikkers, & De Lange, 2014) whereas two other studies examined the impact of HRM bundles. HRM bundles are specified as sets of interrelated and internally consistent HRM practices aimed at achieving the same organizational purpose (MacDuffie, 1995). In addition, in this PhD thesis HRM is conceptualized with distinctive foci. We distinguished between a focus on employees' perception of the availability and the actual use of HRM. One might state that it is insufficient to only shed light on employees' perceptions about HRM (Conway & Monks, 2008; Gratton & Truss, 2003; Snape & Redman, 2010), because they can vary from its intentions and actual use (Nishii et al., 2008). Therefore, it is important to take into account the distinction between employees' perceptions of HRM, and the actual use of HRM by employees (Khilji, 2002; Lee & Allen, 2002; Truss, 2001). For the purpose of this thesis, we examined HRM practices and bundles that are perceived available and actually used by employees.

Accordingly, the causal relations between HRM and employee outcomes is viewed in this thesis as being mediated by increases or decreases of demands and resources. As an articulation of this view, the role played by HRM in different age cohorts of employees is discussed in the next section.

Does Age Matter: Relationship Between HRM and Employee Outcomes

Though there is voluminous literature that addresses the relevance of single or bundled HRM practices (e.g., Becker & Gerhart, 1996; Delery & Doty, 1996; Guest, 1997, 2002; Huselid, 1995; Paul & Anantharaman, 2003; Schuler & Jackson, 2007; Wright, Gardner, Moynihan, & Allen, 2005), up to now, few researchers have conducted empirical research on how age affects the relationship between HRM and important outcomes (e.g., Hedge et al., 2006; Staudinger et al., 2008). Building upon life-span theories scholars have identified some basic changes as people age (e.g., Bal & De Lange, 2015; Baltes et al., 2006; Barnes-Farrell & Matthews, 2007; Maurer, 2007). Therefore, systematic changes in work-related attitudes and work motivation across life-span are to be expected (e.g., Kanfer & Ackerman, 2004; Rhodes, 1983). Consequently, next to our examination of the causal relations between HRM, employee outcomes, and the mediating role of demands and resources, another main challenge is to determine whether ageing would require distinctive HRM practices or bundles for workers of different ages.

In a more concrete sense, this proposition is elaborated in the life-span theory of *Selection Optimization and Compensation* (see also Baltes & Baltes, 1990; Baltes & Carstensen, 1996; Baltes, Staudinger, & Lindenberger, 1999), which states that successful life-span development is a result of maximizing age-related cognitive and physical gains and minimizing age-related cognitive and physical losses. A successful life-span development process involves selecting outcomes, optimizing resources to reach these desirable outcomes, and compensating for the loss of outcome-relevant means. In addition, the *Socioemotional Selectivity theory* states that changes occur during a person's life (Carstensen, 1992; Löckenhoff & Carstensen, 2004). According to this theory, as people age and time boundaries are consequently perceived, the more present-oriented goals related to emotional meaning are prioritized over future-oriented goals that are aimed at information acquisition and expanding horizons. A similar difference between older and younger people derives from Higgins' (1997, 2000) *Regulatory Focus theory*. This theory distinguishes between self-regulation focused on promotion versus self-regulation focused on prevention. Aspirations, accomplishment, growth, and development involve and induce a promotion focus, whilst responsibilities, safety, and security implicate a prevention focus. Whereas younger adults are, in general, more growth-oriented in their goals, older adults demonstrate a stronger orientation towards maintenance and loss prevention (Ebner, Freund, & Baltes, 2006; Lockwood, Chasteen, & Wong, 2005). Together, these life-span-span development theories shed light on changes people face as they age.

In short, as implicated in section 1.1.2, HRM can contribute to employee outcomes of a working population, and this relation may be mediated by job demands and job resources. This suggests that organizations might consider the provision of HRM, next to critical monitoring of job demands or resources to enhance workers' outcomes. To do so effectively, the outcomes of life-span theories (see section 1.1.3) suggest that it is necessary to understand the ageing process and the changes that occur as workers age. This PhD thesis investigates the role of HRM in contributing to enhanced employee outcomes in their life-span. The ageing process at work will be approached from the HRM perspective. The JD-R model and social exchange theory have functioned as an overall framework. The overarching conceptual model is shown in Figure 1. Below, the key issues of this thesis will be described alongside the distinctive empirical studies that will be introduced concisely in order to demonstrate how the studies are related to each other and how they embroider upon each other's theme.

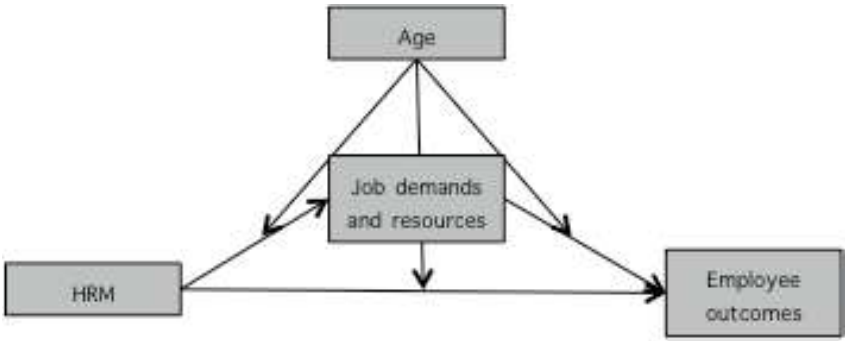


Figure 1. HRM, Job Demands, Job Resources, Employee Outcomes, and Age

1.2 Key Issues of this Thesis

The main research question of this PhD thesis is what and how HRM might contribute to an (ageing) workforce. Related to this research question, our main objective was to examine the relations between HRM and employee outcomes in different contexts and among different age groups to address the evidence-based nature of these relations in empirical research, and to draw conclusions whether age-aware HRM policies are necessary in relation to prolonged working life. More specifically, our research question encompasses the following key issues: 1) the contributing role of HRM to enhanced employee outcomes at work, 2) the ageing workforce, including bridge workers, and HRM. This thesis also aimed at contributing to examining HRM from different angles. These angles relate to key issues with a methodological character. These key issues incorporate: 3) examining the psychometric nature of survey scales to measure (bundles of) HRM practices; 4) examining the perceived availability and / or actual use of HRM; and 5) examining these issues using cross-sectional as well as longitudinal, and mixed methods as well as quantitative approaches.

Key Issue 1: HRM Contributing to Enhanced Employee Outcomes at Work

As noted before, empirical research on HRM has made considerable advancement in understanding linkages between certain HRM practices and employee outcomes, such as work engagement, employability, and perceived health (e.g., Alfes, Shantz, Truss, & Soane, 2013; Clarke & Hill, 2012; Samnani, Boekhorst, & Harrison, 2012), that may subsequently contribute to a firm's effectiveness and competitive advantage (e.g., Becker & Huselid, 1998; Huselid, Jackson, & Schuler, 1997; White & Bryson, 2013; Wright, Dunford, & Snell, 2001). Employee outcomes are the most immediate consequence of HRM, while organizational performances are more distal to HRM and are less directly influenced (Guest & Conway, 2011; Purcell & Kinnie, 2007; Wright & Nishii, 2007). Although, empirical findings have generally confirmed the existence of a significant relationship between HRM and positive individual and organizational outcomes (e.g., Paauwe, 2009), there have been repeated calls to shift the focus of attention to an investigation of factors that may intervene in the relationship between HRM and individual and organizational outcomes (Boselie et al., 2005; Ostroff & Bowen, 2000; Wright & Gardner, 2003). Hence, more insight into how (i.e., through which mediators) HRM may impact these outcomes (the so-called ‚black box', Becker & Gerhart, 1996; Guest, 1997, Ramsay, Scholaris, & Harley, 2000) is considered as one of the key issues in the HRM research field. Despite the efforts in earlier research (e.g., Kuvaas, 2008; Snape & Redman, 2010) to unlock the ‚black box' by examining the mechanisms through which HRM impact upon employees outcomes, more research is still required.

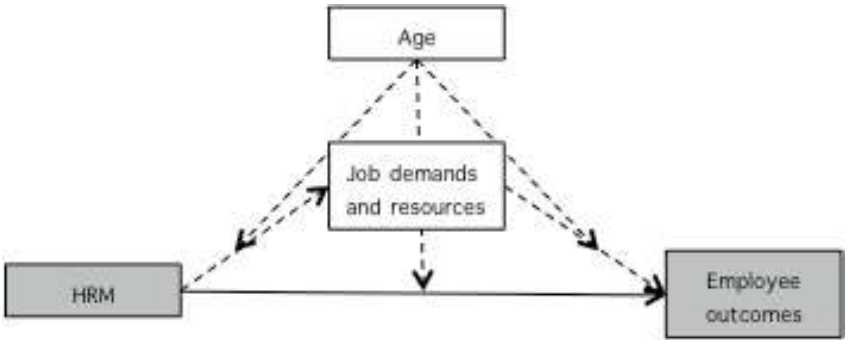
It goes without saying, that a further examination of how employees perceive the HRM practices provided, rather than only studying intended HRM practices is desirable (e.g., Khilji & Wang, 2006; Nishii, Lepak, & Schneider, 2008). Earlier, it has been shown that measures of perceived and actually used HRM practices differ substantially from intended, implemented HRM practices (Conway & Monks, 2008;

Gratton & Truss, 2003; Snape & Redman, 2010; Wright & McMahan, 2011). Hence, it is important to understand the distinctive outcomes of perceived availability and actual use of HRM.

Chapter 2 addresses the issues of the prevalence, the assessment by older workers (55+), line managers, and HRM professionals, and the needs of them related to HRM practices specifically targeted at 55+ workers. Chapter 3 investigates which specific HRM practices actually enhance employees outcomes at work across the life-span. However, these relations might not be direct. To understand the relationships the underlying mechanisms ('black box') have been further investigated. Chapter 4 examines through which mechanisms HRM impact upon employee outcomes. A two-wave complete panel study described in Chapter 5 investigates HRM in relation to social support and employee outcomes among a panel of bridge (65+) workers.

Key Issue 2: The Ageing Workforce and HRM

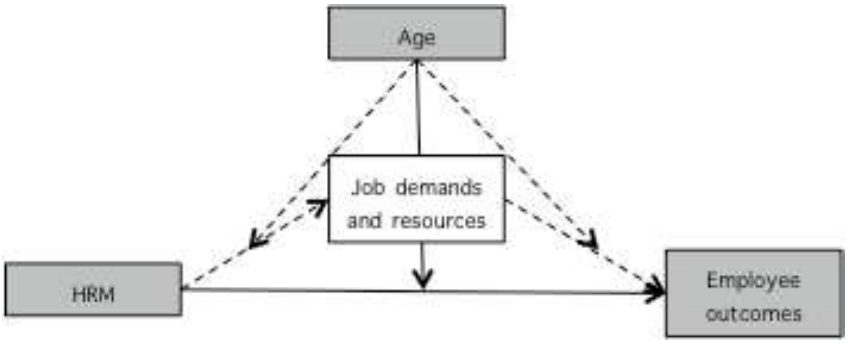
Since organizations face the combination of a constant and rather low number of young employees, due to continuous low birth rates, and the significant dramatic extension of life expectancy at birth within developed countries (Eurostat, 2013; Hertel et al., 2013) adaptations in HRM strategies, might be required. Life-span theories (Baltes et al., 2006; Barnes-Farrell & Matthews, 2007; Kanfer & Ackerman, 2004; Maurer, 2007; Rhodes, 1983) have shed light on changes in workers' needs, which have implications for the specific need for HRM practices throughout their career. This draws attention to the question of how managers may further develop and maintain an ageing and active workforce (Hedge et al., 2006; Hertel et al., 2013; Shultz & Wang, 2011). To date, to the best of our knowledge, no study has addressed the effect of employee age on the mediated relationships that exist between HRM and employee outcomes (Korff et al., 2009). An elaborate overview of used and appreciated practices for the older workers (55+) is, still missing. Chapter 2 of this PhD thesis aims to contribute to the development of such an overview. This study aims to improve knowledge and understanding of age-related HRM practices - solely focused on older workers – that are actually in use, how these practices are evaluated, and whether these practices are aligned with the needs of older workers, line managers, and HRM professionals.



Chapter 2. HRM and Employee Outcomes (55+). Relations examined in this specific study are depicted with solid lines, whereas the contextual relations of the overall PhD study are depicted with dotted lines.

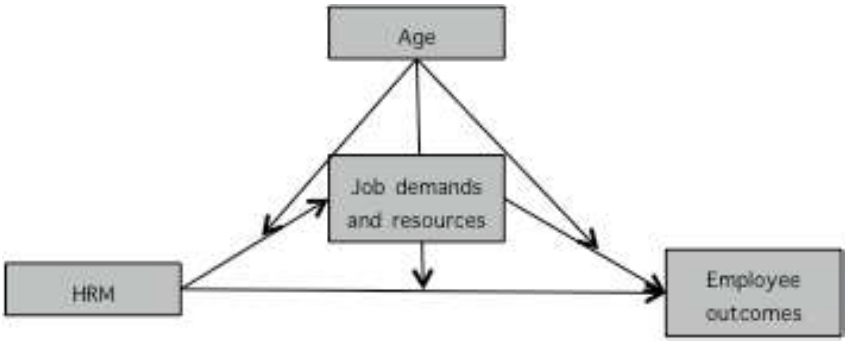
We know that the amount of research on the impact of HRM practices on work outcomes of older workers is expanding (Conen, Henkens, & Schippers, 2012; Herrbach, Mignonac, Vandenberghe & Negrini, 2009; Kooij et al., 2010; Kooij, De Lange, Jansen, Kanfer, & Dikkers, 2011; Leisink & Knies, 2011), but there has been some debate as to whether HRM actually benefits diverse employee age groups in a similar way (Allen, Shore, & Griffeth, 2003; Khilii & Wang 2006; Kuvaas 2008; Truss, 2001; Von Bonsdorff, 2011). Therefore, Chapter 3 investigates which HRM practices can be regarded as effective in

accomplishing a vital workforce of all ages. This study encompasses three meaningful distinctive age groups (< 35, 35-50, and > 50 years).



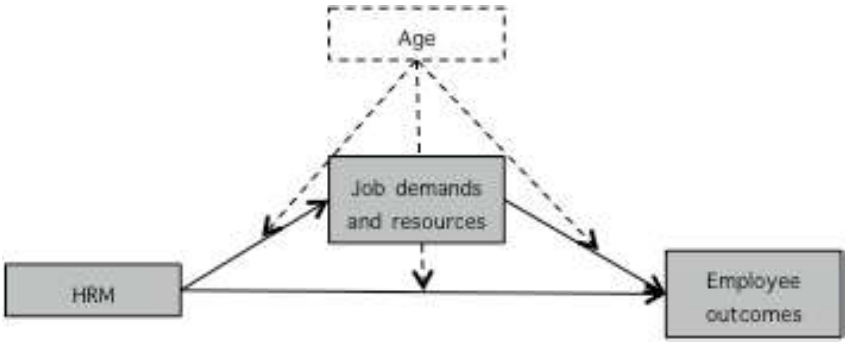
Chapter 3. HRM, Employee Outcomes, and Age Groups. Relations examined in this specific study are depicted with solid lines, whereas the contextual relations of the overall PhD study are depicted with dotted lines.

Chapter 4 delves further into HRM and addresses the impact of mediators upon the relationship between HRM and employee outcomes, and the effect of age in the aforementioned relations, based on the same online questionnaire.



Chapter 4. HRM, Job Demands, Job Resources, Employee Outcomes, and Age. Relations examined in this specific study are depicted with solid lines, whereas the contextual relations of the overall PhD study are depicted with dotted lines.

Chapter 5 exclusively focuses on 65+ workers, the so-called bridge workers. Since the number of older workers participating after retirement age in the workforce is increasing, this thesis aims to contribute to expanding our knowledge about how this specific age group react on HRM and mechanisms through which HRM impact employee (65+) outcomes. This study encompasses a longitudinal analysis of (that is, through which mechanisms) the influence of HRM on employee outcomes for bridge workers.



Chapter 5. HRM, Job Demands, Job Resources, Employee Outcomes (65+). Relations examined in this specific study are depicted with solid lines, whereas the contextual relations of the overall PhD study are depicted with dotted lines.

The following key issues (3-5) are of methodological kind.

Key Issue 3 Psychometric Nature of Survey Scales: HRM Practices and HRM Bundles

This key issue encompasses the investigation of the psychometric nature of survey scales to measure (bundles of) HRM practices. All four studies were based on the aforementioned life-span developmental theories aimed at studying age issues. We differentiate between maintenance and development HRM practices (Kooij, Jansen, Dikkers, & De Lange, 2010). In line with Toh, Morgeson, and Campion (2008), this distinction is made based upon the discrepancy between the shared goals of the two types of HR practices. Hence, maintenance HR practices are focused on retaining employees in their current level of functioning, or are focused on recovery to previous levels after a certain kind of loss. Development HR practices, on the other hand, are focused on advancement, growth and accomplishment, and encourage individual workers to achieve new and challenging levels of functioning. Although the distinction between maintenance and development HR practices is a well-thought out and evidence-based one (Kooij et al., 2010), there is no single accepted theory yet for classifying various practices into different bundles or categories (Boselie, Dietz, & Boon, 2005). The first two studies were based on a conceptual categorization of HRM practices into either maintenance or development, depending on the interpretation of the HRM practice in question. The latter two studies examined HRM bundles, being specified as sets of interrelated and internally consistent HRM practices aimed at achieving the same organizational purpose MacDuffie (1995).

Key Issue 4: Distinction Between Perceived Availability and Actual Use of HRM

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 earlier 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 our studies, we investigate the impact of HRM as perceived available and / or actually used.

Key Issue 5: HRM Approached From Different Angles

This thesis incorporates varied angles from which our topic of HRM and the ageing workforce are approached. Three studies had a cross-sectional character, whereas the fourth was of longitudinal kind. In addition, the first study had a mixed methods set up, whereas the other studies had a quantitative character.

This PhD thesis concludes with several conclusions, discussion, recommendations, and suggestions for future research (Chapter 6).

This PhD thesis concludes with several conclusions, discussion, recommendations, and suggestions for future research (Chapter 6).

1.3 Dissertation Overview

Details of the content of the successive chapters, as characterized above, are displayed in Table 1. This table includes the addressed key issues, research questions, hypotheses/expectations, and the applied research designs.

Table 1. Key Issues, Associated Research Questions, and Hypotheses/Expectation, and Research Design

Chapter	Key issues	Research questions (concise)	Hypotheses/Expectations (concise)	Research design
2	HRM contributing to enhanced (55+) employee outcomes at work	1.1.Which maintenance and development practices for retaining older workers are part of HRM in healthcare? 1.2.To what extent are the used HRM practices, as experienced by older workers, line managers and HRM professionals, successful? 1.3.Which HRM practices for older workers are needed according to these workers themselves, the line managers, and the HRM professionals?	1.Maintenance HRM practices will be more prevalent. 2.Development practices will be generally evaluated highest, particularly by the older workers themselves. 3.Respondents' needs will be focussed rather on development than on maintenance HRM practices.	Cross-sectional exploratory field study
3	HRM contributing to enhanced employee outcomes and the ageing workforce	2.1.Does perceived HRM have positive effects on employee outcomes? 2.2..Does used HRM have positive effects on employee outcomes? 2.3. Does age influence the positive relation between perceived HRM and employee outcomes? 2.4. Does age influence the positive relation between perceived HRM and employee outcomes? 2.5. Does age influence the positive relation between used HRM and employee outcomes? 2.6. Does age influence the positive relation between used HRM and employee outcomes?	H1: There are positive effects of perceived availability of HRM practices on employee outcomes. H2: There are positive effects of used HRM practices on employee outcomes. H3: Age moderates the positive relations between perceived availability of HRM practices employee outcomes. H4: Age moderates the positive relations between perceived availability of HRM practices and employee outcomes. H5: Age moderates the positive relations between used HRM practices and employee outcomes. H6: Age moderates the positive relations between used HRM practices and employee outcomes.	Cross-sectional field study (survey)
4	HRM contributing to enhanced employee outcomes (Opening the black box) and the ageing workforce	3.1. Does maintenance HRM influence job demands and job resources? 3.2. Does development HRM influence job demands and job resources? 3.3. Do job demands and job resources influence the relation between HRM and employee outcomes 3.4. Does age influence the relationship from HRM through job demands and resources to employee outcomes?	H1: The use of the maintenance HRM bundle is negatively associated with (a) job demands and positively with (b) job resources. H2: The use of the development HRM bundle is negatively associated with (a) job demands and positively with (b) job resources H3: The relationship between the use of both maintenance (3a) and development (3b) HRM bundles and employee outcomes is mediated by job demands and by job resources. H4: The mediated relationship between the use of both the maintenance and the development HRM bundles and employee outcomes, through job demands and job resources, is moderated by age.	Cross-sectional field study (survey)
5	HRM contributing to enhanced (65+) employee outcomes (Opening the black box) and the ageing workforce (bridge employment)	4.1. Does perceived and used HRM impact employee outcomes positively over time? 4.2. Does social support (i.e., leader-member exchange and co-worker-member exchange) influence the relationship between HRM and employee outcomes over time?	H1: Perceived availability and actually used maintenance and development HRM bundles are positively related to employee outcomes over time among a sample of 65+ workers. H2: Social support mediates the cross-lagged relationship between perceived and used HRM and employee outcomes over time among a sample of 65+ workers.	Longitudinal study (survey)

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Chapter 2

Development (f)or Maintenance?

An Empirical Study on the Use of and Need for HR Practices to Retain Older Workers in Healthcare Organizations

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Abstract

The aims of this paper are to: 1) examine the prevalence of HR (HRM and HRD) practices to retain older workers in healthcare organizations; 2) evaluate those HR practices that are specifically designed to facilitate the retention of older workers, and; 3) classify those HR practices against the needs of older workers, line managers and HR professionals. To achieve these aims, 51 interviews have been conducted with older workers, line managers, and HR professionals working in 15 Dutch hospitals and care service organizations in late 2010. The study had a mixed-methods set-up in that the collected information was partly quantitative (figures about the prevalence and outcomes of practices), and partly qualitative (incorporating illustrative reflections or observations offered by interviewees), the latter complementing the former. Maintenance HR practices (practices that are focused on retaining older workers in their current jobs) appeared to be by far more prevalent compared to development HR practices (practices that are focused on advancement, growth and accomplishment, and that encourage individual workers to achieve new and challenging levels of functioning). In general, both types of HR practices were evaluated as successful by older workers, line managers and HR professionals. Unexpectedly, the successful evaluations of the maintenance practices appeared to be attributed to developmental rather than maintenance processes. Furthermore, the needs of older workers appeared to be strongly related to both development practices, and, although to a lesser degree, maintenance practices. The paper concludes with relevant directions for future research.

2.1 Introduction

In the face of the rapid ageing and ‘dejuvenization’ of the working population across most of the developed world in the 21st century (Hedge & Borman, 2012; Schalk et al., 2010; Shultz & Adams, 2009; Van der Heijden et al., 2010), there is a need to promote better employment opportunities for older people (OECD, 2012). Internationally, the most populous age group has shifted from the 20-24 group in 1980 to the 30-34 group in 1990, and, subsequently, to the 40-44 group in 2010 (Steemers, 2010). In a similar vein, in European Union member states an average increase of 12% in the proportion accounted for by the 50-59 age group has been predicted over the next 10 years (Inceoglu, Segers, & Bartram, 2012, p. 300).

Therefore, due to the expected workforce shortage, better and longer working careers are urgently needed to finance and support the longer life of European citizens (Ilmarinen, 2005, 2009). In the 21st century, the number of young employees will be too few to replace those who retire, which could be detrimental for the economic growth. The issue at stake here is doing more with fewer workers and, at the same time, with a workforce consisting of relatively more older workers (Collins, 2003). Though retention of older workers might not be an appropriate strategy in some types of organizations, due to specific skill and capabilities’ requirements that are age-dependent, it may be assumed that, in general, a greater utilization of the workforce segment of older workers will be an important approach for organizations to cope with the shortage of younger workers (Collins, Hair, & Rocco, 2009; Ng & Feldman, 2008). It is an approach that, first and foremost, constitutes a challenge for those who are responsible for the Human Resource Management (HRM) and Human Resource Development policy in organizations.

Research has shown that organizations, through applying HRM and HRD practices, offer resources and opportunities to prolong work life of their employees (Kuvaas, 2008), and herewith add to organizational performance (White & Bryson, 2013). More specifically, earlier research has shown that those practices affect worker’s attitudes and behavior (Ostroff & Bowen, 2000). Nonetheless, empirical evidence about HRM and HRD practices that are specifically suited for the older worker is largely lacking (Armstrong-Stassen, 2008; Kooij, Jansen, Dikkers, & De Lange, 2010). In previous research, ergonomic adjustments of the workplace and continuous career development have been shown to have motivational value for older workers (Kooij, De Lange, Jansen, & Dikkers, 2008), as has the provision of training and development practices that were set up to ensure that older workers have interesting and challenging work assignments (Armstrong-Stassen & Ursel, 2009). An elaborate overview of used and appreciated practices for the older workers is, however, still missing. The research presented in this paper aims to contribute to the development of such an overview. To that end, an empirical study was performed. By means of in-depth semi-structured interviews, information was obtained from three types of actors: older workers, line managers, and HRM/HRD professionals. Up until now research on the use of HRM/HRD practices for older workers has only been conducted from the employers’ point of view (e.g., Loretto & White, 2006; Roman, Smeenk, Van Wersch, & De Muijnck, 2009). For instance, Letvak (2002) conducted a descriptive survey to determine the knowledege base and plans for the older nurses, incorporating one respondent group (administrators). In addition to those perspectives, our study incorporates explicitly the perspective of the older workers themselves. As such, this study comprises a mixed-methods approach in that the collected information was partly quantitative (figures about the use of practices), and partly qualitative (incorporating illustrative reflections or observations offered by interviewees), with the latter adding meaning to the former, in a complementary way (Greene, Caracelli, & Graham, 1989).

In this paper, both HRM and HRD practices are included for which we will use the umbrella term HR. Though it is clear that 21st century HRM and HRD have ‘grown up’ as distinctive fields in their own right, there is a great synergy between these two scholarly fields (Ruona & Gibson, 2004). HR management and development are ‘shaped’ by the same changing demographics that create a shortage of skilled and experienced workers (Stein, Rocco, & Goldenetz, 2000). Notwithstanding the interdisciplinary nature of both HRM and HRD (Alagaraja & Dooley, 2003), subtle differences exist

between the specific roles they play at the workplace. The role for HRM is focused on developing distinctive people practices to create core competences that translate into business strategies and that help differentiate an organization's products and services (Cappelli & Crocker-Hefter, 1996). The role for HRD features generative learning as central in future strategic alternatives (Ruona & Gibson, 2004) to create a competent and reflective workforce that utilizes learning to capitalize on emerging opportunities (Torraco & Swanson, 1995). Effective HR professionals should master the basics of HRM and HRD, and this suggests the adoption of an integrated use of these knowledge domains in this study. In line with this reasoning, we refer to the concept of HR incorporating both HRM and HRD.

The objective of this empirical study is to improve knowledge and understanding of age-related HR practices - solely focused on older workers – that are actually in use, how these practices are evaluated, and whether these practices are aligned with the needs of older workers, line managers, and HR professionals. This study is confined to the healthcare sector for several reasons. Since the share of employees in healthcare is 9.9% (OECD, 2008) of the total labor force, healthcare is one of the main pillars of the economy. Due to the increase in the elderly population, and consequently the population of the chronically ill, this sector is set to grow. In order to be and to remain attractive employers, healthcare organizations will have to compete for workers with other sectors, even more so than today. In addition, considering that working in the healthcare sector is mentally and physically demanding (Kirpal, 2004), a major challenge is looming for HR. For these reasons, we have chosen to conduct our research in the healthcare sector, in order to contribute to knowledge and understanding of age-related employment issues in this sector specifically.

2.2 Theory

Before moving on with identifying valuable HR practices for the retention of older employees, conceptual clarification of ageing and age-related consequences needs to be done. The focus underlying the present study implies, as a proposition, that HR practices for the retention of older workers are different from practices that are appropriate for the non-elderly. The basis for this proposition is that ageing involves changes in work-related needs and motives, and that, accordingly, HR practices for older employees should have a different focus than those for their younger counterparts. In a more abstract sense, this proposition is elaborated in the life-span theory of Selection Optimization and Compensation (SOC) (Baltes, Staudinger, & Lindenberger, 1999) which states that successful life-span development is a result of maximizing age-related cognitive and physical gains and minimizing age-related cognitive and physical losses. A successful life-span development process involves selecting outcomes, optimizing resources to reach these desirable outcomes, and compensating for the loss of outcome-relevant means.

The proposition that ageing involves changes in work-related needs and motives has been empirically demonstrated by Kooij, De Lange, Jansen, Kanfer, and Dikkers (2011) who performed a meta-analysis including 86 studies. Their study showed that chronological age is positively related to the strength of intrinsic work motives and negatively related to the strength of extrinsic work motives. In some theories, the difference between older and younger workers, as regards their needs and motives, is elaborated in more detail. One is the Socioemotional Selectivity theory about changes that occur during life (Carstensen, 1992; LÖckenhoff & Carstensen, 2004). According to this theory, as people age and time boundaries are consequently perceived, the more present-oriented goals related to emotional meaning are prioritized over future-oriented goals that are aimed at information acquisition and expanding horizons. A similar difference between older and younger people derives from Higgins' (1997, 2000) Regulatory Focus theory. This theory distinguishes between self-regulation focused on promotion versus self-regulation focused on prevention. Aspirations, accomplishment, growth, and development involve and induce a promotion focus, whilst responsibilities, safety, and security implicate a prevention focus. Whereas younger adults are, in general, more growth-oriented in their goals, older adults demonstrate a stronger orientation towards maintenance and loss prevention (Ebner, Freund, & Baltes, 2006; Lockwood, Chasteen, & Wong, 2005). Together, these life-span development theories shed light on changes people face as they age.

Based on the aforementioned life-span development theories, it can be argued that age involves more dimensions than just chronological (or calendar) age. Simultaneously, however, the other ageing dimensions, such as functional age and organizational age (De Lange, Taris, Jansen, Smulders, Houtman, & Kompier, 2006; Kooij et al., 2008) are highly related to chronological age. For that reason, it is worthwhile to elaborate HR practices for the chronologically older workforce category.

The term ‘older worker’ may refer to workers aged from 40 to 75, depending on the specific kind of job and on the worker (Collins, 2003; De Lange et al., 2006). For the purpose of this study, it was decided to define older workers as workers aged 55 and above. Although in many countries the age of 50 indicates the beginning of a decline in participation rates (OECD, 2012), in this study 55 is used as the age limit, which is in line with collective agreements (for instance, in the Dutch collective labor agreements for care service organizations [2008-2010], in which ‘55 and older’ is particularly mentioned, and for hospitals [2009-2010] in which 55 is also used, although currently the approach changes to a more life-span perspective wherein older workers get prepared for longer careers). In addition, several reports and studies considered 55 as a dividing line between the older and younger employees (Rocco, Stein, & Lee, 2003).

Elaborating on the aforementioned ageing life-span developmental theories, we differentiate between maintenance and development HR practices for older workers (Kooij et al., 2010). In line with Toh, Morgeson, and Campion (2008), this distinction is made based upon the discrepancy between the shared goals of the two types of HR practices. Hence, maintenance HR practices are focused on retaining employees in their current level of functioning, or are focused on recovery to previous levels after a certain kind of loss (see Table 1 for specific examples). Development HR practices, on the other hand, are focused on advancement, growth and accomplishment, and encourage individual workers to achieve new and challenging levels of functioning (see Table 1. for specific examples as well).

Table 1. An Overview of Maintenance and Development HR Practices Based on Kooij et al., 2010

Maintenance	Development
Additional leave	Job enrichment
Early retirement (part-time)	Participation in decision-making
Demotion	Horizontal job change
Exemption from overtime	Second career / job movement
Working part-time	Job redesign
Ergonomic adjustments and safety and health training	Mentoring roles
Performance appraisal	Career planning
Flexible working arrangements (working week of 4x9)	Continuous development on the job
Courses to keep up-to-date	Promotion
Job alleviation	Training in which new things are learned
	Sabbatical leave
	Job development interview
	Health checks

This view on the distinction between HR practices aimed at maintenance or development (Gong, Law, Chang, & Xin, 2009; Kooij et al., 2010), is, by itself, unrelated to age differences between employees. It materializes differently, however, for different employee categories as a result of the various motives and needs that prevail in those categories (Baltes et al., 1999; Carstensen, 1992; Ebner et al., 2006; Higgins, 1997, 2000; LÖckenhoff & Carstensen, 2004; Lockwood et al., 2005). This brings us to Research Question 1:

1. *Which maintenance and development practices for retaining older workers are part of HR in healthcare?*

In the next section, we will elaborate on this issue by outlining the whole of HR practices that fit in with the situation of the category of older workers.

The difference between maintenance versus development HR practices can be clarified in terms of the Job Demands-Resources model (JD-R model: Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). According to this model, two simultaneous processes have an impact on the work outcomes of employees: (1) a health impairment process caused by job demands; and (2) a motivational process evoked by job and personal resources. *Job demands* refer to those physical, psychological, social or organizational aspects of a job that require sustained physical and/or psychological effort or skills, and are therefore associated with certain physiological and/or psychological costs. *Job resources* refer to those physical, psychological, social, or organizational aspects of a job that are: a) functional in achieving work goals; b) reduce job demands and the associated physiological and psychological costs; and c) stimulate personal growth, learning and development. These job resources supplement the *personal resources*, which are aspects of the self, generally linked to resilience, and which refer to individuals' ability to successfully control and impact on their environment (Hobfoll, Johnson, Ennis, & Jackson, 2003; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007).

In order to determine the usefulness of maintenance and development HR practices, criteria from two different stances are used. The aforementioned demands-resources distinction relates to the different approaches that underlie the two types of HR practices: maintenance practices focus on the reduction of job demands, whereas development practices are set up in order to create new and more job and personal resources, or to help employees to cope with job demands themselves. Maintenance practices adapt the work situation to existing employee capabilities while development practices enable employees to perform well and to cope with existing job demands (Evers, Kreijns, Van der Heijden, & Gerrichhauzen, 2011). In terms of work outcomes, improvement of both approaches can be successful. There is a difference, though, as regards the type of successfulness involved. The successfulness of maintenance practices derives from an overall job alleviation that results from demand adaptations that are brought about, whereas development practices are successful given the enrichment of the job situation or the personal efficacy growth of employees.

The triplet successfulness dimensions (job alleviation, job enrichment, and personal efficacy) is a key component of the empirical framework that is used in the present study. It is supplemented with four commonly used criteria of general success (cf. Roman, Smeenk, Van Wersch, & De Muijnck, 2009), being: effectiveness (the extent to which desired goals are achieved), efficiency, degree of actual implementation, and relevance. According to the JD-R model, an investment in the growth of resources, rather than in the reduction of demands, is generally the more productive approach (Bakker & Demerouti, 2008; Bakker, Van Veldhoven, & Xanthopoulou, 2010; Schaufeli & Dijkstra 2010). For that reason, different evaluations of maintenance practices and development practices can be expected, not only in terms of the JD-R criteria job alleviation, job enrichment and personal efficacy, but also in terms of the general success criteria that have been mentioned above. For instance, Van der Heijden, De Lange, Demerouti, and Van der Heijde (2009) found that line managers' ratings of employability related negatively to overall promotions for older workers while the self-rated employability of older workers related positively to promotions throughout the career. Possibly, line managers may differ according to age-related supervisory attitudes. They may assume that older workers are no longer motivated by development in their jobs, and consequently focus on maintenance practices as best option to support older workers. However, along life-span, a shift, not a decline, in workers' motivators is observed: older workers seem to be more intrinsically motivated, replacing extrinsic, competitive ones (Inceoglu et al., 2012; Kanfer & Ackerman, 2004; Ng and Feldman, 2010). Following the theoretical outline above, we expected maintenance HR practices to be more prevalent, but development practices to be generally evaluated highest, particularly by the older workers themselves. Answering the following research questions will shed light on these issues:

2. *To what extent are the used HR practices, as experienced by older workers, line managers and HR professionals, successful in terms of:*

a) *satisfying the purpose for which they are intended (effective);*
b) *being balanced in the time, money and effort they consume (efficient);*
c) *being actually implemented;*
d) *being considered relevant;*
e) *contributing to job alleviation;*
f) *contributing to job enrichment;*
g) *contributing to personal efficacy?*

In line with this reasoning, we assumed that respondents' needs are focused rather on development than on maintenance HR practices. Therefore, Research Question 3 has been formulated:

3. *Which HR practices for older workers are needed according to these workers themselves, the line managers, and the HR professionals?*

2.3 Method

Sample and Procedure

In order to identify used HR practices, their assessments and needs, we approached, through a contact person in an association of healthcare organization, 23 organizations, in particular hospitals and care service organizations situated in the north of the Netherlands. The representatives of the specific organizations were given information by telephone followed by an e-mail in which the objective of the study was explained. We introduced the study as research on 'HRM for retaining older workers' and emphasized voluntariness and confidentiality of responses. To enhance participation, we promised feedback about the findings by means of written reports to be sent to the contact persons of each organization.

Of the 23 healthcare organizations, 15 (representatives) reacted positively, constituting a response rate of 65%. Almost all of the participating organizations were similar as regards size: between 1000 and 2500 employees, with one outlier downwards (nearly 200 employees), and with one outlier upwards (5200 employees). Interviews were planned in each organization, with two older workers appointed to a care/cure job, one line manager of a care/cure department, and one representative of the HR department. This planning was largely realized, but in some cases, this appeared to be not entirely possible due to practical circumstances. In three organizations two instead of one HR professional has been interviewed, one being the general HR professional, and one being an expert on health and safety matters. In three organizations, no line manager could be interviewed, and in two organizations, only one older worker could be approached. All in all, 51 interviews were thus conducted with Dutch employees, constituting three respondent groups: older workers (41%), line managers (24%) and representatives of HR departments (35%; see Table 2). Eighty per cent (N = 41) of the respondents were female. The mean age of all respondents was 50.7, and 57.0 for the older workers (55+), consisting of care and cure employees and (specialist) nurses working on diverse levels. The mean age of the line managers and HR professionals was 47.2 and 45.7 years, respectively. The mean job duration was 12.2 years for the total group, and 18.5 years for the older workers, 7.4 for the line managers, and 7.8 for the HR professionals. The total group of respondents worked, on average, 30 hours a week and had several types of jobs, ranging from care or cure employee to HR manager. The older workers worked, on average, 26.6 hours a week, and the line managers and HR professionals 31.4 and 33.4, respectively.

The interviews, which were conducted in late 2010 by teams of two trained co-workers, with one of them handling the interview questions, and the other one recording and taking notes, consisted of two parts. In the first part (see Appendix 1), the interviewees were invited to mention all HR-practices for older employees, used in their organization, that they knew about. As an aid to perform that job, the interviewers presented and explained a four-fold typology of HR practices to them, with practices focused on, respectively, labor conditions, labor contents, work relations and working conditions (Roman et al., 2009). No further prompts were given, that is, the interviewers refrained from giving concrete examples of practices. As for each practice that was thus mentioned by the interviewee, a

series of questions were asked. First, the interviewee was asked to describe in detail what the practice consisted of, and what it was supposed to bring about. In addition to this information, which had a qualitative nature, he/she was asked to give quantitative assessments, drawn from his/her own experiences, using 10-point Likert scales, in terms of its effectiveness, efficiency, level of factual implementation and relevance (the aforementioned general success criteria), and also in terms of its contribution to the employees' job alleviation, job enrichment and personal efficacy (the aforementioned JD-R criteria). In this paper, we considered scores up to, and including, 4.99 as (relatively) low, and scores from 5 to 10 as (relatively) high scores. Finally, the interviewee was invited to further explain his/her assessments. This generated additional qualitative information, complementary to the quantitative assessments in that it revealed the context and underlying reality, and therewith added to the clarity of those assessments (*cf.* Greene, Caracelli, & Graham, 1989, who call this the complementarity way of combining quantitative and qualitative information in mixed-methods research). Bryman (2006), similarly, reported about 'putting meat on the bones' (p. 106).

As can be seen, the interview format clearly reflected the list of research questions. In addition to the assessments given, the interviewee was asked to explain and justify those assessments and to provide examples of them in practice. The latter was done in order to expel as much as possible self-serving and other biases from the assessments given. The results from this part of the interview thus consisted of: 1) a list of practices; 2) (quantitative) assessments of those practices; and 3) illustrative examples and/or reflections concerning them.

The second part of the interview mirrored the first part, in that the interviewee was asked again to mention and describe HR practices for older people. Now it was about practices that they felt were needed, regardless of their availability in their organization. As such, the results from this part of the interview consisted simply of a list of needed practices.

The interviews were recorded on audiotape, and fully transcribed. The analysis of the texts produced that way, together with the interviewer notes, was mainly a matter of identifying the HR practices that had been mentioned in the interviews. As the interviewees had to name and describe practices without any help from the interviewers, the words chosen by them to perform that job were often quite different from standard HR terminology, and also different from the words chosen by other interviewees who referred to similar practices. As a consequence, the interview outcomes could not easily be brought together into a common pool. Following the approach of Miles and Huberman (1984), first a list of all mentioned practices was established, exactly as worded by the interviewees. Next, one of the authors grouped the practices that she interpreted as being similar into categories, attaching codes (labels) to those categories. Miles and Huberman distinguished between predefined and postdefined codes, the former devised in advance, before the inspection of the list, and the latter devised progressively during and resulting from that inspection (1984, p. 60). The use of postdefined codes, or open coding as it is called by Corbin and Strauss (2008), fits in with an entirely inductive research approach. In the present study, a combined approach, using both predefined codes and postdefined codes, was taken. The predefined codes were derived from what is already known from existing literature on HR activities (Armstrong-Stassen, 2008; Kooij, Jansen, Dikkers, & De Lange, 2010). A check of the resulting categorization by the other authors, and a number of discussions based on that check, resulted in a few adaptations of the category system, the allocation of some practices to categories, and the identification and labeling of some new categories. As such, we identified eleven different used practices, and seventeen different needed practices (see Tables 3 and 4).

Apart from the identification of practices, the analysis of the interview outcomes was rather straightforward. Descriptive statistics were used for processing the quantitative assessments, and a selection was made out of all the explanations underpinning these quantitative assessments, put forward by the interviewees, to be used as illuminating evidence (e.g., Combs & Onwuegbuzie, 2010), in addition to the results about the HR practices and their assessments.

Table 2. Sample Characteristics

	Total group (*N* = 51)	Older workers (*N* = 21)	Line managers (*N* = 12)	HR professionals (*N* = 18)
Male	10 (20)	1 (5)	3 (25)	6 (33)
Female	41 (80)	20 (95)	9 (75)	12 (67)
Age in years	50.7 (8.81)	57.0 (4.18)	47.0 (7.49)	46.0 (8.92)
Job duration in years	12.09 (10.34)	18.50 (12.62)	7.40 (5.72)	7.75 (4.44)
Work week in hours	30.13 (7.74)	26.60 (8.71)	31.42 (7.22)	33.39 (5.03)

Note: Cell entry denote *ns* and % for male and female, and M and SD for the other variables.

2.4 Results

Research question 1: Which maintenance and development practices for retaining older workers are part of HR in healthcare?

Table 3 portrays an overview of the answers related to Research question 1. Distinctions between maintenance and development HR practices, and between the different success criteria (see Research question 2) are reported.

Table 3. Used HR practices and Respondents' Evaluations

HR practice	n (%)	Effectiveness	Efficiency	Level of Implementation	Relevance	Contribution to Job alleviation	Contribution to Job enrichment	Contribution to Personal efficacy
Maintenance								
Additional leave [a,b]	40 (78)	7.05	6.56	7.38	7.17	4.07	5.14	6.60
		(1.62)	(1.87)	(1.46)	(1.55)	(2.48)	(2.42)	(1.93)
Night shift exemption [b]	37 (73)	7.83	7.09	7.60	7.62	4.50	5.21	7.20
		(1.06)	(1.54)	(1.21)	(1.48)	(2.76)	(2.27)	(1.78)
Early (part-time) retirement	6 (12)	7.80	7.00	7.17	7.00	5.67	4.50	7.63
		(0.45)	(1.22)	(1.33)	(3.54)	(4.04)	(4.95)	(0.48)
Menopause help	3 (6)	7.67	6.33	8.33	7.33	4.67	8.00	7.67
		(2.31)	(1.15)	(1.15)	(2.89)	(0.58)	(0.00)	(0.58)
Flexible scheduling	2 (4)	7.00	5.50	4.50	6.50	4.00	4.50	5.50
		(0.00)	(2.12)	(0.71)	(2.12)	(2.83)	(2.12)	(3.54)
Dispensation from task redesign	2 (4)	9.00	7.00	5.00	7.00	8.00	8.00	8.00
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Healthy ageing sessions	1 (2)	3.00	8.00	5.00	4.00	7.00	8.00	5.00
		(-)	(-)	(-)	(-)	(-)	(-)	(-)
Development								
Career and retirement coaching	3 (6)	8.67	8.00	7.33	8.00	7.00	7.67	8.00
		(0.58)	(0.00)	(0.58)	(0.00)	(1.73)	(0.58)	(0.00)
Assignment of mentor tasks	2 (4)	7.00	7.50	7.00	7.50	4.50	5.50	7.00
		(0.00)	(0.71)	(0.00)	(0.71)	(0.71)	(2.12)	(0.00)
ICT training	1 (2)	10.00	10.00	10.00	10.00	3.00	8.00	8.00
		(-)	(-)	(-)	(-)	(-)	(-)	(-)
Work ability monitoring	1 (2)	8.00	8.00	(-)	6.00	7.00	6.00	7.00
		(-)	(-)	(-)	(-)	(-)	(-)	(-)

Note: Cell entries in column 2 are number (%) of respondents mentioning the HR practice. Columns 3 to 9 are means (standard deviations between brackets) of respondents' evaluations for the HR practice, measured on 10-point Likert scales. (-) indicates that the statistic could not be calculated.

[a] This includes Personal Life-span Budget which is used in hospitals: the older the employee, the higher the personal budget.

[b] In a few cases respondents answered from an employee perspective as well as from an organizational perspective. As the figures from the organizational perspective did not differ substantially we confined to presenting the employee perspective.

Of the 11 kinds of HR practices that were mentioned, 4 (36%) were classified as development practices. Moreover, Table 3 shows that of the 98 times that HR practices were mentioned, only 7 (7.14%) could be classified as development practice. Maintenance practices were mentioned most frequently by the older workers, the line managers, and the HR professionals. We found that respondents emphasized two issues: *additional leave* (78%) and *night shift exemption* (73%). Less important was the issue *early retirement* (12%). Other maintenance and development HR practices were only mentioned by two to six per cent of the respondents.

Research question 2: To what extent are the used HR practices, as experienced by older workers, line managers and HR professionals, successful in terms of a) effectiveness, b) efficiency, c) level of implementation, d) relevance, e) job alleviation, f) job enrichment, and, g) personal efficacy?
Table 3 shows details of the success scores for the distinguished HR practices, starting with maintenance practices followed by the development practices. Of the 11 distinguished HR practices in use, 77 evaluations were measured. The mean score on general success and JD-R criteria (as described in section ‚Criteria for the Usefulness of HR Practices') taken together was 6.83, being relatively high. Out of the 77 possible results, we discerned 65 results that were evaluated as successful, and 11 evaluated as not successful (one outcome was not scored).

Evaluated Success Regarding the Maintenance Practices

The results for the success criteria of the most frequently mentioned HR practices – *additional leave* (78%) and *night shift exemption* (73%) – showed the same pattern. Whereas the scores for all items were evaluated as relatively high, job alleviation scored relatively low, and job enrichment scored just above a score of five. This is in contrast to our expectations because maintenance practices were expected to alleviate demands rather than to enhance personal efficacy and job enrichment. Further inspection of the data provides more detailed results. Although the abovementioned HR practices scored quite highly on effectiveness, *additional leave* scored relatively lower, which can be attributed to the large number of part-timers who save up their hours and appeared not to use them to enhance their vitality. As one respondent said:

> ‚For the full-timers, I gave an eight, but the effectiveness for the part-timers is only a four. Part-timers work less and do not need additional leave to build up an extra store of additional leave hours.' (Line manager no. 19, Organization no. 12)

In addition, there is a difference between line managers and employees with respect to this HR practice. This is aptly described by one respondent:

> ‚Employees are positive but managers fear the accumulation of additional hours as they predict a shortage of employees in the longer run.' (Older worker no. 15, Organization no. 5)

None of the two most frequently mentioned HR practices, that is *additional leave* and *night shift exemption*, imply a considerable amount of job alleviation (4.07 and 4.50). These maintenance practices did not appear to be associated with job alleviation. Although *exemption from night shifts* included reduction of tasks, this advantage was offset by doing the tasks all by themselves and being responsible for a substantial number of clients. This individual responsibility can be experienced as stressful. Consequently, job alleviation obtained a low score, which was expressed by one respondent as follows:

> 'The older employee can get *other* tasks, but not fewer tasks.' (HR professional no. 50, Organization no. 8)

As regards the question whether the job became more purposeful (job enrichment), the scores were 5.14 for *additional leave* and 5.21 for *night shift exemption*. In general, these HR practices do not cause changes in the job, and although older workers prefer being exempted from night shifts, this could also be explained by another perception related to personal efficacy. One respondent said:

> 'No, work does not get more interesting when you turn 55.' (Older worker no. 29, Organization no. 6)

The question of whether older workers became more resilient (personal efficacy), as a result of these HR practices, was answered by means of scores of 6.60 for *additional leave* and 7.20 for *night shift exemption*. Respondents indicated a higher personal efficacy, particularly, because of the balanced combination of work and private life, which provides more relaxation and thus yields more job satisfaction. However, more leisure time also has its disadvantages as reported by one respondent:

> ‚It is sometimes difficult to keep up the skills. Due to many days off you lag behind the other employees.' (Older worker no. 9, Organization no. 4)

As stated previously, *early retirement* (12%) showed the same patterns as the above-mentioned HR practices but with different explanations. The aim (*early full-time/part-time retirement*) is certainly achieved (effectiveness: 7.80), but unfortunately at the cost of finance:

> 'The high premiums employees must pay if they wish to retire early.' (Line manager no. 1, Organization no. 9)

Menopause help – a mentor who supports women entering menopause – is mentioned three times (6%) and scored high on level of implementation (8.33). Job enrichment scored high because of its link with personal efficacy. As stated by one of the respondents:

> 'Work is improved by a more appropriate alignment of the work/home life balance.' (Older worker no. 14, Organization no. 5)

Flexible scheduling (4%) involves employees being able to specify their preferences and to have these views taken into account. Nevertheless, this HR practice scored lowest on all mean scores (5.36). Two respondents (4%) mentioned the HR practice *dispensation from task redesign.* This implies that heavier tasks do not have to be executed by older workers. *Healthy ageing sessions* (2%) did not reach their aim and scored a 3.00 regarding perceived effectiveness: of the employees over 55, only two out of ten participated in such sessions. The 7.00 and 8.00 scores for job alleviation and job enrichment are striking, as we would expect no changes in a job as a result of these sessions. One respondent explained:

> ‚Employees can learn from it, which results in job alleviation through greater motivation and pleasure, and more job enrichment.' (Line manager no. 39, Organization no. 10)

Evaluated Success Regarding the Development Practices

None of the development practices are mentioned more than three times. The results of this empirical study should therefore be treated with caution, but nevertheless, we do note some highlights, especially related to the needs of the respondents. Furthermore, we agree that development practices provide perspective on other tasks, that is to say, aimed at development of work and growth in a broad sense. Although this definition is quite stretched, only four HR practices are mentioned: *Career and retirement coaching* (6%) focused on career/life after retirement scored high on every aspect, though to a somewhat lesser extent on job alleviation. *Coaching* could be executed by the manager, and by an external coach as well. The same pattern of high scores applied to *assignment of mentoring tasks* (4%), although to a much lesser extent. *ICT training* (2%) obtained very high scores except for job alleviation. *Work ability monitoring* (2%) showed relatively high scores on all success items.

Evaluated Success Regarding the Maintenance Versus the Development Practices

Overall, we can say that the respondents gave relatively high scores for most HR practices, although some variances are relatively high. Furthermore, we have found that 18% of the maintenance scores have a relatively low evaluation, however with considerable variance. With regard to development practices, we have found that 7% of the development practices are evaluated as low. Relating these outcomes to the distinction between maintenance and development, we only found two low scores for general success, that is for *healthy ageing sessions*, and one low score for *flexible scheduling* (both being maintenance practices). In contrast, we found eight low scores for the success items related to

the JD-R, for both maintenance and development. Concerning job enrichment we only found low scores for maintenance HR practices. As the quotes above pointed out, respondents overall felt no job alleviation through the HR practices. They showed that positive evaluations could be attributed to job enrichment in many occasions, and always to personal efficacy.

Prevalence and Evaluations per Respondent Group

Furthermore, the data from this study were used to test whether differences in the prevalence of HR practices are found among the older workers, line managers, and HR professionals. Descriptive analyses showed that *additional leave* and *night shift exemption* were mentioned by far the most often by representatives from all three groups. To test whether the means of the scores of the three respondent groups differed significantly, a one-way ANOVA was executed. The results of the analysis showed that there were no statistically significant differences between the scores for the three respondent groups.

A more in-depth analysis of prevalence and assessments per respondent group showed differences with regard to the amount and content of mentioned HR practices. HR professionals mentioned six kinds of HR practices, opposed to four HR practices as mentioned by older workers and line managers; since HR is the profession of the HR professionals, we might expect this. Also we found older workers answering less in accordance with the expected JD-R model line of reasoning than HR professionals: Of the four kinds of HR practices that the category of older workers mentioned, they gave low evaluations on job alleviation, whereas the HR professionals evaluated three practices as low with regard to job alleviation and job enrichment.

In sum, the general success issues showed a rather consistent and positive picture. In contrast, the success criteria related to JD-R showed more negative scores on particularly job alleviation as regards to the maintenance and development HR practices. Respondents seem to experience the added value of maintenance HR practices mainly through personal efficacy, and to a lesser extent through job enrichment, while development HR practices' added value is mainly seen through job and personal enrichment. In the next section, we will deal with the needs of the respondents.

Research question 3: Which HR practices for older workers are needed according to older workers, the line managers, and the HR professionals?

Table 4 shows that 51 respondents provided 10 needed maintenance practices - mentioned 25 times -, and 7 needed development practices - mentioned 35 times. The expectation that older workers would want to be supported by development practices that focused on enforcing job resources is partly supported.

The results for the needs regarding HR practices showed that *Career and retirement coaching* was mentioned most frequently (11). This development practice can take many forms. Sometimes it is referred to as interviews on career and retirement issues by the manager with the employee, and sometimes as interviews by parties outside the organization.

Development practices that were less often mentioned included *work ability monitoring* (7 times), but taken together with the adjoining *sport facilities* (4 times), this was mentioned as often as *career and retirement coaching*. As one respondent put the need for it:

> ‚Management should pay more attention to the health of employees and not just to the patients.' (Older worker no. 14, Organization no. 5)

The need for *flexible scheduling*, which is a maintenance practice, and therefore aimed to reduce job demands, was mentioned nine times. The respondents indicated that schedules should be adapted to the capacity of the employee, and that management should consider how to deal with additional leave for older workers. *Job alleviation* was mentioned 7 times. Seconding older workers to work sites that are less demanding, both physically and mentally, was a reported option as well. In this respect, *job alleviation* takes the form of maintenance whereas *job adaption* (mentioned twice) takes the form of development: adaptation to new job circumstances. *ICT training* is offered to older workers where changes in ICT lead to other job content with more responsibilities.

Table 4. Needs per Respondent Group

HR practice	Mentioned as a HR practice in use[1]	Times mentioned	By respondent group
Maintenance			
Flexible scheduling	Yes	9	Older workers: 5 Line managers: 2 HR professional: 2
Job alleviation	Yes	7	Older workers: 4 Line managers: 2 HR professional: 1
Early retirement	Yes	2	Older worker: 1 Line manager: 1
Additional leave	Yes	1	Line manager: 1
More paid breaks	No	1	Older worker: 1
Increased income	No	1	Older worker: 1
Working more	No	1	Older worker: 1
Reduced workload	No	1	Older worker: 1
Facilitating hobby which is not necessarily linked to one's job to find passion	No	1	HR professional: 1
Peer conversation/communication with colleagues	No	1	Older worker: 1
Development			
Career and retirement coaching	Yes	11	Older workers: 3 Line managers: 2 HR professionals: 6
Work ability monitoring	Yes	7	Older workers: 3 Line manager: 1 HR professionals: 3
Sport facilities	No[2]	4	Older worker: 1 Line manager: 1 HR professionals: 2
Job mobility	Yes[3]	4	Older worker: 1 HR professionals: 3
ICT training	Yes	4	Older workers: 3 Line manager: 1
Assignment of mentoring tasks[4]	Yes	3	Older worker: 1 HR professionals: 2
Job adaptation	Yes	2	Older worker: 1 HR professional: 1

Interestingly, the older workers, line managers, and HR professionals differed as regards the amount of HR practices that were mentioned. Most reported needs came from older workers (28), while HR professionals presented 21 ideas, followed by line managers (11). Older workers emphasized *flexible scheduling* (5) and *job alleviation* (4). On the other hand, HR professionals stressed *career and retirement coaching* (6).

Overall, we can conclude that the need to use development practices is strongly recognized by older workers, line managers, and HR professionals, but *flexible scheduling* and *job alleviation* still deserves to be addressed in order to align them to the needs of, and to retain older workers.

[1] Note: Instruments known from Table 3 are mentioned along with new HR practices.
[2] Note: It was not mentioned as being age-specific.
[3] Note: This is mentioned the other way around: no job rotation for older workers. Apparently, a need exists for job rotation for older workers.
[4] This is about being a mentor for younger colleagues.

2.5 Discussion

Restatement of the Research Aims

Three objectives, translated into a series of research questions and sub-questions, underlay the study presented in the preceding sections. The first (corresponding to Research question 1) was to construct a list of used HR practices for older employees in healthcare organizations. More specifically, the aim was to get an overview of 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 in use. The second objective of the study (Research question 2) was to evaluate the success of the HR practices listed. To that end, success was conceptualized in two ways. On the one hand, the concepts of effectiveness, efficiency, level of implementation and relevance were used as general success criteria. On the other hand, some specific concepts derived from the JD-R model were applied. In this JD-R model, two types of working conditions are distinguished. One is called ‘job demands’ (conditions that generate physiological or psychological pressures) and the other is called ‘job/personal resources’ (conditions that open up new opportunities and perspectives). This distinction was translated into three success criteria: job alleviation, job enrichment and personal efficacy. The third objective of the study (Research question 3) was to investigate the needs of involved organizational members with respect to HR for older employees. Data were collected by means of interviews with older workers, line managers and HR professionals using a sample of 51 respondents from fifteen healthcare organizations. These respondents were invited to participate in a semi-structured interview to explain their experiences and their needs with respect to HR management for older workers.

Results and Conclusions

The first step was to identify the prevalence of maintenance and development practices focused on older workers in the healthcare sector. Based on the answers obtained from all interviews combined, eleven different types of HR practices for older workers were identified as being in use in the healthcare sector practice. Two of them stand out as being mentioned by the vast majority of the three respondent groups: *additional leave and nightshift exemption*. These are clearly maintenance practices, and the same is true for five other practices (*early (part-time) retirement, menopause help, flexible scheduling, dispensation from task redesign, healthy ageing sessions*) of the eleven mentioned HR practices. Only four of the practices mentioned by the respondents had a development nature. This all contributes to a highly asymmetric picture, with a strong prevalence of maintenance practices and a weak prevalence of development practices. Moreover, this conclusion is in line with the outcomes regarding research wherein the JD-R model is empirically tested, and in which the balance currently tends to focus on reducing job demands (Bakker & Demerouti, 2007).

With regard to the success of the maintenance and development practices identified, it can be said that these practices are experienced as being fairly successful overall. Apart from a few exceptions, the scores for the three other general criteria of success (efficiency, level of implementation, and relevance) conveyed a similar picture. The amorphously positive conclusion that thus takes shape, is true for both the maintenance and the development practices. The outcomes with regard to the JD-R success criteria (job alleviation, job enrichment, personal efficacy) add, however, some further qualifications. Based on these outcomes, maintenance and development practices appeared distinct when compared as regards the type of their success. By their very nature, maintenance practices can be expected primarily to cause a reduction of demands, operationalized in this study as ‘job alleviation’. In contrast, development practices can first be expected to cause a provision of resources, operationalized as enhanced ‘job enrichment’ and ‘personal efficacy’. As for the development practices, the assessments of the respondents reflected these expectations, with mainly positive scores for the measures of enhanced job enrichment and personal efficacy, and a mixture of positive and negative scores for the job alleviation measures.

Unexpectedly, with respect to the maintenance practices, the respondents' assessments were nearly the opposite in comparison with their expectations. Admittedly, the scores for job enrichment for the two 'outstanding' maintenance practices (*additional leave* and *night shift exemption*) were negative, which still aligns with the above-mentioned expectations. However – contradicting the latter – the scores for job alleviation for these practices were also negative, while the scores for enhanced personal efficacy tended to be straightforwardly positive. In the case of the other maintenance practices, that were mentioned by the respondents, a similar pattern of scores was found. It is a pattern that would be compatible with the nature of development, rather than with maintenance practices. It thus seems to be the case that, remarkably, maintenance practices are beneficial, not so much because they directly reduce the workload of the employees involved, but because they add to the personal efficacy of those employees, enabling them to successfully deal with their workload. In conclusion, whereas we assumed maintenance practices to be predominantly alleviation tools, these maintenance practices appeared to impact in a developmental manner. This conclusion reflects comments made by respondents that HR practices do not instigate job alleviation since these practices do not themselves entail lighter duties, yet, rather more other duties or fewer hours with the same tasks.

Furthermore, this study revealed no significant differences in success scores among the three different respondent groups. Nevertheless, we found the aforementioned developmental nature with regard to the maintenance HR practices, in a more pronounced manner among the older workers. These are the very receivers themselves of the implemented HR practices (Khilji & Wang, 2006). The providers of the (intended) HR practices – line managers and HR professionals – appear to score more amorphously negative for job alleviation and job enrichment. Thus, our analysis of a developmental nature considering the maintenance HR practices, seems particularly appropriate for the older workers. The older workers were explicit in their assessments of practices in the light of job alleviation; inserting maintenance HR practices does not contribute to job alleviation at all; positive scores are mainly related to high scores on personal efficacy. Maintenance HR practices are thus received positively by all respondents, and even in a more pronounced manner regarding the older workers, but they work out in a developmental way.

Examining the needs of the three respondent groups, our expectations that respondents' needs were focused rather on development than on maintenance practices were met with the results of this study. *Career and retirement coaching* was mentioned the most often. This HR practice is approached from a broad stance: 'career development is related to future job assignments' (Gilley, Eggland, & Gilley, 2002, p. 12), and should not be equated with solely upward mobility (Fornes, Rocco, & Rosenberg, 2008), but with sideways mobility and retirement as well. Apparently, a lot could be gained by employing this practice more often. Furthermore, where *sports facilities* and *work ability monitoring* are used – which is seldom the case – it is always offered to all ages. It seems that as *sport facilities* are required for all ages, *work ability monitoring* could be focused on older workers. In addition, *flexible scheduling* was mentioned nine times. Needs such as 'starting later' and 'flexible but regular schedules' were particularly frequently mentioned, primarily by the older workers. Finally, while we found *dispensation from task redesign* as a maintenance practice in use (see Table 3) with good scores for job alleviation, the opposite HR practice, being job mobility, was also mentioned seven times to be a wish. The idea of learning and doing new things could appear challenging, but the knowledge of being secure in a job, appeared also to be attractive. In sum, retaining older workers could improve by using more development practices alongside the existing maintenance practices.

Overall, the most noteworthy outcome of the study is that maintenance practices appeared to be successful in terms of developmental outcomes no less than development practices are. This result gives rise to a reconsideration of two issues. The first one is the distinction between maintenance and development practices. The difference between the two types of HR practices is not reflected in a difference in terms of the generated outcomes. In a sense, maintenance practices can, as a consequence, be called development practices. Especially the pattern of scores given by the older workers, compared to the scores of the line-managers and HR professionals, points to this conclusion. As

the older workers, being the receivers of the HR practices, are the ones with firsthand experience as regards the practice outcomes, this may be viewed as an extra support of it. The conclusion is, in short, that development-through-maintenance, or maintenance-for-development, might be workable HR formula. This may hold for the care of older employees, but also for HR and management development in general.

The second issue to be reconsidered is the age-relatedness of HR practices. The development outcomes of HR practices for the older workers appeared to be no less salient than their counterparts, the maintenance outcomes. This being the case, it becomes questionable whether a focus on maintenance is a wise HR policy for older employees. In contrast to suggestions derived from life-span development theories (Baltes et al., 1999; Carstensen, 1992; Higgins; 1997, 2000; LÖckenhoff & Carstensen, 2004), an HR policy focused on development might be a just as fruitful one.

Limitations

Firstly, although the distinction between maintenance and development HR practices is a well-thought out and evidence-based one (Kooij et al., 2010), there is no single accepted theory yet for classifying various practices into different bundles or categories (Boselie, Dietz, & Boon, 2005). As we argued, some HR practices were not uniformly subject to maintenance or development HR practices, depending on the interpretation of the HR practice in question. For example, a training can be either categorized as a maintenance practice, being focused on retaining skills of the current required level, or categorized as a development practice, being focused on helping employees reaching higher levels of functioning (Kooij et al., 2010). We have chosen to align all practices that are promising regarding even the mere prospect of growth and the development of the job or the employee's competences into the category of development HR practices.

Secondly, the majority of our sample consisted of female employees. More research focusing upon a more gender-balanced environment (Verdonk, Benschop, De Haes, & Lagro-Janssen, 2009) would be highly needed. Research into the generalizability of our findings to other occupational settings and/or countries is recommended as well.

Thirdly, in our study the distinction between older (≥ 55) and younger workers is merely based on chronological or calendar age, whereas chronological age appears to function as a proxy indicator for a broad constellation of age-related processes (Kooij et al., 2008; Kanfer & Ackerman, 2004). Nevertheless, as other ageing dimensions appeared to be highly related to chronological age, it seemed worthwhile to focus on HR practices specifically designed to facilitate the retention of the chronologically older workforce category.

Fourthly, notwithstanding the researchers' attempts to ensure that self-serving and other biases were expelled as far as possible from the data collected, it could maybe have played a role in encouraging respondents to ascribe certain outcomes that may not have articulated if no prompts were given. Undoubtedly, this could have (unconsciously) taken place. Nevertheless, as these biases and prompts given were the same in all interviews, they can not explain any of the differences.

Areas for Future Research

Despite the aforementioned limitations, we now know that future research should focus on the use of development HR practices, possibly tailor-made, over and above maintenance HR practices. This study adds value to the scholarly literature in the field by providing a list of actually used and needed HR practices, solely focused on older workers. In addition, we know now that the three respondent groups' evaluations of these HR practices show a similar, developmental pattern. Even more, the older workers evaluated the maintenance HR practices in a more pronounced developmental manner. General success criteria were rather positive overall. Additional empirical research is needed on the age effects of maintenance and development HR practices in the light of retaining the older worker longer at work. In our empirical study, we have only worked with single item measures; we should extend and deepen our

understanding of these correlations using psychometrically validated measurement scales for the HR practices. Further attention should be given to extending our knowledge to other age categories as well, and to a broader set of development HR practices. A systematic HR knowledge database could be established in order to more safely conclude on the use of the most appropriate HR practice in a certain situation in future benchmarking approaches.

Theoretical Contributions

The findings of this study comprise four theoretical contributions. First, we have argued that most research has been restricted either to a mere social psychological component of older people (Ebner et al., 2006; Higgins, 1997; Lockwood et al., 2005), or HRM/HRD (Gong et al. 2009), without taking into account the knowledge on ageing. By being the very first study bridging the gap between different stakeholders' perceptions of maintenance and development practices focused on older workers, we aimed to partly close the gap regarding more knowledge on ageing at work. As far as we know, this study is the first to focus on all potential HR practices, specifically designed to facilitate the retention of older workers.

Second, we found support for the idea that current HR practices are mainly focused on maintenance, and, more specifically, on reducing employees' job demands. These practices were evaluated as being effective, efficient, implemented in the organizations, and as relevant. Although far fewer development HR practices were mentioned, they had higher scores for job enrichment and personal efficacy. Moreover, most needs mentioned were closely linked to development HR practices. We have thus found support for the JD-R model, which states that to retain older employees, more job resources should be made available (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007).

Third, this study is the first that brings about a list of the needs of the relevant respondent groups (see also Roman et al., 2009). We have thereby offered a list of the HR practices in use – the state-of-the-art, as it were – while relating this to the aim to retain older workers at work. We now know which HR practices to focus on in future scholarly work and in practice, indicating a more developmental scope than focusing on retaining older workers on the same level of functioning.

Fourth, we know there are slight differences between the actual experiences of used HR practices and perceptions regarding the needs for them among the older workers, line managers, and HR professionals. This study is one of the first to incorporate different respondent groups consisting of management and HR professionals (representing the intended part, see also Khilji and Wang, 2006), and the older workers themselves (representing the receivers of the implemented HR practices). Though the evaluations with regard to the maintenance HR practices showed a developmental nature, this trend was more pronounced for the older workers than for the line managers and HR professionals. Also, older workers emphasized needs for *flexible scheduling* and *job alleviation*, whereas HR professionals emphasized needs for development practices, such as *career and retirement coaching*. Overall, more emphasis appeared to be appropriate using development HR practices but *flexible scheduling* and *job alleviation* still need attention to retain older workers' engagement.

Implications for HR Practice

HR practices that are focused on the retention of older workers are experienced as effective. Although governments are undermining these practices through legislation (such as *additional leave*, *nightshift exemption*, *and early retirement*), they are (highly) appreciated by older workers. We now know that these maintenance HR practices are not so much evaluated positively because of their maintenance nature, but much because of their developmental nature. Older workers themselves made clear that they appreciated these HR practices, because they contributed to their personal efficacy (e.g., more leisure time to compensate for working hours). This could implicate that preserving maintenance HR practices, even by law, could contribute to retaining older employees at work.

Compared to maintenance practices development HR practices are used much less frequently, but scored highly nevertheless, in particular in the light of job enrichment and personal efficacy (job and

personal resources). More *career and retirement coaching*, *work ability monitoring* along with *sport facilities* and *job adaptation* are HR practices which could be used easily to retain older workers. Nevertheless, there were considerable variances in the extent to which maintenance HR practices were evaluated positively in terms of success. It seems that to successfully implement these HR practices for retaining older workers, HR should explicitly recognize the organizations' responsibility (Sun & Pan, 2008), and adapt these HR practices slightly. For instance, apparently, a lot can be gained by having good conversations between manager and older worker, incorporating the experiences the older worker has with regard to the last working years (being the third stage of working, Rocco et al., 2003), and the years after retirement. Though the majority of respondents mentioned the annual job interview as a used HR practice, only a few reported this to be (also) focused on facilitating the retention of older workers. HR should incorporate the item of older workers in the yearly job interviews.

We hope that this study encourages more practical and theoretical attention to the used HR practices for older workers in particular.

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Appendix I. Interview Format Underlying the Interviews Conducted

	We would like to know how this HR practice manifests in practice: is it …….				We want to know the intention of this HR practice: is it meant to contribute to ….		
	EFFECTIVE	**EFFICIENT**	**IMPLEMENTED**	**CONSIDERED RELEVANT**	**JOB ALLEVATION**	**JOB ENRICHMENT**	**PERSONAL EFFICACY**
	Does it satisfy the purpose for which it is intended?	Is it in balance to time, money and effort?	Do all parties (employer/employees) cooperate/is it actually implemented?	Is there any need for this?	Reduction of task requirements?	Enrichment of the work (useful, future prospects of work: suiting better in work, job developing)?	Personal efficacy? Increasing personal effectiveness (does it make more resilient, feeling better)?
(1= totally not, 5 = neutral, 10 completely) **MEASUREMENT/ HR PRACTICE**	Notes + Score 1-10	Notes + Score 1-10	Notes + Score 1-10	Notes + Score 1-10	Notes + Score 1-10	Notes + Score 1-10	Notes + Score 1-10
Name: Purpose: Content:							

For each HR practice mentioned by the respondent, the interviewer filled out this format per HR practice specifically designed to facilitate the retention of older workers.

Chapter 3

Which HRM Practices Enhance Employee Outcomes at Work Across the Life-span?

This chapter is under review for a peer-reviewed journal in the domain of Human Resource Management as: Veth, K.N., Korzilius, P.L.M., Van der Heijden, B.I.J.M., Emans, B.J.M., & De Lange, A.H., *Which HRM Practices Enhance Employee Outcomes at Work Across the Life-span?*

This study has been accepted and presented at:
Healthy at Work Congress, Lüneburg, 16-17 May 2014.
The 1st Well-Med Conference, Alexandroupoli, 28 May – 1 June 2014.
The 17th EAWOP Congress, Oslo, 20-23 May 2015.

Abstract

Based on the social exchange theory and on ageing and life-span theories, this paper aims to examine: 1) the effects of perceived availability and use of HRM practices upon employee outcomes (i.e. work engagement and employability); and 2) how employee age moderates these effects. Using a sample of *N*maximum = 1,589 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.

3.1 Introduction

Scholarly research indicates that having an engaged and employable workforce can lead to several beneficial outcomes, such as employee well-being and performance (Harter, Schmidt, & Hayes, 2002; Van de Voorde, Paauwe, & Van Veldhoven, 2012). Human Resource Management (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; Tsui, Pearce, Porter, & Tripoli, 1997). 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). 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 Delery & Doty, 1996; 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, 2013). 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, Kearney, & Stamov Rossnagel, 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, 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, Jansen, Dikkers, & De Lange, 2010; Kooij, De Lange, Jansen, Kanfer, & Dikkers, 2011; 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 (Allen, Shore, & Griffeth, 2003; 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. The current study aims to contribute to responding to this challenge by outlining the different approaches to HRM practices. In this, we will focus on the distinction between the *perceived availability* and the *use* of HRM practices.

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; Ng & Feldman, 2009). 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 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 (≥ 50 years) (Van Dalen, Henkens, & Schippers, 2010b; Van der Heijden, 2001).

To address the aforementioned issues, this paper aims to examine: 1) the effects of perceived availability and use of HRM practices upon 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.

3.2 Theory

Employee Outcomes

In order to reach the goal of enhancing employee outcomes, organizations might require adopting a number of HRM practices targeted at different age groups. Work engagement and employability are critical requirements for enhanced 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). This work outcome is relevant for well-being and a positive state of employees for several reasons. Firstly, being engaged to 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 effect (Demerouti, Bakker, De Jonge, Janssen, & Schaufeli, 2001). Thirdly, engagement contributes to organizational commitment (Demerouti et al., 2001) and is expected to affect employee performance (Kahn 1990). Engaged employees have high levels of energy, are enthusiastic about their work, and are immersed in their work which leads to being in a state of flow (Macey & Schneider, 2008; May, Gilson & Harter, 2004).

The other used work outcome 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). In addition, both employee and employer benefits are at stake; employability enables both career success at the individual level and sustained competitive advantage at the organizational level and (Van der Heijde & Van der Heijden, 2006). More specifically, employable workers deliver more numerical and functional flexibility, and thus meet organization's necessity to manage fluctuating demands. Moreover, they go beyond the domain-specific occupational expertise and are better able to cope with fast changing job requirements by broadening their competence package (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 [see also Boxall & Macky, 2009]) upon the competitive advantage of organizations (Arthur, 1994; Boselie, Paauwe, & Jansen, 2000; Combs, Liu, Hall, & Ketchen, 2006; Delery & Doty, 1996; Guest, 1997; Huselid, 1995; Russell, Terborg, & Powers, 1985), but also upon individual employee outcomes, such as employee trust and perceived job security (Boselie, Hesselink, Paauwe, & Van der Wiele, 2008).

Effects of Perceived Availability and Use of HRM Practices on 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; Tsui et al., 1997) 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 (Harter et al., 2002; Van de Voorde et al., 2012; Wright et al., 2003; 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. Delery & Doty, 1996; Lepak, Takeuchi, & Snell, 2003), but a lack of understanding of the employee factors involved in the HRM – performance linkage still remains (Zhang & Morris, 2010). 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, 2010).

Nonetheless, the evaluation of the impact of HRM on employee outcomes is complex, and more scholarly work is needed. In line with Guest and Peccei (1994), we support 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. employees's behaviors (Lee & Allen, 2002; Purcell & Kinnie, 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; Gratton & Truss, 2004; Ostroff 7 Bowen, 2000). Hence, we hypothesize the following:

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

Hypothesis 2: There are positive effects of actual use of HRM practices on work engagement (H2a) and on 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 explain two life-span theories that underlie our age-related hypotheses. Following these life-span theories, the socio-emotional selectivity theory (Carstensen, 2006) and the regulatory focus theory (Higgins, 1997), work-related motives, and thus the effects produced by the perceived availability as well as the actual use of HRM practices, are expected to change with age.

Firstly, the SST (Carstensen, 1992; LÖckenhoff & 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, 2005). 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 (Freund & Ebner, 2005; Higgins, 1997). 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 et al., 2013; Kooij et al., 2011; Ng & Feldman, 2009).

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, Taris, Jansen, Smulders, Houtman, & Kompier, 2010; Schalk et al., 2010), except from a few studies (i.e. Bal 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 (≥ 41 years) in comparison with the middle (31-40) and younger age group (≤ 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 effects of maintenance HRM practices on 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 effects of development HRM practices on 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 effects of maintenance HRM practices on 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 effects of development HRM practices on work engagement respectively employability weaken as employees age.

Hypotheses 1 to 6 are summarized in Figure 1.

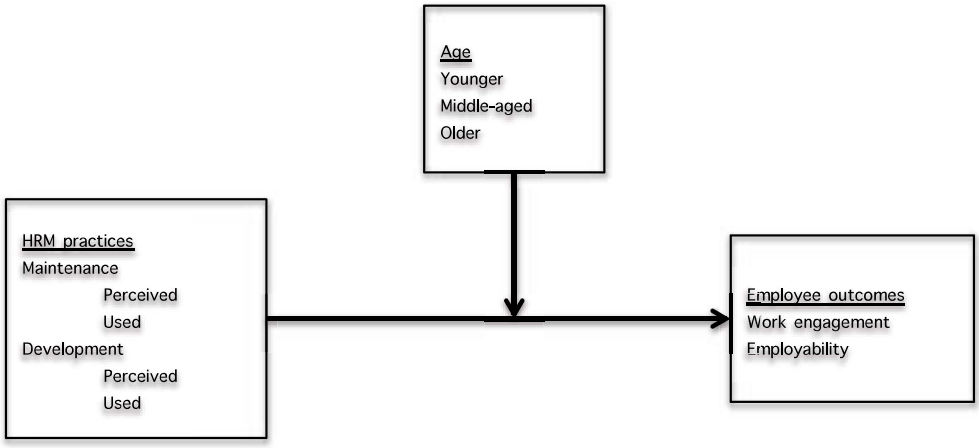

Figure 1. Research Model

3.3 Method

Procedure

The data (*N*maximum = 1,589) collection was based on an on-line survey that was administered between May and June 2012 among 6,000 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 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 to 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 versus 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 (≥ 50 years) differ significantly from younger (< 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 (≥ 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 ≥ 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 ≥ 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*	*χ2*	*df*	*p*
Gender	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)			
Marital status	1167	176	461	530	64.12	6	< .001
Unmarried	118 (10.1)	43 (24.4)	34 (7.4)	41(7.7)			
Married/cohabiting/	961 (82.3)	130 (73.9)	396 (85.9)	435(82.1)			
partnership	79 (6.8)	3 (1.7)	31 (6.7)	45 (8.5)			
Divorced	9 (0.8)	0 (0.0)	0 (0.0)	9 (1.7)			
Widowed							
Children	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)			
Highest completed education	1171	176	463	532	37.39	12	< .001
Elementary school							
Lower vocational education	5 (0.4)	0 (0.0)	2 (0.4)	3 (0.6)			
Secondary school	47 (4.0)	1 (0.6)	17 (3.7)	29 (5.5)			
Secondary vocational	149 (12.7)	13 (7.4)	50 (10.8)	86 (16.2)			
education	370 (31.6)	66 (37.5)	171 (36.9)	133 (25.0)			
Higher vocational education							
Academic education	259 (22.1)	49 (27.8)	93 (20.1)	117 (22.0)			
Other	291 (24.9)	40 (22.7)	110 (23.8)	141 (26.5)			
	50 (4.3)	7 (4.0)	20 (4.3)	23 (4.3)			
Contract	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)			
Management	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 *n*s and percentages between brackets.

Measures

Work engagement (Cronbach's α = .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 α = .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 I) 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).

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 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.

3.4 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’.

Table 2. Means, Standard Deviations, Reliability Coefficients, and Correlations Between Study Variables

	M	*SD*	*(1)*	*(2)*	*(3)*	*(4)*	*M*	*SD*	*(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								Used HRM practices			
						Maintenance HRM practices						
Part-time work	0.87	0.33	-.12**	-.06	-.05	.20**	0.73	0.44	-.04	-.08**	-.06*	.36**
Compressed work week	0.31	0.46	-.09**	.07*	.03	-.01	0.10	0.30	.03	-.01	.06	-.03
Flexible work	0.61	0.49	-.04	.09**	-.02	-.08*	0.65	0.48	-.02	.12**	-.02	-.08*
Telecommuting	0.41	0.49	-.12**	.16**	.06*	-.14**	0.47	0.50	-.09*	.14**	.12**	-.17**
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	.04	.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	-.03	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 – 1350. Correlations of the HRM practices (perceived available and used) and work engagement, employability, and age respectively, are point biserial.

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

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

	Perceived available HRM practices						Used HRM practices					
Variables	*Work engagement* (*n* = 941)			*Employability* (*n* = 962)			*Work engagement* (*n* = 287)			*Employability* (*n* = 299)		
	B	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*
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
Variabele 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^2 change			.12			.11			.16			.23
Adjusted R^2			.09			.08			.07			.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 effects of perceived availability of HRM practices on 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 effect on both work engagement and employability. As regards employability, nine significant effects of both perceived availability and use of HRM practices on employability were revealed. The effect 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 effect on both work engagement and employability, again, regardless of age group. No significant moderating effects of age groups were shown, except one. The effect of the perceived availability of ‘participation in decision-making’ on 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 effects of the actual use on both work engagement and employability were found, with no significant ageing moderating effect. The actual use of ‘participation in decision-making’ appeared to have significant positive effects on employability, irrespective of age group. Therefore, concerning Hypotheses 3-6, only one ageing statement about the effect of the perceived availability of ‘participation in decision-making’ on 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 of those relationships appeared to be moderated by the factor employee age. In short: age apparently does not matter.

Table 4. Hierarchical Multiple Regression Analyses Predicting Work Engagement and Employability From the Perceived Available and Used HRM Practices Including Interaction Variables

	Perceived available HRM practices																		
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*
Control variables										*Control variables*									
Gender	.17	.11	.07	.19	.11	.08	.17	.12	.07	Gender	-.14	.05	-.13**	-.10	.05	-.09*	-.10	.05	-.09
Organizational tenure	.01	.01	.07	.00	.01	.05	.00	.01	.03	Organizational tenure	-.00	.00	-.04	-.01	.00	-.12*	-.01	.00	-.15*
Job tenure	.00	.01	.00	.00	.01	.00	.00	.01	.01	Job tenure	-.00	.00	-.04	.00	.00	.02	.00	.00	.03
Educational level	-.12	.05	-.12**	-.15	.05	-.15**	-.14	.05	-.14**	Educational level	.08	.02	.18***	.03	.02	.07	.03	.02	.07
Maintenance HRM practices										Maintenance HRM practices									
Part-time work				-.33	.12	-.12**	-.35	.14	-.13*	Part-time work				-.21	.05	-.17***	-.25	.06	-.21***
Part-time work x < 35 group							.03	.21	.01	Part-time work x < 35 group							.10	.08	.08
Part-time work x 35-50 group							-.01	.16	-.00	Part-time work x 35-50 group							.09	.06	.10
Telecommuting				.12	.12	.05	.19	.19	.07	Telecommuting				.08	.05	.07	.07	.08	.06
Telecommuting x < 35 group							-.17	.39	-.03	Telecommuting x < 35 group							-.02	.16	-.01
Telecommuting x 35-50 group							-.14	.26	-.04	Telecommuting x 35-50 group							.04	.11	.03
Early retirement				.20	.11	.09	.06	.15	.03	Early retirement				.07	.05	.07	.12	.06	.12*
Early retirement x < 35 group							.26	.38	.04	Early retirement x < 35 group							-.11	.16	-.04
Early retirement x 35-50 group							.25	.24	.07	Early retirement x 35-50 group							-.11	.10	-.07
Ergonomic adjustments				-.16	.11	-.08	-.06	.18	-.03	Reduced workload				-.09	.05	-.08	-.03	.08	-.02
Ergonomic adjustments x < 35 group							-.33	.33	-.07	Reduced workload x < 35 group							-.20	.14	-.08
Ergonomic adjustments x 35-50 group							-.09	.25	-.03	Reduced workload x 35-50 group							-.06	.11	-.04
Demotion				-.42	.13	-.16**	-.42	.19	-.16*										
Demotion x < 35 group							.08	.39	.01										
Demotion x 35-50 group							-.02	.28	-.01										
Paid parental leave				-.06	.10	-.03	-.12	.15	-.05										
Paid parental leave x < 35 group							.17	.29	.04										
Paid parental leave x 35-50 group							.10	.23	.03										
Development HRM practices										Development HRM practices									
Career planning				-.02	.11	-.01	-.12	.18	-.06	Continuous development				.09	.04	.10*	.06	06	.07
Career planning x < 35 group							.28	.37	.07	Continuous development x < 35 group							-.11.12		-.07
Career planning x 35-50 group							.12	.24	.04	Continuous development x 35-50 group							.11	.09	.10
Continuous development				.27	.10	.14**	.26	.15	.13	Task enrichment				.12	.04	.13**	.16	.06	.18**
Continuous development x < 35 group							-.05	.31	-.01	Task enrichment x < 35 group							.09	.12	.06

Continuous development x 35-50 group						.06	.21	.03	Task enrichment x 35-50 group						-.10	.09	-.10
Task enrichment			.18	.10	.09	.31	.15	.16*	Participation in decision-making			.16	.04	.17***	.23	.06	.26***
Task enrichment x < 35 group						-.46	.29	-.13	Participation in decision-making < 35 group						-.27	.13	-.12*
Task enrichment x 35-50 group						-.15	.21	-.06	Participation in decision-making x 35-50 group						-.11	.09	-.09
F	3.10*		4.39***			2.08**				6.86***		9.15***			4.94***		
R^2	.02		.010(.08)			.12				.05		.16			.20		
(Adjusted R^2)	(.02)					(.06)				(.04)		(.15)			(.16)		
ΔR^2	.02		.08			.02				.05		.11			.03		
Used HRM practices																	
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*
Control variables										*Control variables*									
Gender	.08	.16	.03	.10	.16	.04	.09	.16	.04	Gender	-.14	.07	-.13	-.11	.07	-.10	-.10	.07	-.09
Organizational tenure	.01	.01	.11	.01	.01	.01	.01	.01	.10	Organizational tenure	-.00	.00	-.06	-.00	.00	-.06	-.00	.00	-.07
Job tenure	.00	.01	.02	.00	.01	.03	.00	.01	.03	Job tenure	.00	.01	.01	.01	.01	.02	.00	.01	.03
Educational level	-.14*	.07	-.14*	-.14	.07	-.13	-.13*	.07	-.13*	Educational level	.05	.03	.11	.01	.03	.02	.01	.03	.01
	Maintenance HRM practices												Maintenance HRM practices						
Childcare				-.80*	.33	-.15*	-.94*	.44	-.18*	Childcare				-.30*	.15	-.13*	-.31	.20	-.14
Childcare x < 35 group							.57	.71	.07	Childcare x < 35 group							.05	.34	.01
Childcare x 35-50 group							-.45	1.05	-.03	Childcare x 35-50 group							-.28	.48	-.04
													Development HRM practices						
										Participation in decision-making				.29***	.07	.30***	.31	.09	.32**
										Participation in decision-making x < 35 group							.06	.20	.02
										Participation in decision-making x 35-50 group							-.06	.11	-.05
F	2.24			3.02*			2.30*				1.71*			4.75***			2.94**		
R^2	.04 (.02)			.06			.06				.03			.12			.12		
(Adjusted R^2)				(.04)			.(04)				(.01)			(.09)			(.10)		
ΔR^2	.04			.02			.00				.03			.09			.01		

Note: [a] Control variables include gender (male = 0, female = 1), organizational tenure, job tenure, educational level.

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).

3.5 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 effects of perceived availability and use of HRM practices on 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). 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, & Ruokolaine, 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 impact of HRM on 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 effects on 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 effects of HRM on 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 impact of the perceived availability of HRM on employee outcomes, we could state that marketing of the availability of development HRM practices in particular, already pays off. The impact of the actual use of

HRM practices, however, is stronger than the perceived availability. As already stated by Wright and Nishii (2013), 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 effects of perceived available nor used HRM practices on 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 effects on 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 (Carstensen, 2006; Higgins, 1997; Bal et al., 2013; Kooij et al., 2011; Ng & Feldman, 2009), 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, LeBlanc, & Van Emmerik, 2010; Hobfoll, 1989, 2001).

Theoretical Implications

To the best of our knowledge, this study is (among) the first that addressed the specific effect of perceived availability and use of HRM practices on employee outcomes, and the moderating role of age in these relationships. Especially with respect to the specific influence of age, only a few studies seem to have been conducted (e.g. Kooij et al., 2010) up till now.

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 on more than only HRM practices. After all, work engagement is defined as 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). This definition contains much more than just work-related items. For example, neither high levels of energy and mental resilience, nor the persistence to face the face difficulties seem to be constricted to the working context only. Therefore, it would be interesting to conduct further research going beyond the working context.

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 (Adler, Goldoftas, & Levine, 1999; 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 & Nishii, 2013) 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 et al., 2013; Kooij et al., 2011; Ng & Feldman, 2009) 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. The knowledge deriving from this study may therefore 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 of all three included organizations can indeed enhance employee outcomes by offering targeted HRM practices. 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 effects of HRM on 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.

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Appendix I. 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 (4x9) work week	
Flexible work (flexible working hours)	Career planning
Telecommuting (working from home)	Continuous on-the-job development
Additional leave (e.g., extra leave related to ageing)	Promotion (making promotion)
Exemption from overtime working (and irregular hours)	Sideways job movement (job level remains the same)
Early retirement	Task enrichment (job extending with new challenging tasks, e.g., knowledge transfer)
Part-time retirement	Second career (including re-education within organization)
Long career break (sabbatical)	Participation in decision-making
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	

Chapter 4

HRM Bundles and Employee Outcomes: Opening the Black Box

The Roles of Job Demands and Job Resources

This chapter is under review for a peer-reviewed journal in the domain of Human Resource Management: Veth, K.N., Korzilius, P.L.M., Van der Heijden, B.I.J.M., Emans, B.J.M., & De Lange, A.H., *HRM Bundles and Employee Outcomes: Opening the Black Box, The Roles of Job Demands and Job Resources*

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Abstract

Using the Job Demands-Resources model literature and the social exchange theory as a theoretical framework, we examined the effects of perceived job demands and job resources as potential mediators in the relationship between used bundles of HRM and employee outcomes. In addition, we tested for significant mean age differences in our research model. We collected self-reported data through an on-line questionnaire from 1,121 respondents. Results from the factor analyses and measurement models' comparison supported the hypothesized original 2-factor structure of HRM practices. Structural Equation Modeling analyses showed two distinct processes, in terms of mediation, from the distinctive maintenance and development HRM bundles. Maintenance HRM related directly negatively to employee outcomes. Conversely, the results of the use of development HRM confirmed our hypothesized mediation model, however, the moderating effect of age was not supported with these data. Further, we examined whether there are significant age differences in the aforementioned relations.

4.1 Introduction

Previously, ample Human Resource Management (HRM) research has paid attention to effects of HRM on individual employee attitudes and behavior (e.g., Allen, Shore, & Griffeth, 2003; Gould-Williams & Davies, 2005; Kuvaas, 2008; Morris, Lydka, & Fenton, 1993; Wright, Gardner, & Moynihan, 2003; Zacharatos, Barling, & Iverson, 2005). It is through employees' attitudes and behavior that organizational competitive advantage can be gained (Becker & Huselid, 2006; Huselid, Jackson, & Schuler, 1997; Paauwe, Wright, & Guest, 2013). To better understand how HRM contributes to shape employees' attitudes and behavior, research should examine possible mediating linkages between HRM implementation and employee outcomes (see also Bowen & Ostroff, 2004). To this end, the Job Demands-Resources model (Bakker, Demerouti, De Boer, & Schaufeli, 2003; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001a) is used to investigate the influence of the use of HRM bundles by individual employees through the mediating work-related characteristics on employee outcomes. Moreover, to investigate the character of these relationships, social exchange theory ((Blau, 1964; Gouldner, 1960) serves as an additional theoretical framework. These aforementioned relationships occur in the context of an ageing labour force, and get more meat on the bones when age is taken into account as well.

Nowadays, organizations are facing the combination of a constant and rather low number of young employees, due to continuous low birth rates, and the significant dramatic extension of life expectancy at birth within European and other developed countries (Eurostat, 2013; Hertel, Van der Heijden, De Lange, & Deller, 2013; Taylor, 2006). This might require adaptations in HRM strategies, such as career development, recruiting, and retirement policies (Hedge, Bormann, & Lammlein, 2006) in order to find ways to enable workers into a prolonged working life (De Lange, Kooij, & Van der Heijden, 2015). Life-span theories (Baltes, Lindenberger, & Staudinger, 2006; Barnes-Farrell & Matthews, 2007; Kanfer & Ackerman, 2004; Maurer, 2007; Rhodes, 1983) have shed light on changes in workers' needs, which have implications for the specific need for HRM practices throughout their career. This draws attention to the question of how managers may further develop and maintain an ageing and active workforce (Hedge et al., 2006; Hertel et al., 2013; Shultz & Wang, 2011).

To date, to the best of our knowledge, no study has addressed the impact of mediators upon the relationship between HRM and employee outcomes, together with the effect of age in the aforementioned relations (Korff, Biemann, Voelpel, Kearney, & Roßnagel, 2009). This is an important omission, since evidence suggests that employees' working characteristics, such as job resources, have an impact on employees' attitudes and behavior (e.g. Bakker et al., 2003), and can therefore provide an explanation for the relationship between HRM and (ageing) employees' attitudes. Considering these limitations, the contribution of our paper is fourfold. Firstly, we aim to extend the Job Demands-Resources model literature (Bakker et al., 2003; Demerouti et al., 2001a) by investigating the relationships between several HRM bundles actually used by employees, work-related aspects and employee outcomes. To investigate these relationships, social exchange theory (Blau, 1964; Gouldner, 1960) is used as a helpful theoretical framework as well. In order to advance the opening of the 'black box' of the link between HRM bundles and employee outcomes, we have examined the mediating role of job demands and job resources. Secondly, findings from life-span developmental psychology have identified various systematic age-related changes in human functioning (Baltes et al., 2006; Barnes-Farrell & Matthews, 2007; Maurer, 2007), and work-related attitudes, and work motivation (Finegold. Mohrman, & Spreitzer, 2002; Kanfer & Ackerman, 2004; Rhodes, 1983). Therefore, age has been included as an important factor in our research model. Thirdly, a growing body of research has examined the effects of HRM practices on employee outcomes (Gellatly, Hunter, Currie, & Irving, 2009; Gong, Law, Chang, & Xin, 2009; Gould-Williams, 2007; Guest, 1997; Kuvaas, 2008; Macky & Boxall, 2007; Paauwe, 2009), however, to date, there are almost no empirical studies investigating the effects of the *actual* use of HRM practices by employees (see for an exemption Bal & De Lange, 2014). Since employees' perceptions about HRM can inevitably vary from its actual use (Conway & Monks, 2008; Gratton & Truss, 2003; Nishii, Lepak, & Schneider, 2008; Snape & Redman, 2010), we examined the impact of the

actual use of HRM practices by employees. Fourthly, by examining HRM bundles, we go beyond several HRM studies that have taken into account isolated HRM practices (see also Huselid, 1995; Kooij, Jansen, Dikkers, & De Lange, 2014; MacDuffie, 1995; Veth, Emans, Van der Heijden, Korzilius, & De Lange, 2015). Following MacDuffie (1995), HRM bundles are specified as sets of interrelated and internally consistent HRM practices aimed at achieving the same organizational purpose.

This study has been conducted in the Netherlands incorporating three different sectors: transport, healthcare, and research & education, and thus enables us to test the robustness of findings across (not-for-)profit sectors. Our research model, illustrating the link between employees' HRM utilization and work-related outcomes, and all hypothesized relationships is presented in Figure 1.

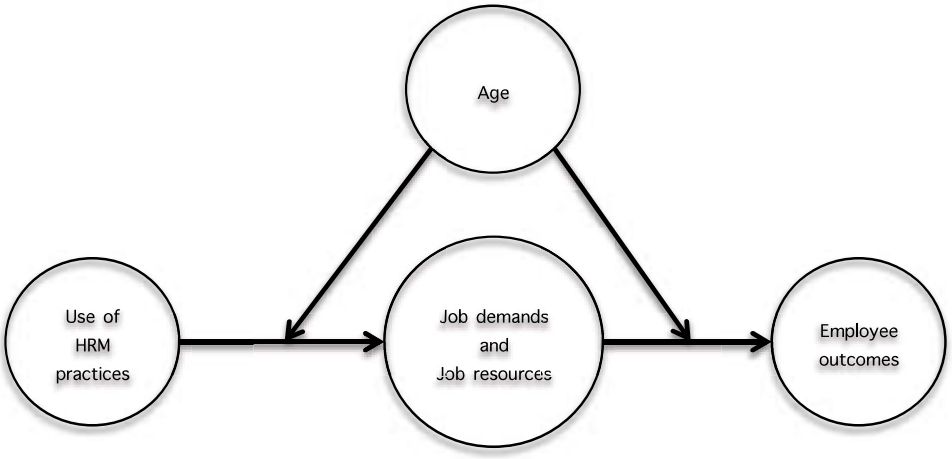

Figure 1. Research Model

4.2 Theory

Extending the Job Demands-Resources Model Framework by Incorporating HRM

The research model for this study comprises an extension of the Job Demands-Resources model (JD-R) (Bakker et al., 2003; Demerouti et al., 2001a). According to the JD-R model, regardless of the specific occupation that is dealt with, two broad categories of work characteristics, can be distinguished: job demands (e.g. mental load, emotional load, pace and amount of work) and job resources (e.g. independence, learning opportunities, variety of work, support from supervisor, and support from colleagues). Job demands are those physical, social, or organizational aspects of the job that require sustained physical and/or psychological effort, and are, therefore, associated with physiological and/or psychological costs (Bakker et al., 2003, p. 344). Job resources refer to those physical, psychological, social, or organizational aspects of the job that: (1) may reduce job demands and the associated physiological and psychological costs; (2) are functional in achieving work goals, and: (3) stimulate personal growth, learning, and development (Bakker et al., 2003, p. 344). According to the JD-R model, job resources have motivating potential (Bakker & Demerouti, 2014), and the impact of work environments, characterized by many resources, on employee outcomes has been widely acknowledged (Hakanen, Schaufeli, & Ahola, 2008; Hobfoll, 2001; Llorens, Schaufeli, Bakker, & Salanova, 2007; Mauno, Kinnunen, & Ruokolainen, 2007; Meijman & Mulder, 1998; Salanova, Agut, & Peiró, 2005; Schaufeli & Bakker, 2004).

First, as *work engagement* is the central variable in the motivation process within the JD-R model that is expected to affect employee performance (Bakker & Demerouti, 2008), this variable is included as one of the employee outcomes in the present study. Second, *employability* is also referred to as a positive outcome (Thijssen, Van der Heijden, & Rocco, 2008). The definition for employability

that has been adopted in our research is ‘the capacity of continuously fulfilling, acquiring or creating work through the optimal use of competences’ (Van der Heijde & Van der Heijden, 2006, p. 453). Employability (or career potential) enables employees to cope with fast changing job requirements (Van der Heijde & Van der Heijden, 2006; Van der Heijden, De Lange, Demerouti, & Van der Heijde, 2009). Last, considerable previous research has shown the association between work characteristics and employee health (i.e. Wilson, Dejoy, Vandenberg, Richardson, & McGrath, 2004). As work is an influential part of employees’ lives, it also affects the quality of individual’s life and his or her perceived mental health (Harter, Schmidt, & Keyes, 2002). Therefore, health is included as an employee outcome as well.

Much evidence suggests that working characteristics (job demands and resources) enhance employee outcomes, such as work engagement (Demerouti et al., 2001a, b; Mauno et al., 2007; Salanova et al., 2005). Drawing from social exchange theory incorporating the norm of reciprocity (Blau, 1964; Gouldner, 1960), it can be expected that HRM affects work-related attitudes through employees’ perceptions or experiences (Gould-Williams, 2007; Kooij et al., 2010; Messersmith, Patel, Lepak, & Gould-Wiliams, 2011). Social exchange theory denotes that reciprocal 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; Tsui, Pearce, Porter, & Tripoli, 1997). Unfortunately, some research has shown ‘a dark side’ of HRM (Jensen, Patel, & Messersmith, 2013), specifically related to enhancing employee skills, increasing their motivation, and facilitating empowerment (Wright & Boswell, 2002), which might result in employees feeling being exploited. For instance, attending a training can be at the expense of employee’s time and energy and can therefore also lead to increased working pressure. However, in general, HRM is acknowledged as an important function that adds value to employee attitudes and behavior (Snape & Redman, 2010), by reducing job demands, and improving job resources.

HRM, the impact of which is explored in this study, is conceptualized in it in a strict way. The focus is on the actual use by employees, rather than on (employees’ perception of) the availability and/or the HRM intentions that form part of organizations’ strategy. It is insufficient to only shed light on employees’ perceptions about HRM (Conway & Monks, 2008; Gratton & Truss, 2003; Snape & Redman, 2010), because they can vary from its intentions and actual use (Nishii et al., 2008). Therefore, it is important to take into account the distinction between, firstly, the intentions behind the HRM practices at a strategic level as reported by HRM professionals (e.g. Khilji & Wang, 2006; Nishii et al., 2008), secondly, employees’ perceptions of those aforementioned HRM practices, and, thirdly, the actual use of those HRM practices by employees (Keenoy, 1999; Khilji, 2002; Lee & Allen, 2002; Legge, 1995; Purcell, 1999; Truss, 2001). For the purpose of this paper, we examine HRM bundles that are actually used by employees, as the organization’s results of social exchange.

In this study, we used an existing list of HRM practices (Kooij et al., 2010) and complemented this with some well-validated HRM practices, such as practices related to care support. In line with existing literature (e.g. Armstrong-Stassen & Schlosser, 2009; Kooij et al., 2014) we have first bundled HRM practices into sets of interrelated and internally consistent HRM practices aimed at achieving the same organizational purpose (MacDuffie, 1995). Next, in order to examine the influence of HRM, more specifically, this study distinguishes between two bundles of HRM practices. First, maintenance HRM practices are aimed at retaining workers at their current level of functioning, or at recovery after a loss (Kooij et al., 2010).In contrast, the so-called development bundle of HRM practices strives for reaching higher levels of functioning of employees. An organization providing HRM bundles signals that it is seeking to continue a social exchange relationship with its employees (Allen et al., 2003; Rhoades & Eisenberger, 2002). Armstrong & Ursel (2009) for instance showed that flexible work options, such as maintenance HRM practice ‘part-time work’, and training opportunities, a development HRM practice, communicate the value an organization places on its employees resulting in more supportive employees. However these HRM bundles work out differently on work characteristics job demands and resources. For instance, employees working part-time allow workers to continue their career as well as pursue their lives beyond the workplace (Collins, 2003). Maintenance HRM bundle is therefore intended to meet

employees' needs to reduce job demands, such as workload. The use of this same maintenance HRM practice ‹part-time work' implies furthermore decreased opportunities to learn. This is due to the reduced employees' presence and therefore maintenance HRM bundle is also suggested to reduce job resources. As regards development HRM bundle, a positive relation is expected with demands. For instance the use of training implies a time consuming effort and therefore leads to increased job demands, such as mental load. Similarly, development HRM is related positively to growth and expanding horizons, therefore to job resources, such as support from the supervisor. Following this line of reasoning, we hypothesized the following:

Hypothesis 1: The use of the maintenance HRM bundle is negatively associated with (a) job demands (mental load, emotional load, pace and amount of work), and negatively with (b) job resources (independence, learning opportunities, variety of work, support from supervisor, and support from colleagues).

Hypothesis 2: The use of the development HRM bundle is positively associated with (a) job demands (mental load, emotional load, pace and amount of work), and positively with (b) job resources (independence, learning opportunities, variety of work, support from supervisor, and support from colleagues).

In this study, our theoretical framework has been focused on the aspects of how (i.e. through which mediators) HRM contributes to employee outcomes. Earlier, several studies have looked at the so-called ‹blackbox' of HRM (Becker & Gerhart, 1996; Boselie, Dietz, & Boon, 2005; Boxall & Macky, 2009; Guest, 1999; Paauwe, 2009), and have shown that HRM influences work outcomes through mediators, such as employee's attitudes and behavior (Combs et al., 2006). Accordingly, a key assumption in the current study is that HRM bundles result in higher employee outcomes, indirectly, by having an effect on employees' perceptions of their job demands and job resources (cf. Delery, 1998).

Hypothesis 3: The relationship between the use of both maintenance (3a) and development (3b) HRM bundles and employee outcomes is mediated by job demands (mental load, emotional load, pace and amount of work), and by job resources (independence, learning opportunities, variety of work, support from supervisor, and support from colleagues).

Extending the JD-R Model Framework by Incorporating Life-Span Theory

Since employees have to work longer due to an increased retirement age (Hedge & Borman, 2012), it is of utmost importance to examine the role of age in the relationship between HRM bundles and employee outcomes. Though there is voluminous literature that addresses the relevance of single or bundled HRM practices (e.g. Becker & Gerhart, 1996; Delery & Doty, 1996; Guest, 1997, 2002; Huselid, 1995; Paul & Anantharaman, 2003; Schuler & Jackson, 2007; Wright, Gardner, Moynihan, & Allen, 2005), up to now, only a few researchers have conducted empirical research on how age affects the relationship between HRM practices and important outcomes (e.g. Hedge et al., 2006; Staudinger, Roβnagel, & Voelpel, 2008). Building upon life-span theories, previously, scholars have identified some basic changes as people age (e.g. Bal & De Lange, 2014; Baltes et al., 2006; Barnes-Farrell & Matthews, 2007; Maurer, 2007). Therefore, systematic changes in work-related attitudes and work motivation tied to life-span are to be expected (e.g. Kanfer & Ackerman, 2004; Rhodes, 1983).

According to the life-span psychology theory (Baltes et al., 2006), human development goes along differential trajectories that entail gains on some dimensions of human behavior and stability and/or losses on other dimensions. The so-called SOC model (see also Baltes & Baltes, 1990; Baltes & Carstensen, 1996) posits that successfully ageing people *Select* subjectively their goals, *Optimize* their strategies for goals attainment, and *Compensate* for age-related losses. This process of adaptation is a dynamic, life-long development in which people and their environment mutually influence each other (Baltes, 1987). This age-dynamic proposition is supported by Ebner, Freund & Baltes (2006), who found, that as people age and have increasingly to deal with losses, for instance as regards their fluid intelligence, their goal focus shifts gradually from a more growth orientation to a goal focus on

maintenance and prevention. Indeed, in their meta-analysis of 86 studies, Kooij, De Lange, Jansen, Kanfer, & Dikkers (2011) 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. Therefore, we argue life-span theories thus teach us that the impact of specific HRM practices or bundles may be dependent on the age of the involved employees (Ng & Feldman, 2008). More specifically, we can formulate the following hypotheses:

Hypothesis 4: The mediated relationship between the use of both the maintenance and the development HRM bundles and employee outcomes, through job demands and job resources, is moderated by age, in the sense that the higher the age, the stronger the relationship between the use of the maintenance bundle, demands, and employee outcomes (4a), as opposed to the relationship between the use of development bundle, resources, and employee outcomes (4b).

4.3 Method

Participants and Procedure

The hypotheses were tested by means of a survey, measuring the involved variables. The mean age of the respondents was 46.9 years (*SD* = 10.2), and 27.2% of the respondents were male. Among the respondents, 20.9% had a management position. As regards educational level, 31.0% had secondary vocational education, 16.9% lower, and 47.7% higher, and 4.4% scored other levels of education. Of the respondents, 27.5% worked full-time and their average current tenure was 12.64 years (*SD* = 10.37). Mean job tenure was 8.54 (*SD* = 8.88). Most of them were married (including cohabiting and partnership) (82.4%) and 78.0% had children.

The data collection was done by means of an on-line questionnaire among 6,000 employees working in three Dutch organizations in three different occupational sectors: transport, health care, and research & education. Initially, a total of 2,240 workers responded to the survey, representing a response rate of approximately 20%. Data from respondents who did not complete the whole questionnaire were listwise excluded from further analyses. This resulted in a total sample of 1,121 respondents. A missing value analysis showed no significant differences between the data set of included and excluded respondents for gender, part-time workers, age ($\chi^2(1) = 0.13$, $p = .72$; $\chi^2(1) = 0.50$, p = .48; $\chi^2(1170) = 0.31$, $p = .76$). However, the category of respondents contained relatively more higher educated employees compared to the group of excluded ones ($\chi^2(6) = 27.56$, $p < .001$). The questionnaires were distributed using the web-based tool Qualtrics (2012), and was sent to all employees including the ones 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 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 of 100 Euros.

Measures

Work engagement was assessed with the Utrecht Work Engagement scale that consists of nine items. This measure contained three 7-point rating scales (‘never’ to ‘always’) (Schaufeli, Salanova, González-Roma, & Bakker, 2002). Examples of the items of each scale included: ‘When I get up in the morning, I feel like going to work’ (dimension vigor, Cronbach’s α = .87, 3 items); ‘I am enthusiastic about my job’ (dimension dedication, Cronbach’s α = .89, 3 items); and ‘When I am working, I forget everything else around me’ (dimension absorption, Cronbach’s α = .81, 3 items). We computed an overall work engagement score, as was recommended by Schaufeli, Taris, & Bakker (2006; Cronbach’s α = .93).

Employability (Cronbach’s α = .93) was measured with 47 items. This measure contained five 6-point rating scales (ranging from ‘not at all’ to ‘extremely’, ‘not at all’ to ‘a considerable degree’, ‘very badly’ to ‘very well’, ‘very little’ to ‘a very great deal’, and ‘never’ to ‘very often’ (Van der Heijde & Van der Heijden, 2006; Van der Heijden et al., 2009). Examples of the items of each scale

included: ‘I consider myself competent to engage in in-depth, specialist discussions in my job domain’ (dimension occupational expertise, Cronbach’s α = .91, 15 items); ‘How much time do you spend improving the knowledge and skills that will be of benefit to your work?’ (dimension anticipation and optimization, Cronbach’s α = .83, 8 items); ‘How easily would you say you can adapt to changes in your workplace?’ (dimension personal flexibility, Cronbach’s α = .77, 8 items); ‘I am involved in achieving my organization’s/department’s mission’ (dimension corporate sense, Cronbach’s α = .85, 7 items); and ‘I suffer from work-related stress’ (dimension balance, Cronbach’s α = .73, 9 items).

General health perception was measured using a 5-point scale (‘definitely false’ to ‘definitely true’) from the SF-36 Health (Ware and Sherbourne, 1992). An example is: ‘I am as healthy as anybody I know’ (Cronbach’s α = .72, 5 items).

Job demands:_Mental load, and *emotional load* were assessed using seven items from a workload scale designed by Van Veldhoven, Meijman, & Broersen (2002). These measures contained 4-point rating scales (‘never’ to ‘always’). Examples of items were: ‘Does your work demand a lot of concentration?’ (Cronbach’s α = .86); and ‘Does your work demand a lot from you emotionally?’ (Cronbach’s α = .76). *Pace and amount of work* was assessed using 11 items by a scale designed by Veldhoven et al. (2002), This measure contained 4-point rating scales (‘never’ to ‘always’). An example of these items assessing quantitatively demanding aspects of individual’s work is: ‘Do you have to work fast?’.(Cronbach’s α = .86)

Job resources: Independence in your work, opportunities to learn, and variety in your work were measured applying scales designed by Van Veldhoven et al. (2002), using eleven items with a 4-point rating scale (‘never’ to ‘always’), four items with a 5-point rating scale (‘not at all’ to ‘very much’), and six items with a 4-point rating scale (‘never’ to ‘always’), respectively. Examples are: ‘Do you have freedom in carrying out your work activities?’ (independence in your work, Cronbach’s α = .91); ‘Do you learn new things in your work?’ (opportunities to learn, Cronbach’s α = .83); and ‘Is your work varied?’ (variety in your work, Cronbach’s α = .82). *Social support from the supervisor and social support from colleagues* (Van der Heijden, 2002; 2003) were both measured using four items. Examples are: ‘Is your immediate supervisor able to appreciate the value of your work and its results?’ (Cronbach’s α = 82); and ‘Do your immediate colleagues give you supportive advice?’ (Cronbach’s α = .79).

HRM bundles. To identify commonly examined HRM practices that are in use by employees in the involved organizations, we first identified 21 relevant age-related HRM practices, in line with Kooij et al. (2010). In addition, seven age-related HRM practices were included: flexible work, telecommuting, attention for health, sport facilities, child care, paid parental leave, and paid care leave. After an analysis and a few adaptations, as regards wording, by six HRM professionals who agreed that all items were unambiguous and familiar to respondents, the list of HRM practices used was established (see Appendix I). For measuring the respondent’s use of HRM practices preliminary questions were asked first about the availability of those practices. As practices that were said to be available, the respondents were subsequently asked whether they made actually use of them.

Control variables. We used job duration, gender, sector, and management as control variables in our analyses.

Statistical Analysis

First, an exploratory and a confirmatory factor analysis (EFA and CFA) were performed to examine whether the two conceptually distinguished HRM bundles (maintenance versus development) could indeed be considered as two distinct constructs. Subsequently, correlational analyses were performed. Finally, using AMOS 21 software (Arbuckle, 2006; Byrne, 2010), structural equation modeling (SEM) was conducted to examine the influence of HRM bundles on job demands and resources (Hypotheses 1-2), and to investigate whether these relations were mediated by job demands/resources (Hypothesis 3), and moderated by age (Hypothesis 4).

Exploratory Factor Analysis

Following Fabrigar, Wegener, MacCallum & Strahan (1999), we initially conducted an exploratory factor analysis (EFA) using principal components (PC) on the 28 HRM items, with oblique rotation (Oblimin), for the total sample. The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, KMO = .74 (which was good according to Field, 2009). Moreover, Bartlett's test of Spherity ($\chi^2(378)$ = 3809.92.16, $p < .001$), indicated that correlations between items were sufficiently large for a PC analysis. An initial analysis showed that 10 components had Eigenvalues > 1 (Kaiser's criterion) together explaining 55.06% of the variance. In addition, the scree plot showed one point of inflexion suggesting two components. The specific output of this analysis is available from the first author upon request.

Confirmatory Factor Analysis

Next, a confirmatory factor analysis (CFA), using maximum likelihood estimation method, was performed to test the suggested 2-factor structure for the 10 HRM practices. In addition to the normed chi-square statistic (χ^2) (Jöreskog, 1969), the analysis assessed the root mean square error of approximation (RMSEA), the comparative fit index (CFI), the (adjusted) goodness of fit index ([A]GFI; Browne & Cudeck, 1993; Kline, 2005), and the normed fit index (NFI; Bentler, 1992). The conventional cut-off values of these fit indices were used to assess the model fit (i.e. RMSEA < .06; CFI > .90; and [A]GFI > .90; and NFI > .90; Marsh *et al.*, 2004). The CFA results indicated an acceptable fit: χ^2 (107.96) N = 1121), *df* = (34) = 3.18, $p < .001$, RMSEA = .04, CFI = .95, GFI = .98, AGFI = .97, NFI = .93. All first-order factors (i.e. the 10 HRM practices) loaded significantly on their intended dimension (i.e. maintenance versus development). We compared the 1, 2, 3-, and 4-factor models for the bundles of HRM practices. The 2-factor model appeared to fit the data significantly better in comparison with the other models (see Table 1). The Cronbach's α was .43 and .72 for the maintenance and development bundles of HRM practices, respectively. Composite means were computed for the amount of used HRM practices per bundle, resulting in scores varying from 0 to 1. Concrete, these HRM bundles represented the usage of HRM practices, and may be considered as an index that has been built up from distinct HRM practices having a compensatory character (see also DeVellis, 1991; MacDuffie, 1995; Osterman, 1994).

Table 1. Comparison of Measurement Models (*N* = 1121)

Model	# factors	$\chi 2$	*df*	$\Delta\chi 2$	RMSEA	CFI	GFI	AGFI	NFI
Baseline model	Two	107.96	34		.04	.95	.98	.97	.93
Model 1	One	1934.84	350	1826.88	.06	.54	.88	.86	.50
Model 2	Three	153.49	62	45.53	.04	.95	.98	.97	.91
Model 3	Four	380.12	113	272.16	.05	.87	.96	.95	.83

Note: RMSEA = root-mean-square error of approximation; CFI = comparative fit index; (A)GFI = (Adjusted) goodness-of-fit index; NFI = normed fit index.

4.4 Results

Descriptive Results

Table 2 presents the means, standard deviations, and correlations among all model variables. For clarity purposes, we only showed the latent variables, and the moderator age. Our outcomes indicate positive significant relations between the study variables and the development HRM bundle, and job resources, however, no significant relations with age have been found. Maintenance HRM bundle and job demands showed significant negative relations with employee outcomes on the one hand, and positive relations with age on the other hand.

Table 2. Means, Standard Deviations and Intercorrelations among All Latent Variables and Age

Variable	*M*	*SD*	1	2	3	4	5
1.Maintenance HRM bundle	.04	.12	-				
2.Development HRM bundle	.42	.29	**.08****	-			
3. Job demands	2.55	.35	.02	**.12****	-	-	
4. Job resources	3.13	.46	.00	**.39****	**.10****	-	
5. Employee outcomes	4.53	.54	**-.09****	**.11****	**-.07***	**.41****	-
6. Age	46.9	10.23	**.12****	**.01**	**.10****	-.04	-.00

Note: N ≈ 1121 because of listwise deletion of missing data. HRM = Human Resource Management. * $p < .05$, ** $p < .01$.

Hypotheses Testing

To test our hypotheses, we used AMOS 21 software (Arbuckle, 2006; Byrne, 2010) to conduct structural equation modeling (SEM) based upon maximum likelihood estimation. On the basis of EFA and CFA, we specified early retirement, part-time retirement, sabbatical and ergonomic adjustments as indicators of the maintenance HRM bundle. Job development interviews, continuous development, regular training, task enrichment, participation in decision-making, and attention for health, were taken as indicators for the development HRM bundle. The two HRM bundles were allowed to be correlated, just as job demands and resources were allowed to correlate with each other. Finally, we specified paths from the control variables to the mediators and to the dependent variables. To ensure we could use work engagement, employability, and health as indicators of employee outcomes, we conducted SEM analyses for the employee outcomes separately. These analyses showed a robust picture with similar outcomes in comparison with the analysis for which the employee outcomes were bundled. For the sake of clarity, we used a latent construct of employee outcomes.

To test the hypothesized relationships between the maintenance and development HRM bundles and job demands and resources (H1-H2); the hypothesized mediations by job demands and job resources (H3); and the moderation effect of age in these associations (H4), we computed different SEM models.

Following James, Mulaik, & Brett (2006) and Schneider, Ehrhart, Mayer, Saltz, & Niles-Jolly (2005), we tested a full and partial mediation model. Figure 2 presents the results for the full mediation model. The outcomes of the fully mediated model showed that all paths were significant, except for the path from the maintenance HRM bundle, through demands and resources, to employee outcomes. These paths were subsequently removed for further analyses. The fit of the fully mediated model was adequate: χ^2 (163, N = 1121) = 597.05 p <. 01, RMSEA = .05, CFI = .90, GFI = .95, AGFI = .93, and NFI = .87. The maintenance HRM bundle was neither significantly related to demands nor to resources (herewith rejecting *Hypothesis 1*), but was significantly directly related to employee outcomes (β = -.09, $p < .05$). The development HRM bundle was positively related to both demands (β = .20, $p < .001$) and to resources (β = .60, $p < .001$). With these outcomes, *Hypothesis 2* was supported. In turn, the development HRM bundle appeared to be positively associated with employee outcomes.

The fit indices of the partially mediated model were almost identical to those of the fully mediated model (see solid lines in Figure 2), and the change in the model fit was not significant at $p <$ .05: $\Delta\chi 2$ = 3.77. As regard the partially mediated model, the indirect effect of the development HRM bundle on employee outcomes, through resources, was .49 (β = -.13, *ns*), whereas that of maintenance was .00 (β = -.09, $p < .05$). Using bootstrapping, we tested whether the indirect effects were significant or not. Confidence intervals (CIs) of indirect effects included zero for the development HRM bundle (BCa CI [-.25, 00]).

The fully mediated model showed that the maintenance HRM bundle only have a significant direct effect on employee outcomes. Therefore, *Hypothesis 3a* was not supported with our data. However, taking into account the non-significant direct effect from the development HRM bundle to employee outcomes, and the significant outcome for the chi-square difference test, there is evidence for

a fully mediated model for the development HRM bundle. Hence, regarding employee outcomes, the effects of the development HRM bundle appeared to be fully mediated by demands and resources, herewith supporting *Hypothesis 3b*.

As regards age, this study showed moderating effects relating to demands (see also Figure 2). More specifically, age comes into play in the relationship between development and demands (β = -.33, p < .05), and between demands and employee outcomes (β = .06, p < .05). *Hypothesis 4a* was therefore partly supported. The relationships from development HRM, on the one hand, through resources, to employee outcomes, on the other hand, are not moderated by age. Therefore, we have found no evidence for *Hypothesis 4b*.

Control Variables

We examined the effects of job duration, gender, sector, and management using multi-group analysis. The association between the development HRM bundle, through job resources, and employee outcomes was particular present among employees with job duration longer than five years, among males, among employees in the research & education sector, and among managers. Employees with a job duration shorter than five years, females, employees from the health sector, and employees without a managerial position showed significant relationships, with employee outcomes, through job demands. For the employees without a managerial position, a significant association between the maintenance HRM bundle and employee outcomes was found.

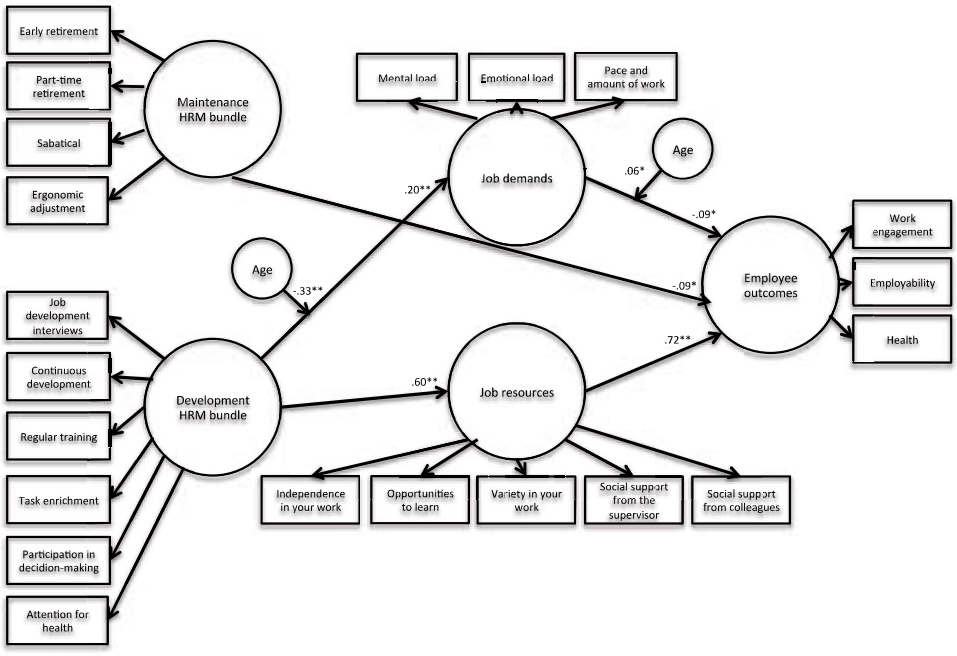

Figure 2. Mediating Roles of Demands and Resources in the Relationships of HRM Bundles and Employee Outcomes. Values Indicate *B* Coefficients for the Total Group, and for Moderation Effects of Age, Respectively.

4.5 Discussion

This study addressed the opening of the 'black box' of the link between the actual use of HRM bundles and employee outcomes, through work-related characteristics (i.e. job demands and job resources). In addition, due to an ageing workforce (e.g. Shultz & Wang, 2011), organizations should be increasingly focused on developing and actually implementing age-related HRM policies. Our results showed two distinct processes, in terms of mediation, from the distinctive maintenance and development HRM bundles. Maintenance HRM related directly negatively to employee outcomes. Conversely, the use of development HRM appeared to be positively related to job demands and to job resources (both expected). and, subsequently the latter to entail higher employee outcomes. Hence, our results suggest the '*driving power*' of development HRM through job resources. However, from our analyses, we may conclude that the use of development HRM increases job demands as well, which, in turn, results in lower employee outcomes. This might refer to the so-called '*dark side*' of HRM (Jensen et al., 2013), being an important outcome of our study.

All in all, theoretically, the development HRM bundle appears to function as a 'bipod': Overall, the process from development HRM through demands to employee outcomes, and from development through resources to employee outcomes show similarities with the health impairment and motivational processes in the Job Demands-Resources model (JD-R), respectively (Bakker et al., 2003; Demerouti et al., 2001b). In a similar vein, as the JD-R model states that an investment in the growth of resources is a more productive approach than an investment in the reduction of demands (Bakker & Demerouti, 2008; Bakker, Van Veldhoven, & Xanthopulou, 2010; Veth et al., 2015), we may state that serious investment in development - accompanied with an investment in resources - rather than focusing upon the maintenance HRM bundle is more rewarding. Therefore, and fully in line with social exchange theory (Blau, 1964; Gouldner, 1960), the development HRM bundle, through job resources, in particular, elicits positive employee outcomes.

Further, this study showed no moderating effects of age on the negative relationship between maintenance HRM and employee outcomes. It is important to consider this in the light of governments undermining maintenance practices through legislation (such as [part-time] early retirement). These practices are often perceived as a 'right', but did not show a positive association with employee outcomes, not even for the ageing employees. We now know that the maintenance HRM bundle does not contribute to higher employee outcomes, but we cannot yet say what process lies behind it. Nevertheless, interactions of age with development, through demands, and employee outcomes, showed significant differences in employees across the life-span. High demands appear to harm all employees, regardless of their age, yet appear to be more harmful (in terms of a decrease in positive work outcomes) for ageing workers. Moreover, the so-called 'dark side' effect of HRM that was found for the impact of the development HRM bundle on job demands was weaker for the older workers as well. Apparently, a high amount of job demands are a risk factor for all employees, and as employees age, the use of development HRM bundle may have an increasingly supportive function. Kooij and Van de Voorde (2015) argue that since older workers are better at regulating their emotions, they are better able to deal with increased workload for example, resulting in weaker negative associations between development HRM bundle and employee outcomes. Notwithstanding this moderating association, one ought to be always cautious for a possible so-called 'dark side' effect. In addition, the mediation relationship from development HRM through resources to employee outcomes was found, regardless of age.

To conclude, our results show that the role of age as regards the effect of demands in the model relationships with development HRM, being the predictor, is rather ambiguous (e.g. Kanfer & Ackerman, 2004; Rhodes, 1983). However, with regard to maintenance HRM as the predictor variable, age does not play a role in the relationships in our empirical model, as opposed to predictions derived from the life-span theories (e.g. Baltes et al., 2006; Barnes-Farrell & Matthews, 2007; Maurer, 2007), and the SOC model framework (Baltes & Baltes, 1990). These theories state that gradual changes from a focus on growth to a focus on security occur as employees age, because of age-related losses.

Apparently, the use of the development HRM bundle may have ‘driving power’ for all employees regardless of age, resulting in higher employee outcomes through resources, although one should never ignore the possible ‘dark side’ effect of this bundle of practices.

This study provides the first empirical examination of demands and resources as links between HRM bundles and employee outcomes. Overall, the results of our study are consistent with the JD-R framework (Bakker et al., 2003; Demerouti et al., 2001b) and with social exchange theory (Blau, 1964; Gouldner, 1960). Nevertheless, our findings suggest that HRM bundles might not always enhance employee outcomes. Particularly, the expectation regards the added value of the maintenance HRM bundle cannot be confirmed in this study. A possible explanation could be that the maintenance HRM bundle is used, in particular, in case of low employee outcomes, as a kind of remedy to make ends meet. This pattern seems similar to the reduction of demands that job resources may cause (Bakker & Demerouti, 2007; Schaufeli & Salanova, 2007). In this way, the maintenance HRM bundle and demands, on the hand, seem to function as hygienic factors, while, on the other hand, the development HRM bundle and resources are more functional in terms of a motivator (Herzberg, 1987). This outcome is line with previous research that demonstrates that motivators associated with intrinsic drivers, such as continuous development, outweigh movers linked to extrinsic drivers, such as early retirement and paid parental leave (Bassett-Jones & Lloyd, 2005).

Limitations and Recommendations for Further Research

The present study has some limitations. First, all data were collected using questionnaires, bringing along the possibilities of response set consistencies. Second, all data were collected at one point in time, that is, the study was cross-sectional. Further research is therefore needed to address the issue of causality and reciprocal effects. As De Lange (2005) and Taris and Kompier (2003) already suggested, further research using multi-wave designs can provide more information about the stability and change of variables over time (i.e. cross-lagged designs).

Practical Implications

From a practical stance, the role of HRM in retaining employees’ well-being appears crucial in the realm of a continuously demanding working environment (e.g. De Lange et al., 2015; Gellatly et al., 2009; Gong et al. 2009; Gould-Williams, 2007; Kuvaas, 2008; Taylor, Osland, & Egri, 2012). Therefore, in order to retain suitable workers for the labor market, as they age, it would be helpful for an organization to know which HRM bundles should be targeted to distinctive age groups.

This study shows that age only plays a significantly distinctive role in relation to the effect of demands in the model relationships. The predominant association between the development HRM bundle and employee outcomes, through resources, turned out to be strongly positive, regardless of age. This outcome implies that, across the life-span, the use of the development HRM bundle is highly important. The unexpected negative relationship between the maintenance HRM bundle and employee outcomes needs some further attention too. Probably, as employees actually use maintenance HRM, resulting in low employee outcomes, this seems to be due to the endeavor to retain at their current level of functioning, or try to recover after a loss (Kooij et al., 2010).

All in all, (HRM) managers now know that stimulating the use of the development HRM bundle is far more rewarding for employees of all ages than the maintenance HRM bundle. HRM focusing on development, through resources, will result in the enhancement of employee outcomes at work. However, controlling for job duration, gender, sector, and management position (yes or no) we found that the process of ‘driving power’ applies more to employees with a job duration longer than five years, for men, for the education & research sector, and for managers. The ‘dark side’ of HRM seems to be perceived more by the counterparts: employees with job duration shorter than five years, women, healthcare sector, and employees without a managerial position. Our study points out that it is highly relevant to understand which and how HRM bundles influence particular employees, and employee

outcomes. As such, our approach may establish a foundation for further theory development, and empirical research on the topic of employee well-being from the perspective of HRM.

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Appendix 1. List of HRM Practices, Used for the Exploratory Factor Analysis

1. Part-time work	8. Part-time retirement	15. Continuous development	22. Second career
2. Compressed workweek	9. Long career break	16. Regular training	23. Participation in decision-making
3. Flexible work	10. Variable remuneration	17. Promotion	24. Attention for health
4. Telecommuting	11. Flexible labor conditions	18. Demotion	25. Sport facilities
5. Additional leave	12. Ergonomic adjustments	19. Sideways job movement	26. Child care
6. Exemption from overtime working	13. Job development interviews	20. Task enrichment	27. Paid parental leave
7. Early retirement	14. Career planning	21. Reduced workload	28. Paid care leave

Chapter 5

Bridge Over an Ageing Population

Examining Longitudinal Relations Among Human Resource Management, Social Support, and Employee Outcomes Among Bridge Workers

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Abstract

This two-wave complete panel study aims to examine human resource management (HRM) bundles of practices in relation to social support [i.e., leader–member exchange (LMX), coworker exchange (CWX)] and employee outcomes (i.e., work engagement, employability, and health), within a context of workers aged 65+. Based upon the social exchange theory and the Job Demands-Resources (JD-R) framework, it was hypothesized that HRM bundles at Time 1 would increase bridge workers' outcomes at Time 2, and that this relationship would be mediated by perceptions of LMX and CWX at Time 2. Hypotheses were tested among a unique sample of Dutch bridge employees (N = 228). Results of several structural equation modeling analyses revealed no significant associations between HRM bundles, and social support, moreover, no significant associations were found in relation to employee outcomes. However, the results of the best-fitting final model revealed the importance of the impact of social support on employee (65+) outcomes over time.

5.1 Introduction

Due to the graying and dejuvenization of the global workforce (Bal, Kooij, & Rousseau, 2015; Müller et al., 2015), older workers are stimulated to continue to work. For example, in the Netherlands until 2013 the official retirement age was 65 years, and is ever since gradually increased by the government to age 66 by 2018 and 67 years by 2021. Financial stipends are given to employers to stimulate work for 65+ workers, making the so-called bridge employment for employers as well as older workers financially interesting. Following Shultz (2003), we state that bridge employment refers to the labor force participation patterns exhibited by older workers that characterize the transition from late careers jobs towards complete labor force withdrawal. Bridge work can include part-time and fulltime work, seasonal work, but also temporary work (Wang, Adams, Beehr, & Shultz, 2009).

Based on previous empirical research (e.g., Becker & Huselid, 1998; Huselid, Jackson, & Schuler, 1997; Snell, Youndt, & Wright, 1996; Wright, Dunford, & Snell, 2001), it has become clear that human resources management (HRM) can contribute to a firm's effectiveness and competitive advantage. It is assumed that particularly bundles of HRM practices, rather than individual HRM practices, can be sources of sustained competitive advantage, because these bundles are often unique, and difficult to imitate (Ferris, Arthur, Berkson, Kaplan, Harrell-Cook, & Frink, 1998; Lado & Wilson, 1994). Earlier scholarly work on the so-called HRM-organizational performance linkage showed a fully mediating role of employee outcomes (Zhang & Morris, 2013). Employee outcomes are the most immediate consequence of HRM, while organizational performances are more distal to HRM and are less directly influenced (Guest & Conway 2011; Purcell & Kinnie 2007; Wright & Nishii, 2007). More empirical research is needed in order to enhance our understanding of the role of HRM in the light of employee outcomes.

Over the past decades, research on HRM has made considerable advancement in understanding linkages between certain HRM practices and employee outcomes, such as work engagement, employability, and perceived health (e.g., Alfes, Shantz, Truss, & Soane, 2013; Clarke & Hill, 2012; Samnani, Boekhorst, & Harrison, 2012). It goes without saying, that a further focus on the question of how employees perceive the HRM practices provided, rather than only relying on intended HRM practices is desirable (e.g., Khilji & Wang, 2006; Nishii, Lepak, & Schneider, 2008). Earlier, it has been shown that measures of perceived and actually used HRM practices differ substantially from intended, implemented HRM practices (Conway & Monks, 2008; Gratton & Truss, 2003; Snape & Redman, 2010; Wright & McMahan, 2011). Hence, perceived availability and actual use of HRM bundles will be examined in this new survey study.

Although empirical findings have generally confirmed the existence of a significant relationship between perceived availability and actually used HRM on the one hand, and positive individual and organizational outcomes (e.g., Paauwe, 2009) on the other, there have been repeated calls to shift the focus of attention to an investigation of factors that may intervene in the relationship between HRM and individual and organizational outcomes (Boselie et al., 2005; Ferris, Arthur, Berkson, Kaplan, & Harrell-Cook, 1998; Ostroff & Bowen, 2000; Wright & Gardner, 2003). Hence, more insight into how (i.e., through which mediators) HRM may impact these outcomes (the so-called ‚black box', Becker & Gerhart, 1996; Guest, 1997, Ramsay et al., 2000) is therefore considered as one of the key issues in the HRM research field. Despite the efforts in earlier research (e.g., Kuvaas, 2008; Snape & Redman, 2010) to unlock the ‚black box' by examining the mechanisms through which HRM practices impact upon employees outcomes, more research is still required, particularly on the aforementioned relations among 65+ employees (Alfes et al., 2013).

In line with the social exchange theory (Blau, 1964; Gouldner, 1960), we argue that organizations, i.e. line management, by providing HRM bundles, send overt and implicit signals to their employees about the extent to which they are valued and trusted by their employer. In turn, these perceived and used HRM bundles may cause feelings of obligation on the part of employees, who might then reciprocate through high levels of performance (Coyle-Shapiro, Shore, Taylor, & Tetrick, 2004; Gould-Williams, 2007; Purcell & Hutchinson, 2007). In addition, we draw on the job demands-resources (JD-R) model (Bakker, Demerouti, & Euwema, 2005; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001)

to identify resources that are critical for positive employee outcomes, and the HRM bundles that build and support those resources (see also Snell et al., 1996; Wright et al., 2001). We therefore consider HRM bundles provided at the organizational level -whether perceived or actually used- to be prerequisites of work-related aspects at the individual level (i.e., resources, such as support from one's direct supervisor), which in turn, impact employee (65+) outcomes (i.e., work engagement).

This study endeavors to overcome the aforementioned limitations of previous research by contributing to our understanding of how employees' perceptions and actual use of HRM practices are linked with employee outcomes by proposing social support as an underlying mechanism in the workplace that mediates the aforementioned relations. The first objective of this two-wave panel study is to examine the direct longitudinal effects of perceived and actually used HRM practices on employee outcomes over time. Secondly, we will test the relations between HRM and employee outcomes (Evans & Davis, 2005; Wright & Nishii, 2007) and examine potential mediating effects of social support between HRM and employee outcomes, among a sample of employees aged 65 years and older. Before addressing the specific hypotheses of this study, we will pay attention to our main concepts to be examined: perceived and actually used human resource management practices, employee outcomes, and to the mediating role of social support of supervisors and coworkers.

5.2 Theory

The Impact of HRM on Employee (65+) Outcomes

Prior research has shown that HRM practices can influence attitudinal and behavioral outcomes at the individual level (Guest, 1999; Gerhart, Wright, McMahan, & Snell, 2000; Gratton & Truss, 2003). Furthermore, perceived and actually used HRM practices may be more proximal predictors of individual attitudes and behaviors than intended HRM practices as reported by managers (e.g., Khilji & Wang, 2006; Kooij, Jansen, Dikkers, & De Lange, 2010; Nishi et al., 2008). Hence, it may be more meaningful to focus on HRM practices that are actually perceived as available and/or used by employees. Following this line of reasoning, this study incorporates both actually used as well as employees' perceptions of HRM practices.

Furthermore, when looking at the mutual employee and organizational relationships, research has examined HRM practices at the individual level, such as regular training and development programs (e.g., Boselie et al., 2005; Kooij et al., 2010). However, since employees are typically exposed to a range of HRM practices simultaneously (e.g., Wright & Boswell, 2002), it has been argued that these need to be considered holistically in bundles instead of individual practices (Gould-Williams & Mohamed, 2010; Snape & Redman, 2010). That is to say, as individual HRM practices can conflict, nullify, substitute, or complement each other, we will focus on examining effects of combinations of HRM practices, so-called HRM bundles, on employee outcomes.

Our choice of bundles of HRM practices is in line with the conceptually meaningful distinction between maintenance and development bundles of HRM practices made by Kooij and colleagues (2010). These bundles of HRM practices have been classified according to the shared goals of the specific HRM practices they entail. Based on earlier research (Baltes, Staudinger, & Lindenberger, 1999; Carstensen, 2006; Higgins, 1997) it was shown that throughout the life-span people allocate different resources to reach their goals. According to life-span theory of motivation, the socioemotional selectivity theory (SST; Carstensen, Isaacowitz, & Charles, 1999) humans adjust time horizons with increasing age. Hence, the authors revealed that although chronological age can function as an index of time, a second index becomes salient as people grow older, namely the subjective sense of remaining time until death. Goal-directed behavior relies inherently on perceived future time, which is inextricably related to goal selection and goal pursuit. The Regulatory fit theory (Higgins, 1997, 2005) suggests that a fit between orientation to a goal and the means used to approach that goal, produces a state of regulatory fit which both creates a feeling of rightness about people's goal pursuit. People who experience time as rather limited, show a prevention focus and base their orientation to a goal on safety and responsibilities. In contrast, people who experience time as open-ended, show a promotion focus and

concentrate on accomplishments and gains (Lang & Carstensen, 2002). Therefore, we can state that these life-span goals can be ‘translated’ (Kooij et al., 2010, p. 1115) into goal orientations with a more promotion or more prevention focus (Higgins, 1997). Thus, maintenance HRM practices are conceptualized as practices focused on retaining employees at their current levels of functioning, or, practices that are rather focused on returning to previous levels of functioning after a loss. The latter being related to protection, prevention, and safety. In contrast, development HRM practices are conceptualized as practices focused on achieving higher levels of functioning, and are related to growth, advancement, and accomplishment (Kooij et al., 2010). Since this study has been conducted among bridge workers, one may hypothesize that, due to the ‘healthy worker effect’, economically active 65+ workers use both kind of HRM bundles. In this study, we have chosen to incorporate bundles of practices consistent with this maintenance-development approach and cross-validate bundles of HRM practices among a sample of 65+ workers.

The social exchange theory (Blau, 1964) can be used to clarify the relationship between perceived availability and use of HRM bundles and employee outcomes, such as work engagement, employability, and health. The social exchange theory, comprising the norm of reciprocity (Cropanzano & Mitchell, 2005; Gouldner, 1960), suggests that one party in the exchange relationship will reciprocate positively to the other party, and in doing so, this will improve the quality of the relationship. Thus, social exchange theory provides a solid theoretical basis to imply that organization’s investments in terms of HRM opportunities that are consequently perceived or actually used by employees, will be reciprocated by employees in terms of positive attitudes and behaviors, e.g., being more engaged (Shaw, Dineen, Fang, & Vellella, 2009; Shore, Coyle-Shapiro, Chen, & Tetrick, 2009; Sun, Aryee & Law, 2007;). In addition, the Job Demands-Resources (JD-R) framework (Bakker et al., 2005; Demerouti et al., 2001) stated that job resources play a vital role in the development of engagement (see Bakker & Demerouti, 2008; De Lange, De Witte, & Notelaers, 2008). For instance, job resources like social support play an important role in fostering a positive work outcome, such as work engagement (Demerouti et al., 2001). Job resources refer to those physical, psychological, social, or organizational aspects of the job that: reduce job demands and the associated physiological and psychological costs; are functional in achieving work goals; or stimulate personal growth, learning, and development (e.g., autonomy or social support at work). Job resources can either increase employees’ growth, learning and development, or help them in achieving work goals (e.g., Schaufeli et al., 2009).

Several studies have demonstrated empirical evidence that successful goal accomplishment is related to *work engagement* (Bakker, 2009; Kahn, 1990; Llorens, Schaufeli, Bakker, & Salanova, 2007). Engaged employees, characterized by having a positive and fulfilling state of mind (Bakker & Demerouti, 2007; Schaufeli & Salanova, 2007), have obtained high levels of absorption, vigor and dedication. Absorption refers to being fully immersed and happily involved in one's work. Vigor is characterized by high levels of energy and mental resilience while working. Dedication refers to a sense of one’s significance, enthusiasm, inspiration, pride and challenge at work. For instance, a study by Salanova, Agut, and Peiro (2005) exhibited the positive impact of work engagement. They concluded that work engagement predicted service climate, which, in turn, predicted employee performance and, subsequently, customer loyalty among Spanish hospitality employees.

In addition, due to the ever-increasing demands of present work life, *employability* is also emphasized. Employability comprehends ‘the ability to obtain a job and to keep employment, within or without one’s organization, for one’s present or new customer(s), and with regard to future prospects’ (Van der Heijden, De Lange, Demerouti, & Van der Heijde, 2009, p. 156). A huge amount of expertise within (a) certain occupational field(s) forms the keys to guaranteeing one’s employability (Thijssen, Van der Heijden, & Rocco, 2008) as it enables employees to cope with fast changing job requirements (Van der Heijde & Van der Heijden, 2006; Van der Heijden et al., 2009). Though specific employability approaches differ according to the perspective that is taken (i.e., society, company, or individual worker), in general, employability is referred to as a positive outcome (Thijssen et al., 2008), which

appears to be advantageous for both organizational, and employee outcomes (Fugate, Kinicki, & Ashfort, 2004; Rothwell & Arnold, 2007; Van Dam, 2004).

According to the World Health Organization (1948), *health* can be defined as: "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (p. 28). In particular, in an increasingly aging world, we see a growing need for effective, affordable health promotion (Pesek, Reminick, & Nair, 2010). In line with Schaufeli, Taris, and Van Rhenen (2008) who found that, in general, engaged employees enjoy good mental health, and following Parent-Thirion et al. (2005), who related the demanding working environment negatively to health and job performance, good health is closely related to positive work affect (Bakker & Demerouti, 2008; Demerouti et al., 2001; Rothbard, 2001; Strijk, Proper, Van der Beek, & Van Mechelen, 2009; WHO, 1948). We therefore argue that employees perceiving and using high levels of HRM, show more positive employee outcomes, and hypothesize the following:

Hypothesis 1: Perceived availability and actually used maintenance and development HRM bundles are positively related to employee outcomes over time among a sample of 65+ workers.

The Mediating Influence of Social Support in the Associations between HRM and Employee Outcomes

Building upon the social exchange theory (Blau, 1964; Gouldner, 1960) and the JD-R framework (Bakker et al., 2005; Demerouti et al., 2001), we assume that the associations between HRM and employee outcomes may vary by social support (i.e., from one's direct supervisor and one's near colleagues). First, a supervisor has a unique relationship with each employee (Graen & Uhl-Bien, 1995), which is developed over time as a result of role expectations and fulfillments between leaders and members (Volmer, Spurk, & Niessen, 2012). A high-quality relationship, as characterized by favorable reciprocal exchanges between leader and member (Blau, 1964; Kelley & Thibaut, 1978), is associated with numerous positive outcomes, such as better performance, more commitment, job satisfaction, and a higher degree of mutual liking (see Gerstner & Day, 1997; Ilies, Nahrgang, & Morgeson, 2007; Liden et al., 1997). Therefore, one's immediate manager (team leader or supervisor) can significantly influence a subordinate's attitudes and behavior (Gerstner & Day, 1997; Ilies et al., 2007; Liden, Sparrowe, & Wayne, 1993). So-called leader-member exchange (LMX) research has been among the most fruitful areas in the leadership literature for decades (Graen & Uhl-Bien, 1995; Ilies et al., 2007; Schriesheim, Castro, & Cogliser, 1999), and is defined in terms of how leaders develop tacit exchange agreements with their members (Graen & Scandurea, 1987); the stronger the LMX relationship, the better the worker's relationship is with his or her manager or supervisor. Thus, LMX is a relational approach to leadership and captures the quality of interactions between a supervisor/leader and a supervisee/follower (Graen & Uhl-Bien, 1995; Nishii & Mayer, 2009). Hence, LMX is characterized as one type of exchange that is part of a larger network of exchanges, including coworker exchanges (CWX).

Second, social support, not only from an individual's immediate supervisor, but also from his or her colleagues, is an important mechanism through which workers can reinforce the impact of the perceptions and actual use of HRM bundles, which can lead to increased perceptions of sustainable work outcomes. CWX refers to the quality of relationships between an employee and coworkers (Sherony &Green, 2002), and comprises a dyadic process that is operationalized along similar dimensions as LMX. Whether employees are involved in a high- or low-quality relationship with their supervisor influences their perceptions of their standing within the group (Cogliser & Schriesheim, 2000; Liden, Erdogan, Wayne, & Sparrowe, 2006; Nishii & Mayer, 2009). Evidence has suggested that when an employee is involved in a high-quality LMX relationship, this influences how other employees accept this individual. If the leader has accepted someone, others will be more likely to accept this person as well (Nishii & Mayer, 2009; Schyns, Paul, Mohr, & Blank, 2005) and allow them to be a part of the so-called in-group (Murphy & Ensher, 1999; Nishii & Mayer, 2009). Therefore, beliefs about respect, trust, and loyalty within CWX relationships are likely to be the same as those same issues in LMX.

We aimed to contribute to the examination of possible pathways through which HRM bundles are related to work outcomes that enhance employees' outcomes, such as work engagement. Therefore, we will examine the mediating role of social support in the relationship between perceived availability and used HRM on the one hand, and employee outcomes on the other hand over time (see Fig. 1 for the specific research model). We hypothesized the following:

Hypothesis 2: Social support mediates the cross-lagged relationship between perceived and used HRM and employee outcomes over time among a sample of 65+ workers.

Figure 1. Research Model

5.3 Method

Sample and Procedure

On-line surveys were initially sent to all registered clients of a temporary agency specialized in contracting workers of 65+ (N = 6,538 working and non-active clients; 74.80% males, Mean age = 69.70 years). In May 2011, 784 workers responded to an online questionnaire, which served as Wave 1 of the study (response rate was 11.99 percent). For Wave 2 (May 2012), all registered contractors of the agency were invited to participate again (N = 6,538 working and non-active clients). Of these individuals, N = 655 completed the online questionnaire at Time 2 (response rate was 10.01 percent). All respondents with missing data were eliminated, resulting in a final dataset of N = 228 participants, who filled out both the Time 1 and Time 2 measurement.

Concerning the demographics from Wave 1, 76.50 percent of the respondents were male, and their mean age was 69.20 years (SD = 6.54 years; range 60-85 years). Of the participants 91.2% were older than 65 years. On average, the respondents worked 2.90 (SD = 3.53) years for the employment agency, while these participants had worked on average 34.18 (SD = 16.07) years prior to their 65th birthday. Participants worked on average M = 14.25 hours per week (SD = 15.20) for the temporary employment agency. The majority had a bridge employment position in the education & science sector (27.6%), followed by transportation & delivery (18.2%), and technology (10.5%). Importantly, comparative analyses of the respondent and total group of employees revealed that the sample did not differ significantly in terms of age and gender from the total employee population working for the temporary employment agency (see also Baltes, Wynne, Sirabian, Krenn, & De Lange, 2014; Müller, De Lange, Weigl, Oxfart, & Van der Heijden, 2013).

Measures

Availability and Use of Maintenance and Development HRM Practices

Availability and use of HRM were measured using 20-item scales comprising maintenance and development HRM practices (see Appendix 1). In line with the majority of HRM literature, we measured the perceived availability and use of HRM practices as reflected in the perceptions of the employees (Boselie et al., 2005). Availability was measured by asking respondents whether an HRM practice was available to them at the current employer. Use of HRM was measured using the same items as availability, and measured whether employees had actually made use of an HRM practice.

Social Support

Quality of leader-member exchange (LMX) was measured using the seven-item scale by Janssen and Van Yperen (2004). An example item was: "My employer is helpful with handling problems when they occur in my work". Answers were provided on a 7-point Likert scale, ranging from 'to a very small extent' to 'to a very large degree'.

The quality of coworker exchange (CWX) was measured using the seven-item scale by Kristensen, Hannertz, Høgh, and Borg (2005). An example item was: "People I work with are helpful in getting the job done". Answers were provided on a 7-point Likert scale, ranging from 'to a very small extent' to 'to a very large degree'. Cronbach's alpha for the total scale at T1 was .97, and at T2 .96.

Employee outcomes

Work engagement was measured using the seventeen-item scale by Schaufeli, Salanova, González-Roma, and Bakker (2002). An example item was: "At work, I am full of energy". Answers were provided on 7-point scale, ranging from 'never' to 'always'.

Employability was measured using the fifteen-item scale by Van der Heijde and Van der Heijden (2006). An example item was: "I consider myself competent to engage in in-depth, specialist discussions in my job domain". Answers were provided on 7-point scale, ranging from 'worst capability' to 'best capability'.

Health was measured using one item: "In general, how would you rate your health?" Answers were provided on a 5-point scale, ranging from 'bad' to 'excellent'. Cronbach's alpha for the total scale at T1 was .94, and at T2 .95.

Statistical Analysis

Following Fabrigar, Wegener, MacCallum, and Strahan (1999), we initially conducted an exploratory factor analysis (EFA) in principal components analysis (PCA) on the 20 perceived HRM items at T1 using oblique rotation (Oblimin) for the total sample. The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, KMO = .93 (good according to Field (2009). Bartlett's test of Spherity χ^2 (190) = 3918.73, $p < .001$, indicated that correlations between items were sufficiently large for conducting a PCA. An initial analysis showed that 3 components had Eigenvalues > 1 (Kaiser's criterion), altogether explaining 70.98% of the variance. The scree plot showed two points of inflection at 2 and 3 components. Part-time work turned out to be a component on itself, and was therefore dropped, leading to a two-factorial solution. Table 1 shows the factor loadings after oblimin rotation of the 19 HRM practices. All items with communalities > .20 after extraction were included. The item factor loading cut-off point was |.30| and cross-loading cut-off point was < |.20|. The two resulting components were labeled as development HRM practices and maintenance HRM practices, respectively. Furthermore, since earlier research (e.g., Conway & Monks, 2008; Gratton & Truss, 2003; Khilji & Wang, 2006; Nishii et al., 2008; Snape & Redman, 2010) has shown that measures of perceived and actual used HRM can differ substantially from intended, implemented HRM, and from each other, we distinguished between perceived and actual used HRM bundles of HRM practices.

Table 1. Summary of Exploratory Factor Analysis Results for the HRM Practices (N = 228)

Item	Communality	Development	Maintenance
1. 4 x 9 working week	**.61**	.10	**.71**
2. Flexible (beginning and ending) worktime	**.33**	-.08	**.62**
3. Working from home	**.60**	.09	**.71**
4. Extra leave or vacation (for example" free days for leave)	**.56**	.03	**.73**
5. Dispensation from extra work or overtime	**.70**	.00	**.83**
6. Long-term absence of work (sabbatical)	**.65**	-.06	**.84**
7. Variable payment, couples with work prestation	**.76**	.03	**.85**
8. Flexible working conditions	**.74**	.02	**.85**
9. Adjusted working conditions	**.62**	-.00	**.79**
10. Job evaluation (minimum once a year)	**.55**	.01	**.73**
11. Career guidance	**.66**	**.79**	.04
12. Permanent development in my function	**.79**	**.87**	.02
13. Recurrent training or education (minimum once a year)	**.72**	**.87**	-.04
14. Getting a promotion at work	**.85**	**.91**	.02
15. Getting a demotion at work	**.66**	**.77**	.08
16. Horizontal change of function (level does not change)	**.78**	**.93**	-.07
17. Job enrichment (expansion of function with new tasks)	**.81**	**.92**	-.03
18. Starting a new career (and retraining) within the organization	**.78**	**.87**	-.02
19. The possibility to take part in the decision-making within the company	**.73**	**.84**	.03
Eigenvalues		10.56	2.32
% of variance		55.56	12.22

Note: Communalities > **.**20 in bold, factor loadings > |.30| in bold, items with cross-loadings < |.20| dropped**.**

Our panel data were analyzed further by means of structural equation modeling (SEM) techniques utilizing AMOS 21 software (Arbuckle, 2006; Byrne, 2010). Before testing our hypotheses, we examined a series of measurement models to support the operationalization of the two social support factors, and the three employee outcome factors as underlying dimensions of an overall social support factor, and an overall factor for employee outcomes, respectively (see also Luthans, Avolio, Avey, & Norman, 2007). For the social support factor, we compared an uncorrelated, first-order CFA model (with the fourteen social support variables with their respective items were represented as independent constructs) with a second-order CFA model (where the items of each scale loaded on the respective underlying factor, e.g., the seven LMX items loaded on one LMX factor, the seven CWX items on one CWX factor, and then the fourteen specific social support variables loaded on one overall social support factor). The analysis was conducted for the two measurement models separately. The same strategy was followed for the employee outcomes. Results supported the representation of LMX and CWX in one overall social support factor, since the second-order model showed an acceptable and significantly better fit in comparison with the first-order model (for T1: $\Delta\chi^2$ (13) = 224.76, $p < .001$; for T2: $\Delta\chi^2$ (13) = 189.14, $p < .001$), and the representation of work engagement, employability, and health in one general employee work outcomes factor (for T1: $\Delta\chi^2$ (70) = 837.05, $p < .001$; for T2: $\Delta\chi^2$ (96) = 936.11, $p < .001$). The output of these analyses are available from the first author upon request.

Due to our relative small sample size, we reduced the complexity of our hypothesized SEM models (i.e., number of free estimated parameters) without ‘paying the price’ of lost information, by using manifest variables (Jöreskog & Sörbom, 1993). To use the scores for our ‘social support’, and ‘employee outcomes’ manifest variables that comprises the factor loadings of their underlying dimensions, we calculated their weighted factor scores. Specifically, we conducted second-order principal axis factoring (PAF) analysis using varimax rotation on the two variables of social support, and the three employee outcomes variables at both measurement times. The advantage of this method is that it takes into account the factor loadings of each sub-dimension, while calculating the factor score. PAF analyses resulted in one social support factor (84% of explained variance at T1 and 80% at T2), and one

employee outcome factor (59% of explained variance at T1 and 63% at T2). Thus, the manifest ‚social support' variable represented the factor score of the two social support scales, and the manifest ‚employee outcome' variable represented the factor score of the three employee scales. PAF analyses of each HRM bundle separately resulted in four factors (56% of the variance was explained at T1, and 55% at T2).

To test the research hypotheses, a number of competing models were fitted to the data consecutively by means of a cross-lagged structural equation model approach. First, a so-called *stability model* (M1) without cross-lagged structural paths, but with correlations between the constructs for each possible pair of measurement waves (see Pitts, West, & Tein, 1996; Salanova, Bakker, & Llorens, 2006), and synchronous correlations was specified. This stability model was compared with the other models representing each of the hypotheses. The second model (M2) was identical to the stability model but included additional structural paths from T1 HRM bundles to T2 employee outcomes. The third model (M3) was identical to the stability model but included all paths from the previous models, as well as paths from T1 HRM bundles to T2 social support, and from T2 social support to T2 employee outcomes.

The fit of the distinguished models to the data was assessed with the chi-square ($\chi 2$) statistic, the Goodness of Fit Index (GFI), and the Root Mean Square error of Approximation (RMSEA). In addition, three fit indices were used that are less sensitive to sample size: the Comparative Fit Index (CFI), the Incremental Fit Index (IFI), and the Tucker-Lewis Index (TLI). For each of these statistics, values of .90 are acceptable and .95 or higher are indicative of good fit (Hu & Bentler, 1999), except for the RMSEA for which values of .05 indicate good fit and values up to .08 represent reasonable errors of approximation (Browne & Cudeck, 1993).

5.4 Results

Descriptive Analysis

Prior to model testing, the means, standard deviations, Cronbach's alpha coefficients and bi-variate correlations (including test-retest correlations) of the study variables were computed (see Table 2 for all specific outcomes). All variables had test-retest reliabilities of .41 on average. The highest test-retest reliabilities resulted for social support and employee outcomes. This means that social support and employee outcomes are relatively stable experiences. In addition, all significant correlations were in the expected direction. Cronbach's alpha for all constructs ranged from .65 to .97, and thus provided satisfactory internal consistency at both measurement times.

Table 2. Means, Standard Deviations, Cronbach's Alphas (in Brackets on the Diagonal) and Inter-correlations among Study Variables (N = 228)

	Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12
	Time 1														
1	Perceived maintenance	0.24	0.33	(.93)											
2	Perceived development	0.23	0.36	.64**	(.96)										
3	Used maintenance	0.12	0.19	-.05	.04	(.80)									
4	Used development	0.10	0.22	.08	-.07	.56**	(.91)								
5	Social support	4.47	1.33	-.08	.03	.09	.08	(.97)							
6	Employee outcomes	4.51	0.59	-.10	-.03	.10	.12	.36**	(.94)						
	Time 2														
7	Perceived maintenance	0.14	0.23	.19**	.33**	-.02	-.05	.16*	-.03	(.86)					
8	Perceived development	0.17	0.29	.22**	.39**	.06	.05	.02	.05	.62**	(.92)				
9	Used maintenance	0.11	0.14	-.01	.06	.38**	.25**	.04	.13**	.04	.24**	(.65)			
10	Used development	0.07	0.16	-.07	-.02	.07	.18**	-.00	.14*	.06	.07	.38**	(.80)		
11	Social support	5.01	1.16	.06	.07	.06	.10	.55**	.39**	.08	.07	.19**	.00	(.96)	
12	Employee outcomes	4.48	0.60	-.04	.02	.06	.07	.33**	.77**	.04	.07	.12	.09	.53**	(.95)

Note: T1 = Time 1; T2 = Time 2.
* p < .05; ** p < .01.

Hypotheses Testing

To explore the effects of HRM bundles on employee outcomes (*H1*), and the hypothesized mediation of social support (*H2*), a longitudinal two-wave path analysis for the total group was performed. Our conceptual model yielded fit statistics that indicated a good model (M3) fit.

Table 3 shows the fit indices of the competing models. The stability model (M1) and M2 appeared to have a bad fit to the data. M3 was the only model with a very good fit to the data, since all fit indices were higher than .90 and the RMSEA was lower than .05. In addition, the ratio between the chi-square statistic and the number of degrees of freedom was relatively low. As regards the model comparisons, most importantly, the $\chi 2$ difference tests showed that both M2 was not superior to M1, $\chi 2(4) = 1.45$, $p < .001$.This suggests that the inclusion of paths either from perceived or used, and either maintenance or development HRM bundles to employee outcomes, does not improve model fit. Nevertheless, Table 3 shows that M3 fitted significantly better to the data than M1 and M2, $\chi 2(10) = 461.02$, $p < .001$, and $\chi 2(4) = 459.57$, $p < .001$ respectively. This indicates that the theoretical model that includes cross-lagged relationships between HRM bundles, social support, and employee outcomes fitted best the empirical data.

Table 3. Goodness-of-Fit Indices for the Alternative Models (N = 228)

Model	$\chi 2$	df	P	AGFI	GFI	RMSEA	CFI	NFI	TLI	IFI
M1. Stability model	532.67	60	.000	.69	.76	.19	.44	.41	.38	.44
M2. HRMT1 -> EOT2	531.22	56	.000	.67	.76	.19	.43	.41	.33	.44
M3. HRMT1 -> SST2/EOT2, SST2->EOT2	71.65	50	.024	.92	.95	.044	.97	.92	.97	.98
Null model	903.05	66	-	.55	.62	.24	-	-	-	-

Note: HRM = human resource management; SS = social support, EO = employee outcomes; T1 = Time 1; T2 = Time 2; AGFI = adjusted goodness-of-fit index; GFI = goodness-of-fit index; RMSEA = root mean square error of approximation; CFI = comparative fit index; NFI = normed fit index; TLI = Tucker-Lewis index; IFI = incremental fit index.

We will now discuss the specific structural relationships from the best fitting model. Hypothesis 1 asserted that perceived availability and used maintenance and development HRM bundles at Time 1 are positively related to employee outcomes at Time 2 among a sample of 65+ workers. The model that included these causal relationships, i.e., M2, did not result in any statistically significant lagged and positive effects of T1 HRM bundles on T2 employee outcomes. The standardized beta's varied from -.02 to .03, $p > .05$). Therefore, Hypothesis 1 was not supported.

Hypotheses 2 stated that T2 social support mediates the relationship between Time 1 perceived and used HRM and Time 2 employee outcomes among a sample of 65+ workers. The model (M3) including causal paths from T1 HRM bundles and T2 social support on T2 employee outcomes resulted in several unexpected cross-lagged relationships. Specifically, none of the T1 HRM bundles appeared to have a significant impact on T2 employee outcomes, nor on T2 social support. Nevertheless, T1 social support positively impacted social support at T2, which in turn, positively influenced employee outcomes at T2. Furthermore, an in-depth analysis showed nearly the same regression weights for the relationships between LMX and CWX at T1, on the one hand, and LMX and CWX at T2, on the other (β = .47 and β = .48), and between LMX and CWX T2 to employee outcomes T2 (β = .27 and β = .29). The statistically significant paths in M3 overlap with those of M1 and M2, and are displayed in Figure 2. For sake of clarity, the non-significant paths were not depicted. In addition, dotted lines depict significant results that are not captured in the hypotheses. We see significant relations between three HRM bundles at T1 and HRM at T2. With these outcomes, Hypothesis 2 was partly supported, in the sense that the positive effects on employee outcomes were solely caused by social support, and not by HRM bundles.

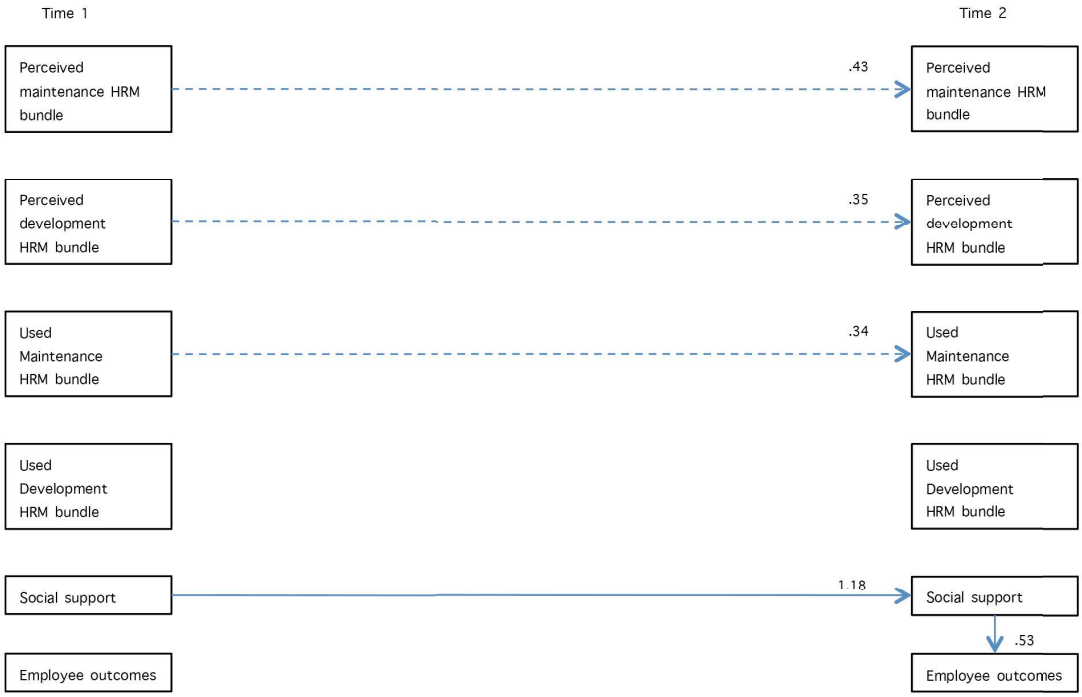

Figure 2. The Hypothesized Model, N = 228. Autocorrelations are omitted for the sake of clarity. Significant standardized regression weights are depicted above the arrows indicating the structural relationships. Hypothesized regression weights are depicted with solid lines, and non-hypothesized regression weights with dotted lines.

5.5 Discussion

The main purpose of the present study was to examine the longitudinal relationships between HRM bundles of practices (perceived versus used, and maintenance versus development), social support, and employee work outcomes among a unique panel of 65+ bridge workers. Based on the social exchange theory (Blau, 1964; Gouldner, 1960) and the JD-R framework (Bakker et al., 2003; Demerouti et al., 2001), it was hypothesized that HRM bundles would influence employee outcomes of bridge employees, and that this relationship would be mediated by social support.

On the one hand, our data strongly support the assumption about the impact of high levels of job resources, such as social support (see Bakker et al., 2003; Bakker et al., 2007; Blau, 1964; Cropanzano & Mitchell, 2005; Demerouti et al., 2001; Gouldner, 1960) on high levels of employee outcomes, such as more work engagement, employability, and perceived health. Specifically, a sustained relationship from the employee with the supervisor and colleagues has significant impact on employee outcomes. Therefore, drawing on both social exchange theory (Blau, 1964; Gouldner, 1960) and the JD-R framework (Bakker et al., 2005; Demerouti et al., 2001), we identified two resources that are critical for positive employee outcomes, i.e., LMX and CWX. Hence, this study shows the importance of the unique relationship of a supervisor, and also of colleagues to each employee, that can significantly influence their bridge subordinates' or colleagues' attitudes and behavior (Gerstner & Day, 1997; Graen & Uhl-Bien, 1995; Ilies et al., 2007; Liden et al., 1993). This finding implies that the retirement decisions might be influenced by, as individuals age, prioritization of present emotionally meaningful – rather than knowledge-related- goals, due to limited future time perspective (Lang & Carstensen, 2001). Related to this statement 65+ workers might emphasize personal constructivism over social constructionism, in which human development is seen as driven by adaptation to a social environment with the goal of person-environment integration, rather than by maturation of inner structures (Savickas, 2012). Thus, after a more than 30 years period occupation and organizations often have changed dramatically, and may result in a declined person-environment fit (Feldman & Beehr, 2011). Older workers may find themselves in jobs they no longer find rewarding, or perceive declines in cognitive processing or physical abilities that occur with aging (Kanfer & Ackerman, 2004). Resources, such as good relationships with supervisors and colleagues seem to be of increased importance.

On the other hand, for bridge workers the organizational adaptation demonstrated no relation to the more distant HRM bundles. Contradictory to our assumptions and notwithstanding the 'healthy worker effect', our four constructed HRM bundles that built and support LMX and CWX (see also Wright et al., 2001) did not evoke employee outcomes. Bridge workers as the healthy workers in optima forma, were expected to be more prone to positive work outcomes, since the ill and chronically disabled work population are ordinary excluded form employment (Last, 1995). However, economically active 65+ workers appeared to not reciprocate positively to the HRM bundles provided by the organizations. We may argue that 65+ workers have a fundamentally different relationship with their organization than younger workers. Possibly, their intent for a long-term investment has obtained another connotation, since –as stated before- their future time perspective has changed (Lang & Carstensen, 2001). As older people perceived their future time as more limited than younger people, emotionally meaningful goals get prioritized, whereas younger people with a more open-ended future time perspective prioritize more knowledge-related goals. Therefore, an HRM bundle including regular training (part of development bundle) may not improve the situation of the economically active 65+ workers. In addition, an HRM practice such as extra leave (part of maintenance HRM bundle) appeared not to improve the employee outcomes either. This might be related to the fact that bridge workers continue working on a part-time basis (in our study, on average, 14.25 hours a week). Thus, strains bridge workers had to cope with during their working life before retirement, seem to be decreased. It seems that a demarcation, in this case between the age of 65, separating these employees from their younger counterparts makes sense (see also Lang & Carstensen, 2001). Indeed, for instance, Veth, Emans, Van der Heijden, Korzilius, & De Lange (2015) found that 55+ workers evaluated development HRM as successful as maintenance, and indicated to have relatively higher needs for the first category. This differentiating finding might enlarge

Super's stage theory (1951, 1957, 1990), going beyond the final stage of career. As such, the final stage is characterized by disengagement from and decline in work activities. However, as the future time perspective shortens, a distinction emerges between individuals who seek out to bridge employment and those who retire fully. Consistent with the role theory, such that if workers are dissatisfied with career jobs, they may seek to escape the undesirable situation by taking a role exit (Wang, 2007). The role exit may be full retirement or a switch to different occupational field for bridge employment. In contrast, to the extent employees have highly invested in and are satisfied with their current work role, they may seek a way to remain in a job as similar as possible to their position before retirement. Wang et al. (2008) emphasized this distinction, stating that all bridge jobs are not alike: career bridge employment (i.e., jobs similar to positions before retirement) and non-career employment (i.e., entail working areas that are not directly related to preretirement employment). Anyway, whether older workers are motivated by approach or avoidance (see also Hamamura, Meijer, Heine, Kamaya, & Hori, 2009; Elliot & Harackiewicz, 1996) to choose to engage in bridge employment, bridge employment allows older workers to keep one foot in work and one foot in retirement in which they do not rely on HRM.

Practical Implications

A practical implication is that managers are urged to optimize their relations with their 65+. employees, and facilitate optimized relations with colleagues. More specifically, these relations need to have a sustained character, and cannot be built overnight. Beliefs about respect, trust, and loyalty are as important for a fruitful relationship with both the supervisor and the colleagues (Graen & Uhl-Bien, 1995; Ilies et al., 2007; Murphy & Ensher, 1999; Nishii & Mayer, 2009; Schriesheim et al., 1999). However, both maintenance and development HRM bundles do not enhance employee outcomes of economically active 65+ workers. HRM bundles might thus be perceived as hygiene factors, though a decrease of employee outcomes might result from the absence of HRM. Organizations might provide HRM bundles specifically targeted at bridge workers in a sense that these bundles should be more ‚close' to the work place. Whereas a training for the future is not appropriate, on the job learning for instance, might fit the bridge worker.

Limitations and Future Studies

This study has some limitations. First, all data were obtained by using questionnaires, opening up the possibility of response set consistencies. Moreover, only self-report measures were used for both the predictor variables, i.e., HRM bundles, for social support (the mediator), and for the outcome variables, i.e., employee outcome. Therefore, a common-method bias may exist (Doty & Glick, 1998; Podsakoff MacKenzie, Lee, & Podsakoff, 2003). The longitudinal design overcomes some of the problems of common-method bias, because previous levels of the variables are controlled for to a degree. It might be interesting to gather data with other ratings, although these can also be problematic due to stereotyping or halo-effects (Kerlinger & Lee, 2000). In particular, it would be interesting to incorporate additional objective ratings in future research.

Despite our longitudinal design, allowing a time interval among hypothesized predictors and outcomes, we are not able to draw conclusions about causality. For instance, an effect of a particular Time 1 predictor on a specific Time 2 outcome variable might also be due to an unmeasured third variable. In our study, however, the importance for bridge workers of social support, rather than HRM bundles, is not contradicted.

This study is based on a fairly small number of participants, which limits the generalizability of our results. However, the participants were spread across several sectors and had various jobs and tasks on different levels. This improved the heterogeneity of our sample. Furthermore, the current study was focused on bridge workers, whereas it might be interesting to compare the outcomes among different age groups as well. Next, although the advantage of this study is its longitudinal character, the time-interval was based on a one-year time lag. Dormann and Zapf (2002) stated that in many situations this

time lag is chosen pragmatically, whereas a two-years time lag seems to be more adequate. Nevertheless, we think that our study is noteworthy, regardless that we think that in might be interesting that future studies focus on an appropriate time lag of two-years in case of effects between work characteristics and well being.

Notwithstanding these limitations, our study concerned the first longitudinal study to date to address the longitudinal effects among HRM, social support, and employee (65+) outcomes. The results have shown that to sustain bridge workers at work, employers should mainly focus on creating high-quality relationships with supervisors and colleagues, instead of providing HRM bundles for bridge workers.

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Appendix 1.

1. Part-time work
2. 4x9 working week
3. Flexible (beginning and ending) working time
4. Working from home
5. Extra leave or vacation (for example: free days for leave)
6. Dispensation from extra work or overtime
7. Long-term absence of work (sabbatical)
8. Variable payment, coupled with work performance
9. Flexible working conditions
10. Adjusted working conditions
11. Job evaluation (minimum of once a year)
12. Career guidance
13. Permanent development in my function
14. Recurrent training or education (minimum: once a year)
15. Getting a promotion at work
16. Getting a demotion at work
17. Horizontal change of function (level does not change)
18. Job enrichment (expansion of function with new tasks)
19. Starting a new career (and retraining) within the organization
20. The possibility to take part in the decision-making within the company

Chapter 6

Discussion

6.1 Introduction

The main purpose of this dissertation was to examine what contribution Human Resources Management (HRM) can make onto a workforce in general, and specifically onto an ageing workforce. Earlier empirical research on HRM examined the linkages between HRM and employee outcomes, such as work engagement, employability, and perceived health (e.g., Alfes, Shantz, Truss, & Soane, 2013; Clarke & Hill, 2012; Samnani, Boekhorst, & Harrison, 2012), that may subsequently contribute to a firm's effectiveness and competitive advantage (e.g., Becker & Huselid, 1998; Huselid, Jackson, & Schuler, 1997; Wright, Dunford, & Snell, 2001). Related to these linkages, this thesis addressed the relationship between HRM and employee outcomes, and the factors that intervene in the relationships between HRM and employee outcomes (Boselie Dietz, & Boon, 2005; Ostroff & Bowen, 2000; Wright & Gardner, 2003). Hence, in this thesis, we endeavored to contribute to unlock the 'black box' (Becker & Gerhart, 1996; Guest, 1997, Ramsay, Scholarios, & Harley, 2000) by examining the mechanisms through which HRM impacts upon employee outcomes. In addition, since employees have to work longer due to an increased retirement age (Hedge & Borman, 2012) it is of utmost importance to examine the role of age in the relationship between HRM and employee outcomes. Recent scholarly work revealed that with ageing changes occur during life (i.e., Higgins, 2000; LÖckenhoff & Carstensen, 2004). Based on these theories, Kooij, De Lange, Jansen, Kanfer, and Dikkers (2011) demonstrated empirically that ageing involves changes in work-related needs and motives. Therefore, for this thesis life-span theories (Baltes, Reuter-Lorenz, RÖsler, 2006; Barnes-Farrell & Matthews, 2007; Kanfer & Ackerman, 2004; Maurer, 2007; Rhodes, 1983) were used to investigate changes in workers' needs, attitudes and behavior, which might have implications for the effectiveness of HRM, and thus for (the impact of) HRM throughout their career. The outcomes of the studies in this thesis have been translated into (age-aware) HRM policy proposals.

The different empirical studies that have been conducted within the context of this PhD thesis shed light on several unresolved issues. As argued in Chapter 1, the studies revolved around the following key issues:

1) HRM contributing to enhanced employee outcomes at work.
2) The ageing workforce and HRM.

First, in this chapter the main findings for each key issue are presented and discussed. Subsequently, the main theoretical implications and contributions related to the key issues, limitations and related future research, and practical implications are discussed. Finally, the chapter completes with the prime conclusion.

6.2 Summary of Main Findings

Key Issue 1: HRM Contributing to Enhanced Employee Outcomes at Work

The first key issue addressed the contribution of HRM to enhanced employee outcomes at work. This PhD thesis aimed to contribute making considerable advancement in understanding linkages between HRM and employee outcomes (e.g., Alfes et al., 2013; Clarke & Hill, 2012; Samnani et al., 2012), the so-called 'black box'. Scholars have suggested that to further examine these relationships, a focus is needed on the question of employees' perceived availability of or actually use of HRM practices, rather than only relying on intended HRM practices (e.g., Khilji & Wang, 2006; Nishii, Lepak, & Schneider, 2008; Snape & Redman, 2010; Wright & McMahan, 2011). Hence, one of the challenges concerned understanding the distinctive outcomes of perceived availability and actual use of HRM bundles. All four studies have contributed to this key issues in their own specific way.

First, studying the relation between HRM and the retention of 55+ workers in the healthcare sector improved and deepened our understanding of the actual prevalence, the evaluations, and the needs as regards HRM practices (Chapter 2). For this aim, we conducted 52 interviews with older workers, line managers, and HR professionals in 15 Dutch hospitals and care service organizations, and our mixed-methods approach showed that maintenance HRM practices appeared to be by far more

prevalent compared to development HRM practices (RQ 1.1.). Simultaneously, both types of HRM practices were evaluated as successful (in the light of being effective, efficient, being implemented and considered relevant; RQ 1.2.). Furthermore, the needs of older workers appeared to be strongly related to both development practices, and, although to a lesser degree, maintenance practices. This suggested that notwithstanding the provision of mainly maintenance HRM, contributions of both maintenance and particularly development HRM can fulfil the needs of 55+ workers (RQ 1.3.).

Chapter 3 focused on the impact of both the perceived availability and actual use of specific maintenance and development HRM practices on employee outcomes. The data (*N*maximum = 1,589) collection was based on an on-line survey in three Dutch organizations from three different sectors: transport, health care, and education & research. Based on social exchange theory and employee-organization relationship frameworks, we have argued that the effects of perceived availability of and use of HRM practices upon employee outcomes would be positive. The results showed that this was the case for employability with predominantly positive associations. However, negative relationships were found between the perceived availability and actual use of HRM upon work engagement, except for HRM practices related to learning, development, and incorporating new tasks (RQ 2.1. and 2.2.).

Hence, the results of both Chapters 2 and 3 have demonstrated that development HRM is an important predictor of positive employee outcomes altogether. Chapter 2 showed that maintenance HRM however, showed a more diffuse picture, with successful evaluations, but these appeared to be attributed to developmental rather that maintenance processes. Chapter 3 showed negative relationships between perceived availability and actual use of maintenance HRM and work engagement, except for HRM related to learning, development, and task enrichment. This study provided support for the positive relationships between maintenance and development HRM and employability.

The relationships of HRM and employee outcomes were further elaborated in Chapter 4. Drawing on the Job Demands-Resources (JD-R) model literature and the social exchange theory as a theoretical framework, we investigated the role of perceived job demands and perceived job resources as mediators in the relationship between the use of maintenance and development bundles of HRM practices and employee outcomes. We collected self-reported data through an on-line questionnaire from 1,121 respondents from one profit, and two not-for-profit organizations in the northern part of the Netherlands. The results showed a direct negative relationship between maintenance HRM and employee outcomes. Conversely, it was found that employees' use of development HRM bundles influence job demands and resources positively that, in turn, affect employee outcomes. Therefore, our study emphasized the *'driving power'* of development HRM through job resources. This same study showed furthermore that the use of development HRM increases job demands, which, in turn, results in lower employee outcomes. This might refer to the so-called *'dark side'* of HRM (Jensen, Patel, & Messersmith, 2013) (RQ 3.1 – 3.3.).

Nevertheless, opening the aforementioned 'black box' yielded more insight into the similarities of the process of the outcomes from development through resources to employee outcomes, and the process of resources to employee outcomes with the health impairment and motivational processes in the JD-R model, respectively (Bakker, Demerouti, De Boer, & Schaufeli, 2003; Demerouti, Bakker, De Jonge, Janssen, & Schaufeli, 2001). In other words, the development HRM bundle appears to function as a 'bipod' in accordance with the JD-R model, stating that an investment in the growth of resources is a more productive approach than an investment in the reduction of demands (Bakker & Demerouti, 2008; Bakker, Van Veldhoven, & Xanthopoulou, 2010). Thus, we have argued that investment in development - accompanied with an investment in resources - rather than focusing upon the maintenance HRM bundle is more rewarding. Therefore, and fully in line with social exchange theory (Blau, 1964; Gouldner, 1960), the development HRM bundle, through job resources, in particular, are concluded to elicit positive employee outcomes.

The findings presented in Chapter 5, which were based on a longitudinal research design applied to data of bridge workers, revealed the non-existence of relationships between HRM practices of bundles on the one hand and both resources (such as social support; see also Bakker et al., 2003; Bakker,

Hakanen, Demerouti, & Xanthopoulou, 2007; Blau, 1964; Cropanzano & Mitchell, 2005; Demerouti et al., 2001; Gouldner, 1960)) and employee outcomes (such as work engagement) on the other hand. The involved HRM bundles included maintenance as well as development ones wherein both the perceived availability and the actual use of them were considered. HRM thus turned out not to give rise to extra resources or outcomes in the case of bridge workers by any means (RQ 4.1.). There was, though, another relationship that surfaced in the findings. It involves, unrelated to the investigated HRM practices, the relationship between two specific resources ((the leader-member exchange [LMX]) and the colleagues (co-worker exchange [CWX]) and employee outcomes (RQ 4.2.). Apparently, high-quality relationships with their supervisors and colleagues are helpful for bridge workers to raise their outcome levels (see also (Ilies, Nahrgang, & Morgeson, 2007).

Overall, the findings from these studies have shown, using various research designs and methods that, HRM contributes to enhanced employee outcomes at work. An exception was found for the bridge workers for whom no relationships were found between HRM on the one hand, and social support and employee outcomes, on the other. As regards the workers younger than 65 years, overall, the empirical studies in Chapters 3 to 5 have demonstrated, each in its own manner, the predominant importance of development HRM in enhancing employees' outcomes at work.

Key Issue 2: The Ageing Workforce and HRM

All four studies have addressed the issue of aging, though in distinctive manners. Each study built upon life-span developmental theories (e.g., theory of Selection, Optimization, and Compensation, Baltes, Staudinger, & Lindenberger, 1999; Socio-Emotional Selectivity Theory, Carstensen, 1995; Regulatory Focus theory, Higgins 1997, 2000), suggesting changes in the effects of HRM on employee outcomes as workers age. This PhD thesis has taken different lenses through which the concept of ageing is investigated. Chapters 2 and 5, focused exclusively on the 55+ and 65+ working population respectively. It was revealed that the development outcomes of HRM practices for 55+ workers were no less salient than their counterparts, that is, the maintenance outcomes. Thus, in contrast to suggestions derived from life-span development theories (Baltes et al., 1999; Carstensen, 1992; Higgins; 1997, 2000; Löckenhoff & Carstensen, 2004), an HRM policy for 55+ workers focused on development, rather that on solely maintenance appeared to be a just as fruitful one. Chapter 5 investigated the relationship of HRM, job resources and employee outcomes through the lens of 65+ workers. This study demonstrated no significant associations between HRM, and job resources, and moreover, no significant associations in relation to any of the included employee outcomes.

Chapter 3 compared three meaningful age groups as regard the relationship between specific HRM practices and employee outcomes at work, whereas Chapter 4 used age as a continuous moderator of the relationship of HRM bundles of practices with job demands/resources and employee outcomes. Although these studies had their own focus of investigation, both revealed that age (groups) did (hardly) not moderate the relationships between HRM on the one hand, and (mediators and) employee outcomes on the other (RQ 2.3 – 2.6, and RQ 3.4.).

Two important implications stem from this finding. Firstly, the first three studies showed that age neither moderated the direct relationships between HRM and employee outcomes, nor had an indirect impact on the outcomes, through work-related characteristics (i.e., job demands and job resources). This implies that it becomes questionable whether a focus on maintenance rather than on development is an appropriate HRM policy for older employees compared to their younger counterparts. In contrast to suggestions derived from life-span development theories (Baltes et al., 1999; Carstensen, 1992; Higgins; 1997, 2000; Löckenhoff & Carstensen, 2004), an HRM policy focused on development appears to be a just as fruitful one for all employees of all ages. Secondly, Chapter 5 added information to Chapters 2-4, and showed that bridge workers turned out to have fundamentally different relationships with their organization than younger workers. Instead of the more distal HRM bundles of practices, it appeared to be the job characteristics, such as the leader-member exchange (LMX), that evoke positive employee outcomes.

Moreover, this thesis deals with the investigation of HRM through two different lenses. The following key issues concern these methodological lenses.

Key Issue 3: Psychometric Nature of Survey Scales: HRM Practices and HRM Bundles

We distinguished between examining HRM as isolated practices, and we went beyond by taking into account bundles of HRM practices. These bundles comprised interrelated and internally consistent HRM practices aimed at achieving the same organizational purpose (MacDuffie, 1995). Our four studies contributed, each in its own way, to scholarly knowledge as regards specific HRM practices as well as to knowledge regarding their interrelations and internal consistencies. In Chapter 2 and 3, we have built upon the conceptual distinction between maintenance and development which we have also confirmed using exploratory and confirmatory factor analyses resulting in HRM bundles of practices as dealt with in Chapters 4 and 5. The distinction between maintenance and development turned out to be a robust one throughout this PhD thesis.

Key Issue 4: Distinction Between Perceived Availability and Actual Use of HRM

Across the different studies, the perceived availability and the actual use of HRM were researched. This PhD thesis therefore focused not only on subjective attitudes (perceived availability of HRM), but also on the objective workers' behavior (the actual use of HRM). Therefore, the mini-chain of intended, actual, and perceived HRM practices (Wright & Nishii, 2013) has been extended with two stages. The results revealed that, although scholarly research has shown that differences between intended and perceived HRM practices can vary significantly (Allen, Shore, & Griffeth, 2003; Khilji & Wang, 2006; Truss, 2001), the same directions in the relationships were found.

Key Issue 5: HRM Approached From Different Angles

This thesis incorporates varied angles from which our topic of HRM and ageing workforce are approached. Chapters 2-5 had a cross-sectional character. An important limitation of cross-sectional research concerns its caution to draw conclusions about causal relationships between HRM and the outcome variables. Chapter 5 encompasses a multi-wave design which provides more information about the stability and change of variables over time (i.e. cross-lagged designs; De Lange, 2005;Taris & Kompier, 2003). Nevertheless, allowing a time interval among hypothesized predictors and outcomes, we should still be cautious to draw conclusions about causality. For instance, an effect of a particular Time 1 predictor on a specific Time 2 outcome variable might also be due to an unmeasured third variable. In addition, our predominantly quantitative studies yielded many advantages, such as questionnaires incorporating many variables, responding anonymously, and responding in their own time. Nevertheless, the first study comprising a mixed methods set up generated partly quantitative (figures about the prevalence and outcomes of practices), and partly qualitative (incorporating illustrative reflections or observations offered by interviewees), the latter complementing the former.

6.3 Theoretical Implications and Contributions Related to Key Issues

This PhD thesis addressed direct and mediating contributions of HRM to enhanced employee outcomes at work. On top of that, this dissertation investigated what adaptations might be applied in HRM policy to better contribute to an ageing workforce. In the section below we will first address distinctive perspectives of the different studies in this thesis.

HRM Contributing to Enhanced Employee Outcomes at Work

The first contribution of this thesis involves a further investigation of the relationship between HRM practices and employee attitudes and behavior at work. The evaluation of HRM effectiveness is complex (Harter, Schmidt, & Hayes, 2002; Van de Voorde, Paauwe, & Van Veldhoven, 2012; Wright, Gardner, & Moynihan, 2003; Wright & Nishii 2007), and therefore, to examine the effectiveness of HRM the JD-R model was used as a conceptual tool (Bakker et al., 2003; Demerouti et al., 2001). According to the JD-R model, job demands and job resources can be distinguished as two broad categories of antecedents of employee outcomes. Job resources have motivational potential (Llorens, Schaufeli, Bakker, & Salanova, 2007) in the light of employee outcomes whereas job demands are associated with psychological and physiological costs (Demerouti et al., 2001; Xanthopoulou, Bakker, Demerouti, Schaufeli, 2007). This PhD thesis extended the relationships of demands/resources with employee outcomes adding HRM as a foundation of demands and resources. Drawing from the social exchange theory (Blau, 1964; Gouldner, 1960), we expected benefits for both the employer and the workforce to be the result of positive social and economic exchanges (Gould-Williams & Davies, 2005; Shore, Tetrick, Lynch, & Barksdale, 2006; Tsui, Pearce, Porter, & Tripoli, 1997). Hence, offering HRM does signal to employees that the organization considers them to be worthy to invest in (Ostroff & Bowen, 2000), and therefore affect employee outcomes through work-related characteristics (Gould-Williams, 2007; Kooij, Jansen, Dikkers, & De Lange, 2010; Messersmith, Patel, Lepak, & Gould-Williams, 2011). Notwithstanding the dominant prevalence of maintenance, this dissertation demonstrated, the *'driving power'* of development HRM, whether or not through job resources, for the working population. Development HRM emerged to function as a 'bipod': The process of development HRM through demands to employee outcomes, and the process from development HRM through resources to employee outcomes showed similarities with the health impairment and motivational processes in the JD-R model, respectively (Bakker et al., 2003; Demerouti et al., 2001). In a similar vein, as the JD-R model states that an investment in the growth of resources is a more productive approach than an investment in the reduction of demands (Bakker & Demerouti, 2008; Bakker, Van Veldhoven, & Xanthopoulou, 2010), we argued that investment in development - accompanied with an investment in resources - rather than focusing upon the maintenance HRM is more rewarding. However, the other side of the coin implies that development HRM increases job demands as well, which, in turn, results in lower employee outcomes. This might refer to the so-called *'dark side'* of HRM (Jensen et al., 2013). Hence, although the relationship of development HRM through demands and resources to employee outcomes appeared to be a strong mechanism, the increasing effects on demands resulting in employees feeling exploited, is not the desired outcome. Development HRM, being the foundation of resources and demands, can have an enhancing as well as an attenuating effect on employee outcomes, and consequently should be applied cautiously. Our research therefore implies a more nuanced picture of the social exchange theory. As regards the bridge employees, our findings affirmed that 65+ workers have a fundamentally different relationship with their organization in comparison with the one their younger counterparts in general have. Our data revealed the impact of job resources, such as social support (see Bakker et al., 2003; Bakker et al., 2007; Cropanzano & Mitchell, 2005; Demerouti et al., 2001) on employee outcomes. Therefore, drawing on both social exchange theory (Blau, 1964; Gouldner, 1960) and the JD-R framework (Bakker, Demerouti, & Euwema, 2005; Demerouti et al., 2001), two resources that are critical for positive employee outcomes, i.e., leader-member exchange [LMX] and co-worker exchange [CWX] were identified.

The Ageing Workforce and HRM

Contradictory to HRM literature on ageing, we hardly found any effects of age on the relationships between HRM and job demands/resources and employee outcomes. Life-span literature suggested that with ageing, changes in work-related needs and motives occur, and that, accordingly, HRM for employees of different ages should have a different focus. In this thesis, the life-span literature has been extended

by testing which and how HRM practices/bundles are most effective in enhancing employee outcomes at different ages.

To conduct this research, in line with Toh, Morgeson, and Campion (2008) a distinction was made based upon the discrepancy between the goals of the two types of HRM: maintenance and development. The first category is focused on retaining employees in their current level of functioning, or is focused on recovery to previous levels after a certain kind of loss. The latter is focused on advancement, growth and accomplishment, and encourages individual workers to achieve new and challenging levels of functioning. Just as Kooij et al. (2010) have stated, we expected age, due to changing goal focus and needs, to influence the relationship between HRM and employee outcomes. In particular, workers' goal focus and their needs would change with age, from a promotion focus characterized by growth needs to a prevention and maintenance focus with security needs. Nevertheless, our analyses found hardly any evidence for this assumption. In the case of only one of the investigated development HRM practice (perceived availability of ‚participation in decision-making') the positive effect of it on employability turned out to increase in strength with age. Years of work experience appeared to be crucial for ‚participation in decision-making'. Thus, our findings showed a diffuse picture concerning the ageing theories (Baltes et al. 1999; Carstensen 2006; Higgins 1997) in combination with the meaningful distinction between maintenance and development HRM practices (Kooij et al. 2010). As opposed to the life-span theories (Baltes et al., 1999; Carstensen, 2006; Higgins, 1997; Kooij et al., 2011; Ng & Feldman, 2009) that state that older people differ from younger people in motivation and behavior, our findings did not support the implications of these theories for HRM. We may conclude that all kinds of HRM should be provided to workers of all ages, with an exception for bridge workers. The theoretical rationale might be found in a more demanding labor market compared to the times wherein the life-span theories were developed. Concrete, due to higher retirement ages in all development countries, workers may feel more encouraged to keep track in their jobs. The outcomes of development HRM might meet the new labor and retirement expectations.

Although literature suggested a motivating influence of development HRM on continuing to work beyond retirement age (e.g., Armstrong-Stassen, & Ursel, 2009), our findings showed that bridge workers appeared to not reciprocate positively to HRM - neither maintenance or development. We may argue that 65+ workers have a fundamentally different relationship with their organization than younger workers, as revealed in Chapters 2-5. Possibly, their intent for a long-term investment has obtained another connotation, due to their changed future time perspective (Lang & Carstensen, 2002). Indeed, as Lang and Carstensen stated (2002), older people might perceive their future time as more limited than younger people and emotionally meaningful goals get prioritized, whereas younger people with a more open-ended future time perspective prioritize more knowledge-related goals.

After all, the empirical work outlined in Chapter 5 implied the importance of the unique relationship of a supervisor, and of colleagues to each 65+ employee, that can significantly influence their 65+ subordinates' or colleagues' attitudes and behavior (Gerstner & Day, 1997; Graen & Uhl-Bien, 1995; Ilies et al., 2007; Liden, Wayne, & Stilwell, 1993). It seems that a demarcation, in this case between the age of 65, and their younger counterparts, makes sense (see also Lang & Carstensen, 2001). This finding might enlarge Super's stage theory (1951, 1957, 1990), going beyond the final stage of career. Super's concept of life-span encompasses five vocational development stages termed growth, exploration, establishment, maintenance, and disengagement. These stages are assumed to correspond with life-stages of childhood, adolescence, adulthood, middle adulthood, and old age. As such, the final vocational stage is characterized by disengagement from and decline in work activities. However, as the future time perspective shortens, a distinction emerges between individuals who seek out to bridge employment and those who retire fully. As regard the 65+ workers, bridge employment allows these workers to keep one foot in work and one foot in retirement in which they do not rely on HRM.

6.4 Limitations and Related Suggestions for Future Research

As with every study, it is important to address the limitations of the studies included in this PhD thesis. The section below concentrates on the limitations and related suggestions for future research that run through the dissertation.

Firstly, although Chapters 2 and 3 relied on the well-thought out and evidence-based distinction between maintenance and development HRM practices (Kooij et al., 2010), there was no single accepted theory yet for classifying various practices into meaningful bundles or categories (Boselie et al., 2005). Chapters 2 and 3 showed that some HRM practices were apparently not uniformly subject to maintenance or development HRM, depending on the interpretation of the HR practice in question. For example, a training can be either categorized as a maintenance practice, being focused on retaining skills of the current required level, or as a development practice, being focused on helping employees reaching higher levels of functioning (Kooij et al., 2010). To meet this concern, the confirmatory factory analyses in Chapters 4 and 5 cleared up this ambiguity with two clear bundles of HRM practices: maintenance and development.

Secondly, our studies were based on chronological or calendar age, whereas chronological age appears to function as a proxy indicator for a broad constellation of age-related processes (Kooij et al., 2008; Kanfer & Ackerman, 2004). Nevertheless, as other ageing dimensions, such as functional age and organizational age (De Lange, Taris, Jansen, Smulders, Houtman & Kompier, 2006; Kooij, De Lange, Jansen, & Dikkers, 2008) appeared to be highly related to chronological age, it seemed worth to focus on age, whether focused on specific age groups (Chapters 2 and 5), or on age groups (Chapter 3), or age as a continuous variable (Chapter 4).

Thirdly, notwithstanding the attempts to ensure that self-serving and other biases were expelled as far as possible from the data collected, it unconsciously could have resulted in ascribing certain outcomes (i.e., interviewer bias in Chapter 2) or common-method bias (Chapters 3, 4, and 5; Conway, 2002; Doty & Glick, 1998; Podsakoff MacKenzie, Lee, & Podsakoff, 2003). To avoid the former bias, the interviewers have restricted as closely as possible to the interview format that clearly reflected the list of research questions. In addition to the assessments given, the interviewees were asked to explain and justify those assessments and to provide examples of these in practice. The latter was done in order to expel as much as possible self-serving and other possible biases in the responses. In addition, common-method bias might occur when employing questionnaires with only self-report data completed by a single respondent at a single point of time (Chapters 3 and 4). The so-called cross-sectional research is widely viewed as being prone to common-method bias and incapable of causal insights. That is, associations between variables could be (partly) attributed to shared variance with respect to the measurement method. The longitudinal design in Chapter 5 may overcome some of the problems of common-method bias and enhance causal inference (Ostroff, Kinicki, & Clark 2002; Podsakoff et al., 2003). In addition, the fact that measurements of the predictor and criterion variables were separated by a one-year time interval, the potential for common-method bias, was minimized. Unfortunately, longitudinal studies may also raise potential problems. Potential problems are for instance confounds due to intervening events and a reduction in sample size due to respondent attrition. As De Lange (2005) and Taris and Kompier (2003) already suggested, further research using multi-wave designs can provide more information about the stability and change of variables over time (i.e., cross-lagged designs). Despite the longitudinal design in Chapter 5, employing a time interval among hypothesized predictors and outcomes, we are not able to draw conclusions about causality straightforwardly. Indeed, an effect of a particular Time 1 predictor on a specific Time 2 outcome variable might also be due to an unmeasured third variable. In addition, despite the advantage of the longitudinal character in Chapter 5, the time-interval was based on a one-year time lag. Dormann and Zapf (2002) stated that in many situations this time lag is chosen pragmatically, whereas a two-year time lag seems to be more adequate. Future studies might focus on a time lag of two years in case of effects between work characteristics and well-being. Moreover, in order to reduce the threat of common-method bias, an additional method might be to supplement objective

ratings in future research, such as registered sickness absence percentages or supervisor ratings of performance (Brenninkmeijer, Demerouti, Le Blanc, & VanEmmerik, 2010).

A final overarching limitation might be the issue of generalizability, or external validity. Generalizability addresses the question whether the findings of research are relevant across different organizations and sectors. In Chapter 2 it made sense to be cautious about generalizing our findings, since the majority of that (healthcare) sample consisted of female employees. Afterwards, in the analysis of results of this specific study we mentioned this limitation. Generalizability of findings can also be anticipated upon during the design of a study (Drummond, Manca, & Sculpher, 2005), which we took into account in our following empirical studies. These studies comprised several samples across various sectors, such as transport, education & research, healthcare, and technology. Irrespective of the different samples, a robust outcome was found in the driving power of the process from development HRM through resources to employee outcomes, and with work characteristics, such as relationships with managers and colleagues, to be the only driving power for the bridge workers.

6.5 Practical Implications

Besides the theoretical implications of the main theme of this PhD thesis (the contribution of HRM onto an [ageing] workforce), it is also imperative from an organizational and practical perspective for both employees and employers.

Although governments are reducing, in particular, maintenance practices for older workers through legislation (such as additional leave, nightshift exemption, and early retirement), these are experienced as (highly) effective by older workers. However, our study in Chapter 2 revealed that maintenance HRM is not so much evaluated positively because of their maintenance nature, but much more because of their developmental nature. Maintenance HRM apparently contributed to the personal efficacy (e.g., more leisure time to compensate for working hours) of older workers. This could imply that preserving maintenance HRM, even by law, could contribute to retaining older employees at work.

Notwithstanding the positive evaluation of maintenance HRM, this PhD thesis demonstrated the importance of development HRM. All studies focused on the regular working population (Chapters 2, 3, and 4), revealed the predominant positive association between the development HRM (through resources) and employee outcomes, regardless of age. This contradicts life-span theories (Baltes et al. 1999; Carstensen 2006; Higgins 1997) and ageing theories (Bal, De Lange, Jansen, & Velde, 2013; Kooij et al. 2011; Ng & Feldman 2009) that state that older people differ from younger people in motivation and behavior. With this PhD thesis organizations now know, in order to retain workers of all ages for the labor market, which kind of HRM should be targeted to their employees. To that end, by preventing ageism resulting in unviable ‘plateauing’ (Ference 1977), organizations should ensure the availability of particularly development HRM and ensure HRM will actually be used by employees of all ages. To that end, managers now know that advocating development HRM is far more rewarding for employees of all ages than maintenance HRM. This outcome contradicts the stereotypical managerial view of older workers that older workers are expected to be unwilling and unable to learn new skills (Greller & Simpson, 1999; Sterns & Mikols, 1995).

Overall, the abovementioned relationships fitted to all outcome variables used in the distinctive studies, such as work engagement, employability, and perceived health. Therefore, organizations should be allowed to rely on the knowledge that development HRM strengthens, whether through resources or not, work engagement, employability, and perceived health. However, employability turned out to be the concept most easily influenced by HRM. Chapter 3 for instance, showed that associations between HRM and work engagement were not unambiguously positive. (HRM) managers should be aware that work engagement, defined as a persistent, pervasive and positive affective-motivational state of fulfillment in employees (Bakker & Demerouti, 2008; Schaufeli & Bakker 2004; Schaufeli, Bakker & Van Rhenen 2009), contains much more than just work-related items. Hence, though it might be realistic to be sensitive toward the limited impact of (maintenance) HRM, in general managers may understand which HRM enhances employee outcomes. Managers know that to affect employee outcomes in general, the

development HRM practices ‘continuous development’, ‘task enrichment’, ‘regular training’, and ‘participation in decision-making’ were drivers that emerged across all studies as regards the regular working population.

With regard to the distinction between perceived availability and actual use of HRM, another practical implication needs to be mentioned. Although the results of both types of measurements (perceived availability and actual use of HRM) did not show different directions, the practical implications are different. Regardless of its actual use, it is already the perception of the availability of HRM that already works out for employees. This implies an important role for the exposure or the marketing of HRM within an organization.

Lastly, the results of Chapter 5 revealed that both maintenance and development HRM bundles do not enhance employee outcomes of economically active 65+ workers. In order to align to the impact of HRM on employees aged younger that 65, organizations could attempt to lengthen the future time perspective (Lang & Carstensen, 2001) of older workers. This could occur, for instance, by outlining a career after retirement within the organization for a longer period of time. Next, our findings demonstrated that, rather than the impact of more distal HRM, work characteristics, such as relationships with managers and colleagues, turned out to be the driving power for the bridge workers. Managers are urged to optimize their relations sustainably with their 65+ employees, and facilitate optimized relations with colleagues. To this end, beliefs about respect, trust, and loyalty are as important for a fruitful relationship with both the supervisor and the colleagues (Ilies et al., 2007; Nishii & Mayer, 2009).

6.6 Conclusion

This PhD thesis aimed to examine what contribution HRM can make onto a workforce in general, and specifically onto an ageing workforce. It has shown that particularly the impact of HRM with a developmental character plays an important role in this respect. Specifically, development HRM such as ‘continuous development’, ‘task enrichment’, ‘regular training’, and ‘participation in decision-making’ affect employee outcomes positively, regardless of age. Thus, in line with the robust results of this thesis, it is important to provide and facilitate appropriate, mostly development HRM, whether, ‘age aware’ or ‘age free’. For bridge workers an optimized sustained relationship with managers and colleagues in which respect, trust, and loyalty flourish, seems to be the ‘holy grail’.

6.7 References

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Samenvatting (Abstract)

Dit proefschrift gaat over de rol van Human Resource Management (HRM) binnen organisaties tegen de achtergrond van een ouder wordende arbeidspopulatie. Specifiek is het doel van dit proefschrift geweest kennis te genereren over de relatie tussen HRM en medewerkersuitkomsten binnen verschillende contexten en binnen verschillende leeftijdsgroepen met empirisch onderzoek als vehikel.

Door zowel een krimpende als een vergrijzende arbeidspopulatie hebben veel landen de pensioenleeftijd verhoogd en wetgeving geintroduceerd om vervroegde pensionering financieel te ontmoedigen. Op mesoniveau doen organisaties hun best om manieren te vinden medewerkers langer en vitaal aan het werk te houden. De hoop is dat HRM hierin kan voorzien. Wetenschappelijk onderzoek laat zien dat met het ouder worden verschillende soorten veranderingen gepaard gaan. Meer specifiek vinden er veranderingen in werkgerelateerde behoeften en motieven plaats. Levensfasetheorieën fungeren als bron van kennis over hoe medewerkers in alle fasen zijn te behouden en te ontwikkelen. Dit promotieonderzoek naar HRM is uitgevoerd vanuit het perspectief van deze levensfasetheorieën: Onderzoek naar de relatie tussen HRM en medewerkersuitkomsten inclusief de invloed van leeftijd op deze relatie.

De sociale ruiltheorie heeft bijgedragen aan het begrip van wederkerigheid. Het aanbieden van HRM binnen een organisatie suggereert dat een investering van een organisatie in HRM zou resulteren in positieve attitudes en gedrag van medewerkers. Daarnaast is in deze thesis de rol van werkkarakteristieken (taakeisen en hulpbronnen) onderzocht binnen de relatie tussen HRM en medewerkersuitkomsten met behulp van het Job Demands-Resources (JD-R) model als een overkoepelend framework. Het JD-R model is hiermee uitgebreid met het HRM perspectief, dat erop gericht is om effect te sorteren op het optimaliseren van taakeisen en hulpbronnen.

Dit proefschrift omvat de volgende key issues: 1) de bijdrage van HRM aan verbeterende medewerkersuitkomsten; en 2) de verouderende arbeidspopulatie, inclusief 65+ medewerkers en in verband daarmee de rol van HRM. Daarnaast poogt dit proefschrift ook een bijdrage van meer methodologisch aard te leveren aan HRM onderzoek. De key issues zijn: 3) onderzoek van de psychometrische aard van de (bundels van) HRM instrumenten; 4) onderzoek naar medewerkers' perceptie van de aanwezigheid van de HRM, en naar het daadwerkelijk gebruik van HRM door de medewerkers; en 5) onderzoek van zowel cross-sectionele als longitudinale aard, en van zowel mixed methods als van kwantitatieve aard.

Key Issue 1: De Bijdrage van HRM aan Verbeterde Medewerkersuitkomsten op het Werk

Empirisch onderzoek op het gebied van HRM heeft de afgelopen periode vooruitgang geboekt in het begrijpen van de relaties tussen HRM en medewerkersuitkomsten, zoals medewerkers' bevlogenheid, employability, en gepercipieerde gezondheid, die uiteindelijk zouden kunnen resulteren in vergroting van de effectiviteit en het competititief voordeel van organisaties. Medewerkersuitkomsten zijn de meest directe consequenties van HRM, terwijl organisatieprestatie meer op afstand staat en minder direct wordt beïnvloed. Hoewel empirisch onderzoek bevestigt dat er een relatie bestaat tussen HRM en individuele en organisatieuitkomsten, pleiten wij ervoor om de factoren te onderzoeken die in de relatie tussen HRM en de individuele en organsatieuitkomsten een medierende rol vervullen. Inzicht in hoe (door welke mediatoren) HRM de medewerkersuitkomsten beinvloedt, wordt wel het openen van de ‚black box' genoemd. Daaraan is in deze thesis aandacht besteed. Hoofdstuk 2 richt zich op de prevalentie van HRM instrumenten. Daarnaast zijn in dit hoofdstuk de waardering en behoeften van oudere medewerkers (55+), lijnmanagers, en HRM professionals, ten aanzien van HRM instrumenten, specifiek gericht op de oudere medewerkers onderzocht. Er zijn 52 interviews gehouden met oudere medewerkes, lijnmanagers, en HRM professionals in 15 Nederlandse ziekenhuizen en verpleeg-, verzorgings-, en thuiszorg-organisaties. De mixed-methods (deels kwantitatief en deels kwalitatief) benadering toonde aan dat HRM

instrumenten gericht op het behoud van medewerkers (maintenance) veel meer worden ingezet dan ontwikkelingsgerichte (development) HRM instrumenten. Tegelijkertijd werd aangetoond dat zowel maintenance als development HRM instrumenten positief worden gewaardeerd. De behoefte van de oudere medewerkers is daarentegen hoofdzakelijk gerelateerd aan development HRM instrumenten. Hoofdstuk 3 richt zich op de invloed van de gepercipieerde aanwezigheid en het daadwerkelijk gebruik van 28 specifieke HRM instrumenten op medewerkersuitkomsten. Het onderzoek werd uitgevoerd in Nederlandse transport,- zorg-, en onderzoeks- & onderwijssectoren (*N*maximum = 1.589). Op basis van de sociale ruil theorie en de theorie van medewerker-organisatie relaties, was de verwachting dat de gepercipieerde aanwezigheid en het daadwerkelijk gebruik van HRM positief zouden uitwerken op de medewerkersuitkomsten (work engagement en employability). Dit was het geval voor employability maar de relaties met work engagement (bevlogenheid) waren negatief. Alleen HRM instrumenten gerelateerd aan leren, ontwikkeling en het uitvoeren van nieuwe taken bleken positief gerelateerd aan work engagement.

In Hoofdstuk 4 werden deze relaties verder uitgewerkt. Gebaseerd op de sociale ruil theorie en het JD-R model, is de rol van gepercipieerde taakeisen en hulpbronnen onderzocht als mediatoren binnen de relatie tussen het gebruik van maintenance en development HRM bundels, en medewerkersuitkomsten. Met gebruik van een online vragenlijst die ook voor de studie uit Hoofdstuk 3 is gebruikt, is er data verzameld van 1.121 respondenten in profit en not-for-profit organisaties in het Noorden van Nederland. De resultaten toonden negatieve relaties aan tussen maintenance HRM en medewerkersuitkomsten. Daarentegen is aangetoond dat het gebruik van development HRM bundels door individuele medewerkers zowel taakeisen als hulpbronnen positief beinvloedt, en dat deze op hun beurt weer de medewerkersuitkomsten positief beinvloeden. De invloed van development via hulpbronnen op medewerkersuitkomsten wordt in deze studie de '*driving power*' van development HRM genoemd. Bovendien toonde deze studie aan dat het gebruik van development HRM de taakeisen verhoogt, hetgeen resulteert in lagere medewerkersuitkomsten. Dit wordt de '*dark side*' van HRM genoemd. Het proces van development HRM via hulpbronnen naar medewerkersuitkomsten toont gelijkenissen met het motivationele proces dat beschreven wordt in het JD-R model. Het lijkt er dus op dat development HRM als een soort tweepoot fungeert overeenkomstig het JD-R model dat aangeeft dat investering in de groei van hulpbronnen een productievere benadering is dan investering in de reductie van taakeisen.

De studie in Hoofdstuk 5, die is gebaseerd op een longitudinaal ontwerp met 65+ medewerkers (de zogenaamde 'bridge workers'), toonde geen relatie aan tussen HRM aan de ene kant, en hulpbronnen (social support: leader-member exchange [LMX] en coworker exchange [CWX]), en medewerkersuitkomsten aan de andere kant. De studie omvatte zowel maintenance als development HRM, en onderzocht de gepercipeerde aanwezigheid en het daadwerkelijk gebruik van HRM. Voor de bridge workers bleek HRM geen effect op social support of medewerkersuitkomsten te hebben. De relatie tussen LMX en CWX enerzijds, en de medewerkersuitkomsten anderzijds, bleek juist sterk aan de oppervlakte te komen. Blijkbaar werken de ondersteunende relaties met leidinggevenden en collega's positief voor de bridge workers.

In het algemeen kan worden gesteld op basis van de verrichte onderzoeken, dat HRM bijdraagt aan medewerkersuitkomsten op het werk. Een uitzondering werd gevonden voor de bridge workers waarbij de resultaten geen relatie tussen HRM aan de ene kant, en social support en medewerkersuitkomstem aantoonden. Echter, voor medewerkers jonger dan 65 bleek uit de empirische studies uit de Hoofdstukken 3 tot en met 5, het overwegend belang van development HRM bij het verbeteren van de medewerkersuitkomsten.

Key Issue 2: De Ouder Wordende Werkpopulatie en HRM

In elke studie van dit proefschrift is het aspect van leeftijd, zij het op onderscheidende wijzen, meegenomen in het onderzoek. Elke studie is gebaseerd op levensfasetheorieën (theorie van Selection, Optimization, Compensation, Socio-Emotional Selectivity theorie, Regulatory Focus theorie) die veranderingen in het effect van HRM op medewerkersuitkomsten suggereren naarmate medewerkers

ouder worden. De verschillende studies hebben bovendien verschillende lenzen gehanteerd waardoorheen het concept van leeftijd is geanalyseerd. In de Hoofdstukken 2 en 5 is gefocust op respectievelijk 55+ en 65+ medewerkers. De studie in Hoofstuk 2 toonde aan dat voor 55+ medewerkers development HRM instrumenten in geen geval van mindere waarde zouden zijn dan maintenance HRM instrumenten. Anders dan verwacht werd op basis van de levensfasetheorieën, bleek dus dat voor 55+ medewerkers een integraal HRM beleid, development én maintenance omvattend, minstens zo effectief is als een eenzijdig op maintenance gericht HRM. In Hoofdstuk 5, dat gericht is op 65+ medewerkers, werd geen enkele significante relatie van HRM met noch social support, noch medewerkersuitkomsten aangetoond.

In Hoofdstuk 3 werden betekenisvolle leeftijdsgroepen met elkaar vergeleken terwijl in Hoofdstuk 4 de variabele leeftijd werd geanalyseerd als een continue moderator van de relaties tussen HRM bundels, taakeisen/hulpbronnen, en medewerkersuitkomsten. Hoewel deze studies de variabele leeftijd dus op verschillende manieren benaderden, toonden ze beide aan dat er (vrijwel) geen modererende werking van leeftijd(sgroepen) optreedt binnen de relaties tussen HRM en (mediators en) medewerkersuitkomsten. HRM gericht op ontwikkeling lijkt een positieve uitwerking te hebben op medewerkers van alle leeftijden. Voor bridge workers geldt dat in plaats van HRM, de positive invloed van social support (LMX en CWX) uitgaat.

Key Issue 3: Psychometrie van Meetschalen: HRM Instrumenten and HRM Bundels

In dit proefschrift is onderscheid gemaakt tussen analyse van HRM als geïsoleerde instrumenten, en van HRM als bundels. Deze HRM bundels behelzen aan elkaar gerelateerde en intern consistente HRM instrumenten gericht op eenzelfde organisatiedoel. Dit proefschrift heeft bijgedragen aan zowel kennisvergaring betreffende specifieke HRM instrumenten als betreffende HRM bundels met hun interne relaties en consistenties. In de Hoofdstukken 2 en 3 bouwden we op het conceptuele onderscheid tussen maintenance en development HRM, dat in de Hoofdstukken 4 en 5 werd bevestigd met exploratieve en confirmatorische factor analyses die in maintenance en development HRM bundels resulteerden. Het onderscheid tussen maintenance en development bleek een robuuste te zijn binnen deze thesis.

Key Issue 4: Onderscheid Tussen Gepercipieerde Aanwezigheid en Daadwerkelijk Gebruik van HRM

Binnen dit proefschrift werden zowel de gepercipieerde aanwezigheid als het daadwerkelijk gebruik van HRM onderzocht. HRM als variabele kan op verschillende wijzen geoperationaliseerd worden die te maken hebben met de mate waarin HRM in de organisatie ontwikkeld, geïmplementeerd, en gepercipieerd wordt. Het is gangbaar om een onderscheid te maken tussen ‘intended’ (HRM zoals op strategisch niveau ontworpen), ‘actual’ (HRM zoals het wordt geïmplementeerd), en ‘perceived’ (HRM zoals ervaren door medewerkers). In de verrichte onderzoeken in dit proefschrift zijn ook ‘perceived availability’ en ‘actual use’ aan deze mini-ketting toegevoegd. Er werd in dit proefschrift dus onderzocht of medewerkers daadwerkelijk ervaren dat een bepaald HRM instrument aanwezig is in de organisatie, én of ze daadwerkelijk gebruik maken van een HRM instrument, en vervolgens de relaties hiervan op medewerkersuitkomsten. ‘Perceived availibillity’ en ‘actual use’ van HRM bleken in onze studies op zichzelf staande variabelen te zijn. Daarmee is de mini-HRM keten van ‘intended’, ‘actual’, en ‘perceived’ HRM genuanceerd met fasen van gepercipieerde aanwezigheid en daadwerkelijk gebruik van HRM. De resultaten toonden aan, dat ondanks dit onderscheid, dezelfde richtingen in relaties werden gevonden.

Key Issue 5: HRM Benaderd vanuit Verschillende Perspectieven

Dit proefschrift omvat verschillende perspectieven van waaruit HRM en de ouder wordende arbeidspopulatie zijn benaderd. Hoofdstukken 2 tot en met 5 hadden een cross-sectioneel karakter. Bij cross-sectioneel onderzoek dient de nodige voorzichtigheid te worden betracht conclusies te trekken

over causale relaties tussen HRM en de uitkomstvariabelen. Hoofdstuk 5 bevatte een two-wave ontwerp dat meer informatie verschaft over de stabiliteit en verandering van variabelen over tijd heen. Desalniettemin dient zelfs met een tijdsinterval tussen gehypothetiseerde voorspellende variabelen en uitkomstvariabelen voorzichtigheid te worden betracht. Immers, een effect van een voorspellende variabele op Tijdstip 1 op een uitkomstvariabele op Tijdstip 2, zou ook kunnen worden veroorzaakt door een niet gemeten derde variabele. Daarnaast is in dit proefschrift overwegend gebruik gemaakt van data van kwantitatieve aard. Een voordeel van onze overwegend kwantitatieve studies is dat veel kennis is vergaard door het gebruik van vragenlijsten met veel variabelen, anonieme respondenten, en beantwoording in eigen tijd. De eerste studie in dit proefschrift heeft daarentegen een mixed methods benadering. In deze studie kunnen daarmee de vruchten worden geplukt van zowel een kwantitatief onderdeel (cijfers over de prevalentie en waardering van de HRM instrumenten) als een kwalitatief onderdeel (illustratieve reflecties of observaties door de geïnterviewden), waarbij het laatste deel het eerst deel complementeert.

Conclusie

Dit proefschrift gaat over de rol van Human Resource Management (HRM) binnen organisaties tegen de achtergrond van een ouder wordende arbeidspopulatie. De resultaten van het proefschrift toonden hoofdzakelijk aan dat de invloed van HRM met een ontwikkelingskarakter een belangrijk rol speelt op dit vlak. Met name development HRM ‘continue ontwikkeling’, ‘taakverrijking’, ‘reguliere training’, en ‘participatie in besluitvorming’ beïnvloeden medewerkersuitkomsten positief, ongeacht leeftijd. Op basis van de robuuste resultaten uit dit proefschrift is het belang van investering in development HRM aangetoond, voor medewerkers van alle leeftijden. Voor bridge workers blijkt een geoptimaliseerde relatie met de manager en collega’s waarbinnen respect, vertrouwen en loyaliteit goed gedijen, de ‘heilige graal’ te zijn.

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About the Author

Klaske N. Veth (1971) has worked for seven years as a senior lecturer and researcher Human Resources Management (HRM) at the Hanze University of Applied Sciences in Groningen. Next to subjects in the area of HRM, she is an expert on the topics of healthy ageing at work and (personal) leadership. She conducts research on these topics, and in addition develops and gives lectures on these. Furthermore, she is supervisor and advisor of bachelor and master students with their graduation projects. She published in and presented at various international peer reviewed journals and conferences.

Before, she worked for 13 years as a (managing) HRM officer in various jobs in three different organizations (service, dairy industry and the health sector). During these years, she faced employees strained by financial disincentives, making longer careers than before, but she felt rather empty-handed when it came to offering solutions. These experiences have turned out to be breeding grounds for her interest into subjects of social psychological HRM. healthy ageing at work, (personal) leadership, and coaching and development.

Initially Klaske studied philosopy (1 year, University of Amsterdam) and management & organizational sciences (graduated ‚with pleasure') at the University of Tilburg. In her career she attended the two-years executive program coaching and consulting in context at the University of Utrecht that, using the so-called psychodynamic-systemic perspective, deepened her understanding of HRM and organization & management sciences.