


# Does age matter? Examining career commitment as a moderator in the relationship between age-related HR/D practices and subjective career success for younger versus older academic staff

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## Abstract

Building upon the job demands–resources framework and employing an interactionist perspective, the purpose of this scholarly work was to investigate the relationship between age-related HR/D practices (being a contextual antecedent) and career commitment (being a personal antecedent), and the interaction between these two, on the one hand, and subjective career experiences, on the other hand. Moreover, elaborating on life-span developmental theories and earlier empirical work on aging at work, this study also examined whether this relationship was moderated by age category (younger workers [ $<50$  years] vs. their older counterparts [ $\geq 50$  years]). An online self-report questionnaire with thoroughly validated measures was distributed among academic staff employees ( $N = 139$ ). The results partially supported the specific study assumptions. Concrete, age-related HR/D practices add significantly to academics' subjective career success. Contradictory to our expectations, we could neither find a main effect of career commitment nor for its interaction with age-related HR/D practices in the light of subjective career success. Results from the multigroup analyses indicate that, in reality, the above results may apply

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only to older academics ( $\geq 50$  years). Possible explanations for this outcome are discussed. This study extends past career research by applying an interactionist perspective (context: age-related HR/D practices; person: career commitment) approach for explaining subjectively experienced career success. The results of this scholarly work provide useful insights for protecting and further enhancing the sustainability of careers in academia, which is of utmost importance in nowadays' labor markets in this occupational sector.

#### KEYWORDS

age, career commitment, career development, HRD policy, human resource management, subjective Career Success, structural Equation Modeling, quantitative Research

## 1 | INTRODUCTION

The ongoing demographic changes, that is, aging and dejuvenization of the working population (Philips & Siu, 2012), provide many challenges for management in organizations, with academic institutions being no exception (Mizikaci & Baumgartl, 2015). Just like for all employees on the current labor market, the combination of rapid technological developments and the growing demands on productivity, creativity, and flexibility that follow from expanded globalization (Berntson et al., 2006) urges academics to be very committed to their career. The latter is needed in order to be able to stay at the forefront and to protect their subjective career success across the life span (De Vos et al., 2020). As a result, retaining academic staff who is highly committed to their career has become a critical priority for higher education institutions in present times (Gandy et al., 2018).

However, while maintaining a sustainable career across their life span has become increasingly important for academics, it has also become increasingly difficult due to changes in both their work content (e.g., the innovations in technology) and working conditions. More and more, universities have to deal with decreasing budgets, increased workloads, an increase in the amount of temporary job contracts, and a downward trend in tenured and tenure-track positions (Kinman, 2014). Simultaneously, academic staff has to deal with the increasing emphasis on the economic value of universities that is apparent from the massification of higher education, the increasing importance of assessments, auditing, and international rankings (Finkelstein et al., 2013). Obviously, these phenomena, in combination with the decreased job security in this professional sector (Cahill et al., 2010) have put increasing demands on academic staff, which might seriously endanger their career sustainability across the life span, as reflected in their subjectively experienced career success (Van der Heijden & De Vos, 2015). On top of this, the global COVID-19 pandemic, being an important career shock for people across the globe (Akkermans et al., 2020), has seriously affected academics' work-life balance. The confinement policies enacted by most countries in response to the pandemic implied a sudden switch to work from home, a transition to online teaching and mentoring, and impacted their research activities considerably (Corbera et al. (2020). The sudden demand, often in a matter of days if not weeks' notice to switch to online learning technologies, can be unsettling for academics who are more accustomed to and comfortable with in-person teaching practices (Kilgour et al., 2019) and require agility and learning for workers of all ages (Kanfer et al., 2020) in order to protect the sustainability of their careers.

Subjective career success lies at the core of the "Person" dimension of the notion of sustainable careers (De Vos et al., 2020). From a subjective perspective, career success is evaluated by individuals themselves, based on their own personal criteria of success (Gattiker & Larwood, 1986). Hence, subjective career success is typically

operationalized by means of attitude scales (Gattiker & Larwood, 1986; Greenhaus et al., 1990). In the context of contemporary careers, with a growing emphasis on unpredictability (De Vos & Soens, 2008) and growing attention for the sustainability of one's career (Van der Heijden & De Vos, 2015), career scholars increasingly focus on the personal meaning of career success, that is, subjective career success (Hall, 2002). Analogously, protecting one's subjective career success comprises a key characteristic for academics to survive in today's academic environment.

In addition to the growing focus on subjective career success, in the past decades, more and more researchers have become interested in understanding the role of individual differences in the achievement of career outcomes (Judge & Kammeyer-Mueller, 2007; Vandenberghe & Basak Ok, 2013). Career commitment comprises an individual career characteristic that represents an employee's attachment, identification, and involvement with their personal career goals (Noordin et al., 2002). At the same time, the concept reflects "people's motivations to work toward personal advancement in their professions" (Ellemers et al., 1998, p. 718). Earlier research has already indicated that career commitment is positively associated with a broad set of variables that are related to the notion of sustainable careers, such as job satisfaction, career satisfaction, and objective and subjective career success (Vandenberghe & Basak Ok, 2013).

However, up until now, there is a substantial lack of research on joint interactions of organizational and individual factors that aim to enhance career outcomes, and to the best of our knowledge, no previous empirical work has examined the possible role career commitment can play as a moderator in the relationship between age-related HR/D practices and subjective career success. HR/D practices are characterized by a functionalistic perspective based on the concept of human capital (Becker, 1964; Schultz, 1961). Following this perspective, training and development are perceived as "an investment in individual employability that is assumed to proportionally increase the productive capacity and income of individuals" (Nilsson & Ellström, 2012, p. 33). Yet, for an organization to be attractive to employees themselves across their life span as well, it should provide HR/D practices that increase workers' employability while taking into account their age (Van der Heijden et al., 2009; Van der Heijden & De Vos, 2015).

The dynamic interplay between organizational and individual factors makes careers inherently dynamic, and the changes in these factors, over time, affect the individual's career sustainability (Nagy et al., 2018). The concept of sustainable careers can, therefore, be understood as a cyclical, self-regulatory process in which both positive and negative experiences and events, and the way they are perceived and interpreted by the individual and their stakeholders (such as one's family, friends, peers, colleagues, and employer), provide opportunities for "dynamic learning" (De Vos et al., 2020). This dynamic learning, for which HR/D activities are argued to be important elements, enables individuals to adapt to and to influence their surrounding environment over time, by sharpening the understandings of themselves, their working life and private life contexts, and the broader labor market (De Vos et al., 2020). Hence, as careers are dynamic by nature and comprise a cycle of intertwined events, both in one's working life and in one's private life, the enhancement and protection of one's subjective career success by means of HR/D practices that are aligned to one's individual preferences and capabilities over time (Van der Heijden & De Vos, 2015) are crucial (Appelbaum et al., 2000; Boxall & Macky, 2009).

By employing an interactionist perspective (Endler & Magnusson, 1976; Lewin, 1935) as our overarching framework, this study goes beyond previous studies focusing on mere individual or organizational effects and underscores the importance of joint effects for an enhanced understanding of how career outcomes come about. In doing so, we also illustrate for both academics and policy makers the importance of approaching career sustainability as a shared responsibility that requires deliberate efforts from both employer and employee. Specifically, and in line with Clarke and Patrickson (2008), we incorporate the impact of an organizational context characteristic (i.e., age-related HR/D policies) and a personal characteristic (i.e., career commitment) and examine their joint effect on the subjective career success of academics. As such, we respond to previous calls for a greater consideration of context and help prevent fragmentation in empirical work on (subjective) career success (see, for instance, Cappelli & Sherer, 1991; Mowday & Sutton, 1993). Our approach also complies with integrative resource management such as suggested by Spurk et al. (2019). It furthermore helps to close the gap of empirical research building on the notion of the sustainable career paradigm (Van der Heijden et al., 2020).

This study also adds to our understanding of the predictive value of individual and organizational factors in the light of subjective career success of academic staff, being a highly understudied occupational category (Baruch

et al., 2014; Osam, Shuck, & Immekus, 2020). As career researchers call for more empirical work on differences in employees' career sustainability according to age (see also Kooij et al., 2011), we will compare two age categories of academic staff, that is, employees who are younger than 50 years old, and employees who are 50 years or older, and investigate whether the strength of the model relationships differs according to age category. Consistent with Greller (2006), we defined older workers as those who were 50 years and older (see also Armstrong-Stassen & Schlosser, 2008). Particularly in a time where academic work contexts are complex and under pressure, the results of our study may aid policy makers by providing insights into the value of generic versus age-directed HR/D approaches to support more sustainable academic careers.

In the next sections, we will go into more detail about the specific theoretical frameworks that we have used and how they form the grounding for our research hypotheses. In particular, we integrate life-span theorizing (P. B. Baltes, 1987) within our overarching framework of the interactionist perspective (Enderl & Magnusson, 1976; Lewin, 1935) on career sustainability (De Vos et al., 2020; Van der Heijden et al., 2020), and explain the line of reasoning underlying our research hypotheses.

## 1.1 | The importance of age-related HR/D practices for subjective career success

The job demands–resources (JD–R) framework (Bakker & Demerouti, 2007; Demerouti et al., 2001) is used to justify the importance of age-related HR/D practices as an antecedent in our research model. The JD–R framework is built upon two underlying psychological processes that are crucial in the development of job strain and motivation (Bakker & Demerouti, 2007; Bakker, Demerouti, De Boer, et al., 2003), that is, a so-called health-impairment (or energy depletion) process and a so-called motivational process. The motivational process, which forms the basis of our research model, implies that job resources have either intrinsic (because they foster growth, learning, and development) or extrinsic (because they are instrumental in achieving work goals) motivational potential and lead to positive work outcomes, such as work engagement and high job performance (Bakker & Demerouti, 2007; Bakker, Demerouti, & Schaufeli, 2003). As such, job resources are essential in order to deal with job demands, but they are also rewarding in themselves, by fulfilling basic human needs (Deci & Ryan, 1985), such as the need for autonomy, belongingness, and competence.

In many countries, and especially Westernized countries such as where the present research is conducted, more and more, employees strive for “a career with a heart” (Hall, 2004). That is, they strive for a career that is characterized by three dimensions (i.e., integrated with life, characterized by positive emotions, and driven by a protean orientation; Kopelman et al., 2012), in addition to the traditional and narrower definition of career success in terms of “climbing the career ladder” (Louis, 1980, p. 329). Such a career is realized over time, through continuous, mindful negotiations with relevant others (Kopelman et al., 2012), and requires the individual to be committed to obtain both short-term and long-term beneficial outcomes for themselves and their organization. As such, individuals who want “career with a heart” value the sustainability of their career (De Vos et al., 2020), as reflected in terms of their individually perceived health, happiness, and productivity (Van der Heijden, 2005). We argue that age-related HR/D practices [in our study referring to measures that the employee's direct supervisor takes to protect and further enhance their career sustainability across the life span, such as aligning tasks and responsibilities with the employee's age, maintaining the worker's employability, and so on (Van der Heijden, 2005) (see also Veth et al., 2015, 2019)] are an important job resource that is positively related to an employee's subjective career success (Armstrong-Stassen & Ursel, 2009; Yean & Yahya, 2013). Practices that are aimed at meeting employee's needs for reduced workloads are a concrete example of accommodative HR/D practices (Armstrong-Stassen & Ursel, 2009; Kooij et al., 2014). The extent to which one's line manager is actually engaged with implementing HR/D practices, that is translating the HR/D policies as formulated at the top management level into concrete HR/D practices, determines employees' perceptions (Shuck et al., 2014; Wright & Nishii, 2007) as reflected in their subjectively experienced career success over time (Van der Heijden & De Vos, 2015).

In order to foster sustainable careers, line managers need to design HR/D practices in such a way that they stimulate Ability, Motivation, and Opportunity (AMO), being all three components in the framework of individual performance (Appelbaum et al., 2000; Boxall & Macky, 2009) (see also Le Blanc et al., 2017). Such practices should incorporate different age conceptualizations, over and above calendar age, being an objective measure (see also Cleveland et al., 1997). The older employees get, the more experience they accumulate, and the more heterogeneous they become (Staudinger & Bowen, 2011). Aging at work comprises a multidimensional process indicating changes in physical, psychological, social as well as societal functioning over time (Kooij et al., 2008), and is argued to affect individual employees' work- and career-related outcomes (cf. Kooij et al., 2008; Sterns & Miklos, 1995). More specifically, Sterns and Doverspike (1989) came up with five different approaches to age comprising chronological, organizational, functional, psychosocial, and life-span development, and called for research using a broader conceptualization of age aiming to capture age-related changes, due to health, career stage, and family status, among others, across time. Their more elaborate conceptualization of aging forms the basis for the operationalization of the HR/D activities measure that is used in this study, and which is needed to better understand the impact of aging on one's career sustainability.

In particular, *calendar* age, or chronological age, refers to the time passed since one's date of birth. *Organizational* age is more commonly referred to as job or organizational tenure (years of service) or as career stage (Kooij et al., 2008) or seniority and comprises the process of aging of individuals in jobs and organizations. *Functional*- or performance-based age refers to a worker's ability to perform their job tasks on a daily basis (Sharkey, 1987). *Psychosocial* or subjective age refers to how old the individual feels, looks, and acts, with which age cohort the individual identifies, and how old the person desires to be (Kaliterna et al., 2002; Stephan et al., 2012). Moreover, psychosocial age also has to do with age norms that are used with respect to an occupation, company, or society (cf. age-related stereotyping). As such, this approach comprises the social perception of age. The *life-span* age approach can be measured by life stage or family status (number and age of dependents, marital status, experiencing the loss of a loved one; Sterns & Doverspike, 1989; Sterns & Miklos, 1995) and focuses on the intra-individual changes people encounter due to them moving through (older) adulthood, and relates to behavioral changes at any point in the life cycle.

In the context of this study, we posit that job demands and job resources may affect the way employees can deal with the health-impairment or energy-depletion and motivational processes that might be involved in employees' functioning across the career span (see also Frins et al., 2016). For instance, in case of excessive job demands (e.g., high work pressure and/or a too high amount of emotional demands at work) may wear out the physical or mental resources of a worker, which might in serious cases lead to health impairment or energy depletion (Bakker & Demerouti, 2007). In a similar vein, an ample amount of job resources, in our case age-related HR/D practices, that are explicitly aimed at protecting and further enhancing the employability of workers while taking into account the specific challenges they encounter in their work and private life in different life and career stages (De Vos et al., 2020; Van der Heijden et al., 2020) might positively affect employees' well-being (i.e., their health and energy level) (Bakker & Demerouti, 2007). Obviously, the latter will be translated into a higher amount of subjective career success. Therefore, we have formulated the following hypothesis:

**Hypothesis 1.** *Age-related HR/D practices are positively related to subjective career success.*

## 1.2 | The importance of career commitment for subjective career success

Career commitment refers to "one's attitude towards one's profession or vocation" (Blau, 1985, p. 278) or to "one's motivation to work in the chosen vocation" (Carson & Bedeian, 1994, p. 240), and is an example of a more recent determinant of career success, in comparison with job commitment (Ballout, 2009). It has already been incorporated in earlier empirical work (see Day & Allen, 2004; Kidd & Green, 2006 for appealing examples in this regard), and recent scholarly research indicates that career commitment is an important element of self-directed career management, which is aimed at achieving career goals and optimizing person-environment fit, that focuses on the proactive

behaviors that individuals show (Hirschi et al., 2018). As such, it is a motivational career resource (Halbesleben et al., 2014) “that helps an individual to attain his or her career goals” (Hirschi et al., 2018, p. 339). Individuals with a high degree of career commitment are assumed to be willing to make significant investments to further their career (Aryee & Tan, 1992; Koslowsky et al., 2012). Indeed, recent career literature has placed more emphasis on career self-management (Hirschi et al., 2018) and the role of individual agency (Van der Heijden & De Vos, 2015) in order to develop their careers and to achieve success.

Particularly, by employing an interactionist perspective (Endler & Magnusson, 1976; Lewin, 1935) as the overarching framework in our empirical work and building on the notion of the sustainable career paradigm, we argue that employees who are active agents in their own life and career course (i.e., portray individual agency) are better able to protect and further enhance their health, happiness, and productivity (being the core indicators of sustainable careers) (De Vos et al., 2020; Van der Heijden, 2005). In the rapidly changing and unpredictable global environment they encounter, with the academic world being no exception (Flecker et al., 2017; Levecque et al., 2017), people who are more committed to their career are assumed to be better able to cope with challenges, both in the private life and organizational context (De Vos et al., 2020).

Following Spurk et al. (2019), we depart from an integrative resource framework approach (see also Halbesleben et al., 2014; Ten Brummelhuis & Bakker, 2012) and combine a personal (i.e., career commitment) and a contextual resource (i.e., age-related HR/D activities) in our research model. First, building upon conservation of resources (COR) theory (Hobfoll, 1989), we posit that employees who have a strong degree of career commitment are more likely to benefit from the age-related HR/D practices that are adopted by one's direct supervisor. COR theory enables us to further our understanding of how experiences of subjective career success can be increased, thereby combining the resource conservation and investment principles of COR theory (Ng & Feldman, 2012). According to the *principle of resource investment*, a resource (in our case career commitment) that can help an individual to attain a certain career goal or to satisfy a particular need (in our case subjective career success) has greater value to them. However, simultaneously, following the *principle of the primacy of resource loss*, experiences of subjective career success will be more likely preserved in case the employee manages to adjust well to losses. Therefore, we argue that individuals who are strongly committed to their career (personal resource) are more likely to value and make use of the contextual resource of age-related HR/D practices, as it helps them to enhance their level of subjective career success.

Second, self-determination theory (SDT) (Ryan & Deci, 2000) states that individuals strive for the fulfillment of three innate psychological needs, that is, the need for autonomy, competence, and relatedness (Ryan & Deci, 2000) when interacting with their surrounding world. First, individuals are inherently proactive and are inclined to act in order to master both internal and external forces. Second, they are inclined to aspire after growth, development, and integrated functioning. Third, individuals need a supportive environment (Deci & Ryan, 2000) that provides resources (referred to as “nutriments” in SDT) in order to realize person-career fit (Parasuraman et al., 2000), as reflected in a high amount of subjective career success.

In line with COR theory and SDT, we expect that people with a high degree of career commitment are more inclined to invest time in thoughtful interaction with stakeholders aimed at obtaining resources (Hobfoll, 2001), thereby creating the so-called resource caravans (e.g., Westman et al., 2004) that may result in a higher amount of subjective career success. The cumulative nature of resources, in the form of resource caravans (in our case, age-related HR/D practices as implemented by one's direct supervisor), implies that individuals with (many) resources are better able to gain additional ones. That is to say, initial resource gain begets further gain, herewith inducing a gain spiral (Westman et al., 2004). Therefore, we have formulated the following hypotheses:

**Hypothesis 2.** *Career commitment is positively related to subjective career success.*

**Hypothesis 3.** *Career commitment will moderate the relationship between age-related HR/D practices and subjective career success, such that when career commitment is high, the relationship will be stronger than when career commitment is low.*

### 1.3 | The moderating role of age

Inspired by Bal et al. (2013), we adopt a contingency perspective to explain differences in the relationship between HR/D practices and outcomes (see also Appelbaum et al., 2000; Purcell, 1999) for specific age categories of employees (cf. Tordera et al., 2020). Delery and Doty (1996) postulated that a contingency perspective on HR/D also applies to micro- or individual-level outcomes. In other words, the effectiveness of HR/D practices is not only dependent upon macro-level factors, such as organizational strategy, but also on micro-level factors, such as individual employee needs across the life-span, and thus upon their age. In formulating our multigroup hypothesis on the moderating role of age, we build on life-span developmental theorizing and earlier empirical research on aging at work.

Following the perspective of life-span theorizing (P. B. Baltes, 1987), aging usually involves a relative loss of individual resources, such as fluid intellectual abilities (Salthouse, 2013), physical capacities (Faulkner et al., 2007), sensory abilities (Takeda et al., 1992), and goes hand in hand with an increase in the prevalence of chronic diseases (Maatouk et al., 2012). At the same time, unfavorable working conditions may intensify the “wear and tear” over time, and consequently impair workers' capacities when they get older (Bosma et al., 2003) (see Müller et al., 2018 for more details). The age-related loss of resources might endanger the career sustainability of older workers, and therefore, we contend that, in terms of optimal resource allocation (M. M. Baltes & Lang, 1997), HR/D practices are particularly important for older workers. Specifically, building upon selective optimization with compensation (SOC) theory (P. B. Baltes & Baltes, 1990; De Lange et al., 2011; Ebner et al., 2006), we argue that the availability of HR/D practices that increase the worker's ability to adopt and to fine-tune specific strategies for minimizing losses and maximizing gains are specifically beneficial for the older staff ( $\geq 50$  years) members, and even more so for the ones that are highly committed to their career, herewith safeguarding its sustainability. SOC theory postulates that successful functioning both at work and in one's private life can be realized through the coordination of interrelated strategies to regulate personal goals (Freund & Baltes, 2002). Selection refers to goal setting processes and the contextualization of goals (e.g., prioritizing goals across the life span), whereas optimization and compensation involve the direction of efforts toward goal pursuit in ways that are well-matched with an individual's personal and contextual resources (Zacher & Rudolph, 2017).

Indeed, previous research has indicated that employees who experience losses in their capabilities appear to use selection, optimization, and compensation in order to protect their subjective career success (Wiese et al., 2002). For example, employees may *select* by giving up job responsibilities or by involving others in their tasks, in case the overall workload is too high. Alternatively, they may *optimize* by acquiring and investing in means and abilities to achieve their career goals, for instance, by combatting obsolescence of their competencies. Moreover, people may *compensate* for losses through employing alternative means to maintain a desired level of performance, for instance, using certain ways to present themselves to others (Abraham & Hansson, 1995). Also, SOC strategy use appears to be positively related to job satisfaction, engagement, and performance, all being important indicators of (subjective) career success (Moghimi et al., 2017).

However, in order to successfully employ a desired SOC strategy, it is also necessary that the organization supports these individual strategies (Bal et al., 2013), and we argue that one's direct supervisor plays a crucial role in this regard (Van der Heijden & De Vos, 2015). Once more, by employing an interactionist perspective (Endler & Magnusson, 1976; Lewin, 1935) and building upon the notion of sustainable careers (De Vos et al., 2020), we stress the importance of mutual responsibility. In this case, mutual responsibility implies that an employee's direct supervisor adopts a non-normative (Van der Heijden, 2005) and individualized (Bal & Dorenbosch, 2015) flexible view on HR/D, wherein justice is done to the increasing idiosyncrasy or variety in careers across the life span (Van der Heijden & De Vos, 2015; Veth et al., 2019).

To summarize, departing from an integrative resource framework approach (Spurk et al., 2019), and by integrating life-span theorizing (P. B. Baltes, 1987) within our overarching framework of the interactionist approach (Endler & Magnusson, 1976; Lewin, 1935), on career sustainability (De Vos et al., 2020; Van der Heijden et al., 2020), we have formulated the following hypothesis:



**Hypothesis 4.** *The strength of the model relationships is stronger for the older employees ( $\geq 50$  years old) in comparison with their younger counterparts ( $< 50$  years).*

## 2 | METHODOLOGY

### 2.1 | Procedures and sample

The study was designed in line with APA (American Psychological Association) ethical guidelines. Data were collected at the Open University of the Netherlands (OUNL), using an online survey. At the OUNL, instruction is mainly delivered through distance learning technologies (e.g., virtual classrooms) combined with some face-to-face learning activities. Participants were voluntarily recruited, striving for a sound representation across the organization. The questionnaire's first page contained information about the goal of the study, instructions for participation, and a data treatment statement, complying with current Dutch regulations. At the end of the survey, the respondents were asked for their informed consent to their answers being used in publications resulting from the study. Responses were dealt with anonymously. The final study sample consisted of 139 academic employees (41.4% response rate, which comprises just about the norm in behavioral sciences; Baruch & Holdom, 2008). All in all, 93 respondents worked at faculties, 29 were employed at the educational research center, and 17 worked at a center specialized in innovations in teacher education. The mean age was 46.4 years ( $SD = 10.42$ ), with 46.8% of the sample being 50 years or older. This age distribution is representative for the total population of academic employees at OUNL, as 42% of the employees were 50 years or older (VSNU, 2015). The average organizational tenure of these employees was 9.61 years ( $SD = 6.06$ ). Exactly 53.2% of the sample was men, which reflects a slight underrepresentation of women in our sample.

### 2.2 | Measures

#### 2.2.1 | Age-related HR/D practices

A newly developed five-item measure for age-related HR/D practices was used. Its factor structure and related psychometric qualities are good (Van der Heijden, Scholarios, Bozionelos, Van der Heijde, Epitropaki, & the Indic@tor consortium, 2005). The items were as follows: "My supervisor has shown special attention to maintaining the employability of older employees during the last year"; "My supervisor has taken into account my age and capacity when assigning me new tasks and responsibilities during the last year"; "My supervisor has talked with me about my career development in relation to my age during the last year"; "My supervisor has taken into account my whole career when he/she has talked with me about my career development during the last year"; "My supervisor has protected me from career challenges that would have been too substantial considering my capacity during the last year." Items were scored on a six-point rating scale, ranging from (1) "totally disagree" to (6) "totally agree." Cronbach's alpha was good at 0.80.

#### 2.2.2 | Career commitment

Van der Heijden et al.'s (2005) newly developed four-item measure for career commitment was used, which is based upon the instrument by Jaskolka et al. (1985) for the measurement of job involvement. An example item was as follows: "The major satisfactions in my life come from meeting my professional/career objectives." Items were scored on a five-point rating scale, ranging from (1) "totally disagree" to (5) "totally agree." Cronbach's alpha was sufficient at 0.74.



### 2.2.3 | Subjective career success

Subjective career success was measured with three items based on the scale by Gattiker and Larwood (1986). This scale originally measured four areas of subjective career success, that is, job success, hierarchical success, interpersonal success, and financial success. Given the fixed salary scales at Dutch Universities, we decided to exclude financial success as an indicator, as there are hardly any differences in terms of financial success to be expected. An example item was as follows: "I am pleased with the promotions I have received so far". Items were scored on a five-point rating scale, ranging from (1) "totally disagree" to (5) "totally agree." Cronbach's alpha was considered acceptable at 0.58.

### 2.2.4 | Age groups

Two age categories were distinguished: younger academic staff (<50 years old) versus older academic staff (≥50 years old).

### 2.2.5 | Control variables

As shown by previous studies, subjective career success varies according to gender and organizational tenure (Ng et al., 2005). Additionally, the number of promotions in entire career was included as a control variable as this objective indicator of career success has appeared to have an impact on subjective career success (Stumpf & Tymon Jr, 2012).

## 2.3 | Analyses

Data analyses were carried out using Mplus V8 (Muthén & Muthén, 1998-2017).

In order to test Hypotheses 1-3, structural equation modeling (SEM) was conducted. Subsequently, multigroup SEM analyses were carried out in order to see whether the relationships in our structural model differed for the two distinguished age categories.

## 3 | RESULTS

### 3.1 | Measurement model

A series of confirmatory factor analyses was conducted in order to establish convergent and discriminant validity of the measures included. A full measurement model, wherein all factors were allowed to correlate, and wherein the indicators for all the variables loaded onto their respective factors, was initially tested. All factors were allowed to correlate. Following Hu and Bentler (1995), multiple fit indices were calculated to determine how the model fitted to the data; the comparative fit index (CFI); the non-normed fit index (NNFI) (values >0.90 for these two indices indicate an acceptable fit); the root mean square error of approximation (RMSEA; ideally scores should be 0.08 or lower) (Byrne, 2001); and the standardized root mean square residual index (SRMR; scores below 0.08 indicate an acceptable fit) (Hu & Bentler, 1995). The three-factor model showed an acceptable model fit ( $\chi^2 = 65.64$ ,  $df = 50$ ,  $CFI = 0.96$ ;  $NNFI = 0.95$ ;  $RMSEA = 0.05$ ;  $SRMR = 0.05$ ). Next, sequential  $\chi^2$  difference tests were carried out. Specifically, the full measurement model was compared with two alternative nested models, as shown in Table 1. The results of the measurement model comparisons

revealed that, in comparison to the full measurement model, the model fit of the alternative models was significantly worse (all at  $p = 0.001$ ). Overall, this suggests that the variables in this study are distinct.

### 3.2 | Measurement invariance across the two age groups

In order to test for measurement invariance across the two distinguished age groups, we followed the procedure as suggested by Van de Schoot et al. (2012). First, we conducted a CFA for the two age groups separately (see Table 2 for the fit indices). The second step included a test of configural invariance, followed by a test of metric, scalar, and strict invariance. In order to see whether there was progression from one model to the next and more restricted model, we focused on the overall adequacy of the model using several fit indices. Moreover, as suggested by Cheung and Rensvold (2002), we checked whether the difference in CFI value was less than or equal to 0.01, as this indicates no decrement in fit. The advantage of using the change-in-CFI, compared with the often-used Chi-square difference test, is that the change-in-CFI is not affected by sample size. All scales showed configural invariance. The results in Table 2 indicate that there is metric and scalar invariance, meaning that the two groups can be compared as regards their scores on the latent variables.

### 3.3 | Descriptive statistics

Means, standard deviations, and correlations of all the variables are presented in Table 3. For the younger academic staff members, age-related HR/D practices appeared to be significantly associated with subjective career success ( $r = 0.24$ ), while career commitment was not. However, both age-related HR/D practices ( $r = 0.35$ ) and career commitment ( $r = 0.26$ ) appeared to be significantly related with subjective career success for their older counterparts. We also found that career commitment was positively associated with the number of promotions in one's entire career, yet only for the younger staff members. These outcomes point to the possible influence of a moderating effect of age.

### 3.4 | Structural model

Given that the three-factor measurement model fitted the data reasonably well, we proceeded with an examination of the structural equation model in order to test Hypotheses 1–3 (see Table 4). The structural model is a saturated model.

**TABLE 1** Measurement model comparison

Models	$\chi^2$ (df)	NNFI	CFI	RMSEA	SRMR	$\chi^2_{diff}$	df <sub>diff</sub>
Full measurement model, three factors	65.64 (50)	0.95	0.96	0.05	0.05	BASELINE	-
Model A <sup>a</sup>	121.73 (52)	0.78	0.82	0.10	0.10	56.09***	2
Model B <sup>b</sup>	208.23 (53)	0.51	0.61	0.15	0.12	142.59	3

Note:  $n = 139$ . One error term was free to co-vary to improve fit and help reduce bias in the estimated parameter values (Reddy, 1992). All models are compared with the full measurement model.

Abbreviations:  $\chi^2$ , Chi-square;  $\chi^2_{diff}$ , difference in  $\chi^2$ ; df, degrees of freedom; df<sub>diff</sub>, difference in degrees of freedom; CFI, comparative fit index; NNFI, non-normed fit index; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual.

<sup>a</sup>Career commitment and career success combined into a single factor.

<sup>b</sup>All variables combined into a single factor.

\*\*\* $p = 0.001$ .

**TABLE 2** Measurement invariance test

Models	$\chi^2$ (df)	NNFI	CFI	$\Delta$ CFI	RMSEA	SRMR
Group 1 (18–49 years; $N = 74$ )	61.50 (50)	0.91	0.93	-	0.06	0.07
Group 2 ( $\geq 50$ years; $N = 65$ )	63.90 (50)	0.94	0.92	-	0.07	0.07
Configural invariance	125.40 (100)	0.91	0.93	-	0.06	0.07
Metric invariance (factor loadings equal; intercepts differ)	128.43 (109)	0.95	0.94	0.01	0.05	0.08
Scalar invariance	135.82 (118)	0.95	0.95	0.01	0.05	0.08
Strict invariance	158.41 (132)	0.93	0.93	0.02	0.06	0.14

Note: Two error terms were free to co-vary to improve fit and help reduce bias in the estimated parameter values (Reddy, 1992).

Abbreviations:  $\chi^2$ , Chi-square;  $\Delta$ CFI, difference in CFI; CFI, comparative fit index; df, degrees of freedom; NNFI, non-normed fit index; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual.

**TABLE 3** Means, standard deviations, and correlations between the model variables

	Younger employees		Older employees		1.	2.	3.	4.	5.	6.
	Mean	SD	Mean	SD						
1. Gender <sup>a</sup>	-	-	-	-	-	-0.05	-0.24	-0.20	-0.12	0.04
2. Organizational tenure	6.38	5.30	13.29	4.61	-0.09	-	-0.22	-0.00	0.12	-0.02
3. Promotions <sup>b</sup>	2.15	1.90	2.97	1.59	-0.07	0.07	-	-0.00	0.17	0.23
4. Age-related HR/D practices	3.12	0.99	2.46	1.12	0.13	-0.10	-0.16	-	0.07	0.35**
5. Career commitment	2.61	0.62	2.48	0.67	-0.07	-0.18	0.33**	0.10	-	0.26*
6. Subjective career success	3.84	0.53	3.74	0.57	0.02	-0.03	0.02	0.24*	0.03	-

Note:  $N$  of younger employees = 74;  $N$  of older employees = 65. Below diagonal correlations for younger employees and above diagonal correlations for older employees.

\*, \*\*Correlation is significant at the 0.05 and 0.01 levels, respectively (two-tailed).

<sup>a</sup>Male = 0 female = 1;

<sup>b</sup>Total number of promotions in one's entire career.

The results indicate that there was a direct and significant relationship between age-related HR/D practices and subjective career success ( $\beta = 0.40$ ,  $p < 0.025$ ), thereby supporting Hypothesis 1. However, we did not find a significant relationship between career commitment and subjective career success. Hence, Hypothesis 2 is rejected with our data. No significant interaction effect was found for career commitment on the relationship between age-related HR/D practices and subjective career success either, herewith rejecting Hypothesis 3.

### 3.5 | Multigroup analyses

While the results for Hypotheses 2 and 3 are somewhat surprising, the descriptive statistics in Table 1 indicate that the correlations between age-related HR/D practices, career commitment, and subjective career success differed between the distinguished age groups. Specifically, as reported here, the outcomes seem to imply that for the

younger academics, career commitment was related to objective career success (i.e., number of promotions) yet unrelated to their subjective experiences of career success. Conversely, for the older academics, both age-related HR/D practices and career commitment were related solely to subjective rather than objective career success. Taken together, and in line with Hypothesis 4, these findings suggest that there may indeed be possible age group differences in antecedents of subjective career success.

We thus proceeded with a multigroup analysis allowing all regression coefficients (including the constant coefficients) to differ among the two distinguished age groups. This saturated model for the dependent variable fitted the data perfectly. For the younger academics (<50 years), we found no significant relationships in the structural model, while for the older employees (50 years or older) we found positive, and quite strong, significant relationships between age-related HR/D practices and subjective career success ( $\beta = 0.60, p = 0.017$ ) and between career commitment and subjective career success ( $\beta = 0.57, p = 0.017$ ). These findings seem to suggest that Hypotheses 1 and 2 are exclusively confirmed for older academics, and not for the ones under 50 years old. For neither the younger nor the older academics, we found a significant interaction effect of career commitment and age-related HR/D practices on subjective career success. With these outcomes, Hypothesis 3 can thus be rejected altogether. As an interesting additional observation, the results showed that there was only a small positive relationship between the total number of promotions older employees had made in the past and their subjective perceptions of career success ( $\beta = 0.09, p = 0.016$ ).

Next, a series of analyses were carried out, in which the regression coefficients of a particular explanatory variable (age-related HR/D practices or career commitment) were set to be equal to each other for the two age groups (e.g., the regression coefficient for age-related HR/D practices was set equal across the two age groups as a first step). For each of the analyses, it was tested whether the simplified model would provide a significantly worse fit to the data in comparison with the saturated model; as such, a worsening of the model would confirm that the differences found in the relationships across the two age groups were indeed significant. Constraining each structural path separately did not result in a significant worsening of the model fit, suggesting that for the isolated paths the differences between groups did not hold. However, this finding might be due to the relatively small sample size ( $N = 139$ ) for the number of parameters to be estimated. Hence, it is still noteworthy that two separate constraints nearly reached a significant worsening of the model fit. First, adding an equality constraint for the path between age-related HR/D practices and career success resulted in  $\Delta\chi^2 = 2.96$  ( $df = 1$ ),  $p = 0.086$ . Second, adding a separate equality constraint for the path between career commitment and subjective career success resulted in  $\Delta\chi^2 = 3.579$  ( $df = 1$ ),  $p = 0.059$ .

Based on these results, we conclude that while we have indications that age groups may in fact differ in terms of the predictive value of their antecedents for their subjective career success, Hypothesis 4 cannot be confirmed with our data.

**TABLE 4** Results of SEM analyses ( $N = 139$ )

	Subjective career success	
	$\beta$	(SE)
Gender <sup>a</sup>	0.07	(0.09)
Tenure	0.00	(0.01)
Nr. of promotions	0.04	(0.03)
Age-related HR/D practices	0.40*	(0.18)
Career commitment	0.33	(0.22)
Age-related HR/D * Career commitment	-0.09	(0.07)
$R^2$	0.14	

Note: Standardized coefficients are presented (standard errors in parentheses).

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ . <sup>a</sup>(0 = male).

## 4 | DISCUSSION

In line with Hypothesis 1, our findings confirm that age-related HR/D practices [referring to measures that the employee's direct supervisor takes to protect and further enhance their career sustainability across the life span, such as aligning tasks and responsibilities with the employee's age, maintaining the worker's employability, and so on (Van der Heijden, 2005) (see also Veth et al., 2015, 2019), add significantly to academics' subjective career success, herewith suggesting that workers indeed require organizational support, in particular from their direct supervisor (Van der Heijden & De Vos, 2015) in selecting, optimizing, and compensating any losses in their capabilities over the course of their life span, and thereby protect their subjective career success (cf. Bal et al., 2013; Wiese et al., 2002). However, contradictory to our expectations, we could neither find support for a main effect of career commitment nor for its interaction with age-related HR/D practices, on the one hand, with subjective career success, on the other hand, herewith rejecting Hypotheses 2 and 3.

Surprisingly, however, the results from our multigroup analyses hint that, in reality, the abovementioned results may apply only to older academics: while we expected to find age differences in the relative strength of the relationships, we found no significant effect of age-related HR/D practices on subjective career success among academics under 50 years old. In contrast, among older academics (50 years and up), the effect of age-related HR/D practices actually seemed quite strong. One possible explanation for this is that the group of older academics is likely to be more heterogeneous in terms of preferences, dislikes, and attitudes, as personality differences within age groups increase (Bal et al., 2015; Caspi et al., 2005;). This is reflected by a greater heterogeneity in work preferences among older employees (Bal & Kooij, 2011), and as a consequence older employees benefit more from customized age-related HR/D practices than younger employees in terms of career success, as they are more in need of practices that are adapted to the different preferences they have.

It may also be that while age-related HR/D practices are available and offered to younger employees as well, the use of such practices carries with it a stigma that prohibits those in their early and mid-level careers to consider these as desirable or to actually make use of these. Academia, in particular, is characterized as a highly competitive and individualized environment that stimulates workers to attribute success to their individual capabilities and competencies, and that leaves little room for the acknowledgment of weaknesses (Edwards & Roy, 2017). Besides, academics face increasingly difficult working circumstances (Baruch et al., 2014; Dany et al., 2011; Scaffidi & Berman, 2011) and growing demands for flexibility, creativity, and productivity (Flecker et al., 2017; Levecque et al., 2017). On top of this, careers in academia are, over the past decades, more and more shaped by cultural and structural changes in higher education, which have led to an increased focus on performance and outcome measures (Sang et al., 2015). The latter aligns with the fact that the dominant career-related prospects in nowadays' academia are "publish or perish" (Miller et al., 2011) and "up or out" (Fitzenberger & Schulze, 2013). As a result, younger employees in academia may simply find such HR/D practices to be inappropriate to use in their earlier and mid-level career stages, as they want to portray themselves as high potentials. In contrast, negative stereotypical beliefs about the employability of older workers (Posthuma & Campion, 2009; Van der Heijden et al., 2009), combined with an increasing need for employers to secure their older workers' productivity against an ever-aging and dejuvenizing working population (Philips & Siu, 2012), may cause line managers to target and frame age-directed HR/D practices particularly toward their older employees while simultaneously creating a discourse that makes it more acceptable for older workers to use them.

We were also quite surprised to find that there was no effect of academics' career commitment on their subjective career success. Again, however, the outcomes of the multigroup analyses provide an interesting possible nuance to this: whereas career commitment did not add to the younger academics' subjective career success, it may actually have quite an important effect for those aged 50 and above. In academia, over time, there has been a relatively strong increase of the amount of PhD candidates, postdoc, and temporary junior faculty positions, in comparison to the limited number of tenure-track positions (VSNU, 2020). Such a scenario, together with the ever-increasing

competition for scarce resources to fund research, may give young academics the idea that their career success is to an important extent out of their hands, and perhaps even out of the hands of their HR and line managers.

Indeed, within the Netherlands in particular, as indicated for instance by several reports by the KNAW (The Royal Netherlands Academy of Arts and Sciences) and VSNU (The Association of Universities in the Netherlands), a growing number of young academics who are considered both highly talented and skilled in their field, are nevertheless unable to obtain prestigious grants as the exceeding amount of grant applications has become disproportional to the amount of funding available. Meanwhile, these young academics are increasingly dependent on such grants to ensure their career success. In contrast, many of the academics aged 50 and over, although they also face increasing challenges and tensions to protect their career sustainability, already made their careers in an institutional setting wherein the pressure to obtain external funding for research was less extreme, and wherein tenure-track positions were generally more widely available. Although the results of our study prohibit us from drawing any firm conclusions in this respect, it seems worthwhile to further explore the extent to which perceptions of individual agency over one's own career success (De Vos et al., 2020) in academia may differ across generations.

A final noteworthy result of the present empirical study is that we did not find any indications that age-related HR/D practices and career commitment had an interactive effect on subjective career success. These results run counter to Clarke and Patrickson's (2008) proposition that individual and organizational context factors may combine to reinforce one another in their effects on workers' career success. In particular, our findings indicate that to the extent that age-related HR/D practices and career commitment have an effect, these effects are distinct and additive. Interpreting these from the perspective of the *best practice* school of HR/D (Boxall & Purcell, 2003), from our study, we may conclude that whether age-related HR/D practices are effective in enhancing subjective career success may thus depend more on the (perceived) quality of those practices themselves [as an indication of good employee–employer relationships and sound psychological contracts (Baruch & Rousseau, 2019)], than on their fit with the specific needs, commitments and ambitions of the worker in question across the life span (see also Le Blanc et al., 2017).

Next to the before-mentioned scholarly contributions of our empirical work, this study also provides empirically validated suggestions for protecting and further enhancing the academic's career sustainability as well as for human resource management professionals and management. Firstly, our study indicates that the implementation of age-related HR/D practices is an important way of shaping academics' career sustainability. In particular, we recommend that academics search for jobs wherein one's direct supervisor is willing “to go the extra mile” and to facilitate them in selecting, optimizing, and compensating any losses they encounter over the years. Obviously, HR representatives play a crucial role in this regard as well, by making sure that supervisors are aware of existing HR/D practices in the academic institution and/or by helping them to become more aware of possible age-related changes their staff members may face. Moreover, supervisors have to be carefully trained to make sure that HR/D policies are soundly translated into concrete practices, as the latter is the only way to guarantee that employees are actually enabled to benefit from these. Given the outcomes of our age-specific analyses, it is important to stress that employees, regardless of age, should be informed about the need to ask for, and actually use, available HR/D practices, not in the least place given the idiosyncrasy of careers (Van der Heijden et al., 2020). Over and above, the increasing demands that academics already had to cope with over the past decades, they now also have to cope with the changes to the work–family interface due to the COVID-19 pandemic. Compassionate leadership seems to be crucial in this regard (Vaziri et al., 2020), yet, in order to make sure that one gets help when needed, for instance when suffering from technostress, the academic needs to be committed to their career as well, and carry responsibility for protecting its sustainability.

This study has some limitations. First, all data were collected using self-reports only and may, therefore, be subject to common-method bias. Yet, in order to minimize this possible bias, we included measures, such as guaranteeing respondents' anonymity, assuring that there was no right or wrong answer, and urging them to answer as honestly as possible (Podsakoff et al., 2003). What is more, our model incorporated interaction effects; therefore, it is not likely that the hypothesized relationships were part of the respondents' cognitive maps (Chang et al., 2010). Moreover, given the nature of our multigroup analyses, the number of respondents per age group (74 younger and 65 older academics, respectively) may have been too small to achieve a satisfactory level of power and thus be able

to confirm the significance of effects. In addition, our measure for subjective career success showed a relatively low reliability estimate (Cronbach's  $\alpha = 0.58$ ), which is most likely both due to the limited number of items (3) and the wide range in how career success can be understood.

Although shortcomings in this study require us to interpret the results with severe caution, our outcomes suggest that further research on antecedents of subjective career success, which takes account of age as a possible discriminating factor in research models in this domain, is highly advisable. Moreover, in order to advance our knowledge in this field and to protect the objectivity and integrity of scientific work, we believe that sharing our insights, including the nonsignificant outcomes of our empirical study, is of utmost importance. Besides, positive results should be treated with the same scrutiny and rigor applied to negative ones, but with all likelihood they are not (Fanelli, 2010, p. 5). Therefore, we believe that the alternative explanations that have been dealt with above might open up interesting avenues for future work in this field and call for cross-validation of our outcomes using alternative methods and samples that are more powerful.

Our cross-sectional design is well-positioned to shed more light on the relatedness of the variables under study (Spector, 2019) and adds to our knowledge on organizational phenomena, such as a better understanding of which factors stimulate or hinder career sustainability. Notwithstanding the low esteem that is held regarding cross-sectional research designs, the ability to reflect causality using longitudinal designs has been overstated (*ibid.*). To provide more insight into the causality in our research model, future research using multi-wave designs is needed to obtain more insight into the stability and change of the variables and about cross-lagged (i.e., over time) relationships (Taris & Kompier, 2003). However, in order to generate convincing evidence that X causes Y, an approach that explicitly focuses more on understanding the timing and order of events, and less on applying complex statistics to data from research designs that cannot provide convincing evidence, is required (Spector, 2019, p. 136).

We also recommend more research across university contexts. Our sample was drawn from the Open University in the Netherlands, a university that, in the past, was mainly teaching-focused. While, over time, changes at this university have increasingly stressed the importance of research too, this teaching-focused context in which our data were collected differs from other universities where research performance is (also) more pronounced in determining both objective and subjective career success. In research-based university contexts, for example, age may actually be conducive for positive perceptions of workers' employability and their career success, as longer research careers allow for a greater accumulation of (highly cited) publications, grants, academic and professional networks, and other academic achievements. As such, there is a possibility that age-directed HR/D policies in research-based universities are less impactful among older workers than in the present study, or may in fact be particularly useful for younger workers rather than for older ones. Future research is hence needed to examine whether the findings of the present study are generalizable, depending upon the character of the educational settings (classical universities versus universities of applied sciences, teaching universities versus research institutions).

Finally, yet importantly, more scholarly work is needed in order to determine the possible role of alternative moderators (e.g., family commitments, tenure or non-tenure positions, years of experience, and different age conceptualizations, next to calendar or chronological age, such as organizational, functional, psychosocial, and life-span age (Sterns & Doverspike, 1989)).

To conclude, we believe that our data provide valuable indications that there is indeed reason to suspect that "Age does matter!" in determining the drivers behind subjective experiences of career success, and as such warrant further inquiry into the interactive effects of individual and organizational antecedents on the subjective career outcomes of different age groups, and across occupational sectors and countries (Fouad & Arbona, 1994). In addition, more research into within-person changes in career-related outcomes is needed to move the field forward (Alessandri et al., 2020; Rudolph, 2016).

## DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available upon reasonable request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.



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