

Research Reports

Intention to Remain at Work Until Legal Retirement Age: A Comparative Analysis Among Different Age Subgroups of Employees

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Abstract

The paper is an empirical contribution to the intention to remain at work until legal retirement age among different age subgroups of employees. Three groups of antecedents are analyzed: health condition, professional competence, and psychosocial work conditions, among two age groups of employees: 40- to 49-year-old employees and employees 50 years of age or older. The participants are employees from the service industry who are subject to annual control by occupational medicine (n = 280). They completed the VOW/QFT (Vragenlijst Over Werkbaarheid / Questionnaire sur les Facultés de Travail), a self-report questionnaire measuring several dimensions to understand the intention to remain at work. Hierarchical regression analyses tested the hypotheses. Results show there is clearly distinctive process between employees who were 40–49 years old and those over 50 in the explanation of intention to work until the lawful retirement age. Among the first group, perceived health and increase in abilities explained the intention to remain (psychosocial aspects were not an incremental explanation); among the second, it was the possibility of participation that motivated them to work. Implications concern the management of age and career: These are not the same factors that explain the intention to remain at different stages of the career. This research clarifies the respective roles of health, professional competence, and work conditions to understand the intention to remain by studying their incremental explanations and distinguishing two subgroups of age.

Keywords: intention to remain, older worker, health, work ability, professional competences, psychosocial work conditions

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Introduction

Many European countries report a low number of people over 55 who still work; Belgium is a good example, with barely 35% of workers from this age group in 2009 (Eurostat, 2010). While the normal state pension age in Belgium is 65, the federal government has awarded early retirement at the age of 55 years under certain conditions (company in financial difficulty, significant restructuring plan, hard labour, disabled workers or with seriously physical problems). This early retirement is a system for employees over 55 years old who are laid off: they are then entitled to unemployment benefits and an additional compensation charge from their former employer, while having the status of "bridging pensioner"; it is not uncommon that taking his/her early retirement is, from a financial point of view, very attractive for the worker. From the 70s, the use of this mechanism has become common in Belgium: it has been seen as a way for struggling businesses to reduce their workforce without significant social conflict by offering an elegant way to older workers to leave their company and the labour market. This strategy has been seen for many years as a win-win strategy for business leaders, labour unions, and workers; so much

so that [Elchardus' and Cohen's \(2003\)](#) Belgian survey showed that, for many workers, early retirement has now become an entitlement. The problem is, under cover of a social plan, that the costs were simply shifted to longer term on the State, and therefore on society. The context of recent years led to radically change the position: many baby boomers leave the workforce and future generations just are not numerous enough to absorb the early massive departure of baby boomers. The Belgian company [Securex \(2010\)](#) estimates that if we want to avoid disaster, we would require that employment rate for workers aged 55 and older back up to 60% by 2030.

As mentioned in [Schalk et al. \(2010\)](#), companies “have to rely increasingly on the knowledge, skills, and experience of older workers while the available workforce is shrinking considerably” (p. 77). A key question is how to enable older workers to remain employed. [Schalk et al. \(2010\)](#) estimate that the elements necessary to efficiently maintain older workers in the labor market are health condition of employees, various psychosocial work aspects such as the job and working environment quality, and also the attitude of managers towards older workers. Thus appears a major contemporary challenge for the Belgian society, through the human resource managers: encourage older workers to continue working without too great personal sacrifice, i.e., in tolerable working conditions for the senior worker.

The aim of this research is to present some factors determining correct work conditions or at least work conditions playing a positive role for workers to remain at work. So in this context, the objective of this study did not focus on the economic and financial situation of workers and their households / families. We analyze the contribution of three groups of antecedents – health condition, work ability, and psychosocial work aspects – among two age groups of employees: 40- to 49-year-old employees and employees 50 years or older. We posit that the antecedents of intention to work until legal retirement age do not have the same incremental value between these two subgroups.

The originality of this contribution is so to distinguish the order of importance of different categories of conditions for the retention of staff among age categories: There is a need for HR to know what the priorities in each age category are for proposing good practices of age management; in Belgium, this need for good practice is very acute. In a study conducted recently in Belgium, it appears that for most companies, actions in terms of age management related thoughts, projects, but few are implemented effectively; actions based on factors identified as levers of continued employment until age 65 are almost nonexistent ([Lurkin, Angenot, & Braeckman, 2012](#)).

Intention to Quit or Intention to Remain Until Legal Retirement Age

There are quite few studies on intent to remain ([Mrayyan, 2007](#)); some exceptions are [Shacklock's](#) contributions in Australia ([Shacklock, 2006](#); [Shacklock & Brunetto, 2011](#)). The concept is usually investigated through intention to quit as retirement or turnover, although [Adams and Beehr \(1998\)](#) showed that there are significant differences between the predictors of turnover intentions and retirement intentions. The essential reasons for retirement are financial – having some savings or other family income ([Beehr & Bennett, 2007](#); [Kim & Moen, 2001](#); [Shultz, Morton, & Weckerle, 1998](#)); family ([Beehr & Bennett, 2007](#); [Saba, Guérin, & Wils, 1998](#); [Shultz et al., 1998](#)); health ([Beehr & Bennett, 2007](#); [Kim & Feldman, 1998](#); [Saba et al., 1998](#)); and various work-related variables like strains, demands, requirements ([Adams, 1999](#); [Blekesaune & Solem, 2005](#); [Elchardus & Cohen, 2003](#); [Elovainio et al., 2005](#); [Schreurs, Van Emmerik, De Cuyper, Notelaers, & De Witte, 2011](#)), job/organizational commitment, satisfaction ([Adams, 1999](#); [Adams & Beehr, 1998](#); [Morrow & McElroy, 1987](#); [Saba et al., 1998](#)), or organizational culture ([Lindbo & Shultz, 1998](#)).

Weckerle and Shultz (1999) have analyzed the antecedents of four types of retirement: early retirement, continuing work, obtaining bridge employment in the same job, and obtaining bridge employment in a different job. They noted that voluntariness of retirement, anticipated financial reward, and job flexibility all significantly differentiate the four types of retirement decisions, but also, according to continuing work, the most important factor is financial constraints. Bidewell, Griffin, and Hesketh (2006) suggest that whereas the choice between early retirement with less money and delayed retirement with more money is an important aspect in relation to retirement decisions, the decision is tempered by current and anticipated health and also by enjoyment considerations after retirement.

The process is actually complex; first, many antecedents to remain or to quit exist. Second, there are various ways to organize these antecedents, and all the authors do not use the same one. For example, Beehr (1986) distinguished “personal variables” (health, age) from “environmental variables” such as “job variables” and “non-job variables.” “Non-job variables” relate to the individual or personal variables. Third, the meta-analysis conducted by Topa, Moriano, Depolo, Alcover, and Morales (2009) resulted in differentiating retirement planning from retirement decision; the statistical analysis indicated different principal predictors for these two variables. Schalk et al. (2010) found that much research on early retirement mainly examines older employees and sometimes retrospectively samples of retirees: The respondents were necessarily more limited than workers working. This comment is not trivial because we think that different dynamics in the explanation of the intention to work until the legal retirement age potentially exist according to the worker’s age because there are probably different needs and different expectations from the employee towards his or her organization (or towards his or her life as a whole) at different stages of his or her current working life or career.

Health, Age, and Work

Studies focusing on the relationship between personal variables and retirement decisions show that health and age significantly predict retirement decisions: People with better health retire at an older age than people in poorer health (Beehr, Glazer, Nielson, & Farmer, 2000; Bidewell et al., 2006). The results from the meta-analysis from Topa et al. (2009) are more precise: Specific job-related attitudes (e.g., job satisfaction and work involvement) predict retirement planning whereas poor health and negative work conditions do not affect it; retirement decisions have an opposite influence on poor health and negative work conditions. Of course, as Topa et al. (2009) stated, the relationship between health and retirement is complex: Health problems can cause early retirement and undermine retirees’ well-being, but retirement from unhealthy jobs may also promote early retirement and increased well-being for retirees. Moreover, they note that the expressions “health” or “health problem” are quite vague, ranging from major physical illness to relatively mild psychosomatic illness, and are not always defined in the investigations or contributions. The studies relating to the evolution of biological phenomena among older workers show that there are real limits to the functioning of older workers only if they work in a professional environment where the physical requirements are painful, such as those for blue-collar workers in secondary production (e.g., Faurie, Fraccaroli, & Le Blanc, 2008; Laville, 1989; Laville & Volkoff, 1998; Millanvoye, 1998; Peeters & van Emmerik, 2008).

An interesting way to understand the links between age and health is Ilmarinen and Tuomi’s (2004) investigation of “work ability”; they developed the Work Ability Index (WAI), a questionnaire of seven simple questions – including three questions on health problems – widely used in epidemiological studies (see also Ilmarinen, 2007). According to the authors, WAI scores can predict work disability, early retirement, and death primarily among older male workers with a job with strong physical requirements. Camerino et al. (2006) confirmed in a large study among 10 European countries that low perceived ability to work increases with age among nurses. Van den Berg, Elders,

de Zwart, and Burdorf (2009) synthesized the results of about twenty studies conducted between 1985 and 2006 concerning the health factors linked to the WAI. Four studies proved the link between a low musculo-skeletal capacity and the WAI; four studies showed a relationship between the overweight and a weak score on WAI; and four studies showed a link between a lack of physical exercise during free time and a weak score on WAI. The general health status seemed well predicted with the WAI, but according to Ilmarinen and Tuomi (1992), the WAI score remains constant between 45 and 57 years old among employees with intellectual jobs. The WAI score is precisely calculated thanks to various questions about health problems. In addition, the unidimensionality of this score does not make it possible to differentiate work ability from the point of view of health and work ability from the point of view of professional competence whereas health problems and problems of competence at work require a different kind of remedial intervention under the responsibility of different actors in the organization.

Psychosocial Work Aspects, Professional Competence, and Intention to Remain

We have seen above that many authors consider work conditions to be antecedents of the intention to quit. Of course, the term “work conditions” covers many aspects, such as job content (quantity of work, complexity, interest, etc.), physical requirements, job conditions (training, learning, financial rewards, etc.), psychosocial work aspects (social support, acknowledgement, opportunity of participation, etc.).

Van den Berg et al. (2009) were interested in the studies relating to the bond between psychosocial job requirements and the WAI score. They report that in five studies out of seven, strong mental requirements are associated with a weak WAI score, and in three studies out of four, lack of autonomy is associated with a weak WAI score.

Shacklock (2006) interviewed 36 people, including 12 retirees (average age was 59.3 years) about their experiences, perceptions, and understanding of continuing to work. The attachment to work and social interaction at work are two findings specific to the intention to continue working. In a very recent contribution, Shacklock and Brunetto (2011) showed that in addition to health and financial factors, older workers' intention to continue paid working (OWICW) depends on four work-related variables: the importance of working, the flexibility of working arrangements, interests outside of work, and management and organizational factors such as supervision.

The analyses deserve further refinement insofar as a short analysis of the literature according to age management demonstrates that expectations and difficulties relating to work conditions differ with advancement in years or in career (Morrow & McElroy, 1987) and probably also according to the sector (secondary sector versus service industry). Authors such as Slocum, Cron, Hansen, and Rawlings (1985) and Roger and Tremblay (1999) estimated the arrival of a career plateau (also called “midcareer plateau”) among workers about 45 years; most authors associate essentially negative consequences with it: poor health (Slocum et al., 1985), a decrease in self-esteem, more anxiety (Cerdin, Marbot, & Peretti, 2003), less satisfaction towards the superior (Slocum et al., 1985), hostility towards the organization, withdrawal, and the intention to quit the organization (Nicholson, 1993). Perceived competence, the ability to perform, and their evolution factor into the process of career plateau (Lemire & Rouillard, 2003; Rabinowitz & Hall, 1981). Marquié (1998) noted that competence continues to progress with age, just as experience and automatism. However, many contributions treating the evolutions of the labour market and the organizational structures underline the changing nature of work, the intensification of work, and the necessity to be trained and continuously adapted (Gollac & Volkoff, 2000; Levy-Leboyer, 1995; Marquié, 1998; Roger & Tremblay, 1999; Wrenn & Maurer, 2004). Adequate competence and experience could thus progress less quickly than the always-renewed requirements of the job. Hellemans (2006) highlighted that if younger workers do not attribute an overall obvious lack of competence to workers older than 50, they attribute a poorer score according

to their adaptation to change. Paumès Cau-Bareille and Marquié (1998) also found that older workers are under-represented in training programs. If there is a deliberate policy not to invest more in the older worker, the organization does not acknowledge it.

According to Guérin, Saba, and Wils (1998), expectations of the oldest workers are nevertheless precisely: the acknowledgment and the feeling to be listened to. Kosloski, Ekerdt, and DeViney (2001) found that jobs with high intrinsic rewards and positive social relations associate with less retirement planning. Rabinowitz and Hall (1981) reported that the strongest correlates of involvement in late career are two types of rewards: performance-based rewards and membership in the organization. Another expectation of older workers is adaptation to work conditions – in particular, adapted rhythm and autonomy (Firth, Mellor, Moore, & Loquet, 2004; Saba et al., 1998) suggested that to ameliorate the intention to quit, managers need to monitor workload actively.

Overall, apart from health, the question of competences is decisive for workers close to 40 years old, as are social acknowledgement aspects, which are advanced for the oldest workers. Our hypotheses are as follows:

- *Hypothesis 1:* Perceived health, professional competence, and psychosocial aspects at work contribute to the intention to work until legal retirement age.
- *Hypothesis 2:* Beyond perceived health, professional competence contributes incrementally to the intention to work until legal retirement age among 40- to 49-year-old employees; psychosocial aspects at work do not.
- *Hypothesis 3:* Beyond health condition and professional competence, psychosocial aspects at work contribute incrementally to the intention to work until legal retirement age among employees 50 years or older.

Recently, Wang and Shultz (2010) recommend using a multilevel framework for potential predictors: individual, job, organization, or even societal levels, and moreover incorporating a person-environment fit perspective. This study follows these recommendations partly. We use perceived health at the individual level and knowledge and the opportunity for training, social support, and participation at the job level. We do not study income as a potential predictor, so it is not controlled, but we use the “managerial role” as a control variable as a proxy for income. Our aim is to study some human and work condition variables on which the occupational medicine or the personnel department can have an impact (cf. prevention approach).

Methodology

Participants

Our study focuses only on workers in the service sector: the participants are employees 40 years or older from the tertiary sector who are subject to annual check-up due to the characteristics of the workplace (exposure to biological risk factors as in health professions, educational sector, food trade, etc.). So it was the occupational physician who asked the employee if he or she agreed to complete the questionnaire.

The sample consisted of 280 employees ($N = 280$) who completed the paper questionnaire. To quote only the principal sectors in which the participants work, 85 (30.4%) of the sample come from the healthcare sector, 25 (8.9%) from the insurance sector, 25 (8.9%) from services to companies (cleaning, etc.), 25 (8.9%) from public administration, 22 (7.9%) from the food trade, 21 (7.5%) from wholesale trade, and 16 (5.7%) from transport. 158 (56.4%) were 40–49 years old ($M = 44.92$; $SD = 2.79$), and 122 (43.6%) were 50 or older ($M = 55.29$; $SD = 3.98$).

There is a good repartition by gender: 112 (40.0%) were men, and 168 (60.0%) were women. 62 (26.9%) had inferior secondary education; 79 (28.7%) had superior secondary education; approximately half of the sample 122 (44.4%) had a high-school diploma among which 32 (11.6%) had a university degree. Only 67 (24.3%) of the participants had a managerial role (cf. “Are you a manager of collaborators?”).

Measures

Intention to Work Until Legal Retirement Age. We use five questions from the VOW/QFT (Hellemans, Piette, & Himpens, 2010) to measure the intention to work until legal retirement age (we call this dimension “intention to remain” for more facility). The questions (with a 5-point scale ranging from 1 = “certainly not” to 5 = “yes, certainly”) are as follows: “Does the idea of having to work until legal retirement age distress you?” (to reverse), “Do you sometimes think about an early retirement?” (to reverse), “Do you prefer to continue to work as long as possible?”, “Do you have the intention to anticipate your retirement?” (to reverse), and “Do you wish to work until legal retirement age?”

Perceived Health. Health problems may be quite different among employees and workers. We chose a single and very general measure of perceived health to be appropriate to our various sub-samples: “How would you qualify your health condition these two last weeks?” (1 = bad, 2 = fair, 3 = good, 4 = very good, 5 = excellent).

Professional Competences. Professional competence is measured by two dimensions from the VOW/QFT (Hellemans, 2011, 2013; Hellemans et al., 2010). The first is related to perceived competence and experience at work; it is measured by six items on a 5-point scale ranging from 1 = strongly disagree to 5 = strongly agree. The items are as follows: “When I’m confronted with a problem in my work, I generally find different solutions”; “I realize the objectives that are imposed for me”; “I’m armed sufficiently to cope with the demands imposed by my job”; “I’m generally on top of my work”; “The experience I have accumulated has prepared me to handle changes in my job”; and “I can stay calm when I’m confronted with difficulties because I can count on my experience”. The other part relates to work capacities evolution (increase) during the last five years (six items to evaluate on a 5-point scale ranging from 1 = strongly decreased to 5 = strongly increased). Items are as follows: “How have these last five years evaluated . . . my speed of work . . . my ambition to reach something . . . my motivation to go to work . . . the quantity of work I can achieve . . . my ability to cope with changes in my job . . . [and] the energy I can use for my work”. Hellemans (2011, 2013) conducted an exploratory-confirmatory analysis on these dimensions; the factorial structure was stable and internally consistent.

Psychosocial Aspects. We have three dimensions from the VOW/QFT (Hellemans, 2011, 2013; Hellemans et al., 2010) closely linked with psychosocial work aspects: (a) use of knowledge and opportunity of training (three items, e.g., “Does your work call sufficiently upon all your aptitudes and capacities?”), (b) social support (four items, e.g., “Can you, if necessary, ask for assistance from your colleagues?”), and (c) opportunity for participation (three items, e.g., “Can you take part in decisions that relate to your work?”). The three dimensions are evaluated on a 4-point scale ranging from 1 = never to 4 = always. Hellemans (2011, 2013) conducted an exploratory-confirmatory analysis on these dimensions; the factorial structure was stable and the internal consistency was good.

Results

All the analyses were conducted with IBM SPSS Statistics 19.0.0.

Descriptive Statistics

Cronbach's Alpha is a measure of the internal consistency, based on the correlations between different items on the same scale. The reliability of a majority of the scales is very satisfactory, with Cronbach's Alpha ranging from .83 to .90 (see Table 1). The reliability of the "knowledge and training" score is .61, a score that is borderline or "questionable" (George & Mallery, 2003). So we can calculate a single index for each scale or dimension starting from the items constituting it. The single index of a scale is obtained by summing the items of this scale (if an item is formulated in an opposite way, one reverses its score before the sum) and then dividing this score by the number of items used in the addition.

Means, standard deviations, Cronbach Alphas (excepting "perceived health" because it is a single measure), and bivariate zero-order correlations are presented in Table 1. The intention to remain is significantly correlated with all the variables. There is no high collinearity between the different potential predictors, except perhaps between social support and participation possibility.

Hypothesis Test

To test the first hypothesis, we used multiple linear regression to assess whether perceived health, professional competence, and psychosocial aspects are good predictors for the intention to remain. The dependent variable was the composite score of intention to remain (mean of the five questions of the VOW/QFT): So the score ranges from 1.00 to 5.00. The potential predictors were perceived health, the two dimensions of professional competence, and the three dimensions of psychosocial aspects. We used the enter method for this regression because it allows obtaining a model containing all the variables and all the information linked to them using an exploratory approach (an exploratory approach is an approach without constraining assumption).

The predictors explain 21% of the intention to remain. In multiple regression, there is multicollinearity when two or more predictors are (very) highly correlated. This question of multicollinearity would be tested through statistical analysis because it affects calculations regarding individual predictors (it does not reduce the predictive power or reliability of the model as a whole). According to Gujarati (2003), there is no multicollinearity problem because the variance inflation factor (VIF) is less than 10. Allison (2001, as cited by Bressoux, 2008) used a more severe indicator – $TOL < .40$ or $VIF > 2.5$ – to detect multicollinearity problems. All of these criteria are respected. There are three predictors with a significant beta: perceived health, perceived competence and experience, and increased capacity. The three psychosocial variables are poor predictors. These results confirm the result of numerous studies: Perceived health explains a great part of the intention to remain, but professional competence contributes also to the explanation of the intention to remain. This is true among our entire 40-years-or-older sample.

There could be different processes according to the age of employees to explain the intention to remain; we wanted to investigate this possibility. Let us first assess whether the two subgroups have similar characteristics: No significant differences appeared between the 40- to 49-year-old employees and those 50 years or older in the intention to continue to work until the legal retirement age ($t = 0.01$; $p = .99$). The two subgroups are not distinguished manifestly according to sex ($03C7 \chi^2 = 4.07$, $p = .04$; *contingency coefficient* $C = .12$, $p = .04$). They are not distinguished according to the level of study ($t = 0.72$; $p = .47$) or by managerial role ($\chi^2 = 1.02$, $p = .31$; *contingency coefficient* $C = .06$, $p = .31$).

We decided to execute a hierarchical regression supported by the results of the preceding stepwise regression to allow comparisons by age of processes explaining intention to remain. The hierarchical regression, contrary to

Table 1
Descriptive Statistics (Mean, Mean by Subgroup, Standard Deviation), Cronbach Alpha (in Diagonal) and Pearson Correlations

	<i>M whole sample</i>	<i>M 40-49 (n = 158)</i>	<i>M 50+ (n = 122)</i>	<i>SD</i>	1	2	3	4	5	6	7
1 Intention to Remain	3.21	3.21	3.21	1.07	(.90)						
2 Perceived Health	3.11	3.07	3.16	.93	.37**	-					
3 Competence and Experience	3.90	3.82	4.00	.69	.33**	.35**	(.88)				
4 Increase Capacity	2.90	3.02	2.75	.52	.34**	.47**	.34**	(.86)			
5 Knowledge and Training	2.58	2.59	2.57	.58	.15*	.18**	.32**	.30**	(.61)		
6 Social Support	2.85	2.84	2.86	.76	.23**	.25**	.41**	.24**	.37**	(.83)	
7 Participation Opportunity	2.48	2.42	2.54	.79	.25**	.18**	.43**	.30**	.47**	.65**	(.85)

p* < .05. *p* < .01. *p*'s two-tailed.

non-hierarchical regression, makes it possible to test very precise hypotheses in terms of incremental contributions: one tests at the beginning a rather simple model; then, stage by stage, one introduces new predictors to test whether they continue to explain the variable to be predicted beyond information from the preceding stages. We will carry out two hierarchical regressions, one by subgroup of age. The hierarchical regressions will make it possible to answer the following questions:

- Thanks to the previous regression, we learned that perceived health contributes greatly to the intention to remain, but we do not know if this contribution is similar between the two subgroups (40–49 years old and 50 years or older) (cf. Step 2 in Table 3).
- Do perceived competence and experience contribute in a large incremental way (beyond perceived health) among the two subgroups? (cf. Step 3 in Table 3).
- Is there an incremental contribution of psychosocial aspects (beyond perceived health and beyond professional competences) among one of the two subgroups? (cf. Step 4 in Table 3).

Table 2

Regression of Intention to Remain on Health, Dimensions of Professional Competences and Dimensions of Psychosocial Aspects

Independent Variables	Dependent Variable: Intention to Remain			
	β	t	TOL	VIF
Perceived Health	.25	3.56**	.76	1.32
Competence and Experience	.17	2.24*	.68	1.48
Increase Capacity	.16	2.15*	.70	1.42
Knowledge and Training	.01	0.15	.72	1.39
Social Support	-.03	-0.41	.56	1.79
Participation Opportunity	.05	0.56	.48	2.07
	$R^2 = .21$		$D(6, 213) = 9.43; p < .000$	

* $p < .05$. ** $p < .01$. p 's two-tailed.

A preliminary stage is to control certain potentially parasitic variables in the model. Results of the studies on the WAI indicate that WAI scores can predict early retirement, primarily among older male workers with a job with strong physical requirements (Ilmarinen & Tuomi, 2004). So, it is convenient to use as control variables gender, level of study, and managerial role (cf. Step 1 in Table 3).

So the different blocks for the hierarchical regression are Block 1: The control variables; Block 2: Perceived health; Block 3: Professional competences; and Block 4: Psychosocial aspects. Inside a block, we used the enter method for the regression. First, we have executed this hierarchical regression with the entire sample (to obtain a global result), and then with each of the two employee subgroups (40–49 years old and 50 years or older). The results are presented in Table 3.

The results show a similar R^2 for both subgroups, .28 and .26, respectively. These R^2 are better than the R^2 for the entire sample (see Table 2). So the predictors taken as a whole explain the contributions to the intention to work until legal retirement age among each subgroup. The control variables never contribute significantly to the intention to remain (Step 1). Gender, education level, and managerial role do not contribute to the intention to remain. Step 2 assesses the perceived health contribution to the intention to remain as well as among employees 40–49 years old and those 50 years or older, but it is more important among the younger group (among 40- to

Table 3

Results of Hierarchical Regressions: Intention to Remain on Health, Professional Competences and Psychosocial Aspects Among Age

Independent Variables	Dependent Variable: Intention to Remain							
	40- to 49-Year Old Sample				50 Years or Older Sample			
	Step 1	Step 2	Step 3	Step 4	Step 1	Step 2	Step 3	Step 4
Step 1 Control Variables								
Gender Ratio	-.13	.03	.00	.01	.16	.15	.13	.19
Educational Level	.09	-.05	-.03	-.04	.03	.01	.03	.09
Managerial Role	.02	.06	.00	.03	.26*	.19	.12	.05
Step 2 Perceived Health								
Perceived Health		.46***	.28*	.27*		.28**	.20	.23*
Step 3 Professional Competences								
Competence and Experience			.13	.15			.18	-.02
Increase Capacity			.22*	.26*			.09	.03
Step 4 Psychosocial Aspects								
Knowledge and Training				.00				.01
Social Support				.11				-.06
Participation Opportunity				-.25*				.41**
R^2	.03	.20	.25	.28	.07	.14	.19	.26
ΔR^2	.03	.17	.06	.03	.07	.07	.04	.08
Sig Var F	.361	.000	.012	.196	.086	.007	.114	.036

* p (t test) < .05. ** p (t test) < .010. *** p (t test) < .000. p 's two-tailed.

49-year-olds: $p > .000$ and $\Delta R^2 = .17$; among employees 50 years or older: $p = .007$ and $\Delta R^2 = .07$). So perceived health is an important predictor of the intention to remain for both age groups. The question is now whether there are other important predictors, what they are, and whether they are different among the subgroups. Step 3 shows that there is a significant incremental contribution of professional competence (cf. increased capacity) among 40- to 49-year-old employees ($p = .012$) but not for the employees 50 years or older ($p = .114$). Thus, increased capacity increases explanation of intention to remain besides the perceived health factor among 40- to 49-year-old employees but not for those 50 years or older. Apart from perceived health, the question of the increase of capacity is a key element of the intention to remain among 40- to 49-year-old employees, but not among the oldest. Step 4 demonstrates that the incremental contribution of psychosocial aspects besides perceived health and professional competence is not significant for 40- to 49-year-old employees ($p = .196$) but is for employees 50 years or older ($p = .036$), with a noteworthy beta ($\beta = .41$) for the opportunity for participation. Opportunity for participation is very important for employees 50 years or older to their intention to remain at work until legal retirement age. This pattern of results indicates that there is a clearly distinctive process between 40- to 49-year-old employees and employees 50 years or older to explain the intention to work until legal retirement age. Among 40- to 49-year-old employees, it is essentially perceived health and also increasing capacity that explain the intention to remain. Among employees 50 years or older, health and opportunity for participation explain this intention to remain; for them, the issue of professional competence is quite limited.

Discussion

Our research aimed to understand workers' reasons to work until legal retirement age. The literature advances many reasons, particularly financial ones related to the income, savings, and household expenses. We did not study this financial aspect as our objective centered on aspects mobilizing the personnel and career department in organizations. For the finest comprehension of the process, we wanted to test the incremental contributions, beyond perceived health, of two work conditions – professional competence and psychological aspects at work – and to compare two age categories of employees. The results highlighted a clearly distinctive process between 40- to 49-year-old employees and employees 50 years or older in the explanation of intention to work until legal retirement age. Among the first group, perceived health and also increasing capacity explain the intention to remain. Among the employees 50 years or older, perceived health and mostly opportunity of participation explain this intention to remain.

As indicated in the literature (Beehr & Bennett, 2007; Beehr et al., 2000; Bidewell et al., 2006; Guérin et al., 1998; Kim & Feldman, 1998), health is a good predictor of intention to remain among older workers. A quite surprising result is that perceived health is also very important to explain intention to remain among the younger group, or even more important than in the older group. A potential interpretation of this result could be that there is a “natural selection” with age: The employees who are older than 50 and still working are in better health than the 40- to 49-year-old employees, or those older employees with poor health have probably already stopped working. This agrees with the results obtained by Beehr et al. (2000) and by Bidewell et al. (2006) (cf. the “healthy work effect”). We have tested the eventuality of a mean difference in perceived health by subgroup of age thanks to a *t* test: The result indicates no significant difference ($M_{40-49} = 3.07$; $M_{50+} = 3.16$; $t = -.82$; $p = .414$). So another interpretation of our previous results – which is not easy to verify – should be that in view of the first important health preoccupations appearing typically around 40 years old (Hunt, McEwen, & McKenna, 1984; Slocum et al., 1985), the 40- to 49-year-old employees are quite distraught and do not consequently think about being able to work until the lawful age of the retirement whereas the older employees already put up with that.

Another important contribution of this research is to distinguish the various meanings of work ability. The literature on WAI understands work ability as a question of (dis-)ability to work whereas the notion from the VOW/QFT concerns the ability to work without a lack of competence or capacity. These two meanings correspond on the one hand to industrial medicine preoccupations and on the other to human resource management preoccupations: They are complementary but play different roles.

We have obtained a pattern of results for the incremental predictors that is quite different between the two groups: Work ability (increased capacity) incrementally explains the intention to remain among younger employees but not among the older ones; psychosocial aspects incrementally explain the intention to remain among the older employees but not among the younger ones. The literature on career management explains the existence of different stages in career – that correspond quite well with our subgroups (Rabinowitz & Hall, 1981) – and the presence of specific needs and expectations for each stage. So among younger workers, a common problem is the career plateau; people who can expect an evolution in their career are those who are competent and/or can still increase their capacity. People in a career plateau at this stage know that without competence, time until retirement will seem quite long. We exposed above many negative consequences of the career plateau raised by the authors (less satisfaction towards the superior, poor health, a decrease in self-esteem, stress, hostility towards the organization, etc.). The challenge thus appears fundamental for HR management: Given the lengthening of

the professional life related to postponement of legal retirement age in many European countries, the career plateau will likely appear more frequently and for a longer period. Because the older workers are closer to the end of their careers, career evolution is likely no longer expected, but fair acknowledgment and consideration – some psychosocial work conditions – are. This result agrees with the results of Guérin et al. (1998), Kosloski et al. (2001), and Rabinowitz and Hall (1981).

Our research is not without limitations. We need to address two limitations in relation to the composition of our sample: (a) Our sample is relatively small, the participants are submitted to medicinal examination seeing their risks at work, so our sample is not necessarily representative of all employees in Belgium; there is no guarantee that the results can be generalized; (b) considering statistics of Eurostat (2010) – A great source for a number of early retirement workers in Belgium – our older sample is in a certain way composed of people who “leave the common run”, so our sample is probably not representative of all older employees in Europe. Another limitation of our study is the number of predictors, although this can be understood within our experimental design (to compare the incremental contributions between two age categories of employees). According to the recent theoretical contribution of Wang and Shultz (2010), future investigation about employee retirement should use a multilevel framework for potential predictors (individual, job, organization, or even societal) and incorporate a person-environment fit perspective. We used in this study perceived health for the individual level and knowledge and opportunity for training, social support, and participation for the job level. Perceived competence and experience, like increases capacity, are variables of congruence between the person and the job (P-J fit). So predictors concerning the organizational level or the person-organizational fit are beneficial to the understanding of early retirement and the remediation in the field. As we suggested about the interpretation of a lack of perceived competence, important variables are general failure of the HRM, discrimination in training, high innovation culture, and organizational pressure for early retirement.

We mentioned above the context of Belgium, and fear for the financing of social security. The problem for the Government is to encourage companies to reduce the number of early retirement / maintaining workers to work beyond the age of early retirement, ideally until the legal retirement age (65 years). To do this, government solutions pass through lower premiums for early retirement and / or bonuses for employees working until 65 years old.

But to make this strategy sustainable, it is necessary that business leaders and HR managers are convinced older workers are still useful and efficient (see cost/effectiveness, cost/competences), and, in connection with this first idea, that business leaders and HR managers improve work conditions of older people so they always feel useful, are not too exhausted, or even take still enjoy working. The pattern of our results indicates the importance of distinguishing the interventions by age category (or by career stage) to motivate or enable employees working until legal retirement age and also the importance of anticipating the management of age. Age management practices should start long before the worker is regarded as an “older worker.” According to Kooij, de Lange, Jansen, and Dijkers (2008), the term “older worker” refers to 50- or 55-and-above; all practices are not necessarily adequate at each age. To prevent perceived (or real) lack of competence among 40- to 49-year-old employees, HR management should follow closely the professional path of the workers over time to propose at the right moment adequate formation, mobility, or coaching. To prevent perceived lack of opportunities of participation among 50-plus, HR management should create mentors or propose transformational leadership in the teams – different actions that have the finality of continuing to recognize the value of the older worker while monitoring their workload. The demonstration of different criteria by age as predictors of intention to remain until the legal retirement age are all guides to motivate companies to develop best practices, targeted to the age category.

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References

- Adams, G. A. (1999). Career-related variables and planned retirement age: An extension of Beehr's model. *Journal of Vocational Behavior, 55*(2), 221-235. doi:10.1006/jvbe.1998.1679
- Adams, G. A., & Beehr, T. A. (1998). Turnover and retirement: A comparison of their similarities and differences. *Personnel Psychology, 51*(3), 643-665. doi:10.1111/j.1744-6570.1998.tb00255.x
- Beehr, T. A. (1986). The process of retirement: A review and recommendations for future investigation. *Personnel Psychology, 39*(1), 31-55. doi:10.1111/j.1744-6570.1986.tb00573.x
- Beehr, T. A., & Bennett, M. M. (2007). Examining retirement from a multi-level perspective. In K. S. Shultz & G. A. Adams (Eds.), *Aging and work in the 21st century* (pp. 277-302). New York, NY: Psychology Press.
- Beehr, T. A., Glazer, S., Nielson, N. L., & Farmer, S. J. (2000). Work and nonwork predictors of employees' retirement ages. *Journal of Vocational Behavior, 57*, 206-225. doi:10.1006/jvbe.1999.1736
- Bidewell, J., Griffin, B., & Hesketh, B. (2006). Timing of retirement: Including a delay discounting perspective in retirement models. *Journal of Vocational Behavior, 68*, 368-387. doi:10.1016/j.jvb.2005.06.002
- Blekesaune, M., & Solem, P. E. (2005). Working conditions and early retirement: A prospective study of retirement behavior. *Research on Aging, 27*(1), 3-30. doi:10.1177/0164027504271438
- Bressoux, P. (2008). *Modélisation statistique appliquée aux sciences sociales*. Brussels, Belgium: De Boeck.
- Camerino, D., Conway, P. M., van der Heijden, B. I. J. M., Estryng-Behar, M., Consonni, D., Gould, D., . . . NEXT-Study Group. (2006). Low-perceived work ability, ageing and intention to leave nursing: A comparison among 10 European countries. *Journal of Advanced Nursing, 56*(5), 542-552. doi:10.1111/j.1365-2648.2006.04046.x
- Cerdin, J. L., Marbot, E., & Peretti, J. M. (2003). Vers une définition du sentiment de fin de vie professionnelle. *Revue de gestion des ressources humaines, 47*, 14-28.
- Elchardus, M., & Cohen, J. (2003). *Attitude et attentes en rapport avec la fin de la carrière professionnelle: Rapport partiel 3: Les déterminants de la fin de carrière* (TOR 2003/16). Retrieved from http://vub.ac.be/TOR/main/publicaties/downloads/t2003_16.pdf
- Elovainio, M., Forma, P., Kivimäki, M., Sinervo, T., Sutinen, R., & Laine, M. (2005). Job demands and job control as correlates of early retirement thoughts in Finnish social and health care employees. *Work and Stress, 19*, 84-92. doi:10.1080/02678370500084623
- Eurostat. (2010). Labour Force Survey: Employment rate in the EU27 fell to 64.6% in 2009 (Newsrelease, No. 117/2010). Retrieved from http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/3-04082010-BP/EN/3-04082010-BP-EN.PDF
- Faurie, I., Fraccaroli, F., & Le Blanc, A. (2008). Âge et travail: Des études sur le vieillissement au travail à une approche psychosociale de la fin de la carrière professionnelle. *Le Travail Humain, 71*(2), 137-172. doi:10.3917/th.712.0137

- Firth, L., Mellor, D. J., Moore, K. A., & Loquet, C. (2004). How can managers reduce employee intention to quit? *Journal of Managerial Psychology*, *19*(2), 170-187. doi:10.1108/02683940410526127
- George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference, 11.0 update* (4th ed.). Boston, MA: Allyn & Bacon.
- Gollac, M., & Volkoff, S. (2000). *Les conditions de travail*. Paris, France: Editions La Découverte.
- Guérin, G., Saba, T., & Wils, T. (1998). Les aspirations des professionnels âgés de 50 ans et plus en matière de départ à la retraite. In C. Lamoureux & E. M. Morin (Eds.), *Travail et carrière en quête de sens – tome 5* (pp. 345-357). Cap-Rouge: Presses Inter Universitaires.
- Gujarati, D. N. (2003). *Basic Econometrics* (4th ed.). New York, NY: McGraw-Hill.
- Hellemans, C. (2006). Les travailleurs âgés et la fin de carrière: Stéréotypes et réalités. In O. Klein & S. Pohl (Eds.), *Psychologie des stéréotypes et des préjugés* (pp. 267-304). Brussels, Belgium: Editions Labor.
- Hellemans, C. (2011). The VOW/QFT: Psychosocial risk factors, pleasure at work and work abilities among older workers. In *Abstracts Book of the 15th Conference of the European Association of Work and Organizational Psychology, Maastricht, May 25 – 28 May 2011* (p. 38). Retrieved from http://www.eawop.org/ckeditor_assets/attachments/139/program-eawop2011.pdf?1337308547
- Hellemans, C. (2013). Risques psychosociaux et capacité de travail des travailleurs âgés: Validation du VOW/QFT. *Psychologie du Travail et des Organisations*, *19*(1), 89-109.
- Hellemans, C., Piette, A., & Himpens, A. (2010). Le VOW / QFT: Un outil complet pour l'analyse des facultés de travail des travailleurs vieillissants. *Travail et Santé*, *26*(3), 23-30.
- Hunt, S. M., McEwen, J., & McKenna, S. P. (1984). Perceived health: Age and sex comparisons in a community. *Journal of Epidemiology and Community Health*, *38*, 156-160. doi:10.1136/jech.38.2.156
- Ilmarinen, J. (2007). The Work Ability Index (WAI). *Occupational Medicine*, *57*(2), 160. doi:10.1093/occmed/kqm008
- Ilmarinen, J., & Tuomi, K. (1992). Work ability of aging workers. *Scandinavian Journal of Work, Environment & Health*, *18*(2), 8-10.
- Ilmarinen, J., & Tuomi, K. (2004). Past, present and future of work ability. In J. Ilmarinen, S. Lehtinen (Eds.), *Past, present and future of work ability: People and Work* (pp. 1-25), (Research report No. 65). Helsinki, Finland: Finnish Institute of Occupational Health.
- Kim, J. E., & Moen, P. (2001). Is retirement good or bad for subjective well-being? *Current Directions in Psychological Science*, *10*(3), 83-86. doi:10.1111/1467-8721.00121
- Kim, S., & Feldman, D. C. (1998). Healthy, wealthy, or wise: Predicting actual acceptances of early retirement incentives at three points in time. *Personnel Psychology*, *51*(3), 623-642. doi:10.1111/j.1744-6570.1998.tb00254.x
- Kooij, D., de Lange, A., Jansen, P., & Dijkers, J. (2008). Older workers' motivation to continue to work: Five meanings of age: A conceptual review. *Journal of Managerial Psychology*, *23*(4), 364-394. doi:10.1108/02683940810869015

- Kosloski, K., Ekerdt, D., & DeViney, S. (2001). The role of job-related rewards in retirement planning. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*, 56(3), P160-P169. doi:10.1093/geronb/56.3.P160
- Laville, A. (1989). Vieillesse et travail. *Le Travail Humain*, 52(1), 3-20.
- Laville, A., & Volkoff, S. (1998). Les travailleurs âgés. In J. M. Stellman (Ed.), *Encyclopédie de sécurité et de santé au travail*. Geneva, Switzerland: Bureau International du Travail (BIT).
- Lemire, L., & Rouillard, C. (2003). Le plafonnement de carrière: Étude dans une municipalité au Québec. *Relations Industrielles*, 58(2), 287-313. doi:10.7202/007305ar
- Levy-Leboyer, C. (1995, June-August). Repenser la gestion des carrières des cadres. *Revue Française de Gestion*, 21, 24-29.
- Lindbo, T. L., & Shultz, K. S. (1998). The role of organizational culture and mentoring in mature workers socialization toward retirement. *Public Productivity & Management Review*, 22(1), 49-59. doi:10.2307/3380589
- Lurkin, F., Angenot, A., & Braeckman, L. (2012, May). *La gestion des âges en entreprises*. Paper presented at the Study Day of the Belgian Federal Public Service Employment, Labour and Social Dialogue, Humanization of Work General Direction, Brussels, Belgium.
- Marquié, J. C. (1998). Cognitive change, work constraints and experience: The ageing worker's room for manoeuvre. In J. C. Marquié, D. Paumès Cau-Bareille, & S. Volkoff (Eds.), *Working with age* (pp. 163-186). London, United Kingdom: Taylor and Francis.
- Millanvoeye, M. (1998). Ageing of the organism before sixty years of age. In J. C. Marquié, D. Paumès Cau-Bareille, & S. Volkoff (Eds.), *Working with age* (pp. 133-161). London, United Kingdom: Taylor and Francis.
- Morrow, P. C., & McElroy, J. C. (1987). Work commitment and job satisfaction over three career stages. *Journal of Vocational Behavior*, 30, 330-346. doi:10.1016/0001-8791(87)90009-1
- Mrayyan, M. T. (2007). Jordanian nurses' job satisfaction and intent to stay: Comparing teaching and non-teaching hospitals. *Journal of Professional Nursing*, 23(3), 125-136. doi:10.1016/j.profnurs.2006.12.006
- Nicholson, N. (1993). Purgatory or place of safety? The managerial plateau and organizational agegrading. *Human Relations*, 46(12), 1369-1389. doi:10.1177/001872679304601201
- Paumès Cau-Bareille, D., & Marquié, J. C. (1998). Ageing workers, learning and job training. In J. C. Marquié, D. Paumès Cau-Bareille, & S. Volkoff (Eds.), *Working with age* (pp. 297-311). London, United Kingdom: Taylor and Francis.
- Peeters, M. C. W., & van Emmerik, H. (2008). An introduction to the work and well-being of older workers. *Journal of Managerial Psychology*, 23(4), 353-363. doi:10.1108/02683940810869006
- Rabinowitz, S., & Hall, D. T. (1981). Changing correlates of job involvement in three career stages. *Journal of Vocational Behavior*, 18, 138-144. doi:10.1016/0001-8791(81)90002-6
- Roger, A., & Tremblay, M. (1999). Plateau objectif et subjectif de carrière, satisfaction et stress au travail. *Psychologie du Travail et des Organisations*, 5(1-2), 34-52.
- Saba, T., Guérin, G., & Wils, T. (1998). Managing older professionals in public agencies in Quebec. *Public Productivity & Management Review*, 22, 15-34. doi:10.2307/3380587

- Schalk, R., van Veldhoven, M., de Lange, A. H., De Witte, H., Kraus, K., Stamov-Roßnagel, C., . . . Zacher, H. (2010). Moving European research on work and ageing forward: Overview and agenda. *European Journal of Work and Organizational Psychology, 19*(1), 76-101. doi:10.1080/13594320802674629
- Schreurs, B., Van Emmerik, H., De Cuyper, N., Notelaers, G., & De Witte, H. (2011). Job demands-resources and early retirement intention: Differences between blue-and white-collar workers. *Economic and Industrial Democracy, 32*(1), 47-68. doi:10.1177/0143831X10365931
- Shultz, K. S., Morton, K. R., & Weckerle, J. R. (1998). The influence of push and pull factors on voluntary and involuntary early retirees' retirement decision and adjustment. *Journal of Vocational Behavior, 53*, 45-57. doi:10.1006/jvbe.1997.1610
- Securex. (2010). Het kapitaal van ervaring en knowhow. *Human Interest Magazine, 1*, 14-15. Retrieved from <http://www.human-interest.be/nl/magazine/2010-11/pageflip.html>
- Shacklock, K. (2006). Propensity to continue working: An emerging model for older individuals. *Proceedings of the Academy of World Business, Marketing and Management, 2*(1), 2055-2064. Retrieved from http://www98.griffith.edu.au/dspace/bitstream/10072/13260/1/39162_1.pdf
- Shacklock, K., & Brunetto, Y. (2011). A model of older workers' intentions to continue working. *Personnel Review, 40*(2), 252-274. doi:10.1108/00483481111106110
- Slocum, J. W. J., Jr., Cron, W. L., Hansen, R. W., & Rawlings, S. (1985). Business strategy and the management of plateaued employees. *Academy of Management Journal, 28*(1), 133-154. doi:10.2307/256065
- Topa, G., Moriano, J. A., Depolo, M., Alcover, C.-M., & Morales, J. F. (2009). Antecedents and consequences of retirement planning and decision-making: A meta-analysis and model. *Journal of Vocational Behavior, 75*, 38-55. doi:10.1016/j.jvb.2009.03.002
- van den Berg, T. I. J., Elders, L. A. M., de Zwart, B. C. H., & Burdorf, A. (2009). The effects of work-related and individual factors on the work ability index: A systematic review. *Occupational and Environmental Medicine, 66*, 211-220. doi:10.1136/oem.2008.039883
- Wang, M., & Shultz, K. S. (2010). Employee retirement: A review and recommendations for future investigation. *Journal of Management, 36*(1), 172-206. doi:10.1177/0149206309347957
- Weckerle, J. R., & Shultz, K. S. (1999). Influences on the bridge employment decision among older USA workers. *Journal of Occupational and Organizational Psychology, 72*, 317-329. doi:10.1348/096317999166707
- Wrenn, K. A., & Maurer, T. J. (2004). Beliefs about older workers' learning and development behavior in relation to beliefs about malleability of skills, age-related decline, and control. *Journal of Applied Social Psychology, 34*(2), 223-242. doi:10.1111/j.1559-1816.2004.tb02546.x

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