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**AGING AT WORK:
The moderating role of age in
occupational wellbeing**

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Dedicated to my father and mother

*“What are you saving for—for another time? There are no other times.
There is only now. Right now”
G. Balanchine*

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Abstract

Aging is a complex multidimensional process, in which *individual* and *contextual* factors combine together. Actually, the rapid *population ageing* is taking place in nearly all the countries of the world. The trend has major social and economic consequences, e.g. many older persons still need to work and engage in the labor market, and changes in the nature of the workforce (i.e. age diversity). Many challenges deal with the *aging process*, so that it is important to understand the perceptions people have of aging. The present research project aims to comply the increasing need for research on aging in order to support a successful aging at work. In particular, the purpose of the dissertation is to test the relationships between age, on the one hand, and several personal, job and organizational factors, on the other hand; furthermore, different work contexts and samples have been investigated.

The dissertation gives a brief introduction of the workforce aging phenomenon and of psychosocial issues related. Afterwards, in light of the significance of the topic in the nowadays age differentiated labor market, the thesis reviews literature on age stereotypes toward older workers. Next, age stereotypes is found in *Study 1* to predict occupational self-efficacy among 4667 Italian bank sector's employees, and findings revealed the moderation effect of age in the path. Thereafter, age stereotypes toward older workers and perceptions of job support for learning from the one hand, and their intention to retire to the other hand, are mediated by older workers' engagement in employability activities (*Study 2*). The research conducted among 2082 Italian bank sector's employees in late career has relevant implication for the management of late career; in fact age do moderate the relationship between age stereotypes and intention to retire, so that it is significant only for the 55-60 group, compared to the over 60 group. Finally, the moderation effect of age is also revealed in the indirect relationship between workaholism and job satisfaction in *Study 3*; the research aims to investigate the path among 750 healthcare professionals in an Italian hospital. Results show that the negative effect of workaholism via perceptions of workload and emotional

exhaustion is showed particularly dangerous for the older age group in comparison with the younger and the middle age.

In conclusion, focusing on the moderating role of age in the interplay of *individual* and *contextual* factors, practical implications are discussed, concerning implementation of gain spirals, the appreciation of age diversity, and the 'return on investment' regarding the older workforce. Results can specify the *aging process* in the labor market supporting human resource specialists and line managers in workers' development throughout their entire career.

Foreword

The flow of time is undoubtedly a certainty; worldwide, since the beginning of time, people start aging from the moment in which they born. However, for the first time in history, actually most people can expect to live into their 60s and beyond; indeed, the actual *aging of population* trend (defined as the shift in distribution of countries' population towards older ages; WHO, 2015) is rapidly accelerating; it represents one of the main social challenge of the current century. As a consequence, worldwide societies are facing with a fast change in health, society and organizations' composition; World Health Organization (2015) has called attention for equally profound changes in the way health policies for ageing populations are formulated and services provided.

In this context, it is common to associate *aging* with a physical and mental decline; however, aging is influenced by life events, personality, expectations from society and not only the chronological age. This perspective emphasis to focus on a life-course approach in human sciences, especially in lifespan developmental psychology. Guided by this evidences, the present dissertation collects three years research project on aging. The general lens of the dissertation is to move the debate about human being' aging, by contextualizing the *ageing process* into the workplace setting, through a life-span approach, hence, the moderating role of age has been investigated.

The research project starts studying age and how it affects individual experience of *work* through the reflection of age differences in workplace, i.e. age stereotypes, and the conditions under which these stereotypes may affect decisions and behaviors. Afterwards, the research project continue debating on main themes on aging in the workplace, by means of studies in different organizational settings.

Therefore, the thesis is articulated in two parts; the first part (A) relates to aging workforce background with a special focus to age stereotyping:

Chapter 1 concerns the background about current *aging of population*; it includes the state of the art and the current challenges for aging research in workplace. Furthermore, the chapter presents the main theoretical frameworks, whereupon the coming studies take support.

Afterwards, in light of the significance of the topic in the nowadays age differentiated labor market, **Chapter 2** reviews literature on age stereotypes toward older workers.

The second part (B) presents three empirical studies on aging at work. The moderating role of age has been tested in different models:

Chapter 3 (*Study 1*) presents the first empirical study of the dissertation; data have been collected among 4667 Italian bank sector's employees. The aim of the study was to explore the relationship between perception of organizational age stereotypes among the employees and their occupational self-efficacy; the moderating effect of age has been tested within the model. Additionally, the study contributes to the existing literature by testing the Italian validation of the *Age Stereotypes Scale* from Henkens (2005).

Chapter 4 (*Study 2*) aims to focus on the "older workers" age category and investigates the heterogeneity within this age bracket. The survey collected data among 2082 Italian bank sector's employees. Workers' perceptions of age stereotypes and their job support for learning, on the one hand, and their intention to retire, on the other hand, via their engagement in employability activities are tested. Furthermore, those having between 55 and 60 years old have been compared to those having over than 60 years old.

Chapter 5 (*Study 3*) considers a broader age bracket by comparing younger, middle and older workers. The research aims to investigate the indirect relationship between workaholism and job satisfaction among 750 healthcare professionals in an Italian hospital. Moreover, the study investigates the moderating effect of age in the relationship.

Chapter 6 summarizes the key findings of the dissertation, and methodological considerations are discussed. Finally, the chapter ends with suggestions for future research and implications for practice.

Even though actually lot of researches are focusing on aging in workplace, the present research project complies the increasing need for research on aging in order to support a successful aging at work. In particular, the dissertation would point out: the moderating role of age through a life-span approach, the scarce attention given to some topics (i.e. employability of older workers and the heterogeneity within an age bracket) and several mechanisms by investigating the (still underexplored) Italian context. In light of its structure, the moderating role of age has been analyzed in the relationships between different constructs showing the relevance of contextual factors. Knowledge that come from the present thesis could represent the reference for human resource interventions on aging; additionally, current research project aims to encourage further research in this field.

Part A:
THEORETICAL AND CONCEPTUAL
OVERVIEW OF AGING

Chapter 1

General introduction: the ageing workforce

Abstract

At the opening of the dissertation the aging worldwide challenges and the main consequences in the workplace are presented. This initial framework allows me to introduce the whole thesis because it shows the current social issue and highlights the main consequences. First, the dissertation presents the global socio-demographic trend; second, the dissertation focus on aging implications on workforce composition - with a specifically focus on the Italian context in which the whole project thesis has take place. Third, the dissertation briefly reviews the main theoretical perspectives of the prevailing aging theories from Life Span Developmental Psychology, that will support next chapters. Hence, this initial contribution aims to introduce the reader in the complex theme of “*ageing*”, which includes many disciplines and lot of issues, demonstrating the importance of discussing the theme.

The social-demographic trend

In the past decades world faced with an unprecedented transformation due to the ageing of the population that is expected to go on in the coming years (United Nation, 2015). Globally, fertility has been shown to decline and life expectancy has been shown to rise, so that the proportion of the population above a certain age rises (United Nation, 2015). This phenomenon, known as population ageing, is occurring throughout the world, and is most advanced in Europe (24% of its population) (Van Nimwegen & Van der Erf, 2010). In 2015, there are 901 million people aged 60 or over (12% of the global population), growing at a rate of 3.26 per cent per year.

The world's population has been aging for centuries, but what is new over the past few decades is the rapidity of aging: indeed, in 2011 it has been estimated that the world population aged over than 65 was 546 million people (7.9% of the total), an increase of over 13 million since 2010 and almost 120 million more older people than a decade before. This trend is estimated to go ahead to the year 2050, when world's older population will then be over a thousand million greater than in 2011, a total of almost 1,600 million or some 17% of the total projected population of around 9,700 million (U.S. Census Bureau, 2011).

Taking a step backwards, which are the main *causes* of this global change?

Ageing results from a demographic transition, a process whereby reductions in mortality is coincided with a reductions in fertility. Together, these reductions (eventually and easily) lead to a smaller proportions of children and a larger percentage of older people in the world population (United Nations, 2013).

According to data from *World Population Prospects: the 2012 Revision* (United Nations, 2013), fertility has been falling in most regions of the world over the last several decades, and this decline has been the main factor driving population ageing. Additionally, increases in life expectancy at birth have been registered in all major regions of the world. Progresses in life

expectancy raise up the median age and it contributes to the increase in the proportion of older people, since more individuals survive to older ages. As a consequence, lower mortality and higher life expectancy finally ends up to reinforce the effect of a lower birth rates on population ageing (United nations, 2013).

As Figure 1.1 shows, the number of older persons was 841 million in 2013, which is four times higher than the 202 million that lived in 1950. By 2050 the elderly population is expected to triple and surpass the two billion mark.

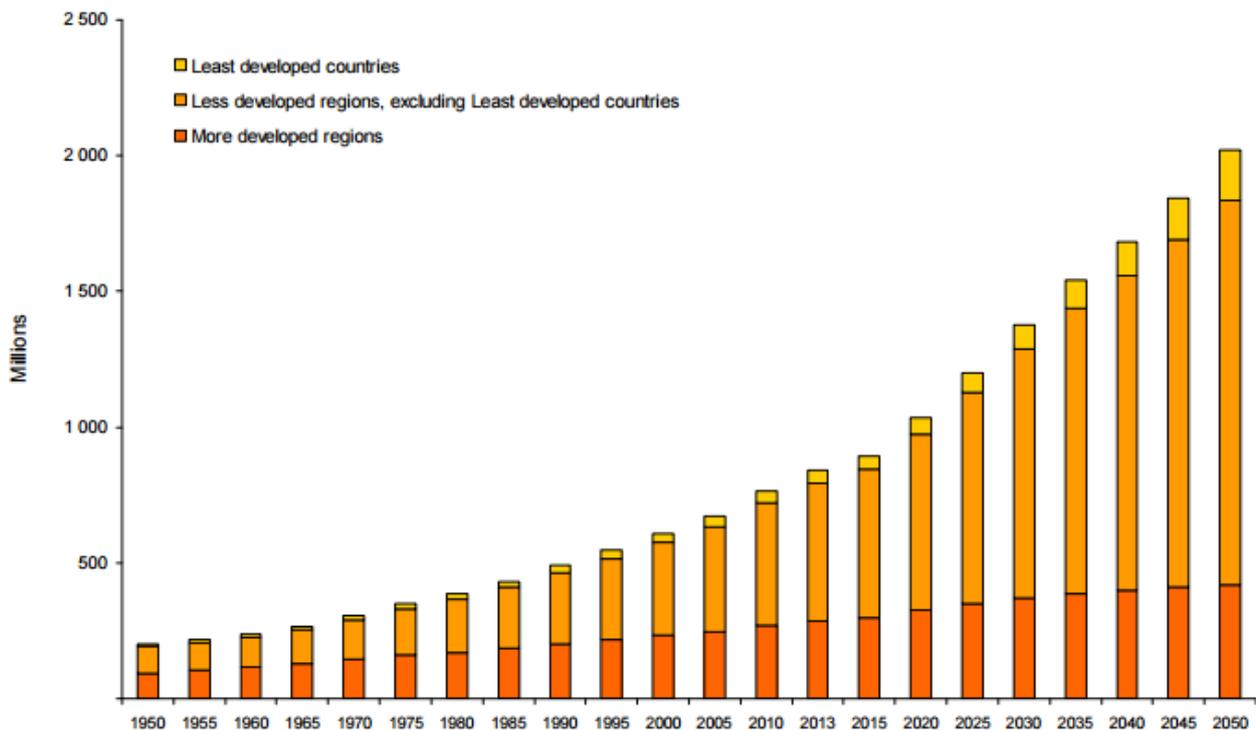


Figure 1.1. Population aged 60 years or over by development regions, 1950-2050 (source: United Nations, 2013).

Population aging vary its extent and speed worldwide. In developing countries, by the contrary to most developed countries, population is ageing almost recently, as their mortality and fertility levels have fallen. Actually, the most aged populations countries in the world are the developed ones, but the majority of older persons reside in developing countries. Migration may

also affect ageing trends, nevertheless national level migration impact is actually almost small (Christensen, Doblhammer, Rau & Vaupel, 2009; Kinsella & Wan, 2009; Vaupel, 2010).

In the short-to-medium term, higher numbers of older population are inevitable; one major consequence of the population aging is the change in population structure. Figure 1.2. shows the trend population by broad age groups between 1950 and expected 2100.

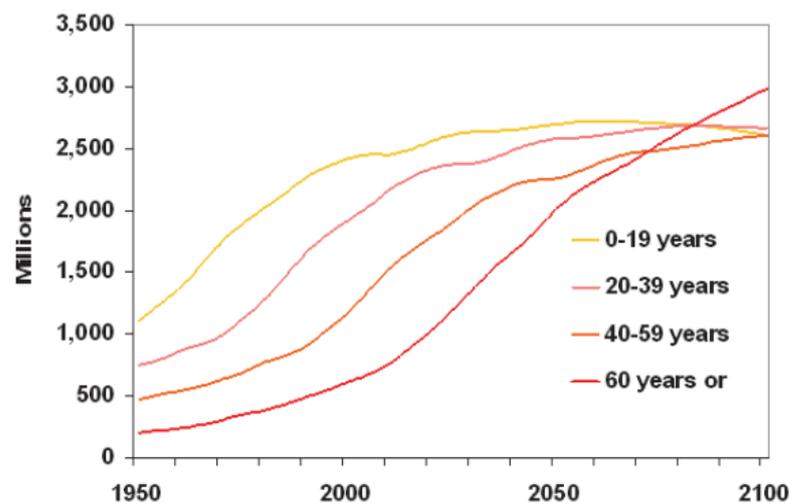


Figure 1.2. Population by broad age group in the world between 1950 and 2100 (Source: United Nations, 2013).

Moreover, population ageing is projected to have a profound effect on the number of workers per retiree. Over time, older group changed significantly the global situation: older group started to grow and continued rapidly, while the other younger groups began to stabilize. Figure 1.2. shows the extent to which the trend is expected to behave: in fact, in future these four age groups are projected to be of approximately equal size, a historically unprecedented fact. Additionally, the projections indicate that ageing will continue to intensify further into the future. Needless to say, the composition of the global workforce has been broadly affected and modified by both the population ageing and changing age structures. The following paragraph is going to consider the consequences of these social-demographic trends on actual working ages.

The aging workforce

Today the global population is undergoing a transformation unlike anything before, and its age structure is increasingly shaped like a dome.

In order to better understand what *aging workforce* means, it is good to start from the *demographic dependency ratio*. This ratio is the indicator of the relationship between the population in mostly dependent ages and the population in the main working ages; it is the result of the ratio of the number of children under age 15 plus older persons aged 65 years or over, to the number of persons aged 15 to 64 years. That is, the indicator assumes that all persons younger than 15 years and older than 65 years are unproductive and that all persons aged 15 to 64 years are productive, which is not always the case. The world dependency ratio is nowadays approaching a minimum (53.8% in 2014), while it has falling for about four decades. In fact, globally, the dependency ratio is expected to rise to 58% in 2050 (The World Bank, 2014; United Nations, 2013).

The extent to which the dependency ratio shows a shift in age distribution, obviously the demographic developments will also have large consequences for the labor market. The emphasis in the labor market will increasingly be transferred towards older workers, as younger cohorts constitute a smaller percentage of the actual working population (cf. European Central Bank, 2008).

The predictions concern the fact that younger cohorts may not suffice to replace the large number of retirees (i.e. labor shortages will increase) (see Figure 1.3.). In that context, increasing the participation levels of underrepresented age groups (above all older workers) become an even more important instrument to cope with the expected demographically induced shortages.

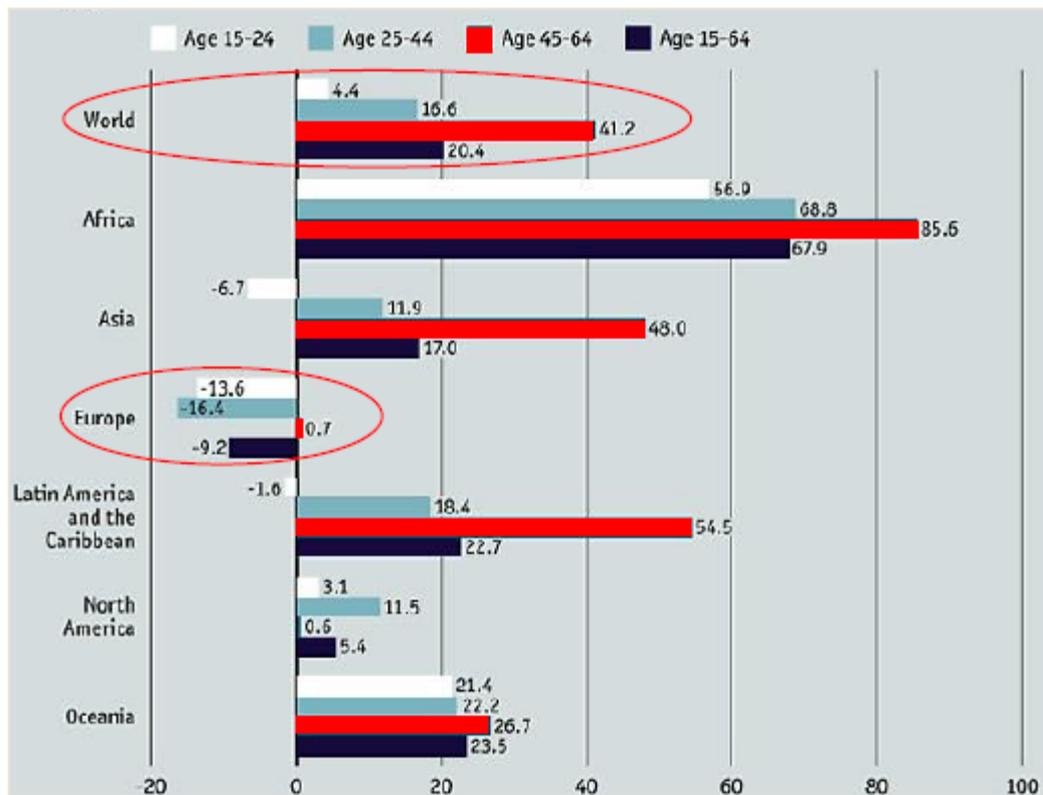


Figure 1.3. Increase in size of age groups in working-age population, 2010 to 2030 (Source: SHRM, 2015, Engaging and Integrating a Global Workforce).

Globally, the group of 45-64 year-olds has been driving the growth rate of the working-age population from 1990 to 2010 (67% growth rate). As I stated, this trend is expected to continue over the coming decades, with the number of those aged between 45 and 64 predicted to rise by 41.2 percent; even though this age group is growing slowly in developed regions (North America, Europe), it is the only group growing at all in Europe.

In the European history, the 1994 EU Summit was the first to discuss the need to improve employment opportunities for older workers. After that, the European Council of Stockholm (March 2001) determined that by the year 2010 the employment rate of older workers should rise to 50 per cent (from 26.3% in 2000) (European Council, 2001). The year after, at the Barcelona European Council (2002), it was stated that responsibility for deal with ageing issues will need to be shared between the generations. Nowadays, labor force participation of older workers has slightly increased, EU government policy has raise the retirement age, and workers have been gradually extending their working lives (Eurostat, 2012). This result is also ascribable to a mixture of factors,

for instance organizations' inciting older workers to extend working lives, higher educational levels of older workers, an increase in female labor force participation and finally an increase in the number of non-standard employment contracts within older workers.

One could ask whether these social trend and demographic shift lead to any sort of “employment gap” (difference between a lower proportion of economically active people who have to meet the same demand for goods and services as when there were more people of working age) (Phillips & Siu, 2012). Estimations indicated that in Europe those having between 15 and 64 years old (working age population) will move up from 305 million in 2005 to 255 million in 2050, and at the same time those having 65-plus will rise from 77 million to 135 million (Berkhout, 2008). That implies a fall from 67.2% to 56.7% for the working-age population. Although this “employment gap” will probably differ from country to country, it is likely that it will be felt across the EU as a whole. The reason is that in Europe, initial post-war birth cohorts are already started to leave the labor market, thus many people are likely to retire as early as possible.

All the studies included in the present dissertation take place in Italy. The Italian population ageing is currently more pronounced than in most other OECD countries; fertility rates have declined steeply and, today they are among the lowest in the world. Additionally, Italian longevity has increased significantly. Concerning the labor market, the Italian pension system is particularly expensive, and it still encourages people to early withdrawal from their work. As a consequence, older Italian employees tend to exit the labor marker earlier in comparison with other countries, and the Italian employment rate of 55-64 years old people is very low. Table 1.1 shows the Italian employment rates compared to the European one for both working people (15-64 years old) and older workers (55-64 years old).

Table 1.1. Italian and European (EU 28) employment rates for working people (15-64 years old) and older workers (55 – 64 years old) 2004-2014 (%) (Source: Eurostat; online data code lfsi_emp_a)

	15 – 64			55-64		
	2004	2009	2014	2004	2009	2014
Italy	57.7	57.4	55.7	30.5	35.6	46.2
EU – 28	62.9	64.4	64.9	40.6	45.9	51.8

Over the past decade, Italy has showed a decrease in percentage of 15-64 group' employment rate and at the same time a strong increase in the 55-64 one. Contrary to the European trend, the Italian employment rate of those having between 15 and 64 years old decreased (from 57.7% to 55.7%). At the same time, the quick increase of the percentage of over 55 years old workers highlights the relevant impact of ageing process in Italy. Hence, Italian older workers will raise an even more high percentage in future, thus, this thesis will particularly focus on the older workers age group in workplace setting.

In light of all above, the whole thesis will discuss the need to encourage employers to review their employment practices and policies with respect to age, and reduce possible employment barriers (e.g. age stereotypes); likewise, efforts to promote the employability of older workers are required. In particular, it is well known that employers, and HR professionals, may be reluctant to hire or retain older workers for several reasons. For instance, employers often have negative attitudes about older workers' work abilities, in turn, they may discriminate against older employees (frequently in favor of younger ones). Furthermore, in order to support older workers employability and to raise the average age of retirement, it is important to consider the quality of the job and of the work environment. In fact, in Italy long hour working and workload, especially for some kind of work setting (e.g. healthcare worksetting), may represent a challenge for older employees with scarce resources. Thus, organizations should adjust the work environment and adapt the job tasks according to the older workers' characteristics and resources available. In general, improving

occupational health and safety for workers of all ages will assist future generations of older workers to remain in employment longer and support actual older workers' occupational wellbeing.

Psychosocial perspectives on aging

The challenges related to the composition of the working population were both objects of international commitments (United Nations, 2002; U.S. White House Conference on Aging, 2015; European Commission, 2012; E.U., 2000) and calls attention of Work and Occupational Psychology scholars (see for instance Truxillo & Fraccaroli, 2013; Finkelstein, Truxillo, Fraccaroli, & Kanfer, 2015). Research, issues and debates related to workforce aging and age management have appeared in literature during the past decades. Several issues as to the work capacity and participation of the older age groups in the workforce were raised. In this paragraph, research in the field of work and organizational psychology on work and ageing is summarized. Main points of emphasis can be: 1) age diversity and age stereotypes; 2) retirement; 3) performance and sustainable employability; 4) occupational well being, and 5) new technology and changes in job demands.

The way workers are considered by colleagues and HR managers may have the potential on the treatment of their "age group" in an organization (cf. Iweins, Desmette, Yzerbyt, & Stinglhamber, 2013). In turn, appropriate age management might affect all ages workers' wellbeing, performance and health. Especially, negative attitudes towards older employees may foil motivation to work and work engagement. As the present dissertation show, one of the most important source of counteractive managerial decisions with respect to older employees is the existence of age stereotypes (e.g., Boerlijst, 1994). Even though age bias are hard to be cognitively removed, it has to be said that age stereotypes may be exacerbated in some context. In light of the relevant implications of this theme, the present dissertation start discussing on age stereotypes towards older workers.

Aging literature in the field of Work and Occupational Psychology debates on retirement since many organizations have been implementing retirement practices as a strategy to cope with the contingencies of the labor market. Retirement could be considered one of the major life course transitions in late adult life.

Even though retirement is an actual topic in this field, there is still a lack of a common theoretical definition of (early) retirement, and as a consequence a wide range of heterogeneous studies. Even worse, previous research has considered different variables and models to predict (early) retirement (see Beehr, 1986; Atchley, 1989). Research on retirement has mainly considered early retirement as an individual variable, focusing on factors that stimulate workers not to leave the organization (for a complete review see Wang & Shultz, 2010). Antecedents can be both individual (i.e. health) and contextual factors (i.e. job demands), as well as consequences of early retirement can be both personal (i.e. mental and physical health) and interpersonal (i.e. relationships with peers). The most recent and innovative approach to retirement is the one introduced by Wang (2007), Resource-Based Dynamic Model for Retirement Adjustment. According to the author, it is important to study retirement adjustment because it directly provides information about how to improve the quality of postretirement life. Wang (2011) says “*Retirement adjustment is a longitudinal process during which retirees’ levels of adjustment (i.e., psychological comfort regarding the retirement life) may fluctuate as a function of individual resources and changes in these resources*”. The assumption of the theory is that adjustment is reached when individuals are comfortable with the changed circumstances of life in retirement, i.e. adjustment is the direct result of the individual’s access to resources.

Even though Wang’s theory received empirical support (see Wang et al., 2011), and in light of the complex nature of the process of retirement (and retirement adjust) (Wang & Shultz, 2010; Wang & Shi, 2014), further researches are needed in order to better examine the retirement experience. Especially, longitudinal designs might explore retirement transitions and to assess adaptation to retirement over time.

As scholars state, employability is a complex and broad concept, which include multiple and relevant subdimensions (Van der Heijde & Van der Heijden, 2006; Schalk et al., 2010). Review on the relationship between age and job performance showed mix results (for example, Rhodes, 1983); additionally, physical work capacity usually decreases with age, but individual differences tend to increase among ageing workers (Ilmarinen, 2006). Older individuals are able to compensate their lacks with strategies (e.g. expertise). But how can older workers deal flexibility with changes? Studies on older workers' employability which may answer the question is scarce. Organizations tend to offer few training opportunity, and all in all older employees preparedness to train might be lower than younger coworkers. So that, the combination of these is sought in a self-fulfilling prophecy (Van der Heijden, 2005). The present dissertation studies employability and its relationships with antecedents and consequence. In this view, older workers can still be motivated by support for learning reducing their retirement intention (see Chapter 4).

Occupational wellbeing is a broad concept and represent an umbrella construct with subdimensions. Hereby the dissertation gives an overview of the main themes of occupational wellbeing. With regards to the relationship between age on the one hand, and wellbeing and satisfaction on the other hand, literature revealed a usual U-shaped curvilinear relation (Warr, 1992, 2007). Literature found that distress, anxiety and depression seems to be higher in middle age workers (Warr, 1992); other scholars showed burnout to decrease with age (Schaufeli & Enzmann, 1998), while work engagement seems to increase with age (Schaufeli & Bakker, 2003). In light of the heterogeneity of older people, further research is needed in order to clarify the context and other significant variables which may influence the flow of occupational wellbeing with aging.

Finally, given the prevalence of technology at work Work and Occupational Psychology studies job design for older workers and the way in which organizational context can adapt to individual characteristics. Age-related changes in cognitive and motor systems are important to be considered when designing job task and technology for older employees (Truxillo et al., 2012; Fisk et al, 2009). Moreover, it has to be said that older adults may perceive technology differently than

younger people. This can be true in their perception of applicability and in their training efforts. The use of technology has become an integral component of work, communication, and entertainment, so that older adults may be motivated to engage in technology training (Charness et al., 2007). However, data indicate that older people tend to have more difficulty in learning to use and operate technology (Sharit, Czaja, Nair, & Lee, 2003; Czaja et al., 2006). From an economist point of view, productivity in the workplace depends highly on capital investment; hence, all human resources should be able to face with technology. However, successful interaction should be able to balance between demands and individual abilities in order to promote positive attitudes towards technology and reduce anxiety and negative stereotypes technology use-related.

Theoretical perspectives on aging

The following section will briefly review the main aging theories which are going to be used as support in the present dissertation.

The study of aging from a psychological point of view requires intra-individual changes over the time (Rudolph, 2016); Lifespan Developmental perspective well explain such changes and is commonly used in successful aging at work researches.

The basic principle of the Life Span Developmental Approach is that development occurs throughout people's lives and does not strictly proceed toward a specific end state (Baltes, Reese, & Lipsitt, 1980). That means, a person does not stop developing once she/he arrive at a certain age. Lifespan developmental theorists assume the characterizations of development as a fluid and continuous process. Lifespan thinking requires one to treat aging and psychosocial development as a continuous, lifelong (i.e., ontogenetic) process (Rudolph, 2016). In this sense, the co-occurrence of personal and contextual factor lead to a significant inter-individual variation, resulting in a different trajectories of development.

Likewise, in working life, people are continually subjected to forces that bring about both stability and change over the course of one's career (in other words, it is a sort of a "movement" over the life cycle; see also Baltes, Rudolph, & Bal, 2012; Baird, Pitzer, Russell, & Bergeman, 2012) (Baltes, 1987, 1997, 2005; Baltes & Goulet, 1970; Baltes & Smith, 2004; Brim & Wheeler, 1966; Dixon & Lerner, 1988; Li & Freund, 2005; Neugarten, 1969; Smith & Baltes, 1999; Staudinger & Lindenberger, 2003; Thomae, 1979).

Furthermore, Life Span Development theories assume that development does not conclude with reaching adulthood; indeed, later life stage is affected by changes and human adaptation [*"expect each age period of life span (...) to have its own developmental agenda and to make some unique contribution to the organization of the past, present and future in ontogenetic development"* (Baltes et al., 2006; pp. 569-570)].

I review some main lifespan theories applied to the study of aging and work.

Selection, Optimization, and Compensation Theory (SOC). SOC theory is defined as a meta-theoretical perspective on lifespan development (Baltes & Baltes, 1990). The theory discuss the developmental regulation of people goals, suggesting life management to be the result of three interrelated processes: selection, optimization, and compensation. These three processes operate on the basis of one's intrapersonal and interpersonal context.

One of the main assumption is that the use of behaviors involving selection, optimization and compensation leads to an increase of one's resources in sense of development enhancement, and at the same time it can help maintain functioning in the face of challenges. Additionally, whether people adopt selection, optimization and compensation strategies they may easily regulate impending losses in resources. In other words, SOC is rooted on the idea that resources are a limited commodity and people try to minimize losses toward successful development (Baltes & Rudolph, 2012).

In details, the first set of behavioral strategies is the selection one; it concerns with the selection of alternative context, outcomes and goals structures. Since people' resources are usually

limited, it is important to create a hierarchy of goals in order to be successful in goals. That imply people to select goal based on their preferences (elective selection), or to change their goal when a loss of resources occurs (loss-based selection). For example, people may decide to postpone retirement when faced with unexpected losses. The second set of strategies refers to compensation one. When people have to allocate their own resources in order to achieve a selected goal, they might redefine, acquire or use of means resources. An example in the work setting could be when a worker make efforts to become more sociable with coworkers in order to increase his/her social network. The third set of strategies, optimization, means the refinement of resources in order to achieve goals; when people face with losses, they try to maintain a specific level of functioning, through optimizing the existing resources or acquiring others. An example would be the use of impression management so that losses are less evident (Baltes & Rudolph, 2012).

Socioemotional Selectivity Theory (SST). Laura Carstensen combined some elements of the SOC model with the Social Exchange Theory (Homans, 1968), and developed the Socioemotional Selectivity Theory (SST). SST is a motivational theory of lifespan development (Carstensen, 1991); the assumption is that people self-contextualize the flow and passage of time, adjusting the “time horizon” – the expansiveness or restiveness of time. In other words, with aging people change time horizon according to their perception of time. In turn, motivational and psychological implications occur (i.e., goal setting and emotional regulation). Particularly, two categories of goals shift in importance together with time horizon: knowledge acquisition and emotional regulation. These two shift according to the “future time perspective” (open-ended or constrained). When time horizon is perceived to be open ended, the most important goal is likely to be on knowledge acquisition; whereas, when time horizon is perceived as constrained, the most important goal would be short-term emotional regulation one.

Due to the fact that chorological age has been considered a proxy of the perception of future, it is plausible that younger people would have an open-ended perception, while the older tend to see their time as more “time till death”. In other words, younger people behave socially based on

acquisition of information (and even to neglect of emotional information), whereas in late life emotional regulation assumes primacy.

Regulatory Focus Theory (RFT). Self-regulation refers to the process in which people seek to align themselves (i.e., their behaviors and self-conceptions) with appropriate goals or standards. According to the Regulatory Focus theory (Higgins, 1997,1998) people use two different kind of motivational (or self-regulatory) systems when they deal with alignment: promotion and prevention. These two mechanism reflect two respectively needs, growth and development, versus safety and security. The overall object of Higgins's theory is to explain how (and why) people seek to approach pleasure and avoid pain; this well-established law of human behavior is the point of departure, because Higgins try to explain how it happens.

Promotion- and prevention-focused self-regulation differ along three dimensions: 1) the motives people are trying to satisfy, 2) the nature of the goals that they are trying to attain, 3) the types of outcomes that are salient to people. At any given point in time, people may engage in these two regulatory systems. Indeed, when promotion-focused, people's growth and needs motivate them to try to bring themselves in line with their *ideal selves*; in doing so, they it would be easier to increase the salience of potential gains to be attained. On the other hand, when people are prevention-focused their security and safety needs push them to bring themselves in line with their *ought selves*, meaning that it would increase the salience of potential losses to be avoided (see also Brockner & Higgins, 2001).

In addition to Lifespan developmental Approach, the present dissertation find support from Conservational of Resources Theory.

Conservational of Resources Theory (COR).Hobfoll (1989) presented this resource-oriented model as an alternative perspective on stress; COR is based on the supposition that "*people strive to retain, protect, and build resources and that what is threatening to them is the potential or actual loss of these valued resources*" (Hobfoll, 1989, p. 513). The theory suggests that people have limited personal resources (e.g. time, physical energy, emotional energy, attention), which they

hardly want to protect. Individuals are highly motivated engage in behaviors to accumulate additional resources for the future.

Psychological stress is defined as the result of a threat of a net loss of resources or the lack of resource gain following their investment (Hobfoll, 1989). Resources are defined as “*those objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as a means for attainment of these objects, personal characteristics, conditions, or energies*” (Hobfoll, 1989, p. 516). In this view, environment circumstances may threat or cause a depletion of people’ resources. When losses occur, individuals apply resource conservation strategies seeking resources available in order to adapt. Moreover Hobfoll posited that those with fewer resources are more vulnerable to resource loss; whereas those with greater resources are less vulnerable to resource loss and more capable of resource gain (Hobfoll, 2001). Therefore, initial loss begets future loss (“*loss spiral*”), conversely, initial resource gain begets future gain (“*gain spirals*”). People’ motivation to gain further resources usually comes from a desire to improve oneself or the social system, and may also be intended in order to compensate future potential losses (Hobfoll, 1998).

The last, but not the least, prospective which support the present dissertation is the Social Identity Approach.

Social Identity Approach (SIA). Social Identity theory (SIT) (Tajfel, 1978) and Self-categorization theory (SCT) (Oakes et al. 1994) together constitute what scholars refer to as the Social Identity Approach. These theories gain more insight on how people define themselves; in particular, scholars use the term “social identity” to describe the way in which people connect themselves to the others: through social identity is something that links us to the social word. In this sense, Social Identity and Self-categorization theory assume that Individuals develop a social identity through a process of self-categorization. In this view, social identity is an ongoing process of interaction between the individual and the focal group (ingroup), and between the individual and other groups (outgroups) (Jenkins, 2004). Furthermore, individuals vary in their opportunity to join

a group as a function of their readiness and fit, as well as the group's accessibility (Turner & Onorato, 1999); groups are open to some and closed to others and in the process of categorization, people evaluate the accessibility of a group for them and, in turn, are assessed by the group for readiness and fit. As a consequence to this process, individuals change to a group-based identity, and it brings corresponding change in motives, expectations, affective connotations, background knowledge, beliefs, norms, and values (Turner & Onorato, 1999).

Following this line of reasoning, people use to behave often in terms of social identity and they view and value others in terms of their in-or-out-group memberships. In this sense, individuals tend to value members of the same group as similar to each other (Haslam et al., 1998).

Given this broad presentation, the dissertation will focus on some aging topics in the context of occupational psychology. It will discuss on age stereotypes, occupational self-efficacy, job support for learning, employability activities, intention to retire, workaholism, workload, emotional exhaustion and job satisfaction.

Next, the thesis presents the second Chapter. As discussed earlier, the research project starts from *age stereotyping*, an organizational factor that nowadays influences all ages workers' wellbeing, especially older workers. From the 1967 (Age Discrimination in Employment Act, ADEA), the United States focus on ageism and battle age discrimination. Age stereotypes is the basic of ageism and age discrimination, considered the socially most acceptable discrimination form. Even though scholars have focused on age stereotypes (see Finkelstein, 2015; Posthuma & Campion, 2009; Ng & Feldman, 2012), research on the topic still need to be improved. Defined as a "cognitive schemas", age stereotypes may represent a relevant employment barrier because of the nature itself. The following Chapter is going to review literature on age stereotypes and the impact that they can have on employment relationship over time. Further researches and even more in-depth analysis could be expected to better explain such a social challenge and, especially, to reduce age discrimination.

Chapter 2

Age stereotypes towards older workers: literature review and conceptual analysis

Abstract

Literature has shown that age stereotypes are contextual barriers for workers' occupational wellbeing. The current Chapter provides a conceptual analysis and a systematic review of research literature on age stereotypes toward older workers and it highlights how age stereotypes represent possible employment barriers into the ongoing aging workforce. Using a systematic review methodology, 18 publications were identified (published in English language since 2000 to 2014 in relevant peer-reviewed journals). The main findings of selected empirical studies indicated that: a) there is the need to focus HR management policies on older workers; b) age stereotypes toward older workers are multidimensional and there is the simultaneous existence of both positive and negative stereotypical beliefs; c) managers' age stereotypes can affect several organizational outcomes. Self-categorization theory and intergroup bias are recommended as promising theoretical approaches for studying age stereotypes toward older workers and their cognitive identification with the age group.

Introduction

Population aging is taking place in nearly all the countries of the world. Aging is the effect of the demographic transition and the main causes of this phenomenon are the reduction of the mortality rate and the declining of fertility (Phillips & Siu, 2012; Vaupel, 2010). In the last decades, an increase in life expectancy has been registered: the shift of mortality at advanced age is the result of a process of improving health. Additionally, it is estimated that the number of the elderly will increase rapidly in most developed and many developing countries and the aging population will have an unexpected impact (Kinsella & Wan He, 2009). The extension of the average age can be considered one of the greatest achievements of the human being, but it could bring several consequences, mainly in terms of the growing claims on the public purse in term of state pensions, the rising request of health services costs and the increase of age retirement by government (Gavrilov & Heuveline, 2003; Toossi, 2012). Furthermore, this demographic trend is projected to lead to an imbalance among age groups. In particular, there will be a smaller proportion of children and larger increase the number of older people (United Nations, Department of Economic and Social Affairs, Population Division, 2013; Kinsella & Velkoff, 2001). Most people born at the end of the XIX century will experience a radical revision of employment, retirement, health, education and other processes (Vaupel, 2010). Due to this challenge, specifically attention should be paid on old age dependency ratio (the ratio between persons economically inactive -aged 65 and over- and persons of working age - aged between 15 and 64). This indicator is expected to rise to 58 % in 2050 (values over 50 % represent a generational imbalance) and to grow again, leading to a more age-diverse workforce into several organizations (Christensen et al., 2009; McDonald & Kippen, 2001). One solution to the financial, social and economical difficulties related to population aging is for older people to keep in paid employment longer (D' Addio et al., 2010; Holzman, 2002; House of Representatives Standing Committee on Employment, Education, and Workplace Relations

[HRSCE] 2000; Szinovacz et al., 2014; Walker, 2007). Many countries have begun to raise retirement ages and a recent survey (AARP 2013) revealed that an increasing percentage of older workers are still working primarily because of financial need. Even though literature and HR policies are aligned to the essential role of older workers into organizations, scholarly research reveals that older applicants are discriminated against in favor of younger ones, and there are many HR decisions supporting younger workers (Gringart & Helmes, 2001; HRSCE, 2000).

Great scholarly attention should be given to the process through which age stereotypes toward older workers became barriers to their employment (Gordon & Arvey, 2004). Literature analyzed, for instance, how age stereotypes may be affecting age discrimination in the workplace (Posthuma & Campion, 2008). In fact, findings suggest a most likely trend for hiring discrimination against older adults, and support the stereotyping-discrimination relationship, that was earlier discussed in literature (Gordon & Arvey, 2004; Finkelstein & Farrell, 2007). In line with this, courts have recognized that, unlike other form of stereotypes (such as race and sex), age stereotypes can operate at a unconscious level, even without the intention to discriminate (Krieger, 1995). This more liberal source of employment barriers could put employers at risk for legal responsibility in case age stereotypes result in age discrimination (Posthuma & Campion, 2008).

In view of the account above, the present study aims to contribute to the debate on older workers age stereotypes by addressing the following research question: Do age stereotypes toward older workers represent employment barriers? Through a critical review of the literature and an in-depth analysis of major theoretical frameworks, I aim to conceptualize age stereotypes in the work setting and, in particular, to categorize of some empirical studies. In the present review, I contribute to the existing literature by showing possible ways in which age stereotypes in the workplace can lead to unemployment. It was decided to conduct an exam on papers that specifically refer to age stereotypes mainly because they may impact on major individual and organizational outcomes, they are found to be resistant to change and they represent huge employment barriers (Falkenberg, 1990; Posthuma & Campion, 2008).

The conceptualization of age stereotypes

Stereotypes are defined as schemas or cognitive categories that people use to process information (Cuddy & Fiske, 2002). Individuals use these categorical schemas in order to understand others and to answer them more quickly (especially when information are unavailable or ambiguous). Stereotypes develop over time as people perceive environment and guide beliefs and expectations about members of a social group. In doing so, these schema are used for interpreting social information, directing our behaviors and social interactions (Avolio & Barrett, 1987; Chao & Willaby, 2007). Indeed, in line with social identity theory, stereotyping implies that people tend to attribute more negative characteristics to members of other groups (out-group bias) (Lalonde & Gardner, 1989; Tajfel & Turner, 1979). In particular, an age stereotype is defined “a simplified, undifferentiated portrayal of an age group that is often erroneous, unrepresentative of reality, and resistant to modification” (Schulz et al., 2006, p.43). In consideration of the changing composition of the workforce, age stereotypes are a relevant phenomenon that could impact on both younger and older workers. Previous scholars have demonstrated that people often hold age stereotypes in work settings, especially toward older workers (Chiu et al., 2001; Kite & Wagner, 2002).

Age stereotypes and older workers: who is an older worker?

Can we choose a cutoff in order to identify her/him? According to the ADEA (U.S. Age Discrimination in Employment Act of 1967) 40 years old seems to be an acceptable cut off to distinguish between younger and older workers. However, the Chapter is in line with several recent studies in which there is not a single worldwide cut off of age to identify an older worker. Indeed, the definition of an older worker can change over time and fast demographic changes cannot consent to identify a threshold (Ng & Feldman, 2008; Shultz & Adams, 2007). The concept varies across contexts and it could be also influenced by number of factors (i.e., cultural dimensions, such as the country of origin of the samples) (Chiu et al., 2001; Hofstede, 1980; Segalla et al., 2001).

Furthermore, there is also worldwide variability in terms of retirement ages and legal protections (McCarthy et al., 2014).

Sterns and Doverspike (1989) distinguished five approaches to conceptualizing the aging of a worker: 1) Chronological age: it refers to the worker's calendar age, 2) Functional or performance-based age: it represents the worker's performance (it considers that there could be variation between individual capacity and functioning), 3) Psychosocial or subjective age: it is based on the self and the social perception of age, 4) Organizational age: it represents the work seniority, 5) Lifespan age: it considers changes at any points of life and emphasizes that many variables may impact the aging process. In an organizational context, age should not be a criteria by reference to which a worker is categorized, indeed he/she could perceive age stereotypes and age discrimination (Claes & Heymans, 2008). Age stereotypes in the workplace can be both positive and negative and they are associated with some personal and organizational indicators, as most common: health (Palacios et al., 2009), employability (Gordon & Arvey, 2004), age discrimination (Finkelstein et al., 2013), and intention to retire (Gaillard & Desmette, 2010).

Theoretical framework

The social identity theory (Tajfel & Turner, 1979) and the self-categorization theory (Oakes et al., 1994) assume that people activate a prior schema when creating an opinion based on one's impressions (Macrae & Bodenhausen, 2001). Social Identity Theory and Self-Categorization Theory constitute the Social Identity Approach (Turner et al., 1987). These theories are concerned with the processes which surround the way that people define themselves as members of a social group; this approach evidences that people tend to identify themselves with groups in which members are similar (Bal et al., 2011; Finkelstein et al., 1995; Lalonde & Gardner, 1989). When acting in terms of social identity people view and value others in terms of their group memberships. In particular, people tend to value members of the same group as similar to each other (Haslam et al., 1998). In doing so, people perceive individuals in terms of the characteristics that are associated

with the groups to which they belong. This is the process of stereotyping (Lalonde & Gardner, 1989; Tajfel & Turner, 1979).

A second framework that can be used to understand the nature of stereotypes in the workplace is the Intergroup Contact Theory (Allport, 1954; Pettigrew, 1998). This theory refers to the reduction of prejudice among groups. One of the major contents of this theory is that the interaction encourages behaviors that disconfirm stereotypes that a group hold about one other. By viewing the inclusive workplace as an intergroup contact situation, it can be assumed that coworkers with the same chronological age will be more accepting and open minded if coworkers have the opportunity to get to know different age groups of workers as individuals rather than as stereotypes or labels (stereotype disconfirmation) (Mohaupt et al., 2012; Novak et al., 2011). Moreover, as the cognitive functional approach explains (Hamilton & Trolier, 1986; Weber & Crocker, 1983), people activate a categorical information because it is easier than forming an opinion about experience. In this view, interactions between different age groups could favor correct impressions and limit negative age stereotypes, also in work setting. In particular, younger workers perceive and evaluate older workers as members of an outgroup; in this process, they predict older workers behaviors based on an earlier assignment of negative characteristics (Bal et al., 2011).

Evidences

Rosen and Jerdee (1976a, b) examined common beliefs toward older workers and found a number of negative stereotypes associated with them. More recently, Posthuma and Campion (2008) revealed that most stereotypes against older workers were on their lower performance, their lower ability to learn, their resistance to change, they tend to have shorter tenure and they were more costly. Concerning being less interest in training, based on a recent meta-analysis (Ng & Feldman, 2012), it was highlighted that this was the only stereotype empirically supported. Furthermore, studies examining common age stereotypes concluded that some of them might be

exaggerated (McEvoy & Cascio, 1989; Ng & Feldman, 2012). Recent scholars examined stereotypes toward older workers investing younger coworkers (Finkelstein et al., 2013). They found that the major portion of younger colleagues hold positive age stereotypes toward older workers. Additionally, Ng and Feldman (2008, 2010) demonstrated that older workers generally have more positive job attitudes and higher levels of organizational citizenship behaviors.

Literature evidenced that several industrial sectors, such as financial, may reveal stronger age stereotypes (Broadbridge, 2001; Chiu et al., 2001; McGoldrick & Arrowsmith, 2001; Perry & Finkelstein, 1999; Posthuma & Campion, 2008). Furthermore, it is known that age is perceived more negatively in sectors such as fashion/luxury, consulting and hospitality, where older workers were identified about 35 years old (Bombelli & Finzi, 2006; Furunes & Mykletun, 2007). As it has been already discussed, older workers represent the target category mainly set to increase in the future. Therefore, HR management needs to rethink their human resource policies right now (Hedge & Borman, 2012; Schalk et al., 2010; Shultz & Adams, 2007; Truxillo & Fraccaroli, 2013). In fact, through age management interventions, employers support older workers' occupational wellbeing and sustain their health during the later employment years (Auer & Fortuny, 2000; Damman et al., 2013; Ilmarinen, 2007). In such an economic decline in which older workers are required to remain in the workforce, age stereotypes are possible barriers to employment (Brooke & Taylor, 2005). Studies evidenced that negative age stereotypes

toward older workers were prevalent in personnel decision (Hirschfeld & Thomas, 2011). Indeed, Bal et al. (2011) showed that although the organizational context held positive stereotypes associated to older workers (e.g., their reliability), older workers received more negative organizational decisions compared to younger workers. As results of these growing issues around age in the workplace, workplace age stereotypes may become more common in any organizations and could have effects on some portions of workers. Indeed, a worker should be considered an "aging worker" from the moment in which she/he enters into organization and starts to work. In this

view, age stereotyping should be studied as a phenomenon that can affect every worker and that should be managed in order to lead to negative outcomes.

Methods

In order to analyze the literature on workplace age stereotypes the research conducted a multiple keyword searches in two main electronic databases used in psychosocial disciplines: Psycinfo and Scopus. A search for those studies that examined specifically the phenomenon of age stereotypes in the workplace and the relationship between them and other key variables was conducted. Multiple inclusion criteria were set prior to the start. It was chosen all relevant peer-reviewed journals, in English language from 2000 to 2014 (this time period in order to offer a recent and complete review on the theme). Field keyword was used: 1) key term “age stereotypes” was combined with the following keywords “older workers”, “work”, “aging”, “workplace”, “employee attitudes”, “stereotyped attitudes”, “working condition”, “negative stereotypes”, “positive stereotypes”, “aging workforce”; and 2) the stand-alone terms: “age stereotypes”, “stereotypes”, “stereotyping” and “older workers perceptions”. The abstracts of the extracted articles were scanned by the authors. Some articles were excluded due to misfit. The main reason for the exclusion was that studies do not discuss a field research into a work setting (i.e., laboratory experiments were left out). This procedure led to identify nearly 51 potentially pertinent papers. All empirical studies and review were included, but it was decided to not include book chapters because the study was interested only in evidence-based researches. Where the full text was not retrievable the study was not involved. Results were narrowed based on abstract and relevant indicators (i.e., research was limited to work setting studies in which data were collected in field). This process yielded about 25 citations, then were reviewed individually again. Finally, four papers were excluded because they did not expose empirical results. This review for relevance discovered few significant synonymous

of age stereotypes (as attitudes toward employee, age norms and age perception) that are not the main focus of the present paper (the aim was to focus only on research which specifically talk about age stereotypes and their impact on workers and organizations).

Results

Selected papers have been divided into 3 groups: 1) systematic review, 2) metaanalysis, 3) empirical studies. Here all results are presented, but for the objects of this review, the research focused mainly on the findings of the third group. In Table 2.1 results of the empirical studies are summarized.

Systematic Review. One systematic review reflected the selection criteria chosen (Posthuma & Campion, 2008). This relevant paper, recently published, considered 117 articles and books and represents a framework for future research. Main age stereotypes that could occur in work settings are described and, moreover, some evidences refuting age stereotypes were posed. It has been demonstrated that age stereotypes could moderate the relationship between age and several outcomes.

Meta-analysis. Results also involved two meta-analysis (Bal et al. 2011; Ng & Feldman, 2012) respectively based on 37 and 418 empirical studies. Researches aimed to examine positive and negative age stereotypes through the evaluation of several common beliefs (i.e., reliability, motivation, willing to be trained) and their effects on major work outcomes (i.e., advancement, selection, general evaluations). Age was revealed as a factor that could have a medium-sized effect on both negative and positive outcomes and perceptions. An interesting result, moreover, was that the only stereotype consistent with empirical evidence was that older workers are less willing to participate in training and career development activities (Ng & Feldman, 2012).

Empirical Studies. Finally, the last type of documents results in the review were the

empirical studies, which represent the focus of the review. A total of 18 researches, published mostly during 2013, were found (see Table 2.1). Most studies of this category used mixed samples (Gray & McGregor, 2003; Fuertes et al., 2013; Gringart et al., 2013; Kunze et al., 2013b) and, in particular, managers/employers and workers were involved in the majority of groups. Nevertheless, regarding the source of age stereotypes, the present review showed that few studies have explored the older workers' point of view and perceptions. Several studies examined different age groups (Zacher & Bal, 2011; Gringart et al., 2013; Kunze et al., 2013b) and results evidence that most studies involved samples with an average age about 44/50 years old (Henkens, 2005; Gringart et al., 2008, 2013; Gaillard & Desmette, 2010; Bertolino et al., 2013; Karpinska et al., 2013; Kunze et al., 2013b) (where the average age was explicitly specified). Several sectors were used to collect data, even if it was not explicitly specified in all studies. Most researches involved more than one work setting.

Results indicate that sectors mostly examined were: health, manufactories, financial/bank. Three researches aimed to compared results from different countries: 1) UK and China (Chiu et al., 2001), 2) Greece, Spain, UK and Netherlands (Van Dalen et al., 2009) and 3) USA and Thailand (McCann & Keaton, 2013). The majority of researches used 55 and 50 years old as cutoff in order to identify older workers. The thresholds of 60 and 35/40 were used only once, instead 45 twice (age cut off was not explicitly specified in all studies). Main measurements utilized in papers selected were questionnaires (N=15); only three researches used face-to-face interviews. In order to present results of empirical researches, they were divided into 2 sections: 1) age stereotypes were examined, 2) main issues and variables were associated to age stereotypes.

Table 2.1. Selected empirical studies

No	Authors	Cutoff for "older worker"	Sample	Type of measurements	Variables	Main results
1	Chiu et al., 2001	no age cut off was explicitly specified	UK (N=265) and Hong Kong(N=302); Average age UK= 33 and HK=31; Student workers; N = 3149;	Questionnaire	Organizational variables; Individual variable; Age stereotypes (adaptability and work effectiveness); Discriminatory attitudes on employment practices	UK respondents saw older workers as more effective at work, but less adaptable to change; respondents' age was predictive of positive age stereotypes. Respondents' stereotypical beliefs about older workers were found to predict their discriminatory attitudes.
2	Gray & McGregor, 2003	55 and over	Average age of employee group= 59; Employees and employers; N= 796;	Questionnaire	Age stereotypes (i.e. reliability, loyalty, productivity); age discrimination; HRD	Negative HRD stereotypes held by employers and employees. Employers aligned with employees on older workers difficulty to train and willing to be trained.
3	Henkens, 2005	50 and over	Average age= 45; managers;	Questionnaire	Age stereotypes (productivity, reliability, adaptability); attitudes toward older worker's retirement	Younger workers have more negative views on older workers productivity and reliability. Results are discussed referring to the importance of different organizational context.
4	Furunes & Mykletun, 2007	35-40 and over	N=20; managers;	Interviews	Recruitment; training; flexible working practice; job design; relationship between older and younger workers	Both positive and negative attitudes toward older workers were evidenced and the most used metaphors regarding workforce were: machine, sport, family, drama and gap metaphors.

No	Authors	Cutoff for “older worker”	Sample	Type of measurements	Variables	Main results
5	Gringart et al., 2008	no age cut off was explicitly specified	N=267; average age=45/50; employers	Questionnaire	3 intervention conditions; age preference in hiring; age stereotypes (i.e. adaptability, interest, trainable); age relevant in making hiring decisions; likelihood to hire older workers	The combination of two intervention conditions enhance the intervention’s effectiveness: participants were more than likely to hire older workers, compared to all other groups.
6	Van Dalen et al., 2009	50 and over	N=1.855; Employers;	Questionnaire	Age stereotypes toward older and younger workers (i.e. social skills, reliability, commitment); Expectations and behaviors regarding older workers	Results indicated that older workers are considered, in general, to be more reliable, more committed and have better social skills. Moreover, older workers are rated most negatively with respect to their willingness to be trained and the capacity to deal with new technologies.
7	Gaillard & Desmette, 2010	45 and over	Study 1: N =78; Average age=50; Employee; Study 2: N =60; Average age=52;	Questionnaire	Positive stereotypic information (PSI) (i.e. ability to solve problems with experience); negative stereotypic information (NSI) (i.e. slowness to process informations); preferences and intention to retire interest for learning and developing at work	Early retirement intentions were significantly lower in the PSI condition than in both the NSI condition and the control condition. Positive communication results leading to older workers motivation and aspiration.

No	Authors	Cutoff for “older worker”	Sample	Type of measurements	Variables	Main results
8	Zacher & Bal, 2011	no age cut off was explicitly specified	N=128; Professor (average age=50) and assistant (average age=32)	Questionnaire	Professor’s age; age-related work concerns; age stereotypes (wisdom, dependability, supervisory); Research assistant ratings of passive-avoidant and proactive leadership	Older professors are perceived as more passive-avoidant leaders than younger professors by their research assistants. Research assistants’ age stereotypes influence the assessments they make of younger and older professors.
9	Dixon, 2012	no age cut off was explicitly specified	N= 60; average age=34; employees	Interviews	Friendliness; cheerfully/openess to diverse sexual identities; asexual workplaces; communication about age; responding to (st)ageism; age; sexuality	Younger employees would be “friendlier” and more tolerant of the communication of sexual identities than older employees. Older coworkers results largely asexual.
10	Bertolino et al., 2013	55 and over	N=155; Average age=44; Employees;	Questionnaire	Age; Five factors model perception; job performance perception	Different perceived in terms of the five factors model (FFM) and job performance between age groups. Overall results are moderated by age.
11	Boone James et al., 2013	55 and over	N=4.713; average age=34; employees;	Questionnaire	Unlikelihood for promotion; unfitness for promotion; work engagement	Perceived discrimination is related to lower levels of employee engagement toward workers of all ages. There is a more negative relationship between unintentional discrimination and employee engagement.

No	Authors	Cutoff for “older worker”	Sample	Type of measurements	Variables	Main results
12	Bowen & Staudinger, 2012	45 and over	N=337; average age=39; employees;	Questionnaire	Age; perceived older worker stereotype; psychological age climate; promotion orientation	Negative relationship between age and promotion orientation when perceived older workers stereotypes was less positive.
13	Fuertes et al., 2013	50 and over	N=27; N=6 senior managers, N=7 line managers, N=2 HR personnel, N=12 employees	Interviews	Job suitability for age; Age stereotypes (i.e. reliability, maturity, enthusiasm)	Study discuss the potential benefits of age management awareness and evidence the influence of attitudes and practices toward older workers. Managers held several preconceptions and stereotypes regarding older workers.
14	Gringart et al., 2013	no age cutoff was explicitly specified	Field Study: two sample of undergraduate students: N=187 (average age=27), N=32 (average age=29); two sample of hiring decision makers: N=128 (average age=45), N=118 (average age=47).	Questionnaire	Age stereotypes (i.e. trainable, willingness to work, cautiousness); applicant’s age when making hiring decisions; likelihood to hire older workers	The present study represents the initial development of the AOWS, a measure of stereotypical attitudes toward older workers.

No	Authors	Cutoff for “older worker”	Sample	Type of measurements	Variables	Main results
15	Karpinska et al., 2013	60 and over	N= 238; average age= 45; manager	Questionnaire and vignette	Age norms; age stereotypes: soft skills (i.e. job performance, commitment, reliability) and hard skills (i.e. mental capacity, physical capacity, willingness to learn new skills)	Results indicated that managers with higher age norms were more inclined to hire early retirees. It could be suggested that stereotypes, by contrast, do not influence managers' decisions.
16	Kunze et al., 2013 (a)	no age cut off was explicitly specified	N=2981; average age= 39; employees;	Questionnaire	Age and tenure; occupational status; resistance to change; goal accomplishment	Employee age is negatively related to resistance to change (RTC). Tenure and occupational status are further identified as boundary conditions for this relationship.
17	Kunze et al., 2013 (b)	no age cut off was explicitly specified	N= 30739; Employee (N=30101, average age=38), top management (N=491, average age=47), the head of HR (N=147, average age=44)	Questionnaire	Age diversity; negative age discrimination climate; negative top managers' age stereotypes (interested in learning new skills, hard work, keep up with the speed of modern industries); diversity-friendly HR policies; organizational performance	Results indicates that higher levels of age diversity were positively related to higher levels of perceived negative age-discrimination climate, which in turn negatively affected company performance.
18	McCann & Keaton, 2013	50 and over	USA (N = 142) and Thailand (N = 125); Average age =22; Student workers	Questionnaire	Age stereotypes (memory skills, adapt to new technology, physical skills); Communication	Older workers were generally seen by young workers as more negatively (exception for performance and mental abilities). Both negative and positive age stereotypes were accentuated in the Thai sample.

Age stereotypes

Age stereotypes examined in empirical studies were listed and summarized. Studies proposed a general description of older workers, and compared them to younger colleagues. A first study by Van Dalen et al. (2009) gave an overall description of employers' point of view on age stereotypes in four European countries. Older workers were considered to be more reliable, more committed and better socially skilled, but were rated most negatively with respect to their willingness to be trained and to deal with new technologies. In this line, Bertolino et al. (2013) showed that older and younger workers were perceived differently in terms of the personality and key job performance dimensions, may be due to real age-related differences.

Common findings. In the selected studies, some common findings were revealed. Several studies found that respondents' age may predict different attitudes toward older workers. People who were older, or in more frequent contact with older workers, tended to hold more positive views of them; moreover, younger workers rated older workers more negatively than themselves (Chiu et al., 2001; Gray & McGregor, 2003; Bertolino et al., 2013; Henkens, 2005). The main cause of a difficult age management was identified in several studies (Fuertes et al., 2013; Furunes & Mykletun, 2007) as the coexistence of both positive and negative attitudes in work setting.

Discordance findings. Several researches found discordance results. Even though Dixon (2012) held evidence for age stereotypes in the workplace (older coworkers were thought to expose a more disciplined workplace ethic), by contrast, Karpinska et al. (2013) and Kunze et al. (2013a) highlighted that workplace age stereotypes did not confirm common beliefs toward older, and, unlike age norms, they did not influence managers' decisions.

Productivity. With specific regard to overall productivity stereotypes, results are mixed. Indeed, in line with most earlier literature (Cuddy & Fiske, 2002; Gordon & Arvey, 2004; Posthuma & Campion, 2008), younger workers were perceived to perform better than older (Chiu et al., 2001; Van Dalen et al., 2009), by contrast, McCann & Keaton (2013) refused the older workers poor performance stereotypes. It has been supposed that, in case of frequent contact between age

groups, stereotypes toward older productivity decreased; moreover, older workers tended to have a more positive view of older workers' performance. It was showed the influence of work environment (i.e., occupational sector and age stereotypes) in perceiving older workers' productivity and the employers need of performance management (Henkens, 2005; Fuertes et al., 2013).

Training and learning. Regarding stereotypical beliefs on training, promotion and retention the present review revealed that they significantly affect respondents' attitudes (Chiu et al., 2001; Kunze et al., 2013b). There are evidences for age discrimination toward older workers' training in different European countries (Van Dalen et al., 2009) and Gray & McGregor (2003) showed that employers are aligned with workers on the stereotypes among older workers' willingness to learn, reliability, loyalty and commitment to the job. As Bertolino et al. (2013) showed, different age groups were not perceived differently in terms of openness to experience (interest in new). This result may indicate that also compared to younger workers, the oldest are valued willing to learn and to experience. Gray & McGregor (2003) focused on HRD (Human Resource Development)'attitudes and suggested that a portion of older workers don't understand the reasons for did not receive any training. In this research older workers thought performance appraisal system was few effective, instead employers rated it a key HRD practice. These findings evidenced that older workers' interests in training are not well managed.

Social Skills. Social skills stereotypes results were mixed. Indeed, Dixon (2012) examined "friendly" stereotypes and evidenced a negative view toward older workers; by contrast, results from Bertolino et al. (2013) found that there were no differences in term of extraversion between older and younger workers, and Van Dalen et al. (2009) revealed managers' positive perceptions among older workers' social statement. Only one study analyzed beliefs toward supervisors (Zacher & Bal, 2011): favorable age stereotypes impacted on assistants' rate of leadership style.

Workability. The most positive stereotype toward older workers concerned their reliability, accuracy, loyalty and commitment to the job, even if compared with younger coworkers (Gray &

Part A - Chapter 2: When age stereotypes are employment barriers

McGregor, 2003; Gringart et al., 2008; Henkens, 2005; McCann & Keaton, 2013). In term of job suitability, results of this review (both by employers and younger workers) were aligned on older workers knowledge and competence; on the other hand, respondents in New Zeland and Australian context thought that older workers were few able to work long hours (Gray and McGregor 2003) and physically strong (Gringart et al., 2008). In Kunze et al. (2013b) negative managers' age stereotypes on older workers' ability to work hard, results correlated to negative job performance. Nevertheless, McCann & Keaton's (2013) results disagree: older workers were not thought to be physically weaker than younger workers in both UK and Thai samples. Finally, the negative relationship between older workers and technology was discussed: older workers were aligned with employers especially in IT sectors (Fuertes et al., 2013; Gray & McGregor, 2003; Karpinska et al., 2013; Van Dalen et al., 2009). Regarding the likelihood to be promoted, Boone James et al. (2013) found that whether senior workers perceived stereotypes on unfitness for promotion may tend to have a lower work engagement.

Main issues and variables associated with age stereotypes

Impact on employers' attitudes and hr polices. Van Dalen et al. (2009) revealed that several employers made no significant interventions to retain or recruit older workers or in order to develop their productivity, even though the aging workforce was perceived as a challenge for future labor market. Furunes & Mykletun (2007) examined the failure of age management and diversity management in Norwegian hospitality industry. Authors hypothesized that one of the reason why interventions failed was the presence of both positive and negative stereotypes toward older workers. Indeed, having experience with an age heterogeneous workforces may increase the likelihood of perceiving positive assets among senior workers. Fuertes et al. (2013), suggested the potential benefits of age management in SMEs (small and medium-size enterprises), through for example training programs, in attitudes and practices toward older workers and in the reduction of age stereotypes. Studies focused on managers' employment decisions (Henkens, 2005; Karpinska et

al., 2013) indicated that both managers' age norms (defined as "*rules of behaviour coordinate interactions with others and are believed to guide individuals in social situations*") and stereotypes were important barriers for early retirees in the labor market because they may affect employers' behaviors. In particular, managers with higher age norms and few age stereotypes were more inclined to hire early retirees and age bias lead managers to lower employ older workers. Analysis with regard to human resource policies related to training found negative HRD stereotypes held both by employers and workers (Gray & McGregor, 2003). This agreement may affect managers' decisions and lead to senior workers' self evaluation. Moreover, results highlighted that age bias toward older workers brings to overall age discriminatory employment attitudes.

Negative impact on older workers' outcomes. Results evidenced that variables as intention to retire, willingness to train, work engagement and orientation to promotion could be affected by age stereotypes (Boone James et al., 2013; Bowen & Staudinger, 2012; Gaillard & Desmette, 2010). In particular, it was discussed that different information on older workers' capacity brings to different behaviors; indeed, the research tested the influence of different age-related stereotypic information on older workers and it was revealed that a more positive stereotypic information support job motivation. Work engagement was explored to be negatively related to age discrimination, furthermore, for all age groups involved. Similarly, the perception of age stereotypes had an impact on older workers' promotion orientation (Bowen & Staudinger, 2012), and authors suggested that older worker stereotypes can be a factor that may moderate the relationship between age and promotion orientation. Moreover, managers' stereotypes on productivity, adaptability and reliability of older workers were resulted to affect older workers attitudes toward retirement (Henkens, 2005; Karpinska et al., 2013). Finally, these findings provide that communicating positive information about older workers' ability may improve their occupational wellbeing.

Negative impact on working relationship. As discussed earlier, age stereotypes could affect both younger and older workers. This literature review found mixed results, even though an overall

negative rate of older workers was highlighted. McCann & Keaton (2013) and Chiu et al. (2001) revealed that younger workers have many common age stereotypes toward older workers (i.e., mental skills, able to adapt to new technology, communicational skills). In particular, stereotypes on training, productivity and adaptability were strongly showed, even though results evidenced some cultural differences toward perceptions of older workers (such as country of origin). By contrast, in Boone James et al. (2013), workers did not rate younger workers more likely to be promoted than older workers, and Bowen & Staudinger (2012) found an average score rate of positive characteristics toward older workers (i.e., loyalty, reliable, creative). Dixon (2012) provides that age stereotypes on sexuality may have an impact on the distance between younger and older workers. For instance, younger workers showed the notion that older coworkers were largely asexual and less “friendlier”, and stereotypical beliefs were found to affect younger willingness to work with older coworkers (Chiu et al., 2001). In terms of supervisions’ style, Zacher & Bal (2011) evidenced that assistants favorable age stereotypes could enhance the relationship between professors’ age and assistants’ evaluation of leadership. Specifically, this study examined the relationship between professor age and leadership ratings. Results showed that whether research assistants held few favorable age stereotypes there was a stronger relationship between professor age and leadership rating. This finding provides that research assistants’ age stereotypes affect the assessments they make of older professors.

Moderating role of age stereotypes. Negative managers’ age stereotypes toward older workers were shown in the relationship between age diversity and performance (Kunze et al., 2013b). In a second research (Kunze et al., 2013a) a negative relationship between age and resistance to change was support by empirical data, and additionally, the correlation between age and goal accomplishment results completely mediated by resistance to change stereotype. In regards to perceptions of older workers’ personality (Bertolino et al., 2013), results highlighted that older workers evaluated more positively workers of their age in overall dimensions of Big Five personality and task performance.

Measurements and interventions. Gringart et al. (2013) described the development of a questionnaire for the assessment of attitudes toward senior workers. Authors tested 3 versions of a questionnaire aimed to examine three areas toward older workers (attitudes, hiring decision, performance). The questionnaire was pilot tested, refined, and field tested, within the particular context of hiring decision. The questionnaire was used also in a second study, which aimed to test three different conditions (an information-based intervention in the form of a list of misconceptions about older workers, refuted by empirical data-, cognitive dissonance, combination of information based intervention and cognitive dissonance) in order to promote attitude change and modify stereotype-based behaviors toward older workers (Gringart et al., 2008). Data supported hypothesis that information-based intervention does not have impact on respondents' perception of older workers. The combination of the information-based intervention and cognitive dissonance conditions showed the main effectiveness: for instance, it has been examined to produce a significantly effect in the intention to hire an older workers compared to all others.

Discussion and conclusions

Earlier researches on aging and age stereotypes in work setting provide several stereotypical beliefs toward older workers and, in some cases, contrasting results. The study attempts to conceptualize age stereotypes toward older workers and to present main results of an updated systematical review. The evidence revealed that main researches focus on employers' and youngers' stereotypical beliefs toward older workers and used mostly samples of middle-age workers. Few researchers examined older workers' perceptions of age diversity climate and meta-stereotypes. Future studies are needed in order to analyze in depth the relationship between older workers perceptions and their employability (Finkelstein et al., 2013).

First, throughout the analysis of earlier reviews and meta-analyses, the research examined the reason why an emergent attention should be posed to the organizational context (in terms of age stereotypes and age discrimination). Indeed, those organizational elements are showed to affect older workers occupational wellbeing and employment (Bal et al., 2011; Finkelstein et al. 1995; Ng & Feldman, 2012; Posthuma & Campion, 2008). In a context in which older workers groups have been the first to be unemployed (Encel, 1998; Van Dalen et al., 2009), age stereotypes became a growing phenomenon and an HR challenge that should be managed (Walker, 2005). Indeed, according to self-categorization theory (Turner 1999) and in line with social identity theory (Tajfel & Turner, 1979), if a worker perceived himself/herself as an “older worker” they will tend to enhance the perception of group identity, to disengage in the job (e.g., early retirement), to feel low commitment (indeed, individuals tend to leave a groups they do not feel to belong) and to predict early retirement intention (Desmette et al., 2005; Desmette & Gaillard, 2008). As it was overall found in the study, a self-categorization as an “older worker” could be related to negative attitudes toward work (for instance, stronger desire to retire early or bad cooperation between age groups) (Desmette & Gaillard, 2008). Moreover, early retirement intentions seem to reflect organizational retirement norms associated with the fact of being an “older worker” (Desmette & Gaillard, 2008; Guillemard, 2003).

Secondly, the Chapter presented results of empirical studies and main finding, in line with previous research (Gordon & Arvey, 2004; Kite et al., 2005; Schalk et al., 2010), is that age stereotypes still exist into the workplace all over several sectors and countries. Age imbalance into organizations frequently leads to compare different age groups, which, consequently, could impact on both organizations and workers. An overall finding of researches included in the review is the multidimensional nature of age stereotypes and the simultaneous existence of both positive and negative stereotypical beliefs toward older workers (Coutant et al., 2011; Chasteen et al., 2002; Hummert et al., 1994, 1997; Schmidt & Boland, 1986). Cognitive categorization theories on the perceptions of age (Hummert, 1999; Nelson, 2002) suggested that individuals use an automatic

schema when people come in the contact with an older person. Those schema can simultaneously hold to positive and negative impressions and attitudes. Nevertheless, younger people have implicitly negative associations regarding images of older person (Nosek et al., 2002), the “golden age” (the so-called last stage of the life cycle (see Toossi, 2007) has been considered a synonymous of experience and wisdom in many fields (Kogan & Shelton, 1960; Finkelstein et al., 2000). Furthermore, an explanation can be found in the literature (see i.e., Crawford et al., 2010; Giniger et al., 1983): as evidence suggests that older workers may compensate their physical and psychological decline through the use of several strategies developed by experiences. Those results evidences that, even though several abilities decline with age, they could be modifiable because they depend in a large part on the work context and job task (Bloom & van Reenen, 2011). Most review results found support in the intergroup contact theory (Allport, 1954; Pettigrew, 1998). Indeed, people who have positive relationships with other aged workers tend to better understand out-group characteristics. In this line, another relevant finding of the review is that more contact between age groups may enhance positive age stereotypes and willingness to work with different age coworkers (Hassell & Perrewe, 1995).

Even though the research analyzed limited literature because of the chosen selection criteria, this review examined different stereotypes toward older workers, and analyzed several samples and countries. This is an interesting advantage because it allows us to consider workers and employers’ point of views and, moreover, to control for possible cultural bias. Besides, the research updates recent review on this theme and require several future researches. For instance, little evidences was found regarding differences age cohorts (i.e., oldest workers) and there is the need to include more sectors and, finally, a comparison between cultures could explain different conceptualizations of age bias. Finally, in a continuous changing workplace, different age cut off should be used to identify older workers.

In conclusion, with the increasing of age in the labor market and in response to recent retirement international policy, stereotypes regarding changes that occur in the life-span will

become a more relevant barriers in HR management. Findings suggest that there is the need to focus HR management on older workers, in order to answer to a changing workforce, to extend their career and to improve their employment possibility. Indeed, it was discussed that older employers held a significantly more positive view of older workers and were more interested in hiring older workers than did younger ones (Gringart et al., 2008; Henkens, 2005; Karpinska et al., 2013). Even though managers' negative age stereotypes toward older workers were not always supported by empirical evidences, results showed that managers' age stereotypes could lead to several organizational outcomes (such as performance) and it was suggested that even unintentional discrimination could bring to employment barriers (Kunze et al., 2013a, b). Indeed, all of empirical studies involved in the review, discussed the huge risk for older workers to be discriminated in favor of younger. Literature evidence that age management interventions could reduce negative attitudes and beliefs toward older workers (Walker, 1999). In this regards, only one of the researches exposed an intervention study, but results emphasized the advantage resources of psychological interventions (Gringart et al., 2008; Gaillard & Desmette, 2010).

By analyzing the intergroup processes, the present research discussed that workers who categorized themselves as "older workers" and who perceived their employers/managers' make use of age for distinguishing between workers were more likely to show negative organizational outcomes.

The Chapter provides an in depth analysis of issue toward age stereotypes, examining a selected portion of literature in order to better understand empirical evidences and to guide future researches. Moreover, it serves to update existing literature review on age stereotypes toward older workers. Indeed, even though earlier studies examined this theme completely (Ng & Feldman, 2008; Posthuma & Campion, 2008), the research seek to capitalize on an additional 6 years of research conducted in this field. This review' s object was to shed light on the growing workforce and on interventions to carry out among older workers in order to understand potential barriers to continue to work. Additionally, only by improving knowledge on psychosocial dimensions of the

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workplace we can support and create positive work settings and limit negative stereotypical outcomes and employment barriers for older workers.

Following this systematic review and the discussion on the importance of age stereotypes in the workplace, next the dissertation presents the second part of the dissertation. Empirical evidences on aging are presented. First, Chapter 3 focus on age stereotypes' effect on workers occupational self-efficacy. Furthermore, the moderating role of age has been investigated.

Part B:
THREE EMPIRICAL STUDIES

Chapter 3

Older workers stereotypes and occupational self-efficacy: the moderating role of age

Abstract

The present study aimed to explore the perception of organizational age stereotypes among the employees. It proposed to expand the findings of Henkens (2005), testing the multidimensionality of his scale and the relationship between age stereotypes and occupational self-efficacy in two age group, respectively under 50 years and 50 years and older. The survey involved a large sample of 4667 Italian bank sector's employees. The results showed that employees perceive three dimensions of organizational stereotypes toward older workers: productivity, reliability and adaptability. Differences between younger and older respondents were found about the attribution to the organization of positive vs. negative attitudes towards older workers. Furthermore, the relationship between organizational age stereotypes and occupational self-efficacy was significant only for older respondents. Further research is necessary in order to verify the generalizability of the results to other sectors and countries. The study confirms the presence of age stereotypes in the workplace and suggests the importance for the organization to reduce their potential negative

outcomes. Findings are especially relevant in view of the lack of instruments measuring age stereotyping in the workplace.

Introduction

Experts agree that the global population is now aging: fertility decline together with the rapid improvement in life expectancy are the two main demographic trends of the twentieth century (Kinsella & Wan He, 2009; Vaupel, 2010). The sustained and steady growth of older populations poses many challenges to policymakers, with particular regard to significant changes in the age workforce. Indeed, as literature showed (Christensen, Doblhammer, Rau, & Vaupel, 2009; McDonald & Kippen, 2001; Silverstein, 2008), in many organizations there will be a smaller proportion of younger replacements and a larger number of older people moving toward retirement. The issue of ageing in the workplace has been defined as “new diversity” (Capowski, 1994) because it tests the capacity of organizations to manage changes in the composition of the workforce (Becton, Walker, & Jones-Farmer, 2014; Boehm & Kunze, 2015). It means that older and younger people are working together, with actually four generations currently in the workplace: Traditionalists, Baby Boomers, Generation X, and Millennials (Becton, et al., 2014; Green, Mastrangelo, Eigel, Boone James, Hartmann, & McLean, 2012). In this context, organizations have to come to the realization that the workforce is even much more heterogeneous, and HR management must face the diverse pool of workers, avoiding negative implications. Recent surveys revealed that Italy is one of the most old country in the world and the process of population ageing currently underway in Italy is more pronounced than in most other European countries (OECD, 2004). Nevertheless, Italy does not give special attention to older workers and this leads to several obstacles as a less investment in older workforce (Segalla, Jacobs-Belschak, & Müller, 2001; Maurer, 2001; Bombelli & Finzi, 2006).

On a scientific perspective, age has moved from being a statistical control variable in research to a central focus of study (Truxillo & Fraccaroli, 2013). The present chapter aims to enhance the debate on the ageing in the workplace, exploring which are the stereotypes toward older workers that employees perceive in their organizations and which effect they are on the employees' self-confidence in managing job tasks.

Studying generations based on a stereotyping perspectives is important in the work context (Zacher, 2015), above all because actually people's beliefs about generational differences are not based on real differences, but are often socially constructed, mainly on knowledge about common age stereotypes (Rudolph & Zacher, 2015). As workforce get older, age stereotypes become more relevant (Finkelstein, Eden, King, & Voyles, 2015; Posthuma & Campion, 2009; Dordoni & Argentero, 2015); as we discussed in Chapter 2, negative age stereotypes have come to stigmatize older workers (Burke & Ng, 2006; Maurer, Barbeite, Weiss, & Lippstreu, 2008) and could result in poor retention and barriers to retaining older workers.

Although the relevance of stereotyping of older workers has widely been reported in literature (e.g. Schalk et al., 2010), only a few validated instruments exist. Among these, the most used are Palmore's Facts on Ageing Quiz (FAQ; Braithwaite, Lynd-Stevenson, & Pigram, 1993), which is likely a test of knowledge, and Tuckman and Lorge measure (Tuckman & Lorge, 1953). However, both these instruments were used in general population and are not specific for the workplace setting. In view of the lack of instruments measuring age stereotyping in the workplace, most investigators have developed research-specific instruments (e.g., Maurer et al., 2008; Rosen & Jerdee, 1976; Taylor & Walker, 1994; Schmidt, 1999). Similarly, Walker and Taylor (Institute of Personnel Management [IPM], 1993) have developed a set of statements in order to measure attitudes and stereotypes among older workers. Some of these questions were widely used by many researchers from different countries, such as United States, New Zealand and Canada (Henkens, 2005; Loretto, Duncan, & White, 2000; Wagner, 1998; Gray & McGregor, 2003; Berger, Marshall, & Ashbury 2005; Chiu, Chan, Snape, & Redman, 2001). In particular, Henkens (2005) submitted a

set of 15 items developed by Walker and Taylor (ibidem) to 796 Dutch managers and conducted a principal components analysis which showed three dimensions of older workers' stereotypes: older workers are considered as 1) less productive, 2) less adaptable, and 3) more reliability than younger workers.

The first objective of the study is to expand the findings of Henkens (2005), testing the multidimensionality of his scale among two different age groups of employees: under 50 years old, who will be called "younger workers", and 50 years old and over, who will be called "older workers". Traditionally, age-stereotype research focused on the targeters (employers), rather than the targets (employees) (Maurer et al, 2008), on the contrary, we chose to analyze the point of view of employees, involving a large sample of banking sector's workers.

The second objective of the present Chapter is to investigate the relationship between organization's age stereotypes and occupational self-efficacy of older and younger workers. According to Bandura (1977), stereotypes can be one of several sources of information which may lead a person to believe that s/he can or cannot succeed in a task. Indeed, stereotypes might act as the so called '*self-fulfilling prophecies*': the negative evaluations made by others may produce a negative spin-off in older workers' behaviours, as career activities (Van der Heijden, 2005; Hilton & Von Hippel, 1996), early retirement intentions and learning and development motivations (Gaillard & Desmette, 2010; Salthouse & Maurer, 1996). As a consequence, this process could reduce olders' self-efficacy at work. Social Cognitive Theory has been already applied to the study of age stereotypes in the workplace by Maurer and colleagues (Maurer, 2001; Maurer et al., 2008; Maurer, Wrenn & Weiss, 2003). In particular, these authors postulated that older workers who are exposed to negative stereotypes about their ability to learn may reduce their self-efficacy for development (defined as the belief by a worker that he/she is capable of improving and developing his/her skills).

In view of the outline given above, the present study aims to contribute to the debates on organizational age stereotypes' effect by addressing the following research questions: Is the

definition of age stereotypes multidimensional?; May organizational age stereotypes perceived by older workers reduce their occupational self-efficacy?

The dimensions of age stereotypes

As we discussed in Chapter 2, age stereotypes are defined “*a simplified, undifferentiated portrayal of an age group that is often erroneous, unrepresentative of reality, and resistant to modification*” (Schulz, Noelker, Rockwood, & Sprott, 2006, p.43). People often hold age stereotypes in work settings, especially toward older workers (Chiu et al., 2001; Kite & Wagner, 2002): when people are categorized as “older workers”, they may become potential targets for prejudice related to ageing (Duncan, 2001; McCann & Giles, 2002), and this stigma is often perceived as a stressor which older workers have to cope with (Miller & Major, 1998). Older workers are not viewed entirely negatively or positively neither (Bal, Reiss, Rudolph, & Baltes, 2011; Bertolino, Truxillo, & Fraccaroli, 2012; Hilton & Von Hippel, 1996), even though evidences revealed that younger people use to have implicitly negative associations among images of an older person (Nosek, Banaji, & Greenwald, 2002). In line with this, older workers are stereotypically viewed more negatively compared to younger workers and this stereotyping is at the heart of employment discrimination against them (Taylor, Steinberg, & Walley, 2000; Van Dalen, Henkens, & Schippers, 2009; 2010).

As said above, Henkens’s study (2005) showed that the managers’ beliefs about older workers can be summarized into three dimensions: older workers are considered 1) less productive, 2) less adaptable, and 3) more reliability than younger workers. These stereotypical ideas influence managers’ attitudes toward the retirement of their employees (Karpinska, Henkens, & Schippers, 2013; Van Dalen et al., 2009). By the opposite, I am interested in exploring the perception that employees have of age stereotypes held by their organization (Gaillard & Desmette, 2010; Steele, 1997; Steele, Spencer, & Aronson, 2002). Hence, the first objective of the study is to contribute to the Italian validation of *Age Stereotypes Scale* developed by Henkens (2005) toward older workers,

testing its structure in a sample of both Italian younger and older workers. Based on previous findings, I hypothesized that organizations' age stereotypes refer to older workers' productivity, reliability and adaptability, and so I expected that:

Hypothesis 1. *A three-factor structure of the stereotypes toward older workers scale will show the best fit to the data across age group*

Age stereotypes and occupational self-efficacy

Drawing upon Social Identity Theory (Tajfel & Turner, 1979) and Self-Categorization Theory (Turner et al., 1987), several studies investigated the effect of age groups membership on the older worker's self-definition and attitudes towards work (i.e. Desmette & Gaillard, 2008; Gaillard & Desmette, 2008); in particular, scholars underlined that being an "older worker" means being a member of a stigmatized group in the workplace and, in turn, it may represents a threat to the natural need to achieve a positive self-image. As Gaillard & Desmette (2010) argued, "*susceptibility to stereotype threat does not require that individuals believe in the validity of negative stereotypes about one of their group memberships but that they just know those stereotypes and the domains where they apply*" (p.87).

In this sense, experimental studies have demonstrated that activating age stereotypes can influence subsequent behaviors in a stereotype-consistent way (Levy, 2003); that is, priming with a stereotype could potentially affect a person's current self-representations (Wheeler & Petty, 2001; Wheeler, DeMarree, & Petty, 2007). Although research on stereotype threat has mainly focused on negative stereotypes, a few studies have confirmed the effects of both negative and positive age stereotype on work attitudes (Gaillard & Desmette, 2010). Self-Categorization Theory (Turner, 1982) explains the social cognitive process that sustains the relationship between beliefs toward in-group and self-concept: under condition of social category salience, individuals perceive themselves more as representative members of a social category than as unique personalities; thus, being target

of stereotyping leads to feel and behave accordingly and to follow the norms, goals and needs of the salient in-group, shaping followers' behaviors and beliefs on them. The responsiveness to the stereotype primes showed to be triggered only if they had personal relevance to the participants (Levy, 2003; 2009). In other words, when the activated prime content is included into one's self-concept, this activated self may color subsequent behavior (Hansen & Wänke, 2009). For this reason, the activation of age stereotypes influence the older participants' performance, but it has not effect on the younger participants. These findings were expected because the age stereotypes were not yet describing the younger participants' self-identity. In this sense, the experimental studies showed that older workers had a higher level of group identification than younger workers (Doosje, Ellemers, & Spears, 1995; Spears, Doosje, & Ellemers, 1997). Moreover, some of these studies (Hansen & Wänke, 2009) suggested that self-efficacy beliefs can have a mediation role in this effect. Self-efficacy is defined as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments." (Bandura, 1997, p. 3). According to Bandura, "people process, weigh, and integrate diverse sources of information concerning their capability, and they regulate their choice behavior and effort expenditure accordingly" (p. 212). Stereotypes represent a source of information and their diffusion in the work environment can have a significant effect on an individual's belief system. It is demonstrated by the fact that, for instance, gender and ethnic stereotypes influence women and minorities occupational self-efficacy and, consequently, career choices, academic and job performance of these groups (Brown & Lent, 2012). Surprisingly, despite the already cited works of Maurer and colleagues (Maurer, 2001; Maurer et al., 2008; Maurer et al., 2003), the role of age stereotypes in defining older workers' self-efficacy is under-researched.

The present research is interested in investigating the effect of age stereotypes on occupational self-efficacy, the latter defined as the competence that a person feels concerning the ability to successfully fulfill the tasks involved in his/her job (Rigotti, Schyns & Mohr, 2008). The medium-level of generality of occupational self-efficacy's concept (Schyn & Von Collani, 2002)

permits to verify the impact of age stereotypes on a quite broad definition of confidence in own capabilities as worker. Since empirical evidences demonstrated the effect of age stereotypes on self-perception (Levy, 1996) and field studies showed that social stereotypes influence occupational self-efficacy of stigmatized group (Brown & Lent, 2012), we expected a relationship between age stereotypes and occupational self-efficacy. In addition, whereas the self-relevance of stereotypes is important in order to determine their effects (Levy, 2003; 2009), we hypothesized that the relationship between age stereotypes and occupational self-efficacy could be different in older vs. younger workers' group. In fact, age group identification would be higher in older workers. In other words, we expected that:

Hypothesis 2. *Age moderates the relationship between stereotypes toward older workers and occupational self-efficacy such that the effect of stereotypes will be significant for older people but not for younger people.*

Methods

Participants and procedure

A survey study was conducted in three Italian financial institutions with locations in multiple regions. For the survey, 7816 employees were invited through an e-mail to participate in an on-line survey. The final sample consisted of 4667 employees (59,7% response rate), of which 64,9% males. The average age was 45,66 years (SD = 9,90). 23% of respondents were managers.

Measures

Stereotypes toward older workers scale. The research team translated the original 15 questions into Italian; a bilingual domain expert back-translated the 15 statements and the two

versions were compared in order to verify the presence of meaning differences. There were no salient or major differences; just one single item was non-literally translated: “My organization thinks that... Older workers are less capable of doing physically taxing work than younger workers”, replaced as “ La mia organizzazione ritiene che... I lavoratori senior fatichino di più a sopportare lo stress rispetto ai giovani” (“My organization thinks that ...Older workers have more difficulties to cope with stress than younger workers”) in order to suit with a white collars’ sample. Finally, the comprehensibility of the translated items was assessed by research colleagues. The respondents were asked to indicate to what extent they agreed with the statements, which refer to the organization’s negative vs. positive beliefs about older 50s workers. The response scale ranged from 1 (strongly disagree) to 5 (strongly agree). Construct validity of the *Stereotypes toward older workers scale* has been explored through exploratory and confirmatory factor analysis. Factor loadings ranged from -.37 to -. 84 for the Productivity factor, from .36 to .77 for the Reliability factor, and from -.55 to -.82 for the Adaptability factor, each having a significant contribution to the latent construct (Henkens, 2005).

Occupational self-efficacy scale. An eight-item scale was used to measure workers’ perception of their occupational self-efficacy (Schyns & von Collani, 2002; italian short version by Di Fabio & Taralla, 2006). Employees were asked the extent to which they think statements are true or false. The original six-point response scale was adjusted into a five-point scale ranged from 1 (not at all true) to 6 (completely true), where high values reflect high occupational self-efficacy. Examples of items were: “I can remain calm when facing difficulties in my job because I can rely on my abilities” and “When I am confronted with a problem in my job, I can usually find several solutions”. The scale show adequate concurrent validity through correlations with the General Self-Efficacy Scale (Sherer et al., 1982) ($r = .57$), the Generalized Work-Related SelfEfficacy Scale (Speier & Frese, 1997) ($r = .67$), the Self-esteem Scale (Rosenberg, 1965) ($r = .39$), the Internal Locus Of Control Scale (Krampen, 1991) ($r = .49$) and the Neuroticism Scale del NEO-PI (Costa & McCrae, 1985) ($r = - .51$) (Di Fabio & Taralla, 2006).

Moderator.

Age. The study's moderating variable 'age of the workers' was measured by a dummy variable representing two age categories: 1) having less than 50 years old (54%), 2) having more than 50 years old (46%).

Data Analyses

The analyses were performed using two statistical software. Firstly, we tested the divergent validity of the latent constructs by testing the measurement model by Confirmatory Factor Analysis (CFA) through IBM SPSS 21. Secondly, through structural equation modeling (SEM) in IBM SPSS AMOS 21, hypotheses were tested.

In the first step, the function "Select cases" and "Random sample of cases (approximately 50%)" were used; we first randomly divided the research sample in two subsamples. The first resulted in 2321 cases; 65.5% were males, the mean age was 45.62 (SD 9.86), 45.3% were over 50 and 23.4% were executives. The second one was composed by 2346 cases (64.2% males, mean age 45.71 (SD 9.94), 46% over 50, 22.6% executives). No statistically significant differences between the two subsamples were found in socio-demographic variables. Consequently, it was conducted on the first subsample an exploratory factor analysis (Principal components analysis) and reliability test (alpha of Cronbach) in order to explore the psychometric properties of the Italian version of the stereotypes scales. On the basis of the obtained results a multi-group Confirmatory Factor Analyses (CFA) was tested on the second subsample. As a first step it was carried out a CFA on the U50 and O50 datasets separately, comparing the fit of the three-factor model (found by Henkens, 2005) to the fit of a one-factor model in each group of age. The aim of these analyses was to ascertain whether the three-factor model fit the data better than the one-factor model in each group of age, and to establish the baseline models over which to run multiple-group analyses. As a second step, a series of multi-group CFAs was run, testing progressively more stringent forms of factorial equivalence (Cheung, 2008; Vandenberg & Lance, 2000): configural equivalence (i.e., the number

of constructs and the observed variables that are associated with each construct are the same across groups), metric equivalence (i.e. factor loadings in the measurement model are equal across groups), and scalar invariance (i.e. intercepts of the indicators in the measurement model are equal across groups).

CFA results were evaluated by using the χ^2 statistic and the two most suggested indices in the literature (Meade, Johnson, & Braddy, 2008; Vandenberg & Lance, 2000): *comparative fit index* (CFI), with values .95 or higher indicating good fit, .90–.95 indicating acceptable fit, and lower of .90 indicating poor fit (Hu & Bentler, 1999), and *root mean square error of approximation* (RMSEA), with values of .05 or lower indicating a well-fitting model, .05–.08 indicating a moderate fit, and .10 or greater indicating poor fit (Browne & Cudeck, 1993). Nested models were evaluated not only by using the $\Delta\chi^2$, which – like its absolute value – is sensitive to sample size, but using the Δ CFI, with values in this statistic up to .002 indicating that the models are equivalent in terms of fit (Meade et al., 2008).

Secondly, in order to test the interaction between older workers' stereotype's dimensions and occupational self-efficacy we used a three-step moderated regression procedure. In the first step, the control variables (gender and work role) were entered. In the second step, the predictor and moderator variables were entered in the equation. In the final step, interaction terms were entered. Significant interaction terms were further investigated by plotting interaction graphs and calculating simple slopes.

Results

Preliminary analysis and testing the measurement model

Preliminary analyses confirmed that data were factorable. The Bartlett's Test of Sphericity showed that the correlation matrix was not an identity matrix ($\chi^2 = 12235$, $df = 105$; $p < .001$), and

the measure of sampling adequacy was acceptable (KMO = .83). Factors with eigenvalues greater than 1 were extracted, and factor loadings less than |.30| were ignored because they were deemed inadequate (Merenda, 1997; Peterson, 2000).

The factor analysis yielded three factors with eigenvalues > 1, explaining 54.73% of the variance and confirming the factorial structure of the original English version of the questionnaire (Henkens, 2005).

Table 3.1. Extracted factors and factor loadings

Items	Factor		
	1	2	3
R_3. Older workers are more meticulous than younger workers.	.843		
R_2. Older workers are more reliable than younger workers.	.830		
R_5. Older workers are more careful than younger workers.	.809		
R_4. Older workers have greater social skills than younger workers.	.723		
R_1. Older workers are more loyal than younger workers.	.650		
P_3. Older workers keep up just as well as younger workers.			
A_2. Older workers are less able to adapt to technological change than younger workers.		.845	
A_1. Older workers are less interested in technological change than younger workers.		.834	
A_4. Older workers are less interested in participating in training programs than younger workers.		.673	.342
A_3. Older workers are less capable of doing physically taxing work than younger workers.		.542	.340
P_6. Older workers prefer not to be assigned tasks by younger workers.		.538	
P_1. Older workers are less productive than younger workers.			.828
P_2. Older workers are less creative than younger workers.			.788
P_4. Absenteeism is higher among older workers than among younger workers.			.610
P_5. Older workers are just as enterprising as younger workers.			-.592
Eigenvalue	3.99	3.10	1.11
% explained variance (cum. 54,7)	26.6	20.7	7.4

Table 3.1 shows that overall items loaded where expected and cross-loading was minimal. Nevertheless, two items behaved differently from the original English version. First, Item P_6 (productivity dimension) “*Older workers prefer not to be assigned tasks by younger workers*” loaded factor 2 (adaptability dimension) with a factor loading of .538. Second, Item P_3 (productivity dimension) “*Older workers keep up just as well as younger workers*” didn’t show any factor loading higher than .30.

Reliability test confirmed the validity of the scales, with alpha of Cronbach being .80 for adaptability, .83 for reliability and .74 for the four-items version of productivity (i.e. without P_3 and P_6; alpha of Cronbach value is .69 if all the six items are computed).

Overall, these analyses provide support for the psychometric properties of the Italian version of the questionnaire, even if excluding two items of the productivity dimension. Thus, the 13-item version of the questionnaire was used for the following CFA and evaluation of measurement equivalence between groups of age (i.e. under and over 50 years old).

Confirmatory factor analyses: testing the factor structure

In order to identify a baseline model for testing cross-age measurement equivalence of the stereotypes scale, two independent CFAs were conducted for each sample. Model 1 (a and b respectively U50 and O50) defined a single factor and Model 2 (a and b respectively U50 and O50) defined a three factors.

Table 3.2. Goodness of fit statistics for tests of measurement equivalence (N=2346)

	χ^2	df	RMSEA	CFI	Δ CFI
Model 1a (Single factor, Under 50)	3169.064	65	.194 (.188-.200)	.433	
Model 1b (Single factor, Over 50)	3189.737	65	.211 (.205-.217)	.432	
Model 2a (Three factor, Under 50)	524.442	62	.077 (.071-.083)	.916	
Model 2b (Three factor, Over 50)	437.139	62	.075 (.068-.082)	.932	
Model 3 (m.g. – configural equivalence)	961.580	124	.054 (.051-.057)	.924	
Model 4 (m.g. – metric equivalence)	969.797	134	.052 (.049-.055)	.924	.000
Model 5 (m.g. – scalar equivalence)	1495.468	147	.063 (.060-.065)	.877	.047

The results (see Table 3.2) shows that Models 1a and 1b do not fit the data in an acceptable way; in particular CFI was largely lower of the minimum required in both the models and RMSEA was largely higher. On the contrary, Model 2 fitted the data quite well in both the samples (Model 2a and 2b), with CFI indicating acceptable fit and RMSEA indicating a moderate fit.

Confirmatory factor analyses: testing the measurement equivalence with age

Table 3.2 shows detailed results from the series of increasingly restrictive tests of measurement equivalence across the two groups of age (U50 and O50). Model 3 (i.e. configural equivalence test of an equal number of factors and pattern of factor loadings) indicated a good fit (CFI = .924, RMSEA = .054), supporting an equivalent 3-factor solution of the questionnaire in the U50 and O50 datasets. Next, an additional constraint of equal factor loadings was imposed in the test of metric invariance (Model 4). If this constraint does not substantially reduce model fit, then metric invariance can be supported. While the χ^2 of Model 4 slightly deteriorated compared to that

of Model 3 ($\Delta\chi^2_{M4-M3}(10) = 8.217$), all the fit indices of Model 4 were acceptable. More importantly, a $\Delta CFI_{M3-M4} = .000$ suggested that Model 4 could be considered equivalent to Model 3. Thus, metric equivalence was also supported, indicating that the strength of relationships between the latent factors and the corresponding items are equivalent across groups. Finally, scalar equivalence was tested by constraining the intercepts of the stereotypes questionnaire indicators to be equal across the U50 and O50 samples. This determined a drastic deterioration in the χ^2 ($\Delta\chi^2_{M5-M4}(13) = 525.671$); furthermore, a $\Delta CFI_{M4-M5} = .047$ suggested that scalar equivalence was not supported.

Descriptive statistics.

Table 3.3 shows descriptive statistics. In accordance with Henkens (2005), the means of productivity, reliability and adaptability were calculated so that respondents with positive views about older workers had a high score. The results showed that organizational stereotypes towards older workers were more positive in terms of their productivity (M=3.29), while not quite positive in terms of their reliability (M=3.06) and adaptability (M=2.78). Furthermore, the perception of organizational stereotypes toward older workers tended to be less favorable in those having under 50 years old, compared with those having more than 50 years. Finally, male and older respondents shows to perceive more positive organizational attitudes toward older employees. In addition, correlations among productivity, reliability and adaptability ranged from $r=.01$ ($p=.376$) to $.55$ ($p=.000$), suggesting the multidimensionality of the age stereotypes.

Table 3.3. Descriptive statistics

	Total (N=4667)		U50 (n=2537)		O50 (n=2130)		F; p
	M	SD	M	SD	M	SD	
1. Age	45.66	9.90	38.10	6.85	54.67	3.09	10632.683; .000
2. Productivity	3.29	.86	3.15	.80	3.46	.90	156.019; .000
3. Reliability	3.06	.87	2.81	.82	3.36	.84	524.130; .000
4. Adaptability	2.78	.91	2.59	.84	2.99	.94	232.651; .000
5. Occupational self- efficacy	3.95	.57	3.87	.55	4.06	.58	136.647; .000

Moderation effects

All interaction hypotheses were tested using aforementioned hierarchical regression method. As shown in Table 3.4, the control variable accounted 2% of the variance in employees' occupational self-efficacy. Specifically, males ($\beta=-.101$; $p=.000$) and managers ($\beta=-.058$; $p=.000$) had a higher occupational self-efficacy than females and subordinates respectively. The joint main effects of the three dimensions of the older workers' stereotypes and age accounted for an additional 3% of the variance. The results showed that productivity ($\beta=.042$; $p=.016$), reliability ($\beta=.117$; $p=.000$) and adaptability ($\beta=.106$; $p=.000$) had a significant positive association with occupational self-efficacy, meaning that whether organization have positive stereotypes toward older workers employees have high occupational self-efficacy. Furthermore, results evidenced that older workers had a higher occupational self-efficacy than younger colleagues ($\beta=.098$; $p=.000$). Finally, the interaction between reliability and occupational self-efficacy was significant ($\beta=.118$; $p=.000$), as well as the interaction between adaptability and occupational self-efficacy ($\beta=.147$; $p=.000$). Together, the interaction coefficients explained an additional 2% of the variance in occupational self-efficacy. In other words, the expected moderating role of age on the relationship between stereotypes toward older workers and occupational self-efficacy was confirmed; nevertheless, moderation hypothesis is confirmed only for reliability and adaptability.

Table 3.4. Hierarchical regression test for age as moderator between stereotype’s dimensions and occupational self-efficacy (N= 4667).

Model	Occupational self-efficacy		
	Step 1	Step 2	Step 3
Gender	-.10**	-.06**	-.06**
Work role	-.06**	-.06**	-.06**
Productivity		.04*	.05*
Reliability		.09**	.01
Adaptability		.09**	-.02
Age		.10**	.09**
Productivity x age			-.03
Reliability x age			.12**
Adaptability x age			.15**
R ²	.02**	.05**	.07**
ΔR ²		.03**	.02**

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

Note: Beta weights provided are in standardized form. Gender: 0=male; 1=female. Work role: 0= manager; 1= subordinate. Age: 0=under50s; 1=50s and older.

The two interaction effects were plotted in Figures 3.1 and 3.2. As we expected, a simple slope analysis revealed that the association between reliability and occupational self-efficacy was positively significant for older workers ($B=.179$; $p<.001$), but not significant for younger workers ($B=.003$; $n.s.$).

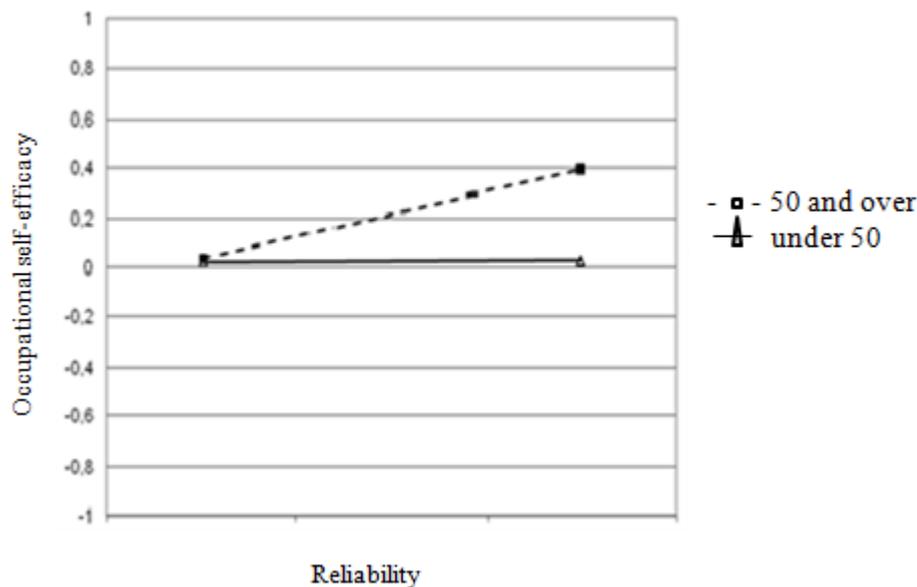


Fig. 3.1. The moderating effect of age on the relationship between reliability stereotype and occupational self-efficacy

Similar evidences resulted for the interaction between adaptability and occupational self-efficacy (see Figure 3.2), which was significant for older workers ($B=.118$; $p<.001$), but not significant for younger workers ($B=-.019$; $n.s.$).

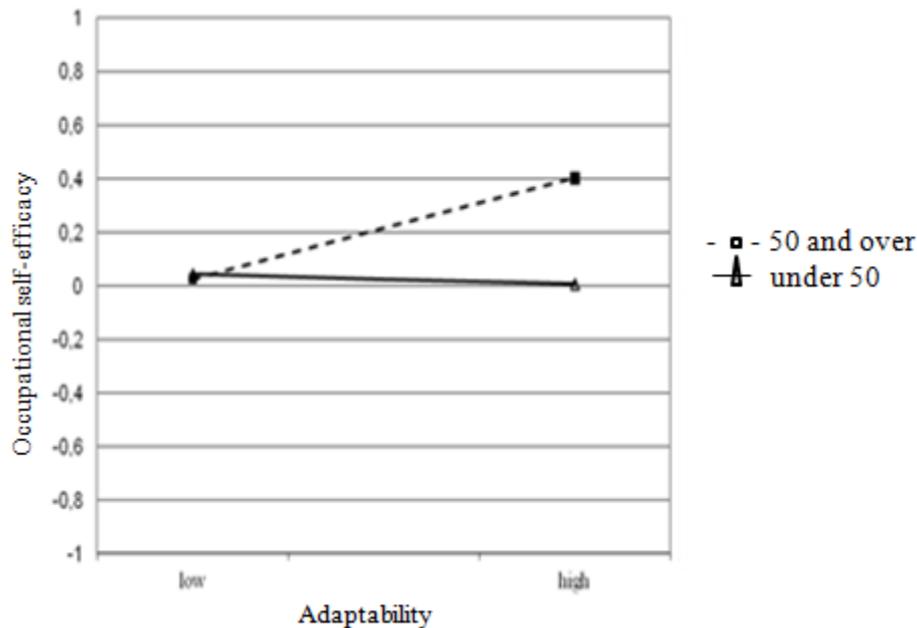


Fig. 3.2. The moderating effect of age on the relationship between adaptability stereotype and occupational self-efficacy

Hence, results support the hypothesis that positive organizational stereotypes on older workers' reliability and adaptability enhance older employees' occupational self-efficacy and have not any effect on the younger people.

Discussion and Conclusions

Reflections upon outcomes

The present study aimed to explore the perception of organizational age stereotypes among the employees and its relation with on the occupational self-efficacy of older workers in comparison with the other workers. The primary purpose was to confirm the multidimensionality of

organizational stereotypes toward older workers, testing the structure of the Italian version of Henkens (2005)'s scale. As expected by the first hypothesis, explorative factor analysis provided support for a three-factor solution corresponding to the subscales of productivity, adaptability, and reliability, even if excluding two items of the productivity dimension. In line with previous studies that showed as the stereotypes toward older workers are both positive and negative (Chiu *et al.*, 2001; Maurer *et al.*, 2007; Posthuma & Campions, 2009), results found that older workers are considered few adaptable to the changes, nevertheless at the same time they seem to be more reliable and loyal to the organization than younger workers. Contrarily, in respect to productivity, findings deviated from prior research; indeed, the research found that older workers' productivity was positively evaluated by the sample. A possible explanation could be related to the specific work environment (bank sector) in which data were collected. Indeed, older workers are generally more positively assessed in the services sectors, in contrast to industries (Turek & Perek-Bialas, 2013; Van Dalen *et al.*, 2010).

The three-dimensional structure of the questionnaire was confirmed by CFA and resulted equivalent among groups of age. More precisely, both under50s and over50s used the same number of factors and the items loaded on the same dimension for each age group (configural invariance). In addition, the factor loadings are the same for different age groups (metric invariance). These results demonstrated the conceptual equivalence of the scale across age groups, that is the primary requirement for using the instrument to compare different groups (Cheung, 2008). On the other hand, the means of the item indicators (scalar invariance) are not equivalent across age groups. In general, older respondents attributed to their organizations more positive stereotypes toward older workers. The in-group bias, according to which older workers view older people more favourably than they do younger people in order to maintain a positive social identity (Tajfel, 1978), is well documented (i.e. Bertolino, Truxillo *et al.*, 2012; Chiu *et al.*, 2001; Posthuma & Campions, 2009). Results may be considered an extension of Henkens (2005)' study which found that older managers

tend to hold more positive views of older employees, because we showed that the same bias persists even when employees are asked to evaluate the attitudes of organization towards the in-group.

A further objective of this study was to investigate the relationship between age stereotypes and occupational self-efficacy of two age groups, respectively, under 50 years and of 50 years and older. In accordance with the second hypothesis, the current research showed what Maurer *et al.* (2007) failed to find: indeed, findings showed that the exposition to others' beliefs toward older workers affects the occupational self-efficacy of the latter. In line with Social Cognitive Theory's assumptions (Bandura, 1997), and similarly to previous findings about gender and ethnic stereotypes (Brown & Lent, 2012), occupational self-efficacy resulted to be influenced by age stereotypes. Of particular concern was the moderating role of age. The organization's positive beliefs toward older employees' adaptability and reliability improved over50s' occupational self-efficacy, while it had not any effect on the under50s. Although the items of the scale used younger worker as a term of comparison to evaluate older employees, organization's positive beliefs about the older workers did not seem a threat for younger workers. Unlike the other two dimensions of stereotypes, the relationship between productivity and occupational self-efficacy was not moderated by age. The results showed that more the employees perceived the organization's beliefs toward older workers were positive more their occupational self-efficacy was high. The acknowledgement of the older workers' value may foster the development of a supportive organizational climate, which is an antecedent of all employees' self-efficacy (Luthans *et al.*, 2008). In other words, positive stereotypes toward older worker may be perceived as an appreciation to the specific contribution that older workers are able to do to organizational performance.

Limitations and future research

The results offer a number of promising practical and theoretical implications, but a few limitations merit mentioning.

Firstly, considering the generalizability of findings, the research collected data only from Italian bank sector. As previously discussed, Italy is one of the oldest countries in Europe and Italian workforce cannot be easily compared to foreign ones. In addition, the bank sector showed to be a favourable work environment for older workers because it has shown interest in investing in aging workforce and developing age management policies: for instance, the European Banking Federation (2014) mentioned older workers' training and career programs among the human resources best practices to foster the length and level of the staff's employability. Taking these contextual features into consideration might yield further insight into the relationship between age and perception of stereotypes toward older employees.

Moreover, due to cross-sectional design, common method variance could represent an issue: in fact, data in a single questionnaire can be closely related (Podsakoff *et al.*, 2003). That is, the present research cannot draw any causal conclusions regarding the role of age stereotypes in determining occupational self-efficacy. Therefore, future studies should aim to replicate the findings with longitudinal designs. However, since confirmatory factor analysis supported the discriminant validity of our measure of age stereotypes, it suggested that common method variance was not a major issue. In addition, since age is an objective variable and thus, it is less likely to be biased (Podsakoff & Organ, 1986), hypotheses testing for interaction effects are also unlikely to be affected by common method variance (Evans, 1985). Finally, further research should include objective indicators together with self report measurements in order to better investigate model relationships.

Practical implications

From an applied perspective, our results confirm the presence of age stereotypes in the workplace and suggest the importance for the organization to reduce their potential negative outcomes. Kray and Shirako (2009) identified three categories of strategies that organizations can implement to reduce stereotype threat: 1) stereotype management, which includes acknowledging

stereotypes, emphasizing positive stereotypes, and deemphasizing negative stereotypes; 2) equal opportunities for younger and older employees, which include increasing older employees' representation and job training; and 3) organizational culture, including both fostering identity safety and valuing effort.

The acknowledgement of the stereotypes helps individuals to question their validity and the use of the stereotypes toward older workers scale in the organizations can facilitate the awareness about positive stereotypes. The negative stereotypes should be deemphasizing because they are a threat for older workers' occupational self-efficacy, and, when they are shared by employers, they become a barrier to older workers' career (e.g., they limit the access of older workers to job training and development opportunities). The aim should be to create a win-win situation, where both older and younger employees are valued, and organizations preserve their competitive edge in light of coming demographic changes. For example, Zaniboni *et al.* (2013, 2014) suggested that it may be a competitive gain for organizations to challenge younger workers with different tasks, and to challenge older workers in ways that utilize their experience. In the perspective of fostering the cooperation between older and younger workers, we suggest also for all ages educational programs a smarter use of age groups aimed to stimulate professional partnership and support both formal and informal learning (i.e. mentoring or reverse mentoring), since it could also positively hence workers' performance.

To conclude, the research recommend to use of the stereotypes toward older workers scale in all situation in which age stereotypes may represent a possible employment barrier.

Chapter 4

Looking beyond age stereotypes and job support for learning in an age-moderated mediation model

*“No one has ever promised you a rose garden”
B. Van der Heijden (2005)*

Abstract

Incorporating various lifespan developmental theories into Van der Heijden’s employability enhancement model, this Chapter develops and tests an age-moderated mediation model, linking older workers’ (55 years old and over) perceptions of job support for learning and their perceptions of negative age stereotypes, on the one hand, and their intention to retire, on the other hand, via their engagement in employability activities. Results on 2,082 workers holding mainly a managerial role revealed that both relationships were mediated by engagement in employability activities, reflecting two mechanisms through which work context affects intention to retire (“loss and gain spirals”). Moreover, Multi-Group SEM analyses, distinguishing between two age groups (55-60 and 60-65 years old), revealed different paths for the two groups of older workers. Employability mediated the relationship between job support for learning and intention to retire process in both age groups whereas it only mediated the relationship between age stereotypes and intention to retire in the 55-60 group. The research concluded that employability is an important factor in the older workers’ intention to retire process. In order to motivate older workers (particularly the relatively

younger group being most vulnerable for age stereotypes) to engage in employability activities and work longer, age stereotypes need to be combated. However, in view of generating a future time perspective in managing employability of both older age groups, creating job support for learning over the life stage is also increasingly important.

Introduction

In the approaching years, the employed workforce will become older and more age-diverse at the same time (Phillips & Siu, 2012). It was estimated that, before 2050, half of the world population will be over 60 years old. In order to make retirement systems more sustainable, working longer has become a necessity in European nations (Toossi, 2012). As a result, EU policy (European Commission, 2012), operationalized by means of nations' labor markets and employment policies, is geared at encouraging older workers to continue working longer over the lifespan (Jespen et al., 2002), and to protect their sustainable employability (Van der Heijden et al., 2009). Sustainable employability may be defined as “*the continuous fulfilling, acquiring or creating of work through the optimal use of competences*” (Van der Heijde & Van der Heijden, 2006, p. 453). Employability enables workers to cope with fast-changing job requirements and to find career opportunities in the internal or external labor markets more easily (cf. Newman, 2011). In view of that, scholars have considered employability to be a personal resource (cf. De Coen et al., 2015; De Cuyper et al., , 2012). In the scientific debates on employability and career development, scholars have tried to gain more insight into the work-related motives of older workers (Kooij et al., 2011; Kooij & Zacher, 2016) from a sustainability perspective (see Kooij, 2015; Zacher, 2015); attention is given to a better comprehension of factors that may impact on older workers' intention to retire earlier (see Beehr & Bennett, 2014; Zaniboni, 2015). However, there is little research on the relationship between age and employability (cf. Froehlich et al., 2015), let alone on the differences

across groups of older workers wherein the associations between antecedents of employability, engagement in employability activities, and work-related outcomes (such as intention to retire) are studied.

Moreover, over the past decades, the nature of retirement has changed dramatically. Indeed, an increasing number of older workers has chosen to work part-time or to become self-employed in the final phase of their careers (Adams et al., 2009; Wang et al., 2009; Wheaton & Crimmins, 2012). In view of this scholars have stressed the complexity of the present-day retirement process and have called for more empirical research in this field. It has been discussed that workers make retirement decisions based upon their personal, non-work environment (such as their personal situation or family status) (Wang & Shultz, 2010), and their work context (such as organizational support for development) (Armstrong-Stassen & Ursel, 2009).

The present study adds to previous work by analyzing factors explaining the intention to retire among a sample of workers over 55 years old. The conceptualization of older workers using the age category of over 55 years old is in line with the categorization that was adopted by the Stockholm European Council of March 2001 (European Council, 2001).

Previous research in our domain of interest has dealt with the process through which older workers decide whether, when, and why to retire (cf. Wang & Shultz, 2010). Intention to retire has been hypothesized as an important antecedent of actual retirement behavior, and indeed empirical evidence has supported this relationship (Feldman & Beehr, 2011; Wang & Shultz, 2010). Even though scholars in the field have looked into pressures arising both from the work and the non-work social environment that influence older workers' retirement intentions (cf. Van Dam et al., 2009; Wang & Shultz, 2010). up to now, only a few studies have investigated the influence of support that older workers perceive from their direct work environment (being a job resource), such as job development climate (Armstrong-Stassen & Schlosser, 2008), support for competency development provided by the organization (De Vos et al., 2011), and learning value of the job (Van der Heijden et al., 2016), on workers' engagement in employability activities offered by employers.

Likewise, opportunities for development are related in general to a lower intention to quit (Henry et al., 2015; Truxillo et al., 2012).

In a similar vein, to the best of our knowledge, job support for learning, being the first antecedent in our model, and defined as the degree to which the job design promotes continuous learning and stimulates workers to acquire new knowledge and skills (Tracey & Tews, 2005), has never been examined as a predictor of older workers' engagement in employability activities.

Likewise, older workers' views on the so-called 'return on investment' of their own engagement in employability activities is assumed to be an important factor in their decision to stay or leave the labor market (cf. Greller & Simpson, 1999).

In addition, negative age stereotyping is the second predictor in our theoretical framework. Although there is empirical evidence that employees' intrinsic work motivation does not decline with age (Kanfer & Ackerman, 2004), in practice, the contribution of older workers in the workplace is often not very highly valued (Claes & Heymans, 2008). More specifically, one of the most common age stereotypes regarding older workers is their alleged lower productivity and job performance (Henkens, 2005; Posthuma & Campion, 2009). As a result, companies prefer to seek and hire younger workers instead of exploring the advantage of employing older ones (Homberg & Bui, 2013), and to invest in their further career growth. Furthermore, older workers may feel stigmatized and stereotyped and may, therefore, opt for (earlier) retirement (Schermully et al., 2014).

In view of the outline given above, the present study aims to contribute to the debate on older workers' sustainable employability and intention to retire (De Graaf et al., 2011; Van der Heijden et al., 2009) by studying: 1) the effect of 'perceptions of job support for learning' and of 'age stereotypes on older workers' lower productivity' (from now on also called 'perceived negative age stereotypes on productivity') on their intention to retire; 2) the mediation effect of older workers' engagement in employability activities in these relationships; and 3) the moderation effect of age within these relationships.

In particular, this study adds to the literature in several ways. Firstly, this empirical research will focus on workers in their latter career stages (55 and over) in Italy, as it is one of the countries in Europe with the oldest population (cf. Eurostat, 2015), herewith incorporating an ever-growing part of the workforce. Secondly, much in line with the plea for an integrative approach by De Vos et al. (2011), this research will build our theoretical lens on Van der Heijden's (2005) employability enhancement framework which distinguishes between three categories of antecedents [i.e., individual factors (in our model, age); job-related factors (in our model, job support for learning (Tracey & Tews, 2005); and organizational factors (in our model, perceived negative age stereotypes (Hassell & Perrewe, 1995)]. In order to predict both workers' employability and work-related or career outcomes (in our study, older workers' intention to retire), this research will incorporate the insights from the Job Demands-Resources (JD-R) framework by Bakker and Demerouti (2007) and the argumentation about 'loss and gain spirals' from the Conservation of Resources (COR) theory (Hobfoll, 1989) within the retirement literature (e.g., Resources-Based Dynamic Model for Retirement Adjustment; Wang & Shi, 2014) into our empirical model. Thirdly, previous studies have researched workers' employability from a 'career success perspective', analyzing the relationship with, for example, workers' turnover intention (De Cuyper et al., 2011) and their intention to work until retirement age (De Graaf et al., 2011). However, to the best of our knowledge, up to now, few empirical studies have looked into the association between older workers' employability and their attitudes toward retirement (De Coen et al., 2015; Hennekam, 2015). Fourthly, because of the serious lack of studies including workers over 60 years old (e.g., De Lange et al., 2010; Müller et al., 2015) and the absence of research on different age groups within the 'older workers' category, this research will draw upon lifespan developmental theories (Baltes & Baltes, 1990; Carstensen et al., 1999) to investigate the moderating effect of age in the hypothesized relationships. More specifically, a Multi-Group SEM analysis will be used to compare two categories of 'older workers': those aged 55-60 years old versus those aged 61-65 years old. Building upon the previously explained 'older workers' categorization (European Council, 2001),

this research will compare two specific age subgroups in order to better investigate statistical differences within the older workers' age group as a whole.

Perceived job support for learning, perceived negative age stereotypes, and workers' retirement intention

Despite the fact that cognitive and interpersonal skills are increasingly required (Wang et al., 2013), most employers tend to invest little in the training and development of older workers compared to their younger counterparts, as they consider investments in them not to pay-off, just because they are closer to their retirement date (Taylor et al. , 2010). A *self-fulfilling prophecy* (Van der Heijden, 2005) may be generated in case workers don't perceive their job and their organization as stimulating their ongoing personal development, and, as a result, they may even decide to seek new job opportunities elsewhere or to retire (Armstrong-Stassen & Schlosser, 2008; Armstrong-Stassen & Ursel, 2009; Zaniboni et al., 2010).

On the other hand, social norms can affect individual workers' behavioral intentions (Ajzen, 1991), such as their intention to retire. Organizational contextual factors (e.g., age climate, social norms, and perceived age stereotypes) are generally seen as potential antecedents of workers' behaviors (cf. Ajzen, 1991; Dordoni & Argentero, 2015), with retirement being no exception (Schermuly et al., 2014; Von Hippel et al., 2013). Specifically, in situations where negative stereotypical views [viewed as job demands that require sustained psychological (cognitive and emotional) efforts and that are associated with certain psychological costs (cf. Bakker & Demerouti, 2007)] on older workers are prevalent, poorer productivity and job performance are reported more often (Posthuma & Campion, 2009). That is, older workers who feel stigmatized, and who are viewed as being less productive, may perceive a lack of resources and cope with this situation by living up to these negative views and by preparing mentally for earlier retirement (Müller et al., 2013). This may lead to a *self-fulfilling prophecy* (Van der Heijden, 2005) being reflected in

reduced investment in further career development by older workers, thereby confirming the negative attitude of the supervisor.

Based on the theoretical outline presented above, the following was hypothesized:

Hypothesis 1: *Older workers' perceptions of job support for learning are negatively related to their intention to retire (H1a), and their perceptions of negative stereotypes are positively related to their intention to retire (H1b).*

Towards a mediation model explaining workers' intention to retire

Van der Heijden's (2005) employability enhancement model hypothesizes personal factors, job-related characteristics and organizational-level factors to be important determinants of workers' employability, which, in turn, predicts work and career-related outcomes (cf. De Coen et al., 2015; De Cuyper et al., 2011; De Vos et al., 2011; Van der Heijden et al., 2009). It is assumed that perceiving sustainable support from the organization may enhance older workers' own engagement in employability as well, while perceiving negative age stereotypes towards them could reduce their own investment in career development activities. In turn, it is hypothesized that older workers' intention to retire might be affected as well. Incorporating insights from the JD-R model by Bakker and Demerouti (2007) Conservation of Resources (COR) theory by Hobfoll (1989) and the Resources-Based Dynamic Model for Retirement Adjustment (Wang and Shi, 2014) into Van der Heijden's employability enhancement model, it can be stated that 'perceived job support for learning' [viewed as personal resources (De Cuyper et al., 2012)] can motivate workers to invest in their employability activities (Pulakos et al., 2000) which may be defined as those activities that workers undertake to improve and maintain their employability (Van Dam, 2004)], and, which may, in turn, reduce their intention to retire ('gain spiral'; see Hobfoll, 1989; Wang & Shi, 2014; Wang et al., 2011) (see also Armstrong-Stassen & Schlosser, 2008; Armstrong-Stassen & Ursel, 2009 who found that support for learning was associated with intention to remain within the organization). On

the contrary, older workers' 'perceptions of negative age stereotypes' in their organization ([viewed as a job demand] can reduce workers' motivation to engage in employability activities (Raemdonck et al., 2015) which, in turn, may enhance their intention to retire ('loss spiral'; see Hobfoll, 1989) (see also Bal et al., 2011 who found that the way workers feel that others perceive them, may affect self-based behavioral outcomes at work, such as workers' intentions to quit).

Hence, it can be argued that older workers who perceive sustainable support for further career development (Van der Heijden and De Vos, 2015) at both a job - and organizational level, and who feel that others still 'believe' in their potential will be more willing to accumulate resources [see also the Conservation of Resources Theory (COR; cf. Hobfoll, 1989)], and by investing themselves in their own careers as well through engaging in employability activities (De Coen et al., 2015).

et al. and In other words, since higher levels of employability can motivate workers to postpone retirement (De Coen et al., 2015), a dual mechanism (both comprising a gain spiral and a loss spiral) is hypothesized (which reflects the *self-fulfilling prophecy*; Van der Heijden, 2005) to operate between the work context and older workers' intention to retire. Based on this, the following hypothesis was formulated:

Hypothesis 2: *Workers' engagement in employability activities (partially) mediates the negative relationship between perceived job support for learning (H2a; reflecting a gain spiral) and the positive relationship between perceived negative age stereotypes (H2b; reflecting a loss spiral), on the one hand, and older workers' intention to retire, on the other hand.*

The moderating effect of age

Drawing upon lifespan developmental theories (Baltes & Baltes, 1990; Carstensen et al., 1999), different model relationships may be expected for workers aged 55 to 60 years old in comparison with those aged 61-65 years old. More specifically, building on Selective Optimization with Compensation Theory (SOC) (Baltes et al., 1999) and Socio-Emotional Selectivity Theory (SST)

(Carstensen, 1995), we argue that age can be expected to moderate the relationships between the two antecedents ‘job support for learning’ and ‘perceived negative age stereotypes’, on the one hand, and our dependent variable ‘intention to retire’, on the other hand, through the mediating variable ‘engagement in employability activities’.

As previously stated, to the best of our knowledge, no earlier research has ever investigated the moderating role of age *within* an older worker age group. Moreover, it is well known that the number of older workers has grown over the past decades, and that the more experience workers accumulate, the more their needs vary in terms of the role work plays in their lives, leading to an ever-increasing workforce heterogeneity (Carstensen, 2006). Consequently, the moderating effect of age is a highly important, yet complex issue to take into account (cf. Rudolph, 2016).

According to SOC theory (Baltes et al., 1999), due to the loss of biological, mental and social resources, older workers employ and optimize available resources to reach *those* goals in life that they consider most desirable and important. This line of reasoning also reflects the so-called ‘prevention focus’ (see Higgins, 1998) according to which people strive to minimize or prevent losses of available resources, and this process becomes more salient with age because of the loss of biological, mental and social resources across the lifespan (Heckhausen, 1997), and even more so if they perceive a negative ‘loss spiral’. Previous research has already shown the negative relationship between age and growth motives, which refer to the value that workers attach to opportunities for advancement and continuous learning (Kooij et al., 2011), as well as between age and learning self-efficacy and learning value (Kochoian et al., 2016). In view of this, it is expected that particularly those workers aged 55-60 years old can benefit from job support from learning, as their learning orientation may be stronger in comparison with that of the eldest age group (Kanfer & Ackerman, 2004). Consequently, employees 55-60 years old may welcome learning opportunities more than those aged 61-65 years old (see Kooij & Zacher, 2016; Moghimi et al., 2016). Hence, the ‘positive or gain spiral’ which may be generated by offering older workers job support for learning, and that was discussed in the previous subsection, may especially enhance the motivation of those who

actually feel that they still have personal resources and a longer ‘time horizon’ (Carstensen, 1995). This latter concept is derived from the SST theory (Carstensen, 1995) and relates to the narrowing time horizons that workers experience when they grow older over the life cycle. Older workers’ perceptions of a more limited time horizon (Carstensen et al., 1999) and having fewer (time and energy) resources left is inextricably linked to goal selection and goal pursuit (Carstensen, 2006). Essentially, older workers are likely to adapt to ageing by prioritizing emotional regulation as a key life goal both in general and in their work life (De Lange et al., 2011; Rudolph, 2016). In fact, based on their limited time horizon, retirement could be an emotionally meaningful goal, particularly for the oldest workers (Freund, 2008). Likewise, it may be assumed that especially the oldest employees (aged 61-65 years old) strive to maximize their social satisfaction and minimize them being exposed to emotional risks, such as perceived negative age stereotypes. In order to maintain positive relationships with their colleagues (Beier, 2008), it is conceivable that these older workers will try to avoid exposure to negative events and/or to try to neglect or ignore them (Rudolph, 2016), such as negative age stereotyping, and are inclined to orient and focus more on pleasant goals, in our case retirement. In contrast, those who have a relatively more ‘open-ended’ future (in this study, it is expected this to be more applicable to those workers aged 55-60 years old, that is the relatively younger age category) may more easily perceive themselves as being part of their organization’s future workforce. That is to say, the workers aged 55-60 years old still have to deal with the negative age stereotypes over a relatively longer time period, and in combination with their relatively stronger growth and development motives, these stereotypes are especially harmful for them. Otherwise stated, negative age stereotypes within the organization may affect employees from the 55-60 years old age category more in comparison with the relatively older age group. Based on the outline provided above, the following is hypothesized:

Hypothesis 3: *Age moderates the strength of the (partially) mediated negative relationship between perceived job support for learning with intention to retire, through engagement in employability*

activities, such that the (partially) mediated relationship will be stronger for those aged 55-60 years old.

Hypothesis 4: *Age moderates the strength of the (partially) mediated positive relationship between older workers' perceptions of negative age stereotypes with intention to retire, through employability activities, such that the (partially) mediated relationship will be stronger for those aged 55-60 years old.*

Methods

Sample and procedure

A survey on HR policies towards age management and its impact upon intention to retire was conducted in a large Italian financial institution - one of the country's largest banks - with locations in multiple regions. For the survey, 2,785 workers aged 55 years and over were invited to participate anonymously in an online survey conducted over the company's intranet. Workers were proactively informed about the survey; additionally, two reminders were sent out by e-mail to every employee after two weeks and after one month, respectively. The researchers sampled explicitly across multiple Italian locations of the bank and across different regions. A total of 2,082 respondents (response rate of 74.7%) were included in the further analyses. The majority of respondents were male and aged between 55 and 60 years old and held a high school leaving certificate. Moreover, the majority had worked for the bank for 30 years or more. More than half of the respondents had a managerial role. Most of the respondents were married (or cohabiting), and more than half of them had at least one child.

Measurements

All variables were measured using five-point Likert scales (with answering categories ranging from 1 = strongly disagree to 5 = strongly agree). The reliabilities of the scales were tested by computing Cronbach's alpha and by performing a Confirmatory Factor Analysis (CFA). All variables were operationalized using thoroughly validated scales, and were derived from previous English versions using the translation-back translation procedure (Hambleton, 1994).

Perceived job support for learning. Older workers' perceptions of job support for learning were measured with three items that were selected from the Tracey and Tews' (2005) original five-item measurement scale. Cronbach's alpha was acceptable (.79). Only items that were actually referring to support for one's career and personal growth were selected. The three items were: "Work assignments include opportunities to learn new techniques and procedures for improving performance"; "There is a strong belief that continuous learning is important to successful job performance"; and "Gaining new information about ways to perform work more effectively is important in this organization". Construct validity of the scale has been explored through exploratory and confirmatory factor analysis. Factor loadings ranged from -.68 to -.79 for the factor and each having a significant contribution to the latent construct (Tracey & Tews, 2005).

Perceived negative age stereotypes. A slightly adapted version of a four-item scale by six item scale by Henkens (2005) was used to measure older workers' perceptions of age stereotypes regarding their lower productivity in the organization. Cronbach's alpha was .66. Four items that were actually referring to job performance and autonomy were selected. Item were: "In my workplace people think that older workers are less productive than younger workers"; "In my workplace people think that older workers are less resourceful than younger workers." And "Older workers are just as enterprising as younger workers". Construct validity of the *Stereotypes toward older workers scale* has been explored through exploratory and confirmatory factor analysis. Factor loadings ranged from -.37 to -.84 for the Productivity factor, each having a significant contribution to the latent construct (Henkens, 2005).

Engagement in employability activities. A slightly adapted version of Van Dam's (2004) original five-item measurement scale was used. Cronbach's alpha was acceptable (.71). Only items measuring engagement in activities actually referring to develop knowledge and to enhance one's career were selected. Item were: "I am actively trying to develop my knowledge and work experiences"; "I do a lot to manage my career" and "I am actively trying to increase my employability". Convergent validity has been explored through correlation analysis. The scale had correlated significantly with the Sensation – Intuition Scale of the MBTI (Myers & McCaulley, 1985) ($r = .46; p < 0.001$), with Initiative Scale (Goldberg (1996) ($r = .38; p < 0.001$), and with Schein's (1985) Career Anchor Questionnaire subscales: Managerial Competence ($r = .44; p < 0.001$), Variety ($r = .54; p < 0.001$) and Security ($r = .31; p < 0.001$) (Van dam, 2004).

Intention to Retire. Following Zaniboni et al. (2010), who developed a measurement scale based upon Ekerdt's work (1996), older workers' intention to retire was measured using three items. Item were: "Even when I can retire I will keep on working", "I will keep on working by changing job type, even when I can already retire" and "As soon as I can retire, I will definitely stop working". Cronbach's alpha was .66.

Moderator. The moderating variable 'age' was measured by means of a dummy variable representing two age categories: 1) those aged 55 to 60 years old; and 2) those aged 61-65 years old.

Control Variables. Given the outcomes of previous empirical studies, gender, education, tenure, job level (De Coen et al., 2015), marital status (Elovainio et al., 2005), and having children (Oakman and Wells, 2013) were included as control variables in the analyses. The following scales were used: gender (1 = female, 2 = male), education (1 = high school, 2 = university), tenure (0 = less than 30 years employed at the bank, 1 = more than 30 years employed at the bank), job level (0 = office worker, 1 = manager), marital status (0 = single/widowed, 1 = married/cohabiting), and having children (0 = no, 1 = at least one child).

Analyses

Mplus (Muthén and Muthén, 2012) was used to perform the analyses. First, the divergent validity of our latent constructs was examined by testing the measurement model using Confirmatory Factor Analysis (CFA). Second, Structural Equation Modeling (SEM) was used to test our hypotheses. The fit of the hypothesized model was compared to that of several competing models, using the full sample. Subsequently, the best fitting model was selected to examine the invariance of the model across the two distinguished employee age groups. Third, structural invariance was tested using Multi-Group SEM analysis. The data was split into two groups based on the dummy variable for age. The first group included respondents in the age range from 55 to 60 years old (N = 1,815). The second group included those respondents aged 61-65 years old (N = 267).

Results

Preliminary analyses

The correlation matrix that is depicted in Table 4.1 shows that perceived job support for learning was positively associated with engagement in employability activities, while it was negatively associated with perceived negative age stereotypes, and with workers' intention to retire. Table 4.1 also shows a negative association between perceived negative age stereotypes and engagement in employability activities, and a positive association with intention to retire. Based on the results of the correlation matrix, the mediation paths from perceived job support for learning and perceived negative age stereotypes on intention to retire, through engagement in employability activities, are plausible and, therefore, further investigation of these using SEM analyses can be justified (Baron & Kenny, 1986).

Table 4.1. Correlation matrix (N = 2,082)

Variable	1	2	3	4	5	6	7	8	9	10
1. Job support for learning	1									
2. Age stereotypes on older workers' lower productivity	-.23***	1								
3. Engagement in employability activities	.56***	-.22***	1							
4. Intention to retire	-.32***	.16***	-.47***	1						
5. Gender	.00	-.012	-.03	-.14***	1					
6. Education	-.01	.05	.12***	-.13***	.01	1				
7. Tenure	-.09*	.07	-.14**	.11**	.06	-.51***	1			
8. Job level	.18***	-.04	.32***	-.30***	.42***	.27***	.14**	1		
9. Marital status	.09*	-.02	.06	-.11**	.32***	-.04	.06	.14***	1	
10. Having children	.04	.06	.05	-.19***	.21***	.13***	-.17***	.10**	.47***	1

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

Testing the measurement model

A full measurement model was tested including the latent constructs of: 1) perceived job support for learning; 2) perceived negative age stereotypes; 3) engagement in employability activities; and 4) intention to retire. Using CFA, the four latent variables constructed by means of 13 observed variables were modeled as discussed in the Measurement section above. The full measurement model yielded a good fit to the data (see Table 4.2, Model C). All observed variables had a significant contribution to the latent constructs with factor loadings for the items concerned ranging from .90 to .29. Therefore, all the manifest variables were included in comprising the latent constructs (Anderson & Gerbing, 1988; Iacobucci, 2009).

Table 4.2. Goodness of Fit Indices for the Distinguished Models (N = 2,082).

	Chi-Square Test of Model Fit	DF	Model Comparison (Δ Chi- Square)	Δ DF	RMSEA	CFI	SRMR
A (M \rightarrow DV)	728.378***	145			0.044	0.93 1	0.047
B (IV \rightarrow DV)	829.245***	144	-100.867*** (A – B)	1	0.048	0.91 9	0.053
C (IV \rightarrow M \rightarrow DV)	718.757***	143	110.488*** (B – C)	1	0.044	0.93 2	0.045
			9.621** (A – C)	2			

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

Note: M = mediator; DV = dependent variable; IV = independent variable.

Testing of the hypothesized model

The fit of the hypothesized model was compared to that of several competing models, using the full sample in order to test the mediation hypothesis. Afterwards, the best fitting model was selected in order to examine the invariance of the model across the two distinguished employee age groups. As Table 4.2 shows, Model A, including the direct relationship between the mediator (engagement in employability activities) and the outcome (intention to retire), has an acceptable fit. In line with expectations, engagement in employability activities was negatively associated with intention to retire ($\beta = -.38$; $p < .001$). Then the fit for Model B was computed, in which direct effects from the independent variables (perceived job support for learning and perceived negative age stereotypes) on the dependent variable (intention to retire) were tested. The fit indices suggested that the model fit was acceptable (see Table 4.2). In support of Hypothesis 1, perceived job support for learning ($\beta = -0.24$; $p < .001$) was negatively related to intention to retire (H1a), while perceived negative age stereotypes ($\beta = 0.06$; $p = .017$) related positively to intention to retire (H1b). Then the mediation model (Model C) was calculated, which included direct and indirect paths from perceived job support for learning and perceived negative age stereotypes to intention to retire, through engagement in employability activities. In line with Hypotheses 2a, the partial mediation of

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perceived job support for learning on intention to retire, through employability activities ($\beta = -.16$; $p < .001$) was confirmed, also leaving a direct effect of job support for learning on intention to retire ($\beta = -.07$; $p = .027$). Moreover, in line with Hypotheses 2b, it confirmed a full mediation of perceived negative age stereotypes on intention to retire, through employability activities ($\beta = 0.02$; $p = .005$), whereas the direct effect was no longer significant ($\beta = .05$; $p = .066$). The mediation model provided an acceptable fit to the data. Moreover, the outcomes of the Chi-square change indicated that the fit of the mediation model was superior to the fit of the direct effects' models (Models A and B) (see Table 4.2). Therefore, the mediation model was used for testing the moderation hypotheses.

Testing for Multi-Group invariance

In order to investigate the possible moderation effect of employee age, Multi-Group SEM analyses was conducted. Following the stepwise procedure recommended by Van de Schoot, Lugtig, and Hox (2012), the measurement invariance of the mediated model (Model C) was studied across the two distinguished employee age groups by placing constraints on particular parameters. The first step of the Multi-Group SEM analyses comprised the testing of a so-called free model (Model 1). In this model, all parameters were unrestricted. In a second step, the fit of the free model (Model 1) was compared with a model in which the factor loadings were constrained to be equal (Model 2), a model in which both factor loadings and intercepts were constrained to be equal (Model 3), a model in which the factor loadings, intercepts and the errors were constrained to be equal (Model 4), and a model in which the factor loadings, intercepts, errors and the structure were constrained to be equal (Model 5). Models 2, 3 and 4 were aimed at testing for metric invariance, whereas Model 5 was meant for testing for structural invariance (Van de Schoot et al., 2012). The results of the model fit tests (see Table 4.3) showed a significantly worse model fit when moving from the model with the constrained factor loadings and intercepts (Model 3) to the model that also constrained the errors (Model 4). This indicates that there is metric invariance, more specific, scalar

invariance. This implies that the meaning of the constructs, based on both the factor loadings and the intercepts, is equal in both employee age groups. Therefore, it is justified to compare the two age groups as regards their scores for the latent constructs (Van de Schoot et al., 2012). However, our outcomes also indicate that there is no structural invariance. Indeed, the model with the fixed structure (Model 5) has a significantly worse fit (as the Chi-Square rises significantly) in comparison with Model 3 (see Table 4.3). Therefore, the Multi-Group SEM analyses for the distinguished structural paths were also justified.

Table 4.3. Measurement fit for the distinguished invariance models (N = 2,082).

	Chi-Square Test of Model Fit	DF	Model Comparison (Δ Chi- Square)	Δ DF	RMSEA	CFI	SRMR
1 FREE MODEL	753.027	259			0.043	0.942	0.045
2 LOADINGS FIXED	771.735	272	-18.708 (M1-M2)	13	0.042	0.941	0.047
3 LOADING INTERCEPTS FIXED	765.139	268	6.596 (M2-M3)	-4	0.042	0.941	0.045
4 LOADINGS INTERCEPTS ERRORS FIXED	798.683	281	-33.544*** (M3-M4)	13	0.042	0.939	0.047
5 LOADINGS INTERCEPTS ERRORS STRUCTURE FIXED	811.268	298	-46.129* (M3-M5)	30	0.041	0.939	0.047

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

Testing the moderated mediation model for retirement intention

Hypotheses 3 and 4 stated that employee age would moderate the (partially) mediated relationships between perceived job support for learning and perceived negative age stereotypes, on the one hand, and intention to retire, on the other hand. Specifically, the research expected those

relations to be stronger among those workers aged between 55 and 60 years old. Results of the Multi-Group SEM test indeed revealed different paths across the two age groups. Tables 4.4 shows the results for each employee age group. Figure 4.1 presents the model outcomes with standardized path coefficients and significance levels for the age groups of workers between 55-60 years old versus those 61-65 years old. Firstly, perceived job support for learning appeared to be negatively related to intention to retire, through engagement in employability activities, in both age groups, yet, in line with our expectations, the negative relationship was stronger among the 55-60 years old category ($\beta = -.16, p < .001$) in comparison with the category of workers 61-65 years old ($\beta = -.11, p = .003$). Taking together the fact that there is no structural invariance and that 55-60 years old have higher Beta coefficients, Hypothesis 3 was supported by our data. Secondly, perceived negative age stereotypes related positively to intention to retire, through engagement in employability activities for workers aged 55-60 years old ($\beta = 0.02, p = .02$), while there was no significant relationship for the workers 61-65 years old. With these outcomes, concerning the (partial) mediation paths of both perceived job support for learning and perceived negative age stereotypes, Hypothesis 4 was supported by our data as well. Both mediation paths were stronger for the workers between 55-60 years old in comparison to the workers 61-65 years old.

Table 4.4. Structural path analyses.

Variables	Intention to retire	
	55-60 results β (SE)	60-65 results β (SE)
<i>Direct effects</i>		
Job support for learning	-.06 (.03)	-.06 (.08)
Perceived age stereotypes on older workers' productivity	.06* (.03)	-.01 (.07)
Engagement in employability activities	-.34*** (.03)	-.31*** (.09)
Gender	-.09 (.06)	-.01 (.27)
Education	-.11 (.07)	.27 (.17)
Tenure	.11 (.09)	.35 (.33)
Job level	-.25*** (.06)	-.31* (.16)
Marital status	.01 (.07)	-.24 (.23)
Having children	-.30*** (.05)	-.22 (.14)
<i>Indirect effects</i>		
Job support for learning ON Intention to retire THROUGH Engagement in employability activities	-.16*** (.02)	-.11** (.037)
Perceived age stereotypes on older workers' productivity ON Intention to retire THROUGH Engagement in employability activities	.02* (.01)	
Gender ON Intention to retire THROUGH Engagement in employability activities	.07*** (.02)	
Tenure ON Intention to retire THROUGH Engagement in employability activities	.07* (.03)	
Job level ON Intention to retire THROUGH Engagement in employability activities	-.15*** (.02)	-.15* (.06)
R ²	.22*** (.02)	.17*** (.06)

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

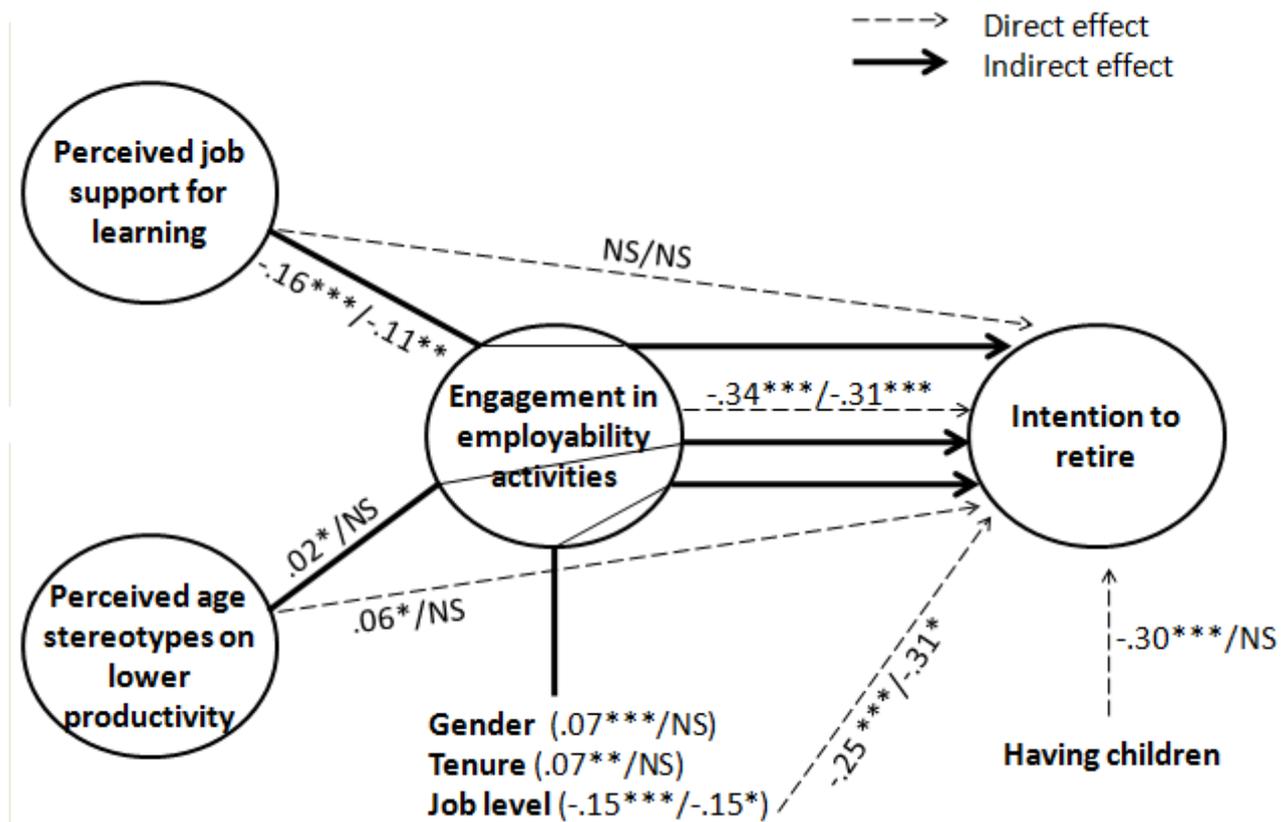


Fig.4.1. Parameter estimates of the Multi-Group SEM (standard coefficients).

Note: The coefficients of the different employee age groups are sorted in ascending order: 55-60 years old/60-65 years old.

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

Discussion and conclusions

The present study aimed to contribute to the debate on older workers' sustainable employability and intention to retire by thoroughly testing a new empirical model. This model built on Van der Heijden's (2005) employability enhancement framework, while incorporating additional key scientific literature, in order to unravel the relationships between older workers' perceptions of job support for learning and of negative age stereotypes, their engagement in employability activities, and their intention to retire. In the full sample, empirical evidence for two mediation paths was found, wherein older workers' engagement in employability activities mediates the relationships between the two predictors. More specifically, partial mediation for perceived job support for

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learning and full mediation for perceived negative age stereotypes, on the one hand, and intention to retire, on the other hand were found. Furthermore, empirical support was found for the moderation hypotheses predicting that these mediation effects differed among the age groups, and indeed were found to be stronger for workers aged 55 to 60 years old in comparison with their relatively younger counterparts. Below, an elaboration of the main results of our study is provided.

Job-related factors, organizational factors, and older workers' intention to retire

In line with related studies (Armstrong-Stassen & Ursel, 2009; Elovainio et al., 2005; Hofstetter & Cohen, 2014; Schreurs et al., , 2011), our empirical work revealed that ‘perceived job support for learning’ [viewed as a job-level resource (cf. Demerouti et al., 2001)] has the potential to reduce older workers’ intention to retire. Further, in line with previous studies (cf. Hofstetter & Cohen, 2014; Schermuly et al., 2014; Von Hippel et al., 2013), the research found that ‘perceived negative age stereotypes’ [viewed as an organizational-level demand (cf. Demerouti et al., 2001)], were associated with retirement intention. Hence, both positive perceptions on the room for development in their jobs and negative perceptions on their organization’s culture, in terms of the prevalence of negative age stereotyping, have proven to be important factors in older workers’ retirement intentions.

The mediating role of engagement in employability activities

The direct relationship between engagement in employability activities and intention to retire provided empirical support for the theoretical claim that employability [viewed as a personal resource (cf. De Coen et al., 2015; De Cuyper et al., 2012)] has the potential to mediate the relationships between job-related and organizational characteristics, such as job resources (i.e., job support for learning) and job demands (i.e., perceived negative age stereotypes), on the one hand, and older workers’ retirement intention, on the other hand (cf. Bakker et al., 2003). Our path model, based on the full sample, revealed two important behavioral processes, operating between the work

context and older workers' intention to retire. On the one hand, following COR theory (Hobfoll, 1989) and the Resources-Based Dynamic Model for Retirement Adjustment (Wang & Shi, 2014), the present research found a solid 'positive gain spiral' wherein older workers' perceptions of job support for learning motivates them to engage more in employability activities (conservation of personal resources), which, in turn, reduces their intention to retire (cf. De Cuyper et al., 2011). Possibly, individuals who have accumulated more personal resources feel to be stimulated in their career and believe that they have a higher level of sustainable employability and, therefore, want to prolong their working life. On the other hand, the research found a 'negative loss spiral' (Hobfoll, 1989) in which older workers' perceptions of age stereotypes productivity discourages their engagement in employability activities, which, in turn, increases their intention to retire., Older workers' perceptions of negative age stereotypes lower their self-evaluations, which, through a *self-fulfilling prophecy*, reduces their engagement in employability activities (Van der Heijden, 2005). This, in turn, results in them wanting to leave the organization sooner. Hence, the present study follows Finkelstein et al. (2015) and calls for a broader perspective on age stereotyping; the daily pulse of interpersonal interaction in an organization requires multiple viewpoints indeed, which have the potential to affect individual behaviours.

Finally, findings also confirm a recent contribution added by Zaniboni (2015), in which older workers that still had access to personal resources (i.e., learning ability and interest in development) desired to go on working longer when they perceived to low discriminated against.

The moderating effect of age in the mediation model

Finally, the present research contributed to the to the debate on older workers' sustainable employability (De Graaf et al., 2011; Van der Heijden et al., 2009) by looking into the complex moderating effect of age within the relationships between job support for learning, perceived negative age stereotypes, engagement in employability activities, and intention to retire. The assumptions regarding the moderation effects were based on the argumentation on future time

perspective, following the SST theory (Carstensen, 2006) and the SOC theory (Baltes et al., 1999). Our multi-group findings indeed supported the assumption that there is a relationship between individuals' so-called 'life time horizon' (cf. Carstensen, 2006) and their engagement in employability activities, implying that those aged 55 to 60 years old have a more 'open-ended future' in comparison with those 61-65 years old, and are more inclined to invest in their further career development. Additionally, in line with lifespan developmental theories (Baltes and Baltes, 1990; Carstensen et al., 1999) and empirical evidence from previous ageing research (cf. Baltes, et al., 1999; Kanfer & Ackerman, 2004; Kooij et al., 2011; Kooij & Zacher, 2016; Rudolph, 2016), our multi-group results also confirmed the line of reasoning, stating that, with ageing, people become more motivated towards maintaining the performance in their current job, instead of focusing on growth and development goals (i.e., being less learning oriented), and tend to minimize losses (i.e., paying less attention to, or focusing less on, negative age stereotypes, and as a result, probably, being less threatened by these).

In particular, our multi-group findings support outcomes from previous research suggesting a stronger 'prevention focus' (Higgins, 1998) among older workers (Ebner et al., 2006), since the allocation of resources for acting upon growth goals tends to decline throughout the lifespan while, with ageing, acting upon maintenance and regulation of 'loss or prevention' goals appear to increase (see Rudolph, 2016). Concrete, older workers may prefer to focus on what they might gain in their work setting rather than what they might lose. In doing so, they may shift their attention from focusing upon a further career growth to a possible alternative, in this case retirement. It is likely that in the meantime they may value their current position, in particular the positive relationships with their colleagues, and may be less bothered and/or threatened by negative age stereotyping. Moreover, in perceiving negative age stereotypes, older workers may re-evaluate the meaning of work (cf. Baltes & Baltes, 1990; Hobfoll, 1989), resulting in a decreased value that work has for them, which, in turn, may increase their likelihood to retire.

The revealed employee age group effect in this study may be explained by highlighting the younger age group's relatively 'open perception of the future' in comparison with the 61-65 years old age group (Carstensen et al., 1999). That is, the former age group still has almost ten years of work ahead, whereas the latter may be more disengaged from their organization's culture. In fact, the relatively younger employee age group may see retirement more as a future event and, therefore, might be more motivated or, in this case, discouraged by negative organizational factors, in our case perceptions of negative age stereotypes, as these may affect (harm) their actual mindset and immediate future. Alternatively, the 61-65 years old group's awareness of reaching retirement might contribute to striving for experiences that are more positive (for instance focusing on good relationships with close colleagues) in order to get rid of these negative emotions (Carstensen, et al., 1999).

Overall, our multi-group results contribute to the existing literature by applying lifespan developmental theories in a study focusing on the 'older workers' age bracket. In fact, the present research have demonstrated that, due to its heterogeneity, the older workers' category should not be taken as one unit of analysis. Based on the effects of age that the research found in our contribution, it can be conclude that further elaborating on age-related processes incorporating a 'future time perspective' is strongly needed in order to advance the HRM, career and employability literatures, since it allows scholars to better understand *why* and *how* age effects occur and how they affect organizational behaviors (cf. De Lange et al., 2010; Rudolph, 2016).

Limitations of the study and recommendations for future research

Despite the important contributions of our study discussed above, there are several limitations that should be acknowledged. First, although our moderated mediation model allowed us more insights into positive and negative processes, the data used were cross-sectional. Therefore, our conclusions have to be interpreted with care. Second, as all variables in our study were measured using self-reports, a common-method bias may exist (Podsakoff et al., 2003). Moreover, although

we believe that the scales reflect meaningful content coverage and unidimensionality, implying that the relatively low alphas are not a major impediment to its use (Schmitt, 1996), more reliable measures for perceived negative age stereotypes and for intention to retire might be used in future work. In response to both limitations, future longitudinal research, preferably using a multi-wave design in order to better examine and analyze, in-depth, the causal relationships within the model (De Lange, 2005), and incorporating more objective data, such as, actual retirement age, is called for. Finally, further research should include objective indicators together with self report measurements in order to better investigate model relationships.

Practical implications

Our study has important implications for managers and other important stakeholders in organizations who are in search of ways to enhance older workers' career development, in order to improve both their sustainable employability as well as the performance of the organization. Increasing older workers' added value throughout their lifespan strengthens their chances in both the internal and external labor market (Rocco & Thijssen, 2006; Van der Heijden et al., 1999, Folts, & Knapp, 2000; Zappalà et al., 2008). In order to achieve these multiple goals, organizations should provide older workers with ample job support for learning and should combat a culture that is prone to negative age stereotyping. With regard to the latter, human resource policies should pay more attention to the *process* of ageing and should focus on protecting sustainable employability throughout workers' entire career in order for older workers to feel 'conserved' instead of 'depreciated' (Peterson & Spiker, 2005). Moreover, our study shows that older workers respond differently to job-related and organizational factors than younger workers. Our results call for a reconsideration of reflections on 'return on investment' regarding the oldest workforce that are ubiquitous and solely based on negative age stereotyping rather than actual strengths and weaknesses of the employee involved. Zwick (2011) highlighted that, often, organizations do not offer appropriate learning opportunities to older workers because firms may view older workers as

being less effective; that is, on-the-job training is rarely available for older workers. This while the present research' results show that support for learning increases their engagement in employability activities, and, as a result, reduces their intention to retire. Hence, job design models should take into account workers' changing needs across the lifespan when examining effects of job characteristics and job design on work outcomes (such as intention to retire) (Henry et al., 2015). The present research findings also shed more light on the specific Italian context. In particular, a recent study based on the Activating Senior Potential in Ageing Europe project (ASPA, 2009) indicated that Italian employers considered the promotion of life-long learning as the most effective measure for enhancing the productivity of older workers. Nevertheless, employers do not actually apply policy regarding development and learning (Lazazzara et al., 2013). Using a lifespan perspective and carefully paying attention to age-related processes (such as workers' changing future time perspective and their prevention focus), human resource specialists and line managers should focus on supporting older workers' development throughout their entire career.

Chapter 5

Workaholism and age: a moderated mediation model on workload perceptions, emotional exhaustion and job satisfaction

Abstract

The notion of an ‘ageing population’ is associated with both an increased proportion of older workers and a growing demand for healthcare services. The associated higher job demands notoriously affect healthcare professionals’ job satisfaction. Therefore, healthcare organizations should align working conditions with workers’ personal characteristics and job resources.

The present research aims to determine the fit of an age-moderated mediation model by simultaneously estimating the mediating role of workload perceptions and emotional exhaustion in the relationship between workaholism and job satisfaction and the moderating role of healthcare professionals’ age. Cross-sectional data were used, derived from a self-report anonymous questionnaire, including 750 cases of Italian healthcare professionals, holding mainly a nursing role. Multi-Group SEM analyses revealed differences across three age groups (under 35 years old; between 35 and 50 years old; over 50 years old). In addition, the negative relationship between

workaholism and job satisfaction appeared to be mediated by workload perceptions and emotional exhaustion. This effect was relatively stronger among the younger age group in comparison to the older age groups. In addition, the Multi-Group analysis revealed a direct positive relationship between workaholism and job satisfaction for the two youngest age groups, whereas for their older counterparts no such relationship was found. Findings shed light on the ambiguous relationship between workaholism and job satisfaction. Workaholism may, under certain circumstances, increase job satisfaction while, at the same time, it is a risk as it triggers a loss spiral that, appears to be more dangerous with an increasing age.

Introduction

All over the world, the impact of the ageing and dejuvenization of the population and of labour markets challenges is felt strongly by organizations and professionals in the healthcare sector (Camerino, Conway, Van der Heijden, Estry-Behar, Consonni, Gould, & Hasselhorn, 2006; Wang & Shi, 2014). More specifically, these trends have led to a growing demand for healthcare services, posing higher workloads and emotional demands on healthcare workers (Glomb, Kammeyer-Mueller, & Rotundo, 2004). In addition, as the working population of the healthcare professionals themselves is also ageing, the earlier mentioned higher workloads and emotional demands have to be carried out increasingly by older healthcare workers themselves (Hedge & Borman, 2012). Particularly for this category of healthcare professionals the high job demands may be hard to cope with (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002; Bakker, Killmer, Siegrist, & Schaufeli, 2000), possibly leading to increased staff turnover and decreased older workers' retention (Coomber & Barriball, 2007; De Gieter et al., 2011; Heinen et al., 2013; Liu et al., 2011; Sawatzky & Enns, 2012). In order to maintain a motivated workforce and to reduce early turnover and retirement intentions (see also Armstrong-Stassen & Stassen, 2013), the healthcare system finds

itself in a difficult situation. In fact, healthcare organizations increasingly need to focus on ways to enhance their employees' levels of job satisfaction, which can be defined as "*a global feeling about the job or as a related constellation of attitudes about various aspects or facets of the job*" (Lu, While, & Barriball, 2005, p. 212). In order to protect their employees' job satisfaction, healthcare organizations may need to adjust working conditions (in this study operationalized as workload perceptions), and should align these to their personal characteristics (in this study age). Moreover, they should provide ample job resources (Baernholdt & Mark, 2009; Lu et al., 2005), for example by reducing their workload, which, in turn, is expected to decrease their emotional exhaustion. Furthermore, personality traits (in this study, workaholism trait; see Guglielmi, Simbula, Schaufeli, & Depolo, 2012) have been considered to be a prominent category of factors predicting healthcare workers' occupational well-being and job satisfaction since it may threaten their personal resources (cf. Burke et al., 2006; Cunningham, De La Rosa, & Jex, 2008; Guglielmi, Simbula, Schaufeli, & Depolo, 2012).

In previous scholarly literature, healthcare workers' job satisfaction is typically considered as one of the key indicators of well-being (Sheward, Hunt, Hagen, Macleod, & Ball, 2005; Scheibe, Stamov-Rosnagel, & Zacher, 2015). Moreover, it has been shown to be a core factor in achieving high quality of service delivery (e.g., performance) (cf. Lu, Barriball, Zhang, & While, 2012). Job satisfaction is a complex and multifaceted concept since it depends both on the nature of the job and on the individual's expectations of what the job should provide to them (Liu et al., 2011; Lu et al., 2012). Some scholars have argued that personal characteristics have more impact than working conditions when it comes to explaining individual reactions to work (Cunningham, De La Rosa, & Jex, 2008). In order to add to the literature in this field, we will take both personal and job-related characteristics into account, and will test their effects simultaneously in order to determine their relative impact in the light of employee job satisfaction.

In addition, while the relationship between workaholism and job satisfaction has often been researched up to now (cf. Burke et al., 2006), strikingly, however, the existing literature revealed

both positive (Burke, 1999) and negative associations (Shimazu & Schaufeli, 2009; Clark, Michel, Zhdanova, Pui, & Baltes, 2014). That is, the results are mixed and scholars in this knowledge domain have not reached a shared opinion yet (cf. Burke et al., 2006). Therefore, this contribution is aimed to shed more light on the underlying mechanism that determine the character of this relationship.

Unfortunately, healthcare staff faces high levels of workaholism [cf. Burke, Matthiesen, & Pallesen (2006) for an elaborate overview of health complaints; Kubota, Shimazu, Kawakami, Takahashi, Nakata, & Schaufeli, 2010, for sleep problems; Balducci et al., 2015, for mental distress)], which can be defined as “... *the tendency to work excessively in a compulsive way*” (Schaufeli, Bakker, Van der Heijden, & Prins (2009, p. 250). The concept of workaholism refers to the combination of *working excessively* and *working compulsively*. Workaholics typically allocate as much time to work as possible, sometimes creating even more work for themselves than is necessary and are obsessed with their work, being unable to detach from their duties (cf. Oates, 1971). Workaholism can therefore be viewed as an important personal demand affecting workers’ job satisfaction, as it has the potential to deplete their personal resources (Guglielmi et al., 2012), the resources which are strongly needed to cope with all kinds of workplace demands and to achieve high performance (cf. Clark et al., 2014).

In order to contribute to the scholarly and societal debates on working conditions, workaholism and healthcare professionals’ job satisfaction, and specifically, to further explore the ambiguous relationship between workaholism and job satisfaction, we build on the Conservation of Resources Theory (COR) (Hobfoll, 1989) which is based on the assumption that “*people strive to retain, protect, and build resources and that what is threatening to them is the potential or actual loss of these valued resources*” (Hobfoll, 1989, p. 513). In other words, when people perceive a threat or an actual loss of resources (in our research model workaholism and workload perceptions), or fail to receive sufficient return on their investment of resources (in our model emotional

exhaustion), they experience distress (in our model less job satisfaction) ('loss spiral'; Hobfoll, 1989).

In a similar vein, in case workaholism is perceived to be a personal challenge or resource (rather than as a personal demand) (cf. Buelens, & Poelmans, 2004), it is plausible that people do not perceive it to be a threat or an actual loss of resources; that is, workaholic professionals might enjoy experiencing an increased workload and, in turn, they may gain from it, leading to a higher amount of work pleasure (in our model, job satisfaction) ('gain spiral'; Hobfoll, 1989). Therefore, we will first examine the so-called 'loss of resources spiral' and test a chain of associations wherein it is assumed that workaholism 'impacts healthcare professionals' workload perception', resulting in increased emotional exhaustion', and, eventually affecting their job satisfaction in a negative way.

Second, we will examine the moderating effect of age within the research model; that is, to test whether the hypothesized 'loss of resources spiral' affects older healthcare professionals (i.e., over 50 years old) differently in comparison with the younger (i.e., under 35 years old) and middle-aged (i.e., between 35 and 50 years old) ones. As people get older they tend to perceive future as more limited, consequently shifting attention to the present (Carstensen, 1995). As such, emotionally meaningful goals become more relevant, because elderly are more easily engaged in achievement of short-term benefits. On the other hand, younger people perceive time as more "open-ended" and it has been argued that younger individuals are more motivated to growth and on knowledge-related goals, that can be useful to achieve successful goals (for instance career in the workplace setting) (idem.). Furthermore, younger people are relatively more *promotion focused* (e.g. interested in growth and development), have more resources (Baltes et al., 1999; Higgins, 1997) and need less time to recover in comparison with older coworkers (cf. Sluiter, De Croon, Meijman, & Frings-Dresen, 2003). There is a positive effect between age and need for recovery (cf. Jansen et al., 2002; Kiss et al., 2008; Mohren et al., 2010). In this sense, older workaholics with few time for recover may fall in a vicious circle, wherein workload and emotional exhaustion exacerbate this insane process (see also Hobfoll, 19989). Mohren et al. (2010) assumed that the decrease of

work capacity of the ageing worker will result in a further need for recover levels if the workload remains the same. Therefore, by using Multi-Group Structural Equation Modeling (SEM) to test for age-moderated mediation, the present study addresses the following research questions: Does workaholism have a direct relationship with healthcare professionals' job satisfaction? Is this relationship mediated by healthcare professionals' workload perceptions and emotional exhaustion? Are these relationships similar across workers in three distinguished age groups [under 35 (younger professionals); 35 to 50 (middle-aged professionals); and over 50 years old (older professionals), respectively]?

Hypothesis 1: *Workaholism is related to workers' job satisfaction.*

Hypothesis 2: *Workload (partially) mediates the relationship between workaholism and emotional exhaustion (H2a), which, in turn, (partially) mediates and the relationship between workload and job satisfaction (H2b).*

Hypothesis 3: *Age moderates the strength of the (partially) mediated relationship between workaholism with job satisfaction, through workload and emotional exhaustion, such that the (partially) mediated relationship will be stronger for those aged under 35 years old.*

Methods

Sample and Procedure

The data for this study (N = 750) was collected by means of a stratified sample from a northern Italian hospital that was aimed to be representative of professional category composition in the healthcare sector. After approval of the ethics committee, a self-administered questionnaire was distributed among four groups of healthcare professionals in the organization (i.e., nurse aides,

nurses, physicians, and physiotherapists). Participants filled in the questionnaires together with a socio-demographic form including their demographic details, and posted them in a private box; on average 15 minutes were needed to complete the questionnaire. In order to guarantee anonymity, code numbers were placed on the completed questionnaires after they were returned to the researcher.

The majority of the respondents was female (74%). 12% was under 35 years old; 56% was 35 to 50 years old; and 30% was over 50 years old (2% missing for respondent's age). As regards the professional categories, 11% of the respondents were employed as nurse aides; 57% were nurses; 16% were physicians; and 12% were physiotherapists (4% missing for professional category). Moreover, 23% of the respondents were employed in the hospital for 1 to 10 years; 24% for 11 to 20 years; and 52% for over 20 years (1% missing for tenure). Furthermore, only 13% held part-time jobs, while 87% held full-time jobs. Finally, 32% did not work in shifts; 16% only worked in day shifts and 50% also worked in night-time shifts (with 2% missing for shift).

Measurements

Five latent variables using Likert scales' answering categories were included in the survey. Scale reliabilities and factor structures were tested by means of Cronbach's alphas and Confirmatory Factor Analysis (CFA). *Workaholism* was measured using two subscales from the short version of the Dutch Work Addiction Scale (DUWAS) developed by Schaufeli, Shimazu, and Taris (2009) [i.e., 'work excessively' (Cronbach's alpha = .86), and 'work compulsively' (Cronbach's alpha = .93)]. A four-point rating scale was used, ranging from 1 (= almost never) to 4 (= almost always). The standardized factor loadings for work excessively ranged from .47 to .60', and for work compulsively they ranged from .45 to .76, with all items having significant loadings on the intended factor. Construct validities of both subscales have been explored through exploratory and confirmatory factor analysis. Factor loadings ranged from -.46 to -.78 for the *Working excessively* factor, and from .55 to .79 for the *Working compulsively* factor, each having a

significant contribution to the latent constructs. As for convergent validity, *Working excessively* scores correlated significantly with perceived health ($r = -.09, p < .001$) and with happiness ($r = -.07; p < .001$); likewise, *Working compulsively* scores correlated significantly with perceived health ($r = -.28, p < .001$) and with happiness ($r = -.25; p < .001$) (Del Libano et al., 2010, cf. Dutch sample). For the subsequent SEM analyses, the two subscales were combined in order to create a second-order construct, that is, 'workaholism' (Cronbach's alpha = .94). The factor loadings of both subscales on this second-order construct were .98 and .79, for work excessively and work compulsively, respectively, and both appeared to have a significant contribution to the second order construct.

Workload Perceptions was measured using a six-item scale to investigate professionals' workload perceptions (*Workload*; OCS; Leiter & Maslach, 2000; Italian validation by Borgogni, Galati, Petitta, & Centro Formazione Schweitzer, 2005). A five-point rating scale was used, ranging from 1 (= strongly disagree) to 5 (= strongly agree). The Cronbach's alpha was .79 and the standardized factor loadings ranged from .33 to .79, each having a significant contribution to the latent construct. Construct validity of the OCS was assessed through factor analysis. Factorial analysis confirmed a six-factor structure of the OCS corresponding to Workload, Control, Reward, Community, Fairness and Values (Leiter & Maslach, 2004). The six-factor solution was found to be an excellent fit to the data ($\chi^2 = 5138.98, df = 358; CFI = .94; RMSEA = .04$), with factor loadings ranging from .46 to .78 for the Workload factor (Leiter & Maslach, 2004).

Emotional exhaustion was measured using the five-item scale from Schaufeli, Leiter, Maslach, and Jackson (1996) (*Maslach Burnout Inventory-General Survey*; MBI-GS; Italian validation by Borgogni et al., 2005) using a seven-point scale ranging from 0 (= never) to 6 (= daily). Cronbach's alpha was .75 and the standardized factor loadings ranged from .75 to .87, each having a significant contribution to the latent construct. Construct validity of the MBI-GS has been explored through confirmatory factor analysis. Factor loadings ranged from -.37 to -.84 for the Productivity factor, from .69 to .82 for the Emotional Exhaustion factor, each having a significant contribution to the latent construct. As for convergent validity, subscale's score correlated

significantly with Problems with quality of care ($r = 0.12; p < .01$), positive management ($r = -.09; p < .05$), work overload ($r = .18; p < .01$), critical management ($r = .08; p < .05$), critical supervisor ($r = .11; p < .01$), low morale ($r = .13; p < .01$), job insecurity ($r = .08; p < .05$), harassment ($r = .13; p < .01$), stress and burnout ($r = .11; p < .01$) (Leiter & Schaufeli, 1996).

Job satisfaction was measured by asking how the participants would evaluate their job satisfaction. The one-item scale from Aiken, Clarke, and Sloane (2002) was used with answering categories ranging from 1 (= very unsatisfied) to 4 (= very satisfied).

Moderator. Age was categorized into three groups; the first group included those healthcare professionals being under 35 years old ($N = 82$); the second group included those aged 35 to 50 years old ($N = 397$); and the third group comprised those aged over 50 years old ($N = 212$).

Control variables. In the present study, we controlled for some key characteristics of healthcare professionals that have been shown to be predictive of workload perceptions, emotional exhaustion, and job satisfaction in previous scholarly work. In the analyses, these control variables we included as dummy variables. Specifically, we controlled for gender (with reference category male), professional category (with reference category physicians) (Fiabane et al., 2012), part-time (with reference category not part-time) and shift (with reference category no shift), (Burke, Berge, Matthiesen, & Pallesen, 2006).

Analyses

All analyses were performed using the Mplus software (Muthén & Muthén, 2012). First, we investigated the divergent validity of our constructs by testing the measurement model, using Confirmatory Factor Analysis (CFA). Secondly, we conducted preliminary analyses to investigate whether the assumed causality in our model made sense.. By conducting Structural Equation Modeling (SEM), we tested the hypothesized relationships in our research model. We compared the fit of the hypothesized mediation model to several direct effect models, using the full sample. The goodness of fit was evaluated based on the χ^2 goodness-of-fit statistic and some alternative fit

indices. The Comparative Fit Index (CFI) was computed, considering values over .90 indicating a good fit. For the Root Mean Square Error of Approximation (RMSEA), values up to .08 were viewed to represent a reasonable model fit. Finally, the Standardized Root Mean Square Residual (SRMR) was computed, considering values under .09 indicating good model fit (Hu & Bentler, 1999).

Based on these indicators, we selected the best fitting model in order to further examine the invariance of the model across the age groups using Multi-Group SEM analysis.

Results

Preliminary Analyses

Table 5.1 presents bivariate correlations for all possible combinations of the measured variables. It shows that workaholism was significantly correlated with both workload perceptions and emotional exhaustion. Furthermore, workload perceptions had a significant relationship with emotional exhaustion and job satisfaction. Emotional exhaustion was significantly correlated with job satisfaction. Based on these results, it is meaningful to test the mediation paths running from workaholism to job satisfaction via workload perceptions and emotional exhaustion (see Baron & Kenny, 1986).

Part B - Chapter 5: Workaholism and age

Table 5.1. Correlation Matrix (N = 750)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Workaholism	.94															
2. Workload perceptions	.77***	.79														
3. Emotional exhaustion	.57***	.78***	.75													
4. Job satisfaction	-.04	-.21***	-.36***	-												
5. Gender ^a	.12*	.16**	.16**	-.00	-											
6. Nurses aides ^b	.04	.02	.04	-.01	.06	-										
7. Nurses ^b	.03	.11*	.18***	-.01	.32***	-.88***	-									
8. Physicians ^b	.08	.03	-.17**	.03	-.50***	-.56**	-.93**	-								
9. Physiotherapists ^b	-.18**	-.27***	-.16**	-.00	.01	-.51**	-.88***	-.59**	-							
10. Under 35 years old ^b	.02	.01	-.00	-.04	-.11	-.30**	.14	-.05	.02	-						
11. Between 35 and 50 years old ^b	-.03	.00	.01	.07	.17**	-.08	.31***	-.32***	-.12	-.88***	-					
12. Over 50 years old ^b	.02	-.01	-.01	-.05	-.13	.21**	-.41***	.36***	.12	-.71***	-.99***	-				
13. Part-time work ^b	.07	.11	.05	.03	-.61***	.22	-.23**	.33***	-.07	.42***	-.23***	.09	-			
14. No shift work ^b	.07	.04	.04	-.03	.27***	-.21**	-.03	-.06	.28***	-.42***	-.07	.28***	-.38***	-		
15. Only daily shifts ^b	.01	-.03	.04	.01	.10	.13	.02	-.32***	.14	-.06	-.01	.04	-.11	-.79***	-	
16. Also night-time ^b	-.07	-.02	-.06	.02	-.30***	.10	.01	.22**	-.35***	.37***	.07	-.28***	.45***	-.97***	-.89***	-

*** $p < .001$; ** $p < .01$; * $p < .05$. Note: ^a 1= male, 2 = female; ^b 1= yes, 2= no

Testing the Measurement Model

We estimated a measurement model including latent constructs for: 1) workaholism – work excessively; 2) workaholism – work compulsively; 3) workload perceptions; and 4) emotional exhaustion. By means of Structural Equation Modeling (SEM) (including both CFA and path modeling), we modeled the four latent variables as discussed in the Methodology. Moreover, we tested the hypothesized sequential mediation model, from workaholism to job satisfaction via workload perceptions and emotional exhaustion, including two sequential mediators. In comparison to the other models that were tested (direct effects or using single mediation variables), the sequential model appeared to have the best fit with the data (see Table 5.2, model G). Therefore, the sequential mediation model was used in the Multi-Group analysis in order to further explore the relationships and to test the moderation effect of age.

Table 5.2. Goodness of Fit Indices for the Distinguished Models (N = 691)

	Chi-Square Test of Model Fit	DF	Model Comparison (Δ Chi- Square)	Δ DF	RMSEA	CFI	SRMR	
A	Workaholism – job satisfaction	1564.325	404		.064	.809	.061	
B	Workload perc. - job satisfaction	1530.274***	404	34.051** (A-B)	0 ^a	.064	.815	.059
C	Emotional exhaustion – job satisfaction	1473.563***	404	56.711*** (B-C)	0 ^a	.062	.824	.058
D	Workaholism - emotional exhaustion – job satisfaction	1508.969***	393	-35.406** (C-D)	11	.064	.817	.058
E	Workaholism – workload perc. - job satisfaction	1606.099***	404	-132.536*** (C-E)	0 ^a	.066	.802	.062
F	Workload perc. - emotional exhaustion – job satisfaction	1441.822***	393	31.741** (C-F)	11	.062	.828	.056
G	Workaholism – workload perc. – emotional exhaustion – job satisfaction	1425.816***	391	16.006** (F-G)	2	.062	.830	.055

^aIn case the df difference is 0, the Chi-Square comparison has been tested with a df of 1.

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

Testing for Sequential Mediation

In line with Hypothesis 1, workaholism influenced job satisfaction ($\beta = .303$; $p < .001$). Furthermore, the indirect effect (via workload perceptions and emotional exhaustion) was significant ($\beta = -.320$; $p < .001$). Hence, our mediation hypothesis (Hypothesis 2a and 2b) was supported by the data.

Testing for Measurement Invariance

In order to test the moderation effect of the age groups, we need to compare the structural model of the different age groups which are based on their scores on the latent constructs. In order to be able to compare the group results there should be measurement invariance between the groups. The measurement invariance of the sequential mediation model (Model G) across the three distinguished age groups (youngsters, middle-aged and older healthcare professionals) was studied using a stepwise procedure (Van de Schoot, Lugtig, & Hox, 2012). The first step of this analysis comprised testing a free model (Model 1), in which all parameters were unrestricted. In a second step, we compared the fit of Model 1 with a model in which the factor loadings were constrained to be equal (Model 2), a model in which both factor loadings and intercepts were constrained to be equal (Model 3), a model in which the factor loadings, intercepts and the errors were constrained to be equal (Model 4), and a model in which the factor loadings, intercepts, errors and the structure were constrained to be equal (Model 5) (Van de Schoot et al., 2012).

Our results showed that there was metric invariance. Model 4 does not fit significantly worse than the previous models and is therefore accepted as the best model (Van de Schoot et al., 2012). This implies that the meaning of the constructs, based on both the factor loadings, the intercepts and the errors, is equal in the age groups. Therefore, it is justified to compare the age groups with regards to their scores on the latent constructs (Van de Schoot et al., 2012). However, our outcomes also indicate that there is no structural invariance. Indeed, the model with the fixed structure (Model 5) has a significantly worse fit (as the Chi-Square rises significantly) in comparison with Model 4

(see Table 5.3), which justifies the use of a Multi-Group analyses for the distinguished structural paths.

Table 5.3. *Measurement Fit for the Distinguished Invariance Models (N = 702)*

		Chi-Square Test of Model Fit	DF	Model Comparison (Δ Chi- Square)	Δ DF	RMSEA	CFI	SRMR
1	FREE MODEL	3130.298	1003			0.096	0.660	0.206
2	LOADINGS FIXED	2173.583***	990	965.715*** (1-2)	13	0.072	0.811	0.076
3	LOADING INTERCEPTS FIXED	2167.722***	988	5.861 (2-3)	2	0.072	0.811	0.073
4	LOADINGS INTERCEPTS ERRORS FIXED	2214.304***	1038	46.582 (3-4)	50	0.070	0.812	0.077
5	LOADINGS INTERCEPTS ERRORS STRUCTURE FIXED	2288.097***	1092	-73.793* (4-5)	54	0.069	0.809	0.082

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

Testing for Moderated Sequential Mediation with Age

We expected that workload perceptions and emotional exhaustion would mediate the relationship between workaholism and job satisfaction. Moreover, we assumed that these relationships would be moderated by age, resulting in a stronger relationship for those being under 35 years old. Our Multi-Group model revealed different paths across the three age groups (see Table 5.4 which presents the results for each single age group), whereas Figure 5.1 presents the hypothesized model outcomes with standardized path coefficients and significance levels for the distinguished age categories of healthcare professionals under 35 years old, 35 to 50 years old, and workers over 50 years old, respectively.

Table 5.4. Structural Path Results of the Sample.

Variables	Less than 35 years old	Between 35 and 50 years old	Over than 50 years old
	Job satisfaction ON		
	β (SE)	β (SE)	β (SE)
Direct effects			
Workaholism	.511*(.225)	.412***(.105)	.115(.145)
Workload perceptions	-.080(.291)	-.182(.141)	.105(.223)
Emotional exhaustion	-.775***(.211)	-.503***(.089)	-.486**(.149)
Gender	-.169(.207)	.153(.118)	.023(.183)
Nursing aides	.142(.578)	-.061(.201)	.164(.237)
Nurses	.593(.359)	.013(.153)	.030(.193)
Physiotherapists	-.036(.363)	-.019(.204)	.029(.266)
Part-time	2.803***(.744)	-.044(.132)	.227(.229)
Only daily	-.176(.423)	.165(.144)	-.112(.197)
Also night-time	-.005(.347)	.037(.113)	-.043(.155)
Indirect effects			
Workaholism ON job satisfaction VIA workload perc. VIA emotional exhaustion	-.349**(.130)	-.305***(.065)	-.317**(.109)
Workload perc. ON job satisfaction VIA emotional exhaustion	-.473**(.168)	-.414***(.081)	-.425**(.140)
Nurse ON job satisfaction VIA workload perc. VIA emotional exhaustion	-.409*(.189)		
Gender ON job satisfaction VIA workload perc. VIA emotional exhaustion			-.203*(.091)
Nurse aides ON job satisfaction VIA emotional exhaustion			-.230*(.114)
Nurse ON job satisfaction VIA emotional exhaustion			-.220*(.097)
Physiotherapists ON job satisfaction VIA emotional exhaustion			-.348*(.140)
R ²	.467***(.114)	.275***(.048)	.137**(.050)

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

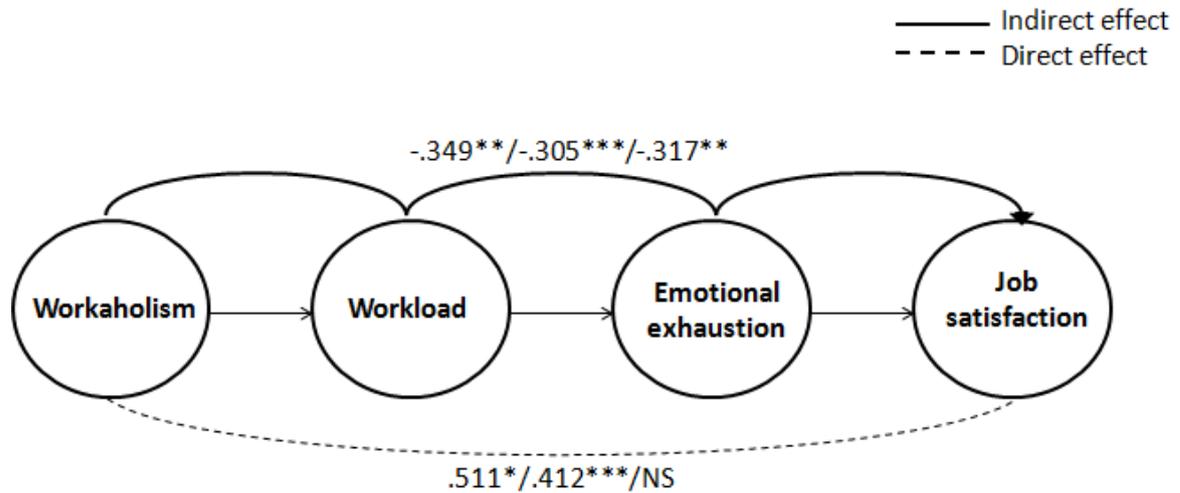


Fig 5.1. Parameter estimates for the Multi-Group model (standard coefficients). The coefficients of the different age groups are sorted in ascending order: under 35 years old/ 35 to 50 years old/ over 50 years old). *** $p < .001$; ** $p < .01$; * $p < .05$

First, in all three age groups, workaholism related to job satisfaction via workload perceptions and emotional exhaustion. In line with our expectations (Hypothesis 5), the negative mediated relationship that was found appeared to be stronger among the younger aged employees ($\beta = -.349$, $p = .007$) in comparison to the middle-aged ($\beta = -.305$, $p < .001$) and the older aged ones ($\beta = -.317$, $p = .004$). Multi-Group analysis also revealed a direct relationship between workaholism and job satisfaction, yet only for the younger and middle-aged groups of healthcare professionals. In particular for the youngest age group, a stronger positive effect of workaholism on job satisfaction was shown ($\beta = .511$, $p = .026$), whereas the effect for the middle-aged group appeared to be lower ($\beta = .412$, $p < .001$). Taking all these results into account, in combination with the results of the invariance test indicating that there is structural variance (see Table 5.3), it can be concluded that our expectation about the moderating effect of age was supported with our data.

Discussion

The mediating role of workload and emotional exhaustion

The results of the full sample model test confirmed our expectations that healthcare professionals' workload perceptions' and emotional exhaustion mediate the relationship between workaholism and job satisfaction. In this sense, healthcare professionals suffering from higher levels of workaholism, which is interpreted to be a personal demand, more easily fall into a so-called 'loss spiral' due to them being exposed to a depletion of job resources (which are, in turn, a result of perceiving higher levels of workload), causing feelings of emotional exhaustion (cf. Lee & Ashforth, 1996) (Hobfoll, 1989). This, in turn, has the potential to decrease their job satisfaction (Clark et al., 2014). Following the logic of the mechanism of the 'loss spiral' central to the Conservation of Resources (COR) theory (Hobfoll, 1989), workers with few resources might be less capable of withstanding further threats to resource losses. This can be a harmful trend, since resource losses are typically accompanied by negative emotions and impaired psychological well-being. Indeed, job demands have the potential to trigger strain, both in the form of physical and emotional exhaustion (Hobfoll & Freedy, 1993). Additionally, workers with few resources are more vulnerable to depletion of resources due to environmental circumstances (such as high levels of perceived workload) and are less capable of (re)gaining helpful resources (Gorgievski & Hobfoll, 2008). This may result in even more detrimental 'loss cycles' (or 'dog-eat-dog') (see also Van der Heijden et al., 2008).

In a similar vein, due to the increasing workload characterizing human service professionals' work, including healthcare services, job resources are often insufficient to cope effectively with the ever-increasing amount of job demands. Therefore, it is plausible that professionals will try to gain other personal resources (see also the extension of the JD-R model by Guglielmi et al., 2012; Lorente, Salanova, Martinez, & Schaufeli, 2008; and the argumentation in interactive perspective

psychology by Pervin, 1989; cf. Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Likewise, Del Libano, Llorens, Salanova, and Schaufeli (2012) revealed that the combination of personal demands (workaholism in our model) and job demands (workload perceptions in our model) may bring about a health impairment psychological process (leading to more emotional exhaustion and, subsequently to less job satisfaction in our model).

Based on the discussion above, we can conclude that our results provide important insights into the complex ‘workaholism-job satisfaction relationship’ and contribute to the scholarly literature by revealing and better explaining this rather ambiguous relationship reported in the existing literature (i.e., a positive association, e.g., Burke, 1999; a negative association, e.g., Shimazu & Schaufeli, 2009). Indeed, we demonstrated the simultaneous effects of the - earlier discussed - negative spiral (i.e., the negative indirect effect on job satisfaction running through workload perceptions and emotional exhaustion) and the positive direct effect (i.e., enhancing effect of workaholism on job satisfaction, when workload perceptions and emotional exhaustion are controlled for). Specifically, on the one hand, it is plausible that, as soon as workaholic workers in healthcare actually start perceiving high levels of workload perceptions and emotional exhaustion, they respond negatively to resource losses, indirectly affecting their job satisfaction. On the other hand, our results reveal that work addiction, when viewed as a personal challenge, also has the potential to create pleasure, leading to more job satisfaction, possibly alleviating negative emotions and affects. However, in practice this potential direct effect might be overshadowed by perceived workload and emotional exhaustion. Hence, our findings showed the two opposing yet simultaneously operating mechanisms [(which can be viewed as “loss and gain spirals” (Hobfoll, 1989)], pointing out that workaholism can be viewed as a challenge, in this case referring to a personal condition that can not only function as a demand, but also as a resource (cf. Van den Broeck et al., 2011). In this sense, it is plausible that personal and environmental conditions may trigger either the one mechanism or the other, or both simultaneously.

The moderating role of age

We compared the hypothesized model among different age groups. Our results indeed demonstrated a moderation effect of age. Specifically, it was shown that the negative indirect effect from workaholism on job satisfaction only slightly *decreased* with age, whereas the positive direct effect completely extinguished throughout the career. That is, unlike the sample of their younger peers, the older workers sample showed less of a negative spiral from workaholism to job satisfaction. Moreover, they were not shown to gain any more job satisfaction through the chain of higher levels of work addiction leading directly to more pleasure in work. Possibly, older workers may typically hold less personal resources than younger workers (cf. Baltes et al., 1999). On the one hand, it can be argued that older workers, due to their age, have less stamina. Therefore, older healthcare workers may need more time to recover from work in comparison to their younger peers (cf. Sluiter, De Croon, Meijman, & Frings-Dresen, 2003). In this sense, as prolonged workaholism of healthcare workers triggers a downward negative spiral, exacerbated by workload perceptions and emotional exhaustion (cf. Hobfoll, 1989), older workers seem to be more vulnerable than younger healthcare workers. That is to say, due to the decreased work capacities of ageing workers, workaholism will still result in an increasing need for recovery if the workload remains high (cf., Mohren et al., 2010).

On the other hand, elaborating on previous findings and aligning Hobfoll's theory (1989) with lifespan development theories (Cartensen, 1992; Higgins, 1997), older professionals, in comparison with younger people who may perceive time as rather 'open-ended' (Carstensen, 1995), may be less motivated by growth and knowledge-related goals, that can be useful to achieve successful objectives, for instance further career development opportunities in the workplace setting (ibid.). It is plausible, therefore, that particularly younger workers gain pleasure through workaholism compared to their older peers, because the younger ones are largely career-motivated and promotion-focused (i.e., being more interested in growth and development) (Higgins, 1997).

Summarizing, these results demonstrate that workaholism may increase job satisfaction while, at the same time, it may be a risk in triggering a loss spiral that, even further, may be more severe with an increasing age.

Limitations of the study and recommendations for future research

Even though our study adds value to previous scholarly literature in the field (i.e., the further exploration of the ambiguous relationship between workaholism and job satisfaction and an investigation of the moderating effect of age), there are several limitations in the current research. First, even though the moderated mediation model allowed us to gain more insights into the ‘negative spiral’ processes, the data used was cross-sectional; that is, our results have to be interpreted with care. Second, all variables in the survey were measured by means of a self-report questionnaire, therefore a common-method bias may exist (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). In light of these limitations, we recommend future longitudinal research, preferably using a multi-wave design, in order to better explore the causal relationships of our model. Furthermore, qualitative studies and objective indicators are needed in order to shed more light on how different ages perceive workaholism; that is, ‘workaholism’ is shown to have different meanings (for instance, personal demand vs personal challenge) in different ages. Third, perceptions of workload appeared to not have any direct effect on job satisfaction but only an indirect effect through emotional exhaustion; since the effect of the perceptions of workload was not the focus of our paper, further research may investigate this interesting result. Likewise, our findings showed that job satisfaction explained variance decrease with aging. It is plausible that the explanatory variables included in our model are more relevant for the younger age groups than for the older one. Future research should be done in order to better investigate the antecedents of older workers’ job satisfaction. In a similar vein, we need to say that other variables (such as, success achievement, and need for autonomy in the job) may be able to intervene in the relationship between workaholism

and job satisfaction. In this sense, other personal and job-related factors ought to be included in future model tests.

Practical implications

Our results have important implications for managers and stakeholders in healthcare organizations. Building upon our model, we may conclude that, in order to enhance healthcare professionals' satisfaction, both personal resources together with job-related factors need to be considered by all parties involved. The current study suggests that negative effects resulting from workaholism are most likely to occur when workers' personal characteristics interact with job-related factors (i.e., a high workload level). Given the very limited opportunity to influence workers' personal characteristics (i.e., workaholism traits), it might be more worthwhile for healthcare organizations to stimulate a work environment that does neither enhance nor reward workaholism. In a context where organizations often encourage workaholic behaviour (such as incentive systems promoting to work longer; cf. Burke, 2001; Johnstone & Johnston, 2005), interventions in this sense become particularly important. Indeed, in case a pressuring culture is supported by high workload and job demands, policies and practices should be adopted in order to limit employees to overwork in too many occasions, herewith discouraging workaholism behavior. For instance, organizations could stimulate a growth culture (that is an organizational culture which provides ample opportunities for personal growth; Buelens & Poelmans, 2004) rather than a pressurising one, and decrease a too high amount of job demands (i.e., herewith influencing workload perceptions). Concrete, even if workaholism is defined as a stable individual characteristic, organizations can take steps to curb it.

Additionally, our results demonstrate that the *process* of ageing is a priority for human resource policies; that is to say, HR managers, and direct supervisors have to promote workers' job satisfaction throughout workers' entire career. In detail, our study shows that older workers respond differently to the so-called 'negative spiral' that may be caused by workaholism in comparison with their younger counterparts, and that this 'negative spiral' is particularly dangerous for older workers. In the light of the increasing portion of older workers in the labor market with the

healthcare sector being no exception, healthcare organizations should rather support their workers' sustainable employability and workers' active ageing, by arranging sound and facilitating working conditions (Kooij et al., 2010; Veth et al., 2015).

Chapter 6

Discussions and conclusions

Key findings

The general goal of this dissertation was to move the debate about human being' aging by contextualizing the *ageing process* into the workplace setting; with this in mind, I used a life-span approach in order to empirically examine the moderating role of age through the career.

With regards to the specific lens of the research project (i.e., the moderating role of age through a life-span approach, the scarce attention given to some topics, the exam of several constructs' relationships into the Italian context), findings permit the discussion of each of them. Furthermore, results of the present dissertation comply with the increasing need for research on aging in order to support a successful aging at work.

After having introduce the worldwide aging situation (Chapter 1), this dissertation started with an evaluation of the art of the studies related to age stereotypes towards older workers (Chapter 2). This review captured a number of limitations in previous research studies, which enabled to make an informed choice about the research groups to involve in coming studies. Not a single age cutoff is shared in literature among all settings and cultures; even worse, it would be not possible to generalize the meaning of age to every organizations. Indeed, with aging both people and the way the others value people change; hence, "*perceptions*" of an 'age groups' (as scientific evidences

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refer to) may depend on subjective and contextual factors, and could be hard to capture the real cognitive schema underlying (i.e. age stereotypes). That is even worse in the context of a such age heterogeneity. Hence, when the dissertation have dealt with the choice of defining an ‘age group’ (i.e. younger, middle and older), it has referred to life-span development approach (Baltes, 1987; Carstensen, 1992; Kanfer & Ackerman, 2004); this approach guided the project research in understanding that *aging* is always related to the *feelings* of ‘become older’ and to the individual *perception of time (past and left)*. In this sense, an older person may feel younger than an younger one (and vice versa). Following this line of reasoning, the lifespan perspective on human development assumes that time is a fluid, continuous and lifelong process. Development is the results of the combination of personal and contextual elements, that lead to different trajectories in life. Consequently the question: ...what could be the differences between persons? This research project lead to say that, obviously, people have different personal characteristics (i.e. culture, health status, personality), but the *context* may be the key factor which makes the difference in perceiving the *aging process*. In this sense, reviewing literature on age stereotypes towards older workers highlighted that job and organizational setting represent a sort of chessboard on which people behave and create shared social rules.

Study 1 investigated the psychometric analysis of the *Age Stereotypes Scale* (Henkens, 2005) though two age groups (under 50 years and 50 years and older), and the relationship between age stereotypes towards older workers and occupational self-efficacy. Results on the validation of the *Age Stereotypes Scale* (Henkens, 2005) demonstrate that there is support for metric invariance (so that age groups have the same factors and the same factor loadings), whereas there is no support for scalar invariance (hence, age groups have different structures in the age stereotypes construct). Those findings suggest what previously said about the differences between age groups; following Social Identity Approach (Oakes et al. 1994; Tajfel, 1978) people define themselves based on social connections; the “social identity” is an ongoing process that change with aging. Furthermore, findings showed that age moderates the relationship between age stereotypes and occupational self-

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efficacy, so that only older workers' occupational self-efficacy is affected by a perceptions of age stereotypes among them. Asking younger worker to evaluate older colleagues implies "perceptions", and, as stated earlier, those are fallible and prone to biases. However, these findings may suggest that age stereotypes towards older adults is much more acceptable into an organization rather than towards younger ones. Age stereotypes indeed have impact only on older group occupational self-efficacy, as if it is common thinking that older workers are victims of stereotypes. In a similar vein, Kmicinska et al. (*submitted*) showed that both implicit and explicit negative attitudes towards older workers are much more acceptable within a selection process. Because of findings refer to explicit perceptions, future researches on the combination of the implicit and explicit stereotypes are needed.

Study 2 was devoted to develop and test a model where older workers employability activities mediate the relationship between from one hand age stereotypes on older workers' unproductivity and perceptions of job support for learning, and from the other hand their intention to retire. This research is a relevant contribution in literature on older workers' employability and retirement because through Multi-Group SEM analysis two late career groups were compared: those having between 55 and 60 years old, and those having over than 60 years old. Incorporating various lifespan developmental theories into Van der Heijden's employability enhancement model, results revealed that both relationships were mediated by engagement in employability activities, reflecting two mechanisms through which work context affects intention to retire ("loss and gain spirals"). Moreover, different paths for the two groups of older workers are shown: employability mediated the relationship between job support for learning and intention to retire process in both age groups whereas it only mediates the relationship between age stereotypes and intention to retire in the 55-60 group. The research concludes that employability is an important factor in the older workers' intention to retire process, and in order to motivate older workers to engage in employability activities and work longer, age stereotypes need to be combated. However, in view of generating a future time perspective in managing employability of both older age groups, creating job support

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for learning over the life stage is also increasingly important. In light of the recent retirement adjustment perspectives (Wang, 2007), these findings provides information about how to improve the quality of postretirement life. It represents an opportunity for researchers to understand how people simultaneously adjust to aging and react to external workplace challenges in the later life. In fact, whether older workers have more resources to fulfill the needs they value, they will be less stressed in the final stage of their career, resulting in a scarce intention to quit, and in a better adjustment to retirement. On the contrary, in case older workers perceive a decrease in resources (i.e. perceive age stereotypes, cf. Zaniboni, 2015; Zaniboni, Sarchielli & Fraccaroli, 2010), they will have much more intention to protect themselves quitting the organization and adverse effects on their retirement adjustment (see also Hobfoll, 1989, COR theory). Hence, saying “I have the intention to retire” could mean “I have no more resources to go on working since the work setting do not support me”.

Study 3 took into account a wider range of ages: those having under than 35 years old with those having between 36 and 50 and over than 50 years old were compared. The study aimed to investigate whether and how age may change the individual reaction to work addiction; and furthermore the way in which job demands (i.e. workload) interact with personal demands (i.e. work addiction) in creating occupational wellbeing (i.e. emotional exhaustion and job satisfaction). In order to investigate this moderated mediation model, data were collected in a healthcare professional sample. Multi-Group SEM analyses revealed differences across three age groups, so that different aged workers showed different reaction to workaholism when workload was perceived. In addition, a negative relationship between workaholism and job satisfaction appeared to be mediated by workload perceptions and emotional exhaustion. This effect was particularly strong among the younger group, and stronger among the middle-aged than among the oldest group. In addition, the Multi-Group analysis revealed a direct positive relationship between workaholism and job satisfaction for the two youngest age groups, whereas for their older counterparts no such relationship was found. These findings shed light on literature about the ambiguous relationship

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between workaholism and job satisfaction, in fact workaholism may, under certain circumstances, increase job satisfaction while, at the same time, it is a risk as it triggers a loss spiral that, appears to be more dangerous with an increasing age. Findings contribute to the literature in the field by demonstrate that the context need to be adjusted based on individual characteristics. That means, HR departments and managers should focus on real differences of age groups (i.e. resources) rather than false believes (i.e. age stereotypes) in order to improve practices and support active aging at work.

Overall, findings of the dissertation and especially those emerging from *Studies 1, 2 and 3*, strongly point at the potential of the work context in perceiving the ‘meaning of age’ and in leading to some negative vs positive spirals (Hobfoll, 1989) within an aging perspective. This has strong implication for the prevention of ageism and early retention, since organization and HR policies could have the possibility to guide a correct and supportive age climate. Implications for practice are presented below.

Methodological considerations

The paragraph discuss the methodological strength and weakness of the research project.

Strength

One of the main strength of this dissertation is the relevance of the aging theme for research and social interest. The focus of the thesis is not on a specific issue within the aging field, but the project studies aging from different point of view through multiple arguments and samples. Furthermore, in the whole research project age has been considered a core variable, contrary to common psychosocial discipline where age was a control variable. This methodological decision gave the opportunity to analysis in a wider way the topic studying the relationship between age and

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several constructs. “*Aging at work*” is an umbrella concept, which include many themes; it could not have been possible to examine only one topic in the field. This is a reason for specialists and researchers from different sectors interest in the current research project; overall findings indeed may help to understand how individuals deal with the flow of time, and how people relate to work with aging.

The combination of different data is a second important strength, which help to generalize discussion and conclusion. In *Study 1* and *2* two large sample of bank employees were examined, and in *Study 3* a large sample of healthcare professionals has been used; moreover, information about gender, marital status, job level, professional category, having children, shift at work and having part time were collected, so that an overall photography of Italians workers is provided. In light of the heterogeneity of the aging nature, researchers should always study issues related through different samples and contexts.

A very important strength of the dissertation is the methods and analyses. In *Study 1*, *2* and *3* Structural Equation Modeling (SEM) were used with different softwares. There is largely agreement in literature about the potential of SEM analysis in psychosocial discipline (Hancock & Mueller, 2013). *Study 1* used IBM SPSS 21 and AMOS 21 in order to test the divergent validity of the latent constructs and the moderation hypothesis; *Study 2* and *3* tested a SEM using MPLUS 7 in order to verify the moderated mediation hypothesis.

Weakness

The most important limit for the studies included in this dissertation is that none of the empirical chapter was longitudinal in nature. As Chapter 3, 4 and 5 said, cross-sectional data implies common method variance could represent an issue: in fact, data in a single questionnaire can be closely related (Podsakoff *et al.*, 2003). That is, the dissertation cannot draw any causal conclusions regarding the role hypothesized models included in the dissertation. However, since confirmatory factor analyses supported the discriminant validity of measures, it is suggested that

common method variance would be not a major issue. Obviously, this is not a justification for the decision, which went in the direction of different samples in different work setting, however, that is to say, there is still need for longitudinal investigations, which is the most important suggestion that can be made for future research in the aging area.

Likewise, although the main potential confounders were selected in accordance with literature and the specific workplace contexts, unmeasured factors (e.g., socio-cultural environment factors or other job-related variables) may have influenced the association between age and the constructs.

Recommendations for research and practice

Focusing on the relationships between aging and multiple constructs, thesis' recommendations relate to several issues. Each chapter discuss recommendations for research and practice, hence, in order to avoid repetitions, the paragraph discuss overall recommendations of the whole dissertation.

First, in response to above methodological limitations, future longitudinal research, preferably using a multi-wave design are needed in order to better examine and analyze, in-depth, the causal relationships within the models and incorporating more objective data. Likewise, based on findings it is plausible that some other variables that have not included in models help in explaining more variance. That implies, future research should be done in order to better investigate antecedents and consequences in the models. Again, it would be interesting to compare my findings with researches applying models to other work context.

Second, even though actually lot of researchers are focusing on aging, I would point out the scarce attention given to some. Findings supports that the self may be threatened by others' beliefs, and that across aging this threat can have different effects. Older people benefit from others' positive beliefs since they are the objects of these stereotypes; hence, HR interventions are

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recommended in order to take advantage of the potential impact on senior workers. In this sense, organizations (and society) could enhance older people self and identity, potentially deserving their wellbeing. In the perspective of fostering the cooperation between older and younger workers, these findings also suggest that educational programs for all ages could be helpful in order to stimulate professional partnership and to support both formal and informal learning.

In a similar vein, literature in the field of older vs oldest workers is still little. In light of findings important differences emerges between the two age groups, HR have to be aware of workers' characteristics in order to better keep up the good work and to support the active aging into the workplace. The dissertation point out also relevant implications for older workers' employability and career development; since workplace setting is resulted to enhance (via job support for learning) as well as to decrease (via age stereotypes towards older workers) older workers' employability, organizations should pay attention to possible trigger factors. Actual governments efforts to rise up the retirement age could be supported by an attention to older workers' employability and age climate because in case older workers feel comfortable and that they still can contribute, they would be more likely to stay engaged postponing retirement.

Finally, as *Study 3* particularly shows, in an integrative perspective personal and job-related factors are combined together in creating occupational outcomes; in details, people characteristics can trigger to a 'loss spiral' (Hobfoll, 1989) only in case job-related demands are perceived. Given that people cannot be selected based on their personality traits nor personal characteristics, the context should play the role of guiding the 'loss vs gain spiral'. That means, organizations should be the one who prevent the establish of insane situations. Above all, findings suggests that interventions would become even more important when older workers are considered. Again, knowing age differences is a key assumption that HR policies have to adopt.

In conclusion, general human resource policies should pay more attention to the *aging process* and should focus on protecting sustainable employability throughout workers' entire career in order for older workers to feel 'conserved' instead of 'depreciated' (Peterson & Spiker, 2005).

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The present research project calls for a reconsideration of reflections on ‘return on investment’ regarding the oldest workforce that are ubiquitous and solely based on negative age stereotyping rather than actual strengths and weaknesses of the employee involved. Researchers should bring out the real differences between age groups, highlighting the room for improvement and unmasking real false beliefs. In this sense, a better designed work context could help every age worker to optimize resources, skills and knowledge.

Using a lifespan perspective and carefully paying attention to age-related processes (such as workers’ changing future time perspective and their prevention focus), human resource specialists and line managers should focus on supporting older workers’ development throughout their entire career.

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