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SUCCESSFUL AGING AT WORK

Tesi di Dottorato Presentata da

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Introduction

The main aim of this PhD thesis is to add knowledge on how ageing influence workers' well-being, in particular the intention is to acknowledge the processes that ultimately affects work engagement and job satisfaction.

The present thesis aims at providing a contribution by achieving the following purposes:

- To investigate how work engagement vary across different age groups and which factors are the most prominent in influencing work engagement.
- To study how negative (meta-) stereotyping affects work ability and ultimately job satisfaction.

Since working life as well as the context of work is changing, as is the age composition of the workforce, this raises several issues to the work capacity and participation of the older age groups in the workforce. Increasingly, researchers in a number of domains have shown that the assumption of a general decline with age is simplistic and misleading (Kanfer & Ackerman, 2004). With the growth of positive psychology researchers have begun to focus not only on the problems that mature workers encounter in the workplace, such as discrimination and cognitive loss, but also on the potential strengths and resources (Robson et al., 2006). Meta-analyses performed by Ng and Feldman in the last years show very well how older workers are very far from the common stereotypes that depict them as poor performers and detached from work. Studies indeed show that older individuals do not show a decrease in performance. On the contrary, older workers contribute significantly to noncore domains of performance, as they show more citizenship behaviors and greater attention to safety; at the same time, they exhibit less counterproductive behaviors, less aggressiveness, and less absenteeism (Ng & Feldman, 2008).

Developmental psychology has been a major source for aging research. From that point of view, individual paths are perceived as something dynamic, developing over the course of a lifetime. Based on various biological and psychological considerations, models from that school of thought posit that an individual's needs vary depending on his/her life stage. Whilst personality is generally seen as being fairly stable over the course of an individual's life, individual attitudes are thought to be more changeable (Arnold, 1997). For example, according to these theories, career exploration is an important theme for a young individual. At later stages, an individual's focus is said to shift to maintaining the status quo and eventually to preparing for retirement. Several of the corresponding concepts, e.g. Erikson's (1959), Super's (1957) and Levinson et al.'s (1978) theories, have remained influential for career research until today (for an overview, see Sullivan & Crocitto, 2007). Erikson's (1959) work described various developmental stages and the corresponding challenges individuals face therein. In particular, for childhood and adolescence he provided a detailed view of individual development. Erikson's stages were not directly linked to biological age (Arnold, 1997). As a consequence, especially the age ranges of the proposed adulthood stages have often been ambiguously interpreted in the literature. However, there seems to be some agreement that individuals may enter new stages at the age of around 25, 40-45, and 65 (e.g. Arnold, 1997; Sullivan & Crocitto, 2007). In his theory, Super (1957) described a growth stage (from conception to the age of 14), an exploratory stage (about from the age of 15 to 25), an establishment stage (about from age about 25 to 45), a maintenance stage (about from age 45 to 65) and a phase of decline, which starts about at the age of 65. Each of these phases is characterized by corresponding career-related challenges for individuals. Levinson et al. (1978) focused on an individual's development over a life-span and suggested clearly defined age ranges. Periods of transitions, i.e. phases of inevitable uncertainty and change for individuals and their lives, were thought to separate those age

ranges. For example, the “mid-life transition” (age 40-45) bridges “early adulthood” (age 22-40) and “middle adulthood” (age 45-60). Ornstein et al. (1989) empirically examined and compared these two theories, and found partial support for both of them. A notable finding was that “[the] beginning phase of a career – defined by age or psychological adjustment – is the one that is most distinctly different from the others” (Ornstein et al., 1989, p. 131), i.e. individuals in their early career stages showed clear differences from their older colleagues.

Research on ageing has also argued that age-related differences in individuals’ perceptions of work and work-related motivation exist. For example, Kanfer and Ackerman (2004) contended that motivation in the workplace changes with age. They argued that individuals’ fluid intellectual (Gf) abilities, e.g. their working memory and processing of novel information, decrease with age. At the same time, however, individuals gain in crystallized intellectual (Gc) abilities. This means that, for instance, their general knowledge, extent of vocabulary, and verbal comprehension become stronger. As a consequence, Kanfer and Ackerman (2004) reasoned that individuals would prefer different kinds of work roles, depending on their age. In particular, roles with higher requirements of Gc abilities, such as teaching or mentoring, may become more attractive. Roles which require both high levels of Gc and Gf abilities may also be attractive to older workers, as long as they are able to compensate the loss of Gf with their increasing Gc abilities. However, tasks in which Gf abilities play a dominant role, such as learning new programming languages, may become less intriguing to older employees.

In line with this, Carstensen and colleagues (Carstensen, Isaacowitz, & Charles, 1999; Carstensen & Mikels, 2005; Mather & Carstensen, 2005) showed in various studies that older individuals focus less on the acquisition of new (technical) knowledge but become stronger in memorizing and dealing with emotions. In addition older workers show more favorable job attitudes than younger workers (Ng & Feldman, 2010). For example, older workers are more

satisfied with work, and relationships with colleagues and supervisors, and show greater commitment to the organization. So, contrary to some common stereotypes that view ageing as simply losing former abilities, getting older is a complex process that involves gains and losses in individuals abilities alike (e.g. Kanfer & Ackerman, 2004; Sneed & Whitbourne, 2005). As for work characteristics, recent studies have shown that workers tend to stay longer in the workforce when there is job autonomy and variety, feedback is given on a regular basis, and work is perceived as meaningful (Gobeski & Beehr, 2009; Wang, Zhan, Liu, & Shultz, 2009).

The first study, presented in Chapter 1, will focus on the different patterns of job resources and work engagement shown by three successive age cohorts. Some dated ideas and stereotypes of older workers would have us believe that engagement is a condition of youthful energy. Indeed, aging has long been viewed as a period of adjustment made in response to the limitations experienced by adults as they transition into their elder years. For much of the 20th century, many who studied aging accepted the proposition that gradual disengagement from work and community life was expected as people became older. But new ways of thinking about the multi-generational workforce have encouraged researchers to consider alternatives. Despite the growing body of research on work engagement, little is known about what job resources influence it among different age cohorts. To the best of our knowledge only few studies focused on this subject. For instance, Pitt-Catsouphes and Matz-Costa (2008) report a large number of drivers that differentiate younger and older worker cohorts. Satisfaction with training and development, and a perception of security strongly predict engagement of younger workers, while older workers are influenced by supervisor status and higher work overload. On the contrary, the work by James et al. (2011), found no differences in engagement determinants between the diverse age groups, with the exception of career development and promotion, which appears to be less important to older employees.

This study aims at studying how job resources and work engagement varies across different age groups, and examines the factors that play a role in fostering teacher engagement.

Even though literature do not show a significant decrement in performance, still age related stereotypes exist. In the workplace, older people are often perceived as less competent and less motivated to learn new things when compared to their younger counterparts (Desmette & Gaillard, 2008). Older workers may act under a stereotype threat that has been described as a reaction to the awareness of a negative stereotype. Studies have found that a common consequence of stereotype threat is indeed a decrement in performance. Researchers have focused on performance on memory tasks wherein negative older age meta-stereotypes are relevant (Barber & Mather, 2013; Hess, Hinson, & Hodges, 2009; Kang & Chasteen, 2009; O'Brien & Hummert, 2006). The decrements in performance described presumably arise from internal states such as anxiety and worry, but these mediation mechanisms have never been measured. The second study, presented in Chapter 2 will focus on the mediational mechanisms that may explain how these negative (meta-)stereotypes function via the decrease in work ability that ultimately also affect job satisfaction.

Subsequently to the two studies, a final section will discuss the main conclusions that can be drawn by these studies.

Chapter 1

What drives teacher engagement: a study of different age cohorts

Background

In the present study we have used the work engagement model (Bakker & Demerouti, 2008) to investigate what key resources are involved in the building of work engagement in a group of teachers. Engaged employees are enthusiastic, completely involved in their job and able to solve the problems that may occur (Bakker et al., 2008). If this is true for any worker, it is even more salient in the teaching profession, as research has shown that engaged teachers are able to improve students' performance and their preparation for the future (Bakker, 2005; Kahn, 1990). Moreover, the more engaged teachers are, the less willing they are to leave their job (Bakker et al., 2003).

Teachers are also likely to have different needs and experiences at different points in their careers (Lavigne, 2014). As teachers gain more experience, ulterior and different influences affect teachers the longer they have worked in their profession (Canrinus et al., 2012). Teachers' career stages have been the object of several investigations. The majority of studies have focused on a specific stage, such as early career (e.g. Fernet et al., 2014; Le Cornu, 2013; Mansfield et al., 2014), while fewer have taken into account the mid-career stage (e.g. Farrell, 2014), and only small proportion have considered the entire career progression.

According to Super (1957), working life consists of three broad phases: a trial stage, a maintenance phase, and a late career stage. The existence of different work stages in the teacher career has been recognised also by Day et al. (2006); in a sample of 1143 English teachers, they found that the first years (< 8 years) of the teaching profession are characterised by the development of commitment and a sense of efficacy. The central years (8-24 years) of the career constitute a challenge balancing work and life domains, and almost

25% of teachers begin to show detachment and loss of motivation. The final years (> 25 years) see a significant difference between primary and secondary school teachers. While the first category retains a strong motivation, the other is found to be losing it. Another study supporting the use of three phases is Borman and Dowling's (2008): their meta-analysis shows that drop-out among teachers is high at the beginning of the career, very low during midcareer, and high again as teachers approach retirement. As this study is interested in studying teacher work engagement across different life and career stages, we decided to make a comparison of three successive age groups. The career stage perspective has also been adopted by Van der Heijden's (2006), although there was no reference to the teaching profession, she found that for profit sector employees, career activities varied between starters (20-34years), middle aged workers (35-49) and seniors (over-fifties); whereas, less differences between age groups were found for the non-profit sector employees.

Based on the evidence presented, this study is interested in studying how job resources and work engagement varies across different age groups, and examines the factors that play a role in fostering teacher engagement.

Work engagement and age

As anticipated, the present research has been based on Bakker and Demerouti's (2008) work engagement model. Work engagement is a positive, work-related state of mind characterized by vigour (i.e. high levels of energy and resilience at work and willingness to invest on the job), dedication (i.e. being involved in one's work, enthusiasm, inspiration), and absorption (i.e. being happily engrossed in one's work so that one has difficulties to detach from the tasks being performed) (Schaufeli et al., 2002). Engaged employees are supported by high levels of energy and feel enthusiastic about their work. Furthermore they are often so immersed in their work that do not perceive time passing (Bakker & Demerouti, 2008). Trends associated with the aging of the workforce have made it important to consider

whether employee age, tenure with their company, life-stage, and career-stage is related in any way to their engagement (Pitt-Catsouphes & Matz-Costa, 2008). To this end, Schaufeli et al. (2006), used a large sample of employees and pointed out that age and engagement are both positively related, although this relationship was too weak to be considered meaningful. In a similar vein, Robinson et al. (2004) found that workers over the age of 60 were the most engaged among all ages of employees. Again, these results have been recently replicated by two different studies: on the whole, these empirical findings suggest that older workers are more engaged than their younger colleagues (Pitt-Catsouphes & Matz-Costa, 2008; James et al., 2011). All considered, this data underlines that significant variations between different age groups exist, although this aspect has been rarely taken into account. In particular, to the best of our knowledge, no study seems to have investigated whether age is related to engagement experience in the teaching profession. Therefore, we have reported and based this work on the findings of the few studies that have tested the impact of age on employee engagement.

What drives work engagement

In line with traditional motivational approaches such as the *job characteristics model* (Hackman & Oldham, 1980) and the *self-determination theory* (Ryan & Deci, 2000), work engagement is primarily fostered by those working conditions that help build dedication to and identification with work, i.e. *job resources* (Demerouti et al., 2001). Job resources refer to those physical, social, or organizational aspects of work that may reduce the impact of job demands and foster personal development and learning (Bakker & Demerouti, 2007; Schaufeli & Bakker, 2004). Numerous studies have consistently shown that work engagement is driven by job resources (just to cite the most recent studies: Airila et al., 2014; Lee & Ok, 2015; Lorente et al., 2014). This process, in which resources influence engagement is called “motivational process” in the Job demands-resources model,

(Demerouti et al., 2001) and is described as enhancing intrinsic motivation. However the same authors stated that job resources can also play an extrinsic motivational role by stimulating the willingness to dedicate one's effort and abilities to the work tasks, thus being instrumental to achieve work goals (Bakker & Demerouti, 2008). Research in the educational sector has found evidence in the relationships between work engagement and several job resources: interactions with pupils (Runhaar et al., 2013), social support and learning opportunities (Simbula et al., 2011), appreciation, and organizational climate (Bakker et al., 2007) job control, information, social climate, and innovativeness (Hakanen et al., 2006). These studies show that there are a number of job resources that may play a significant role in influencing teachers' work engagement. In our study we decided to take into account those that are more relevant to the Italian school context. On the one hand, several changes have occurred in the recent years, such as changes in the local management of schools and appraisal of teacher performance. On the other hand, the fact that monetary rewarding is not available to the management raises the issue of recognizing personal effort and finding alternative resources to sustain teacher engagement. For instance, a resource that has consistently been shown to foster employee engagement is *learning opportunities* (e.g. Hu et al. 2011; Pitt-Catsouphes & Matz-Costa, 2008). At the same time, *role clarity* has been shown as a major issue in school, as education systems are facing new challenges and the teaching profession is characterised by ambiguous job definitions and a lack of formal procedures (Somech & Drach-Zahavy, 2000). Teachers are expected to teach, care for the psychological equilibrium of their pupils, and help their social integration (Esteve, 2000). Given the number of tasks required of teachers, a clear definition of role expectations may foster teacher engagement. Another asset to good organizational design, and insofar as good levels of engagement, is teacher personal *responsibility*. Responsibility has important motivational implications as it fosters effort investment, persistence, and commitment

(Lauermann, 2014); in fact, previous research shows that it relates positively to work engagement (see Matteucci & Guglielmi, 2014). Employees are also sensitive to *remunerative justice*. When workers have high perceptions of justice in their organization, they are more likely to feel obliged to be fair in return on how they perform their roles by giving more of themselves through greater levels of engagement (Saks, 2006; Ghosh et al., 2014). The motivating connection between the worker and the workplace, which goes beyond the utilitarian exchange of time for money or advancement, is through *work values* that are the ideals and motivations that originally attracted people to their jobs (Maslach & Leiter, 2008). This motivating process results in higher engagement, especially when intrinsic work values are involved (Sortheix et al., 2013). Interpersonal relationships are other job resources and a potential source of influence on engagement. Its influence is two-fold: on the one side interaction and *support from colleagues* has consistently shown to boost employee engagement, at the same time *external validation* represents the opportunity for teachers to gain professional recognition and being acknowledged as role models. As Hildebrandt and Eom (2011) showed, validation from others along with career advancement and enhanced leadership, serve as strong incentives for teachers.

Despite the growing body of research on work engagement, little is known about what job resources influence it among different age cohorts. To the best of our knowledge only few studies focused on this subject. For instance, Pitt-Catsouphes and Matz-Costa (2008) report a large number of drivers that differentiate younger and older worker cohorts. Satisfaction with training and development, and a perception of security strongly predict engagement of younger workers, while older workers are influenced by supervisor status and higher work overload. On the contrary, the work by James et al. (2011), found no differences in engagement determinants between the diverse age groups, with the exception of career

development and promotion, which appeared to be less important to older employees. Based on the aforementioned considerations, our research questions are the following:

- Does teacher engagement differ on the basis of age?
- Do job resources vary across age cohorts?
- What job resources foster teacher engagement and do the effects vary by age?

Methods

Data collection

Data was collected within a project commissioned by the Province of Trento. The project aimed to provide a description of the potential of those working within the schools in terms of involvement and attitude toward their work. The research was presented to school principals who in turn reported to the board of governors. Members of the research team distributed the research tool (i.e. a questionnaire). Participation was requested but not mandatory. Every school nominated a representative to solicit colleagues' support and monitor the collection of questionnaires. Once the questionnaire was completed at home, teachers were asked to insert it in a box so that the participants remained anonymous. At the end of the project, each school illustrated the main findings emerged from the survey.

Participants

Five hundred thirty seven Italian teachers fulfilled the questionnaire (response rate reached 70.4%). Women were 75% of the sample. The average age was 42.85 (S.D. = 9.91). Age in particular was well distributed: 24.2% of the respondents were less than 34 years old (starters), 45.6% were 35–49 (middle-aged), and 30.2% were over 50 (seniors). Participants taught in a number of different schools: 47.1% of them taught in primary school, 31% taught in lower secondary school, and the remaining 21.9% taught in upper secondary school. A total of 22.3% have worked for five years or less, 14.7% for 6–10 years, 26.1% for 11–20 years, 21.5% for 21–30 years and 15.4% for more than 30 years.

Age Categories

Given that this study is particularly interested in the differences between different age cohorts, the authors decided to make a comparison of three successive age groups of the working population namely starters (20-34 years), middle-aged (35-49 years), and seniors (50+). As in Van der Heijden's (2006) study of career activities, this division was proposed for several reasons: it covers the whole career span; it provides age groups with a similar range; and it frames a category of workers experiencing mid-life changes.

Even though seniority is not always equivalent to age, what we posit is that age homogeneous groups are preferable, as life stages bring the individuals to experience similar patterns and challenges. Moreover, as Kanfer and Ackerman (2004) stated, age and age-related changes, play a key role in successful work outcomes.

Control Variables

We identified control variables that might affect our findings: gender and school type. We anticipated that these variables might affect teacher engagement. For instance, prior evidence has indicated women to be more engaged than men (Mauno et al., 2005; Rothbard, 2001). Regarding the school membership, evidence shows that primary school teachers experience more dedication and absorption in their work than do secondary teachers (Timms et al., 2007).

We created dummy variables and used them in regression analyses. Gender was dummy-coded (0 = male; 1 = female). Furthermore, we controlled for the type of school in which teachers were employed. We created two dummy variables in which the category 'upper secondary school' was the point of reference when constructing the dummies.

Measures

Engagement. The short version of the Utrecht Work Engagement Scale (Italian validation: Balducci et al., 2010; Schaufeli et al., 2006) was used, consisting of a nine-item

scale (three for each dimension): vigour (e.g. 'During my work, I feel bursting with energy'), dedication (e.g. 'My job inspires me') and absorption (e.g. 'I am immersed in my work'). We followed Schaufeli et al. (2006) recommendation and computed an overall engagement score of the UWES, which we used in the analyses. All items related to dimensions of engagement were scored on a seven-point scale ranging from '0' (never) to '6' (always).

Role clarity. Role clarity is defined as the extent to which individuals clearly understand the duties, tasks, objectives, and expectations of their work roles (Hinkin & Schriesheim, 2008). This dimension was measured with a five-item scale (Italian validation: Almudever et al., 2000; Rizzo et al., 1970). An example of the items is 'Often I have to do things that have nothing to do with teaching (reversed).' The scores ranged from '1' (strongly disagree) to '5' (strongly agree).

Learning opportunities. Learning opportunities represent the extent to which the context at work provides stimuli for individual learning and allows the skills and competences of the workers to be used while carrying out the work (Panari et al., 2010). This construct was measured with a five-point Likert scale developed by Borgogni et al. (2005). The scale consists of four items such as 'This work is improving my skills' and the scores ranged from '1' (strongly disagree) to '5' (strongly agree).

Responsibility. Responsibility refers to a sense of internal obligation and commitment to produce or prevent designated outcomes, or that these outcomes should have been produced or prevented (Lauermann & Karabenick, 2011). It was measured with a five-point Likert scale developed by Guglielmi et al. (2011). It consists of four items such as "I find myself taking on responsibilities that should not be mine" (reversed). The scores ranged from '1' (never) to '5' (always). Higher scores meant that individuals felt an adequate amount of responsibility.

Colleague support. Colleague social support refers to actions and positive relationships, such as perceived availability of help, or actually received support from coworkers (Schwarzer & Knoll, 2007). To explore the relationships with colleagues we used 5 items measured on the five-point Likert scale (Agervold & Mikkelsen, 2004; Italian validation: Guglielmi et al., 2011). One example of the items is “There is collaboration between colleagues.” Workers could answer on a scale from '1' (never) to '5' (very often).

Remunerative justice. This construct was measured with a single item created ad hoc for this research. The item is 'Do you believe that your salary is adequate for carrying out your job?' Answers were on a scale ranging from '1' (not at all suitable) to '5' (entirely appropriate).

Social recognition. Social recognition refers to trustworthiness and reliability, and being recognised in the workplace as an expert by significant individuals. It is characterised on the one side by the ability to impact and influence colleagues, on the other side by the ability to build and develop relationships (Van der Heijden, 1998). We used a 5-item scale developed by Van der Heijden (1998). One example of the items is 'I am the point of reference for my colleagues.' The scores ranged from '1' (strongly disagree) to '5' (strongly agree).

Work values. A ten-item scale was used to assess work values (Italian validation: Depolo, 1998; MOW, 1987). The MOW International Research Team study (1987) stated that work values can be intrinsic, when related to the degree of importance to immaterial aspects of the jobs that foster self-expression, and extrinsic, which focus on material work aspects, such as retribution and opportunity for promotion. Therefore six items represented the intrinsic dimension (autonomy, opportunity to learn new things, variety, relationships with supervisors, interest, relationships with colleagues), the other four the extrinsic dimension (physical work environment, work security, salary, work schedule). Workers

indicated the degree to which intrinsic and extrinsic values were important to them. The scores ranged from '1' (not important at all) to '5' (vital).

Strategy of Analysis

In order to answer the research questions, we first performed descriptive statistics and Pearson's correlation analyses between all variables under study. As a rule of thumb (Hinkle et al., 2003), correlation coefficients whose magnitude are between 0.9 and 1.0 indicate variables which can be considered very highly correlated; magnitude between 0.7 and 0.9 indicate variables which can be considered highly correlated; magnitude between 0.5 and 0.7 indicate variables which can be considered moderately correlated. Correlation coefficients whose magnitude is between 0.3 and 0.5 indicate a low correlation. Finally, correlation coefficients whose magnitude is less than 0.3 have little if any (linear) correlation.

Moreover, a multivariate analysis of variance (MANOVA) was performed to evaluate statistically the differences between the three age groups in all scales presented above. We also included gender and school level as fixed factors, in order to check for potential interaction effects with age groups. Where necessary, we conducted follow-up univariate and post-hoc Tukey tests to determine the pairwise differences among variables for our groups. As an estimate of effect size for group mean differences, we calculated the partial eta squared (η^2). Partial eta squared measures the proportion of variability associated with an effect when the variability associated with all other effects identified in the analysis has been removed from consideration (Richardson, 2011). Cohen (1969) has suggested values of .0099, .0588, and .1379, respectively to indicate small, medium, or large effects for this measure of the proportion of variance explained.

Finally, multiple regression analysis was used to estimate the effects of the job resources (role clarity, responsibility, learning opportunities, colleague support, social recognition, remunerative justice, intrinsic and extrinsic work values) on work engagement.

Separate regression analyses were performed for each of the three age categories. We also added Cohen's f^2 value as an estimate of multiple regression effect size. As rule of thumb, effect size of 0.02, 0.15, and 0.35 are considered small, medium and large, respectively (Cohen, 1998).

Results

Means, coefficient alphas and correlation coefficients of the study variables are provided in Table 1 (see Appendix). Internal consistency of the scales was acceptable, with the exception of the learning opportunities scale and extrinsic work values, which are slightly under the usually accepted threshold value of .70 (Nunnally & Bernstein, 1994).

Table 1. Means, Standard deviation, Cronbach's Alphas, and Correlations among the study variables (N=537)

	M	SD	α	1	2	3	4	5	6	7	8	9	10	11
1. Gender	0.75	0.43	-											
2. Primary school	0.47	0.50	-	.35**										
3. Lower Secondary school	0.31	0.46	-	-.08	-.63**									
4. Role clarity	2.81	0.82	.80	-.15**	-.17**	.02								
5. Learning opportunities	3.42	0.68	.64	-.04	.00	-.06	.28**							
6. Responsibility	3.18	0.82	.78	-.12**	-.21**	.04	.51**	.16**						
7. Colleague support	3.68	0.86	.91	.02	.15**	-.09**	-.09*	.24**	.01					
8. Intrinsic work values	4.42	0.45	.71	.08	.05	-.18	.11*	.20**	.09*	.20**				
9. Extrinsic work values	4.26	0.54	.68	.09*	.07	-.05	-.05	.07	-.03	.14**	.47**			
10. Remunerative justice	2.67	1.14	na	.02	.01	-.05	.19*	.21**	.16**	.08	.06	-.11*		
11 Social recognition	3.28	0.64	.80	-.12**	-.07	-.01	.02	.11**	.10*	.17**	.15**	.07	-.03	
12. Work Engagement	4.91	0.90	.90	.05	.10*	-.07	.25**	.30**	.20**	.22**	.31**	.15**	.14**	.26**

Note: gender was dummy-coded (0 = male; 1 = female); with regard to the type of school, two dummy variables were created in which the category 'upper secondary school' was the point of reference.

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

As correlation analysis shows, engagement is significantly related to every variable apart from gender and secondary school, even though all coefficients are small. Further analyses will explore these relationships in detail.

MANOVA Analysis

Using a general linear multivariate analysis of variance (GLM MANOVA) we evaluated statistically the differences between the three age groups on all scales presented above. In order to control for gender and type of school we also included these variables as fixed factors in the analysis. Where necessary, we conducted follow-up univariate and post hoc tests to determine the pairwise differences among variables for our groups. Results from the first GLM MANOVA revealed an overall significant multivariate effect of age group, with Wilks' $\lambda = .83$, $F(18, 960) = 5.39$, $p = .000$, partial $\eta^2 = .09$, as an overall significant multivariate effect of school, with Wilks' $\lambda = .91$, $F(18, 960) = 2.67$, $p = .001$, partial $\eta^2 = .05$. No significant multivariate effects were found for gender or for any interaction effect between variables.

Table 2. Results of ANOVA between groups: Age.

	Starters (≤ 34) n=126	Middle-aged (35-49) n=234	Seniors (≥ 50) n=146	$F(2; 488)$	Partial η^2
	$M(SD)$	$M(SD)$	$M(SD)$		
Work Engagement	5.12 (.10) ^a	4.89 (.08) ^{a,b}	4.63 (.09) ^b	6.59**	.03
Role clarity	3.29 (.09) ^a	2.76 (.07) ^b	2.73 (.08) ^b	14.30***	.06
Responsibility	3.55 (.08) ^a	3.15 (.07) ^b	3.13 (.08) ^b	7.68**	.03
Learning opportunities	3.61 (.08) ^a	3.37 (.06) ^b	3.42 (.07) ^{a,b}	3.28*	.01
Colleague support	3.89 (.10) ^a	3.46 (.08) ^b	3.57 (.09) ^{a,b}	6.40**	.03
Social recognition	3.06 (.07) ^a	3.32 (.06) ^{a,b}	3.45 (.07) ^b	8.29***	.03
Remunerative justice	3.13 (.13) ^a	2.55 (.10) ^b	2.50 (.12) ^{a,b}	8.08***	.03
Intrinsic work values	4.51 (.05) ^a	4.40 (.04) ^b	4.30 (.05) ^b	4.32*	.02
Extrinsic work values	4.21 (.06) ^a	4.28 (.05) ^a	4.15 (.06) ^a	1.57	.01

Note: ^{ab} Different letters denote significant differences between age groups based on Tukey post hoc paired comparisons (when the groups do not differ from one another, they all share the same superscript). *** $p < .001$. ** $p < .01$. * $p < .05$

Subsequent univariate analysis of variance (ANOVAs) indicated that the age groups differed significantly on all variables except for extrinsic work values (Table 2). Moreover, as we mentioned above, Cohen (1969) has suggested values of .0099, .0588, and .1379, respectively to indicate small, medium, or large effects for partial eta squared. Thus, in our analysis the proportion of variance between engaged groups can be considered from small to medium magnitude (Table 2).

Post-hoc Tukey tests were applied for pairwise comparisons. Results revealed that the younger teachers in particular were different from the other groups. To be specific, with respect to the perception of role clarity and responsibility, younger teachers showed a significantly higher mean than all the other groups, and they perceived more intrinsic work values than older teachers. Concerning the perception of remunerative justice, learning opportunities, and colleague support the younger teachers were found to have significantly higher ratings than those in the middle group (35-49 years old). Finally, starters were again found to be more engaged than their older (50+) colleagues. However in their perception of social recognition the pattern was opposite: that is, older teachers perceived more social recognition than their younger colleagues.

Concerning school type, subsequent ANOVAs indicated that the groups differed significantly on role clarity ($F(2;488)=3.63, p<.05$), responsibility ($F(2;488)=7.59, p<.01$), and social recognition ($F(2;488)=4.95, p<.01$). To be specific, primary school teachers showed lower levels of role clarity and responsibility in comparison with both lower and upper secondary school teachers, whereas they showed lower levels of social recognition than upper secondary school teachers.

Multiple Regression Analysis

Regression analysis was used to estimate the effects of job resources on work engagement. Separate regression analyses were performed for each of the three age

categories (Table 3). The results show that the control variables have little effect on employee engagement. Only primary school membership has an impact limited to the senior group ($\beta = .30, p < .05$).

None of the job resources had significant effects on engagement across all age categories. Indeed, results show several differences. Role clarity is positively related to engagement only for the middle-aged group ($\beta = .20, p < .01$). Learning opportunities show significant positive effects on the starters ($\beta = .20, p < .05$) and the middle-aged groups ($\beta = .15, p < .05$). Responsibility ($\beta = .29, p < .01$), colleague support ($\beta = .29, p < .001$), and intrinsic values ($\beta = .24, p < .05$) show significant effect on engagement only for the starters.

Table 3. Multiple regression analysis.

	Work Engagement								
	<i>Starters (<34)</i>			<i>Middle-aged (35-49)</i>			<i>Seniors (>50)</i>		
	$R^2 = .321; F(11) = 6.371; \text{Cohen's } f^2 = 0.47$			$R^2 = .187; F(11) = 5.876; \text{Cohen's } f^2 = 0.23$			$R^2 = .317; F(11) = 7.126; \text{Cohen's } f^2 = 0.46$		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	-0.22	0.15	-.13	0.17	0.13	.08	0.20	0.18	.09
Primary school	0.30	0.16	.19	0.07	0.14	.04	0.63	0.24	.30*
Lower Secondary school	-0.13	0.17	-.07	0.02	0.14	.01	0.41	0.23	.19
Role clarity	-0.03	0.09	-.03	0.22	0.07	.20**	0.12	0.12	.09
Learning opportunities	0.25	0.10	.20*	0.18	0.07	.15*	0.18	0.13	.11
Responsibility	0.28	0.09	.29**	-0.01	0.07	-.01	0.06	0.12	.04
Colleague support	0.30	0.08	.29** *	-0.04	0.06	-.04	0.12	0.10	.10
Intrinsic values	0.48	0.18	.24*	0.21	0.13	.12	0.36	0.19	.16
Extrinsic values	-0.08	0.12	-.06	0.15	0.11	.10	-0.08	0.15	-.05
Remunerative justice	0.02	0.05	.03	0.01	0.05	.02	0.07	0.07	.08
Social recognition	0.15	0.09	.13	0.38	0.08	.29***	0.61	0.13	.37***

Note: gender was dummy-coded (0 = male; 1 = female); with regard to the type of school, two dummy variables were created in which the category 'upper secondary school' was the point of reference.

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

Extrinsic work values and remunerative justice show no significant relationships with any of the groups considered. Social recognition has strong positive effects on the middle-aged ($\beta = .29, p < .001$) and the senior groups ($\beta = .37, p < .001$).

Discussion

The first objective was to verify whether teacher engagement differed on the basis of age. Younger teachers were found to be more engaged than their older (50+) colleagues. Nevertheless, to our knowledge there are no studies that deal with teachers' age and engagement, this result confirms Day and colleagues' (2006) findings that teacher involvement is high at the beginning of their career and Hildebrandt and Eom's (2011) that starters represent the most proactive and enthusiastic group, but goes in the opposite direction compared with the previous studies that show older employees as more engaged than their younger counterpart (James et al., 2011; Pitt-Catsouphes & Matz-Costa, 2008; Robinson et al., 2004). It seems noteworthy to underline that the first two studies were conducted with teachers, while the others collected data among other professionals. This difference confirms the value of investigating in the field of education, since specific features may have a different impact on workers, especially in Italy, where teachers become fully professionally qualified at an older age compared to their foreign colleagues. The specificities of the Italian context explain thus the differences with previous findings, such as Borman and Dowling's (2008) that beginners are more prone to attrition. In fact, balancing pros and cons of leaving the profession, the required long training and development of competencies may discourage starters from attrition, while Borman and Dowling (2008) postulate that beginners' decision to leave is due to the minor capital of specific knowledge accumulated, that is knowledge specific to the occupation and non-transferable.

The second objective was to study the role of job resources across age cohorts. Pattern emerged from analyses suggests that younger teachers find more positive and motivating

elements in their job than their older colleagues. Starters showed a significantly higher mean than all other groups with respect to their perception of role clarity, responsibility, and intrinsic work values, while perceiving more remunerative justice, learning opportunities, and colleague support, but less social recognition than the middle-age group. Unavoidable difficulties in first years of teaching jobs, such as the burden of multiple tasks or the mismatch between idealistic motivation and the reality of a classroom, are likely to be interpreted by younger teachers as temporary obstacles, compared with the success of having started their desired job. Clearly social recognition (i.e. that is being recognised as expert by peers) does not play the same role at the beginning of teachers' career that has later on, while colleagues' support in particular plays a central role during these first years. In fact, by providing emotional and practical support to early career teachers, this feature has a positive effect on their self-confidence and their resilience (Le Cornu, 2013).

The third objective was to investigate whether job resources predicted teacher engagement differently across age cohorts. Younger teachers' engagement is enhanced by the opportunity for personal development, responsibility, colleague support and intrinsic values. Job resources related to the levels of engagement among the middle-aged include role clarity, and opportunity for development and social recognition, while seniors' engagement is boosted only by social recognition. In line with Pitt-Catsouphes and Matz-Costa's (2008) findings, younger teachers' engagement is driven by the opportunity for development, and interaction with colleagues, while older employees appreciate the opportunity to see their competencies acknowledged. Middle-aged teachers are somehow at a turning point where they still benefit from the opportunity to develop, but at the same time desire to be valued and recognised as a point of reference for their colleagues.

It is not surprising that starters seem to hold more positive attitudes toward their job and their engagement appears driven by the desire for continuous development and intrinsic

values. It has been shown to be an occupation closely linked to intrinsic work values, high expectations, and personal involvement (Struyven et al., 2013). On the one hand younger teachers may perceive a lesser need for approval when starting their career. Given the time spent in gaining the proper training and education, they are strongly driven by intrinsic motives. On the other hand, the continuous lack of incentives and development opportunities may start to have a stronger influence when approaching the following stages of career, when some older teachers, especially in secondary schools, are called upon to help in managerial tasks, such as filling the vice-principal role.

It seems noteworthy to underline the findings related to primary schools teachers compared to those working in secondary schools. On the one hand, they emerge as those perceiving less clarity, a less appropriate responsibility and less social recognition, on the other hand, for older teachers, working in a primary school seems to offer more opportunities for engagement. Among the main predictors of work engagement in senior teachers we find working in primary school. These results partially cover what indicated by Day and colleagues' study (2006), which showed that teachers who work in primary schools are more likely to sustain their commitment and motivation over career than secondary teachers. The scholars found that primary teachers seemed to value positively certain situated factors within primary schools such as more opportunities for promotion and less complicated school structures.

Strengths, limitations and future research

One the main strength of this study is that intends to clarify mixed results obtained in previous studies; in this line, the study of engagement differences among age cohorts shows opposed results compared to those already performed on the subject. Furthermore, it investigates the determinants of such work engagement among teachers and offers interesting support for interventions that foster work engagement in the school staff.

Concerning the limitations, the study has some, each of which provides a basis for future studies. Firstly, the data is based on self-reported measures, thus there is the potential effect of social desirability. Secondly, the correlational design does not allow us to interpret the relationships found significant as causal relationships. Longitudinal studies are needed to examine stability in self-reported engagement. Moreover, the survey instrument includes a limited number of potential sources for teacher engagement. Future studies may assess additional factors and whether our findings are specific to the school context or may be generalized also to other organizations.

Practical implications and conclusion

Our results show that 'one size does not fit all'. When it comes to what employers could do to improve employee engagement, principals might want to focus on specific drivers of engagement for their teachers, according to particular age groups. Indeed, the age cohorts explored in our study have been shown to react to different resources. What is most noteworthy is the opportunity, for managerial and ethical reasons, to design appropriate practices to every age group.

Our data, along with the literature here presented, showed that younger teachers are mainly driven by responsibility, colleagues' support and learning opportunities. Among these job resources, we believe it may be strategic to focus on the opportunity for professional development. Beginning teachers see it as an intrinsic motivator (increased professional self-efficacy) and a 'extrinsic' tool to build their career (the more skilled they are, the more likely that they will have a positive and successful career). Training is consequently one of the best human resource (HR) tools for this group, especially if these activities are under voluntary participation. Academic research has demonstrated that employees who are offered training and development program acquire job-related skills and competencies and demonstrate higher job performance (e.g., Aguinis & Kraiger, 2009; Arthur et al., 2003).

Training, however, may not be an equally useful strategy for older teachers. They have a narrower time perspective, which makes career development less attractive. At the same time they do not perceive the need for further improving professional skills, because they feel sufficiently efficient due to their seniority. According to our data, seniors' engagement is driven by social recognition. This does not mean that other factors cannot play a role, but social recognition still stands as the best leverage for principals. Kanfer and Ackerman (2004) observed that aging individuals tend to lose fluid intellectual ability, which makes it difficult for them to compete with younger employees in term of workload and rapidity. However, evidence showed a strong positive relationship between age and knowledge levels (e.g. Beier & Ackerman, 2003). Thus, the opportunity for them to use the capital of accumulated knowledge and to perform more managerial tasks or support their peers should be regarded as the best tools to manage seniors. Even if seniority is not a substitute for competence, past experience can foster social and relational skills that are useful for coaching and mentoring. Senior members could see performing these roles as both worthwhile and gratifying while offering valuable services to the schools. In spite of the lack of extrinsic rewards and verbal praise, these teachers may overcome career frustrations and regain their enthusiasm.

Looking at our results, the same is not exactly true for middle-aged teachers. While social recognition could remain a booster for work engagement, role clarity emerged as a critical factor specifically for this group. As a consequence, one could suggest that school principals pay close attention to role design, since middle aged teachers (no longer newcomers, and not yet fully masters of the work setting) seem specially sensitive to role clarity and its effects. At the same time, as previously stated, since the middle years of the career constitute a challenge in terms of what is required by both work and life domains,

paying attention to the work/life interface, such as according flexible schedules or work permits, may reduce the discomfort perceived in the workplace.

Chapter 2

How negative age meta-stereotyping influences job satisfaction via work ability: a mediation in serial

Introduction

The demographic changes occurring in most industrialized countries present an urgent challenge for many organizations today. Companies are confronted with the fact that their workforce is getting both older and more age diverse due to the aging of their employees and shortages in the labour pool (Baltes & Finkelstein, 2011; Dychtwald et al., 2004). These changes imply that companies, who have historically had a largely homogeneous and young workforce, have to integrate an increasing number of older employees. It is now critical to understand the conditions that facilitate or inhibit positive and productive work life of older workers. There is a large body of literature that analyses what age stereotypes are related to younger and older workers and how these stereotypes affect their performance and well-being. In the workplace, older people are often perceived as less competent and less motivated to learn new things when compared to their younger counterparts (Desmette & Gaillard, 2008), even if their performance do not show such difference (Ng & Feldman, 2008). This study intends to make a contribution shedding more light on the consequences of a relatively under-researched construct, which is negative age meta-stereotyping.

Age stereotypes and meta-stereotypes

Stereotypes are defined by Cuddy and Fiske (2002) as “cognitive structures that store our beliefs and expectations about the characteristics of members of social groups” and stereotyping as “the process of applying the stereotypic information” (p. 4). Investigations of age stereotypes in the workplace have mainly investigated the content of stereotypes of different age workers (e.g., Posthuma & Campion, 2009), and the extent to which stereotypes

are accurate reflections of age differences (Ng & Feldman, 2012), though most of the studies have focused on older worker stereotypes.

A meta-stereotype is “a person’s beliefs regarding the stereotype that out-group members hold about his/her own group” (Vorauer, Main, & O’Connell, 1998). A growing body of social psychological studies regarding meta-stereotypes on gender, ethnicity, and religious groups confirm that people are indeed concerned about others view of them (Vorauer, Hunter, Main, & Roy, 2000). Age meta-stereotyping process is much less investigated. In fact, the complexity of daily interactions within age-diverse organizations require to study the multiple viewpoints, which is not just what an age group think about others, but also what they think others believe about them. To the best of our knowledge, only a few contributions have been made on age-related workplace meta-stereotypes (Bal, De Lange, Van der Heijden, Zacher, Oderkerk, & Otten, 2015; Finkelstein, Ryan, & King, 2013; Ryan, King, & Finkelstein, 2015). In summary, these studies show that workers tend to believe that other age groups have a negative opinion of them, more negative than their actual viewpoints and that negative meta-stereotyping can affect satisfaction with coworkers and lead to unfavourable outcome, such as the intention to retire earlier.

Regardless of age, research on the effect of meta-stereotypes shows that can be intra- and inter-personal in nature and can have potential psychological outcomes, such negative affect, disrupted self-views, and discomfort (Vorauer & Kumhyr, 2001).

In this line of thought, the concept of stereotype threat is strictly related to meta-stereotypes. In fact, stereotype threat has been described as a reaction to the awareness of a negative stereotype. Studies have found that a common consequence of stereotype threat is a decrement in performance. Researchers have focused on performance on memory tasks wherein negative older age meta-stereotypes are relevant (Barber & Mather, 2013; Hess, Hinson, & Hodges, 2009; Kang & Chasteen, 2009; O’Brien & Hummert, 2006). The

decrements in performance described presumably arise from internal states such as anxiety and worry, but these mediation mechanisms have never been measured. Stereotype threat may easily be defined as the potential emotional and behavioural consequence of a negative meta-stereotype (Finkelstein, King, & Voyles, 2015). For instance, when primed with negative stereotypes towards their own age group, older people showed a decrease in memory performance and higher cardiovascular stress (Levy, Slade, Kunkel, & Kasl, 2002; Stein, Blanchard-Fields, & Hertzog, 2002). Similarly, Geller and Stroh (2004) found that negative development ability stereotypes play a central role in predicting declining motivation. Therefore, we hypothesize that this prolonged state of anxiety and worry can diminish the perception of work ability.

Work ability

Work ability refers to “a balance between personal resources and work characteristics” (Gould, Ilmarinen, Jarvisalo, & Koskinen, 2008, p. 165). Personal health is a key component of work ability; accordingly, the Work Ability Index (WAI; Tuomi, Ilmarinen, Jahkola, Katajarinne, & Tulkki, 1998), the most popular measure of work ability, contains questions that assess diagnosed diseases along with functional impairment.

Prior research on work ability has found support for several negative work-related correlates of work ability. Tuomi and colleagues (Tuomi, Luostarinen, Ilmarinen, & Klockars, 1991; Tuomi, Ilmarinen, Nartikainen, Aalto, & Klockars, 1997) showed that dissatisfaction with supervisor’s attitude, lack of freedom, decrease in recognition and esteem, and role ambiguities at work were associated with impaired work ability among municipal workers. Similarly, lack of support at work, poor possibilities to control one’s work and poor management were also associated with lower work ability among construction workers and home care workers (Alavinia, van Duivenbooden, & Burdorf, 2007; Pohjonen, 2001).

With regards to outcomes earlier analyses have shown that work ability declines from midlife onwards and decreased work ability predicts work disability, spells of sickness absence, and early retirement from employment (Alavinia, van den Berg, van Duivenbooden, Elders, & Burdorf, 2009; Sell, Bultmann, Rugulies, Villadsen, Faber, & Sogaard, 2009; Ahlstrom, Grimby-Ekman, Hagberg, & Dellve, 2010).

Work ability is considered as an important aspect of well-being and health status. Due to a greater susceptibility to conditions that reduce their ability to work, the elderly are frequently associated with impairments in body functions and, difficulties in performing work activities and restrictions in social participation. However, it is noteworthy that the studies are not consistent with regard to the factors that promote sustainability of the work ability in this aging group.

High work ability is associated with self-perceived quality of work and enjoyment of staying in one's job (Tuomi, Huuhtanen, Nykyri, & Ilmarinen, 2001), whereas poor work ability is related to productivity loss (Van den Berg, Robroek, Koopmanschap, & Burdorf, 2011). Poor work ability also increases the risk of early retirement, long term sickness absence and work disability (Salonen, Arola, Nygard, Huhtala, & Koivisto, 2003; Burdorf, Frings-Desen, van Duivenbooden, & Elders, 2005; Alavinia, van den Berg, van Duivenbooden, Elders, & Burdorf, 2009).

Even though job satisfaction is a very popular construct in work and organizational psychology and it is strictly related to the factors usually associated with work ability, that is work performance (e.g., Bowling, Khazon, Meyer, & Burrus, 2015), life satisfaction (e.g., Newman, Nielsen, Smyth, & Hooke, 2015), early retirement decision (e.g., McGonagle et al., 2015) and turnover intention (e.g., Guan et al., 2014), the relationship between work ability and job satisfaction has been rarely investigated. Our intention was to include job satisfaction as the outcome of the mediation in serial.

Occupational future time perspective

Occupational future time perspective is defined as workers' beliefs about how much time they have left until their retirement (Zacher & Frese, 2009). The concept derives from the general notion of future time perspective in the aging and life span development literature. Future time perspective focuses on the motivational consequences of a changing time horizon and hypothesizes that individuals react in accordance with their perceptions of the future (Lang & Carstensen, 2002). Bal and colleagues (2015) found a negative association between occupational future time perspective and age negative meta-stereotypes, that is negative age meta-stereotypes relate to lower future time perspective. In the present study the relationship was reversed because employees working in the public sector do not voluntarily choose when to retire, yet their remaining time at work is a given time frame rather than the result of a goal selection process. Thus, our decision was thus to include this limited time frame as the first component in the mediation in serial.

Based on previous considerations, the hypothesis is the following:

Negative age meta-stereotypes and then work ability will mediate the relationship between occupational future time perspective and job satisfaction.

Methods

Participants

Data were collected within a broader project regarding older workers' resources and well-being. A large regional administration agreed to participate. Participants were approached twice to fill out the questionnaire. Between Time 1 and Time 2 there was an interval of 8 months. Following Taris and Kompier (2003) the time lag should correspond with the "causal interval" of the process under study. This time lag was considered appropriate to control for potential bias of the correlational design and to look for causal relationships (Zapf, Dormann, and Frese, 1996).

The collection was managed as follows. Prior to distribution of the questionnaire, the management put a message on the news board of the website informing the employees about the aims of the project. Then the research team contacted via e-mail all individuals aged 50 or more. The e-mail contained information on the project and the link to an online questionnaire. The researchers assured confidentiality of employees' responses. After 8 months the research team contacted the participants again, asking to fulfill the questionnaire one more time. The first questionnaire was completed by 1016 workers (64% response rate), the second questionnaire was fulfilled by 949 employees (60% response rate). A total of 556 workers participated in both surveys. Given that the context was very large and number of team members varied greatly between departments, to assure homogeneity only departments with more than 30 participants were selected in the analysis. The final sample was 430 employees. Participants were mainly women (59%), and the average age was 56.20 years ($SD = 3.27$), ranging from 50 to 65 years, and with an average organizational tenure of 24.88 ($SD = 9.08$).

Measures

Retirement perspective was measured subtracting the expected age of retirement from the age of the respondent.

Negative meta-stereotypes were measured with four items. High score meant that employees felt that their organization held a negative view of older workers' ability to adapt to technological change and interest in training. Example of item is "My organization believes that older workers are less interested in technological change than younger workers". The response ranged from 1 (not true at all) to 5 (totally true).

Work ability was measured with four items. Three items from the Work Ability Index (WAI, Tuomi et al., 1998) and one additional item adapted from the WAI (Barnes-Farrell et al., 2004) as used in McGonagle and colleagues (2014) that also checked construct validity of this four-item work ability measure. The items included the WAI subscales of current work

ability compared to lifetime best and work ability in relation to physical and mental job demands. The additional item measured work ability in relation to interpersonal demands. The items were “How many points would you give your current ability to work?” and “Thinking about the [physical, mental, interpersonal] demands of your job, how do you rate your current ability to meet those demands?” The response ranged from 0 (cannot currently work at all) to 10 (work ability at its lifetime best).

Job satisfaction was assessed with a single item (Wanous, Reichers, & Hudy, 1997). The statement was “Overall, how satisfied are you with your job?”, which was scored on a 5-point scale ranging from 1 (totally unsatisfied) to 5 (totally satisfied).

Results

Descriptive statistics

The means, standard deviations, internal consistencies (Cronbach’s alpha), and correlations were computed for all study variables (Table 4).

Table 4. *Means, Standard deviation, Cronbach’s Alphas, and Correlations among the study variables (N=430)*

	M	SD	α	1	2	3
1. Occupational future time perspective	8.92	4.73	-	-		
2. Negative age meta-stereotypes	2.94	1.00	.72	-.10*	-	
3. Work ability	7.78	1.47	.88	.15**	-.21**	-
4. Job satisfaction	3.36	1.15	-	-.01	-.07	.18**

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

Strategy of analysis

To test the model, it was used the analytical approach described by Preacher and Hayes (2004). The purpose of this mediation approach is to test the indirect effect between the predictor and the criterion variables through the mediator using a bootstrapping procedure that addresses some weaknesses associated with the Sobel test (Preacher & Hayes, 2004). SPSS macros for bootstrapping with multiple mediators operating in series (Hayes, 2012) were used to test the model. The most useful model to test our research hypothesis was model 6, which consisted of SPSS macros for bootstrapping, with multiple mediators in serial. To obtain direct and indirect effects, all the paths coefficients were estimated simultaneously.

The method outlined generates an estimate of the indirect effect, including a 95% confidence interval. When zero is not comprised in the 95% confidence interval, one can conclude that the indirect effect is significantly different from zero at $p < .05$ and, thus, that the effect of the independent variable (i.e., retirement perspective) on the dependent variable (i.e., job satisfaction) is mediated by the proposed mediating variables (i.e., negative meta-stereotypes and work ability).

Test of the model

As formerly defined, the Preacher and Hayes analytical approach allow us to test the direct and indirect effects of the variables considered. Descriptive statistics, reliability analysis and Pearson correlations between variables are presented in table 4.

In Table 5 estimates of all the paths coefficients are provided, as well as indirect effects along with the 95% bias corrected bootstrapped confidence intervals for paths estimates. Concerning the direct effects, there was no direct effect of occupational future time perspective on job satisfaction. Only work ability shows a positive direct effect on job satisfaction. Otherwise, occupational future time perspective is negatively associated to negative age meta-stereotyping and positively to work ability, that is, longer time remaining

at work lessen the perception of being seen less adaptable to changes and at the same time foster work ability. Negative age meta-stereotyping is negatively related to work ability.

Regarding the indirect effects, the hypothesis suggested the possibility that negative age meta-stereotypes and work ability sequentially mediate the relationship between occupational future time perspective and job satisfaction. Thus, the hypothesis was confirmed; in particular the results indicate that lower occupational future time perspective is associated with negative age meta-stereotypes which in turn negatively affect work ability and lower job satisfaction. Workers with less time remaining at work perceive more negative age meta-stereotyping which in turn lessen their work ability and subsequently their job satisfaction.

Table 5. Path coefficients and Indirect effect for Mediation Models

	Path coefficients			Indirect effects	
	Job satisfaction (JS) T2	Negative Age Meta-Stereotypes (NAMS) T1	Work Ability (WA) T2	Estimate	Bias-Corrected Bootstrap 95% Confidence Interval
R	.19	.12	.26		
R ²	.04	.01	.07		
MSE	1.28	.97	2.08		
F	5.13	5.39	14.35		
p	.00	.02	.00		
Occupational Future Time Perspective (OFTP) T1	-.01 (.01)	-.02 (.01)*	.05 (.01)**		
Negative Age Meta-Stereotypes (NAMS) T1	-.04 (.06)		-.30 (.07)***		
Work Ability (WA) T2	.14 (.04)***				
Total				.09 (.03)	.03; .18
OFTP → NAMS → JS				.01 (.02)	-.01; .05
OFTP → NAMS → WA → JS				.01 (.00)	.00; .03
OFTP → WA → JS				.07 (.03)	.02; .14

Notes. *** p<.001, **p<.01, * p<.05. Bootstrap confidence intervals were constructed using 5000 samples. Standard error in parentheses.

Discussion

This study is the first to examine relations between occupational future time perspective, negative age meta-stereotypes, work ability and job satisfaction. In order to analyse the process that lead from occupational future time perspective to job satisfaction and the role played by negative age meta-stereotypes and work ability, a subsequent mediation was computed. Results of the mediation in serial performed showed that both negative age meta-stereotypes and work ability subsequently mediate the relationship between occupational future time perspective and job satisfaction. Despite no direct association was found between occupational future time perspective and job satisfaction or negative age meta-stereotypes and job satisfaction, results showed that there is a process able to link those variables. Specifically, occupational future time perspective affect negative age meta-stereotypes, which in turn affects work ability that in turn influences job satisfaction.

This process may underline a process similar to what is described by Bal et al's (2015) as a self-categorization process. According to person-environment fit literature (Edwards, 2008), a misfit between one's personal identity and one's work resulting from negative stereotypes may be associated to lower work outcomes. Individuals who have less time remaining at work may assume that colleagues and supervisor make insinuations made on their inferior adaptability to change and thus be more affected by the distress caused that decrease their work ability. When one does not identify as being part of the group of older workers, age meta-stereotypes impede one's self-categorization because they run against the beliefs one has about the self-identity.

No direct association was found between occupational future time perspective and job satisfaction. This lack of association may be explained by the fact that in the final stage of the career job satisfaction is not directly affected by the time remaining before retirement. It may become more manifest when there is less time remaining and there are more negative

stereotypes against older workers perceived. Less time remaining at work has been shown also related to an increase in retirement planning activities (Wang & Shi, 2014) that may ultimately influence reflections on job satisfaction.

Similarly, there was no direct relationship detected between negative age meta-stereotypes and job satisfaction. Negative age-meta-stereotypes influence job satisfaction only through work ability. The reason may lie on the fact that the decrease in work ability accounts for the awareness of negative stereotypes that previous studies have found to be related also to decrements in performance. As scholars have noted, such decrements presumably arise from internal states such as anxiety and worry (Finkelstein et al., 2015) that may similarly affect work ability.

Strength and limitations

One of the main strength of the present study is that makes an attempt in explaining the mediational mechanisms that link age meta-stereotypes to job satisfaction. Since, age meta-stereotypes is an under researched subject we find it noteworthy to underline. Secondly, it uses two waves of data, thus addresses the issue of correlational design, which is usually a common limitation in social research that precludes causal relationships between the variables examined.

This study has also a number of limitations that should be noted and that should be addressed in subsequent research. First limitation is the fact that only one organization was involved in the study. Even though the initial sample used was large (more than 1500 employees contacted), we cannot overlook the peculiarity of the company involved, which is a public organization. Second, future research should consider the addition of moderating factors that account for the negative emotional occurring between negative meta-stereotypes and work ability.

Practical implications and conclusions

Work on age meta-stereotypes is still in its earlier days but it is suggested that future research might inform interventions designed to reduce negative effects of meta-stereotype activation at work (Finkelstein et al., 2013). Also, such interventions could possibly come into play either earlier in the process (preventing the reaction to meta-stereotypes) or later (preventing negative behaviors resulting from reactions).

There are several interventions possible. First, interventions aimed at individuals could be implemented to reframe cognitions when individuals are reacting negatively to meta-stereotypes. This can be applied by designing interventions that reframe threats as challenges. Interventions can also be aimed at workgroups and organizations. Recently, Zabel and Baltes (2015) discussed a host of workplace interventions that should be studied in light of age-relevant changes in the workplace. Likely, the most promising category would be more social interventions, such as diversity training (with a focus on age and inclusion of the concept and content of age meta-stereotypes) and team-building interventions. The latter could include activities to help solidify bonds among age-diverse team members, open honest lines of communication, and a focus of sense of identity on the team as an entity, and away from age group division.

Conclusion

As previously discussed, as the context of work and the age composition of the workforce are changing, this raises several issues to the work capacity and participation of the older age groups in the workforce. With the growth of positive psychology researchers have begun to focus not only on the problems that mature workers encounter in the workplace, such as cognitive loss and discrimination deriving from stereotypes, but also on the potential strengths and resources (Robson et al., 2006). Despite the attention paid to this subject, there are still unresolved issues concerning factors and processes that contribute to enhance/inhibit older workers' well-being at work. According to this, this thesis presented two studies, aimed to understand the role of relevant antecedents and outcomes of older workers' well-being at work.

Summary of the main findings

The first study concerned how job resources and work engagement varied across different age groups, and examined the factors that play a role in fostering teacher engagement. This study was conducted on 537 teachers, employed in different schools: primary, lower secondary and upper secondary school. Given that this study was particularly interested in the differences between different age cohorts, the authors decided to make a comparison of three successive age groups of the working population namely starters (20-34 years), middle-aged (35-49 years), and seniors (50+).

The first objective was to verify whether teacher engagement differed on the basis of age. Results of MANOVA analysis revealed that younger teachers were significantly more engaged than their older (50+) colleagues.

The second objective was to study the role of job resources across age cohorts. Pattern emerged from post-hoc Tukey tests suggested that younger teachers find more positive and motivating elements in their job than their older colleagues. Starters showed a significantly

higher mean than all other groups with respect to their perception of role clarity, responsibility, and intrinsic work values, while perceiving more remunerative justice, learning opportunities, and colleague support, but less social recognition than the middle-age group.

The third objective was to investigate whether job resources predicted teacher engagement differently across age cohorts. Multiple regression analyses showed that younger teachers' engagement was enhanced by the opportunity for personal development, responsibility, colleague support and intrinsic values. Job resources related to the levels of engagement among the middle-aged included role clarity, and opportunity for development and social recognition, while seniors' engagement was boosted only by social recognition.

The second study presented in this thesis focused on the process that links negative age meta-stereotypes and job satisfaction via work ability.

More research on age meta-stereotyping process is needed. Indeed, the complexity of daily interactions within age-diverse organizations require to study the multiple viewpoints, which is not just what an age group think about others, but also what they think others believe about them. Only a few contributions have been made on age-related workplace meta-stereotypes (Bal, De Lange, Van der Heijden, Zacher, Oderkerk, & Otten, 2015; Finkelstein, Ryan, & King, 2013; Ryan, King, & Finkelstein, 2015). These studies found that workers tend to believe that other age groups have a negative opinion of them, and that such negative meta-stereotyping can affect satisfaction with coworkers and lead to unfavourable outcome, such as the intention to retire earlier. The awareness of a negative stereotype has decrement in performance as a common consequence. This decrement presumably arises from internal states such as anxiety and worry, but these mediation mechanisms have never been measured.

The study was conducted on 430 workers aged 50+, employed in a public agency. They were contacted twice within 9 months to answer a questionnaire. In order to analyse the

process that lead from occupational future time perspective to job satisfaction and the role played by negative age meta-stereotypes and work ability, a subsequent mediation was computed. Results of the mediation in serial performed showed that both negative age meta-stereotypes and work ability subsequently mediate the relationship between occupational future time perspective and job satisfaction. Despite no direct association was found between occupational future time perspective and job satisfaction or negative age meta-stereotypes and job satisfaction, results showed that there is a process able to link those variables. Specifically, occupational future time perspective affect negative age meta-stereotypes, which in turn affects work ability that in turn influences job satisfaction.

In conclusion, results from these studies support the idea that creation of ‘age-aware’ policies and practices that challenge latent negative conceptualisations and prevent from affecting decisions about older workers is recommended. It is usually noted that older workers face considerable challenges in remaining in work and finding new employment when displaced, which several scholars (e.g., Golub et al., 2002) suggest is reflective of the paradigm that comparisons between young and old are perceived as decrements rather than simply as differences. Hedge (2009) similarly notes that myths and stereotypes about ageing workers are often so ‘stucked’ in organizations that it seems almost impossible to dislodge them. While macro-level policies and legislation can serve in persuading or even mandating certain organizational policies, they cannot oblige positive attitudes and age-sensitive behaviours. The HR management challenge lies in finding ways of recognising and using this capital of knowledge and skills that benefit workers and organisations alike.

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