**European Journal of Training and Development**

Proactive personality and training motivation among older workers: A mediational model of goal orientation

Ilaria Setti Paola Dordoni Beatrice Piccoli Massimo Bellotto Piergiorgio Argentero

# Proactive personality and training motivation among older workers

## A mediational model of goal orientation



Ilaria Setti and Paola Dordoni
*University of Pavia, Pavia, Italy*
Beatrice Piccoli and Massimo Bellotto
*University of Verona, Verona, Italy, and*
Piergiorgio Argentero
*University of Pavia, Pavia, Italy*

Received 11 March 2015
Revised 27 August 2015
Accepted 29 August 2015

## Abstract

**Purpose** – This paper aims at examining the relationship between proactive personality and training motivation among older workers (aged over 55 years) in a context characterized by the growing ageing of the global population. First, the authors hypothesized that proactive personality predicts the motivation to learn among older workers and that this relationship is mediated by goal orientation. In particular, the authors hypothesized that learning goal orientation may mediate the relationship between proactive personality and learning motivation.

**Design/methodology/approach** – The employees of an Italian bank completed an online questionnaire. AMOS 17 was used to carry out confirmatory factor analysis, and the SPSS macro was used to test the meditational model.

**Findings** – The results confirmed both the hypotheses, demonstrating the influence of proactive personality on training motivation of older workers, as mediated by goal orientation and, in particular, by learning goal orientation.

**Practical implications** – From an applicative point of view, this study may have implications for organizations that aim to increase the employability of older people by encouraging them to undertake more training. In particular, interventions aimed at increasing learning goal orientation could contribute in strengthening proactive personality that, in turn, may affect levels of training motivation.

**Originality/value** – Even if proactive personality has already been found as a predictor of learning motivation, to the best of the authors' knowledge, the present study demonstrates that the relationship between proactive personality and training motivation is mediated by goal orientation among older workers.

**Keywords** Older workers, Proactive personality, Training motivation, Learning goal orientation, Mediation model, Performance goal orientation

**Paper type** Research paper

## Introduction

Global population is ageing at an unprecedented rate (Vaupel, 2010). In 2009, it was estimated that one out of nine people were aged 60 years and over; this index is expected to grow and reach one out of every five people. In the most developed countries, it is estimated that one out of three people will be 60 years old, or over, by 2050 (United

European Journal of Training and Development
Vol. 39 No. 8, 2015
pp. 681-699

2046-9012
DOI 10.1108/EJTD-03-2015-0018

Nations, 2013), with European countries being no exceptions. Italy is one of the first countries (with Japan, Germany and Sweden) that is facing an increase in the number of older people (United Nations, 2013). In detail, a recent survey revealed that Italy is one of the European countries with the lowest employment rate for people aged 20-64 years (55.6 per cent; Eurostat, 2013). Moreover, the Italian participation rate of people aged 55-64 years is at least at the bottom of the 16 European Union members. The main reasons for this global change are the lower fertility and the improvement of health conditions (Kinsella and Velkoff, 2001). The demographic changes and the extension of the average working life, in turn, lead people to stay employable longer (Hedge and Borman, 2012). Therefore, the need for retaining older workers in organizations has become a noticeable area of research (Wang and Shultz, 2010), and it is at the top of the agenda of several governments and societies (Schalk *et al.*, 2010). Indeed, organizations need to understand how to manage ageing workers and how to guarantee them adequate occupational well-being in terms, for example, of work motivation, job performance and training motivation (Bal *et al.*, 2015; Finkelstein *et al.*, 2015).

While numerous studies have examined the reasons why employees choose to retire early (Shultz *et al.*, 1998), less research has focused on employees' motivation to continue working beyond the retirement age (Armstrong-Stassen, 2008). In this view, encouraging motivation toward training may increase older workers' desire for staying employed longer (Bal *et al.*, 2012). The importance of studying training motivation among elderly workers is due to the fact that they usually have less training opportunities, if compared to younger colleagues. Indeed, on the one side, young employees have broader time horizons, so that learning and growth opportunities are relevant for them; on the other side, older workers perceive limited occupational future and give more importance to present goals over future ones, including training activities (Bal and Dorenbosch, 2015). As a result, they seek for and often receive less training opportunities (Bertolino *et al.*, 2011; Birdi *et al.*, 1997; Dordoni and Argentero, 2015).

*Who is an older worker?*

Ageing refers to the changes that occur in biological, psychological and social functioning over time, and it affects individuals on personal, organizational and societal levels (De Lange *et al.*, 2006; McCarthy *et al.*, 2014; Schalk *et al.*, 2010). Sterns and Doverspike (1989) have identified five conceptualizations of age in organizational contexts:

(1) *Chronological age*: Referred to as the actual calendar age.

(2) *Physiological-*, *functional-* or *performance-based age*: Represented by a worker's health state and performance level.

(3) *Psychosocial* or *subjective age*: Based on social and self-perceptions of the older worker.

(4) *Organizational* or *job age*: Referred to work seniority.

(5) *Life-span age*: Which considers all the changes that can occur during life and emphasizes that many variables, such as family and economic constraints, may impact the ageing process.

More easily, according to Schalk *et al.* (2010), age may be considered on a continuum: on the one hand, it is an individual characteristic, and on the other hand, it is an

environmental feature. Furthermore, it may be considered as a result of person-environment interaction. In this view, chronological age is an example of age as an individual characteristic, social age – based on age stereotypes – is a result of the environment and work seniority concerns the person-environment interaction.

A clear conceptualization of age in the workplace is currently needed, as there is a lack of a priori consensus on the term "older worker" (Schalk *et al.*, 2010). With regard to this, Shultz and Adams (2007, p. 310) even assert that "One avenue for dealing with the dilemma of where to set the cut off is not to set any cut off". Nevertheless, the need to establish a cutoff to define "older workers" represents an issue not only for older workers themselves but also for researchers and politicians (Truxillo *et al.*, 2012), because the only way to determine the current and future proportion of older workers is to define who they are (Gonyea, 2009). These are the reasons why, in the present study, we have chosen the 55 years age cutoff, which are better explained in the Method section.

With regard to older workers' cognitive skills, there is an evidence for a gradual decline in fluid intellectual abilities and an increase in crystallized ones. Therefore, when fluid intellectual abilities are strongly required, it may be more difficult to effectively complete work tasks for older people (Kanfer and Ackerman, 2004). However, overall work performance does not seem to be affected by age because there is an interplay between diminishing and increasing mental abilities (Schalk *et al.*, 2010). Furthermore, wisdom and work experience allow to compensate for reduced cognitive capacities (Ilmarinen, 2006; Spirduso, 1995).

Looking into a life-span approach, workers' competencies and motivations may vary during their career, and these changes cannot be characterized as a fixed process: there are large individual differences that increase with age (Taylor and Walker, 1998). With regard to this, studies on the relationship between age and job performance found contradictory results. For example, Waldman and Avolio (1986) suggested a performance increasing with age, whereas McEvoy and Cascio (1989) found a non-significant correlation between them. Instead, an influence of personal and psychological characteristics on job performance has been found (van Scotter and Motowidlo, 1996). For this reason, there is a need for an idiosyncratic approach in terms of a greater focus on individual differences (such as personality, values and motivations) and not on the stereotypical beliefs about different age groups (Schalk *et al.*, 2010).

### *Training motivation and ageing*

Training motivation can be defined as the direction, intensity and persistence of learning-directed behaviors in training contexts (Kanfer and Ackerman, 2004); otherwise, it can be defined as the tendency to engage in training and development activities, to learn training content and to embrace the training experience (Carlson *et al.*, 2000). From an applicative standpoint, the interest in studying training motivation is that the more motivated the trainee, the more likely will he or she be able to reap the intended benefits from the training experience (Facteau *et al.*, 1995; Noe and Wilk, 1993).

Several studies (Jenkins and Mostafa, 2014; Maurer *et al.*, 2003) have emphasized the importance of training activities for both the organizations and the individuals, because of the positive effects that they may produce, for example, in terms of job performance (Bassi and McMurrer, 1998).

As previously stated, older workers are experiencing an extended working life and, with age, employees seem to be more focused on intrinsic aspects rather than on

extrinsic ones (e.g. money) (De Lange *et al.*, 2010; Kooij *et al.*, 2008). This study aims to shed light on the relationship between training motivation and age; indeed, it has been argued that older workers are usually less interested in learning activities, if compared to their younger colleagues (Baltes *et al.*, 1999; Ng and Feldman, 2012) and, at the same time, they receive less training opportunities from organizations (Birdi *et al.*, 1997; Dordoni and Argentero, 2015). Considered together, these factors may result in lower flexibility and employability of older workers (Maurer *et al.*, 2003), which in turn may result in a self-fulfilling prophecy (Schalk *et al.*, 2010; Van der Heijden, 2005). However, lifelong training is a key element to compensate for the diminished older workers' skills and productivity (OECD, 2006). Traditionally, studies have investigated the relationship between cognitive ability and learning outcomes, but, recently, scholars have also paid attention on older workers' training motivation and on the strategies that will support their career later (Tannenbaum and Yukl, 1992). With regard to this, among the main theoretical models, Mathieu *et al.* (1992) instrumentality approach shows that a good job performance may be largely achieved through the perception of utility and of doing well in a training program.

In general, older and younger workers have different work-related needs and, more in detail, with an increase in age, individuals' motivation usually shift from extrinsic and competitive aims to more intrinsic goals (Bal and Dorenbosch, 2015): older workers are characterized by conservatism and cautiousness, and they are generally focused on short-term goals and on maintenance activities, such as mentoring, rather than on professional growth and training activities (Carmichael and Ercolani, 2014). Therefore, they may show lower levels of training motivation, if compared to younger colleagues (Ebner *et al.*, 2006; Kanfer and Ackerman 2004). The negative relationship between age and training motivation could also be ascribed to the fact that older adults are less confident in their abilities to learn new knowledge and skills (Touron and Hertzog, 2004).

It has been recognized that training motivation is influenced by both individual and situational characteristics (Mathieu and Martineau, 1997). The examples of situational variables that may influence training motivation are: organizational climate for transfer, that refers to a work environment encouraging the use of training content on the job (Grossman and Salas, 2011), and perceived support by managers and peers for participation in learning activities (Noe and Wilk, 1993). The examples of individual variables that may influence training motivation are: attitude toward training – which, in turn, is influenced by organizational commitment and self-esteem – achievement motivation, training self-efficacy (Carlson *et al.*, 2000) and individual adaptability (Vaughn, 2011). Furthermore, as suggested by Major *et al.* (2006), training motivation may be predicted by proactive personality together with other individual variables, such as goal orientation (Zaniboni *et al.*, 2011).

### *Proactive personality and training motivation*

As previously mentioned, research showed that training motivation could be influenced by several individual factors (Colquitt *et al.*, 2000), such as proactive personality (Fuller and Marler, 2009; Major *et al.*, 2006): the more proactive employees are, the more likely they are to show motivation toward training activities (Bertolino *et al.*, 2011). Unsworth and Parker (2003, p. 177) defined proactivity as "a set of self-starting, action-orientated behaviours aimed at modifying the situation or oneself to achieve greater personal or

organisational effectiveness". A personal initiative in the work setting refers to going beyond what is formally required, persevering to achieve goals to improve performance levels (Seibert *et al.*, 1999). It is also concerned with learning and gaining experiences that promote workers' career and/or chances for future employment (Van der Heijde and Van der Heijden, 2006). Proactive people identify opportunities and show initiatives for goal significant changes (Crant, 2000). In this view, interest in personality traits that reflect a willingness to change has been mainly stimulated by the increased demands for flexibility, innovation and change that characterize the actual socio-economic scenario (Fugate *et al.*, 2004). Indeed, in such a contemporary workplace characterized by rapid changes (Crant, 2000; Grant and Ashford, 2008), proactive behaviors represent an important requirement for optimal organizational functioning, as self-directed and future-focused actions allow employees to effectively manage and take advantage of the changes (Bindl and Parker, 2010). That is, active – rather than passive – performance and behaviors are highly valued concepts within current organizations (Unsworth and Parker, 2003).

The proactivity trait has been revealed to be unrelated to mental ability (Bateman and Crant, 1993), and it does not change during the life-span. The relationship between age and proactive personality has been examined in literature: Warr and Fay (2001) found no differences among different age groups in personal initiative, while attitudes toward learning and development seem to decline with age.

Beyond training motivation, proactive personality has been found to be related to other important occupational outcomes both behavioral, such as performance and organizational citizenship, and attitudinal, such as job satisfaction, affective organizational commitment (Pen-Yuan, 2015) and stress (Lee *et al.*, 2014).

Because achievement motivation at work is found to decline with age (Kanfer and Ackerman, 2004), and several studies reveal a positive relationship between the proactivity trait and motivation to learn (Bertolino *et al.*, 2011), we hypothesize that:

*H1*. Older workers' proactive personality is positively related to their motivation to learn.

*Goal orientation and training motivation*

Goal orientation is a relatively stable dispositional trait that covaries with the individual's implicit theory of ability (Bempechat *et al.*, 1991; Dweck, 1989). Several researchers (Ebner *et al.*, 2006; Freund, 2006) have demonstrated that individual goal orientation changes across the life-span, with a stronger orientation on maintenance and loss avoidance among older people, if compared to younger ones. In this field of study, the goal approach to achievement motivation is a theoretical framework, which allows the understanding of how people define, experience and respond to competence-relevant situations, such as the workplace (Elliot, 2005). This model concerns the basic distinction between "mastery" – focused on task-based and intrapersonal standards of competence – versus "performance" goals – focused on interpersonal standards of competence. It has been widely demonstrated that older workers are mainly motivated by mastery goals (De Lange *et al.*, 2010), as also confirmed by life-span theories, according to which, achievement motivation becomes more intrinsic, i.e. mastery-related, with ageing (Baltes *et al.*, 1999; Carstensen, 1998).

To the best of our knowledge, few individual variables have been examined in relation to training motivation (Colquitt *et al.*, 2000), and few empirical studies have

specifically examined the impact of goal orientation on motivation-related outcomes among older workers. Our approach is to examine goal orientation as a possible mediating process underlying the proactive personality-training motivation relationship.

Dweck (1989) distinguishes between two types of goals: "performance" and "learning", i.e. mastery, goals. Individuals high in "performance goal orientation" try to demonstrate their competence through task performance, gaining positive judgments and avoiding negative ones. Therefore, they usually avoid challenges that may deteriorate their performance. Individuals high in "learning goal orientation" are usually in search of understanding something new and increasing their level of competence. They intentionally seek challenges and difficult tasks that allow them to improve their competence level (Button *et al.*, 1996). Learning and performance goals are not mutually exclusive: individuals may be simultaneously oriented to both types of goals, based on specific situational characteristics. Relating goal orientation to age, older people are generally more learning oriented, whereas younger people are more performance oriented (Button *et al.*, 1996).

Based on previous research (Button *et al.*, 1996; Zaniboni *et al.*, 2011), we hypothesize that learning – more than performance – goal orientation mediates the relationship between proactive personality and training motivation among older workers.

Therefore, we hypothesize that:

*H2*. The relationship between proactive personality and training motivation is mediated by performance and learning goal orientation.

Moreover, we propose to test:

*H3*. Comparing the strength of performance and learning goal orientation, verify which mediating process offers greater value in explaining the proactive personality-training motivation relationship.

## Method

### *Sample*

International public policies and scientific studies on workforce ageing have often used the cutoff of 55 or 65 years to describe "older workers" (Bertolino *et al.*, 2011; Dohm and Shniper, 2007; James *et al.*, 2011; Rix, 2001). In particular, discussions about the labor force participation tend to consider those aged over 55 years as "older workers" because participation in labor market significantly decreases among workers aged over 55 years (American Association of Retired Persons, 2010; DELSA, 2006; Kooij *et al.*, 2008). Therefore, even if the age range for older workers may vary from 40 years to statutory retirement ages of 65/68 years, we used the 55 years cutoff (Pitt-Catsouphes and Smyer, 2006; Stein and Rocco, 2001). Even if we were aware of the limitation inherent in the choice of a specific cutoff, because individuals equally aged may be differently affected by the ageing process (Kooij *et al.*, 2008), we needed to define a specific cutoff to carry out the present research.

The employees belonging to an Italian financial institution were asked to complete a questionnaire. In all, 3,909 questionnaires were sent to all the bank employees aged over 55 years. In all, 2,215 online questionnaires (response rate: 71.2 per cent) were filled anonymously and voluntarily. The majority of participants were male (76.3 per cent), in line with the Italian occupational rate: even if female occupation is gradually growing,

males still represent the majority of people employed in the credit and insurance sector (ABI, 2012). Of the total, 87.7 per cent were aged 55-60 years, and 61.9 per cent had work seniority in their current job of over 30 years. The majority of participants were employed in managerial roles (63.3 per cent), in line with the national occupational trend: Italian managers are mainly aged between 40 and 69 years, and our sample mainly comprised managers aged 55-60 years (ABI, 2012).

*Procedure*

Data were collected from January to March 2014. Before the participants could complete the online questionnaire, they were informed about the project through an e-mail. The questionnaire was accompanied by a letter that explained the aim of the study and guaranteed anonymity. The participants were also invited to fill in a socio-demographic questionnaire.

*Measurements*

*Proactive personality.* To measure the proactive trait, we used the Seibert *et al.* (1999) scale. The respondents were asked to indicate their capacity to lookout for new ways to improve themselves and their interest in finding better ways to do things. An example of an item is "I excel at identifying opportunities". The items were rated on a 5-point Likert scale (1 = totally agree; 5 = totally disagree). The Cronbach's alpha of this scale was 0.62.

*Goal orientation.* Learning and performance goal orientation were evaluated through the scale used by Button *et al.* (1996). Learning goal orientation examines how respondents perform challenging work, learn new skills and develop alternative strategies for doing a difficult task (an example of an item: "I prefer to work on tasks that force me to learn new things"). The Cronbach's alpha of this sub-scale was 0.65. By contrast, performance goal orientation evaluates people's desire to obtain favorable judgments of their competencies or, conversely, the desire to avoid negative judgments (an example of an item: "I prefer to do things that I can do well rather than things that I do poorly"). The items were rated using a 5-point Likert scale (1 = totally agree; 5 = totally disagree). The Cronbach's alpha of this sub-scale was 0.61.

*Training motivation.* To evaluate the level of motivation toward training activities, we used a three-item scale: the T-VIES by Truxillo and Weathers (2005). This scale examines workers' beliefs about successful training performance and the valence to which successful job performance after training was valued. An example of an item is: "I believe the training activity is useful for workers who occupy a job position similar to mine". The items were rated on a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree). The Cronbach's alpha of this scale was 0.90.

*Data analysis*

The testing was done in two steps:

(1) the measurement model; and

(2) the mediated-effect hypotheses.

Using AMOS 17 (Arbuckle, 2008), in the first step of the analysis, we related the observed variables to the underlying constructs by means of confirmatory factor analysis. We tested and compared the hypothesized measurement model with two

alternative models. The hypothesized model was a four-factor model in which all items loaded on the corresponding latent variable: proactive personality, performance goal orientation, learning goal orientation and training motivation. The alternative measurement models were:

- a three-factor model – one factor for proactive personality, another latent factor representing the two mediators (performance and learning goal orientation) and a third factor for the outcome (training motivation); and
- a one-factor model in which all items loaded on the same factor.

In a cross-sectional research, common method variance can be a problem, as the data in a single questionnaire can be closely related (Podsakoff *et al.*, 2003). For this reason, the one-factor model was tested, as it may provide an indication whether a single factor accounts for the covariance among the items. Moreover, we further examined the risk of common method variance testing, a model including an unmeasured latent factor. In this model, the items loaded on the four expected latent factors, whereas all items additionally also loaded on a latent common method factor (i.e. a five-factor model). This enables the estimation of the proportion of variance explained by the common method factor (Conway and Lance, 2010).

In every model, each of the observed variables loaded on only one latent factor and latent variables were allowed to correlate. Following the recommendations of Hu and Bentler (1999), the fit of the models was evaluated using the following indices:

- non-normed fit index (NNFI);
- comparative fit index (CFI);
- root mean square error of approximation (RMSEA); and
- standardized root mean square residual (SRMR).

For NNFI and CFI, values between 0.90 and 0.95 are acceptable. RMSEA and SRMR values indicate a good fit when they are smaller than or equal to 0.08. Competing models were also compared based on the chi-square difference test in addition to the fit indices.

The mediational hypotheses, i.e. the second step of the analysis, were tested using the SPSS macro of Preacher and Hayes (2008) for testing specific indirect effects in multiple mediator models. SPSS macro allows the comparing of the strength of the two indirect effects to decide which underlying theory should be given more credence, i.e. the contrast test. Contrasts compare the unique abilities of each mediator to account for the effect of the independent variable on the dependent variable, conditional on the inclusion of the other mediator(s) in the model. Although the word "effect" may suggest a causal relationship, we do not want to make inferences about causality (Preacher and Hayes, 2008).

In the model, proactive personality was inserted as the independent variable, performance and learning goal orientation as the mediator variables and training motivation as the dependent variable (see Figure 1).

Bootstrapping was used to construct two-side confidence intervals so as to evaluate mediation effects (Hayes, 2009; Preacher and Hayes, 2008). Preacher and Hayes (2008) recommend bootstrapping, especially because it does not impose the assumption of normality of the sampling distribution. The statistical significance of bootstrap estimated indirect effects was tested: 95 per cent bootstrap confidence intervals (5000

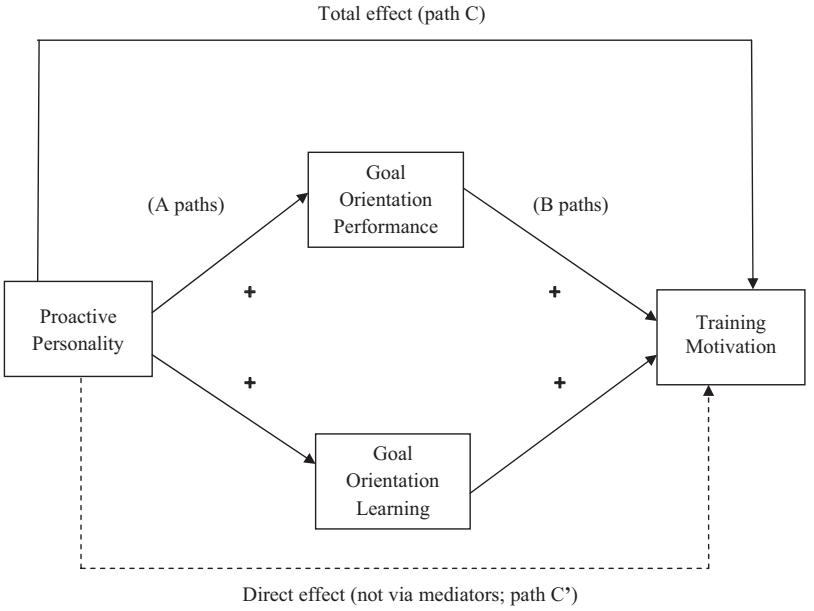


**Figure 1.**
Model proposed with specific paths

samples) for indirect effects were computed to evaluate whether they included zero. Specifically, total and indirect effects are significant if zero is not contained in the 95 per cent confidence interval (lower-upper).

The proportion of the relationship of proactive personality with training motivation explained by the two mediators was also calculated (effect ratios).

## Results

### *Descriptive statistics*

Descriptive statistics of the scales [means and standard deviations (SDs)], Bravais-Pearson's "r" correlations between the variables and internal consistencies (Cronbach's alpha) for the measures used in this study are provided in Table I. As expected, the correlation matrix showed that proactive personality was positively correlated to performance goal orientation, learning goal orientation and training motivation. Furthermore, performance goal orientation was positively associated with learning goal orientation and training motivation. Finally, there was a positive correlation between learning goal orientation and training motivation.

| Variable | M (SD) | $\alpha$ | 1 | 2 | 3 |
|---|---|---|---|---|---|
| Proactive personality | 3.96 (0.58) | 0.62 | | | |
| Performance goal orientation | 3.60 (0.76) | 0.61 | 0.21** | | |
| Learning goal orientation | 4.10 (0.61) | 0.65 | 0.46** | 0.43** | |
| Training motivation | 3.91 (0.74) | 0.90 | 0.26** | 0.30** | 0.41** |

**Note:** $^{**}p < 0.01$

**Table I.**
Means, standard deviations, internal consistencies (Cronbach's $\alpha$) and correlations among the variables

*Measurement model*

The hypothesized measurement model with four latent variables (proactive personality, performance goal orientation, learning goal orientation and training motivation) provided a good fit to the data: $\chi^{2(82)} = 1{,}343.14$; NNFI = 0.90; CFI = 0.92; RMSEA = 0.07 with confidence interval (CI) = 0.07-0.08; SRMR = 0.06. All items loaded significantly on their corresponding latent factors, ranging from 0.57 to 0.90 (a table with the detailed findings of the CFAs is available upon request from the first author). The competing models were the:

- three-factor model ($\chi^{2(85)} = 1{,}466.83$, $p < 0.001$);
- one-factor model ($\chi^{2(88)} = 1{,}908.26$, $p < 0.001$); and
- five-factor model with the unmeasured latent factor ($\chi^{2(63)} = 925.31$, $p < 0.001$).

The hypothesized measurement model fitted the data better than each of the alternative models (Table II). In particular, the results of the two last models indicate that common method variance is unlikely to significantly distort participants' responses. First, the one-factor model showed no acceptable fit indices. Second, the unmeasured latent factor of the five-factor model explained only 5 per cent of the variance, which is well below the threshold of the 25 per cent suggested (Williams *et al.*, 1989). Consequently, we decided to use the four scales proposed in the measurement model to test the study hypotheses.

*Test of the mediated-effects hypotheses*

As suggested by Preacher and Hayes (2008), investigating multiple mediation involves two parts: investigating the total indirect effect and the testing hypotheses regarding individual mediators, i.e. investigating the indirect effects associated with each mediator. Therefore, as shown in Table III, we first found that proactive personality is positively related to training motivation through the two mediators (C path in Figure 1): the total indirect effect is 0.40 ($p < 0.001$). Specifically, the relationship between proactive personality and performance goal orientation is positive (0.26, $p < 0.001$). The proactive personality also has a positive relationship with learning goal orientation (0.48, $p < 0.001$). These relationships are referred to as A paths in Figure 1. In turn, performance goal orientation is positively related to training motivation (0.20, $p < 0.001$) as well as learning goal orientation (0.47, $p < 0.001$). These relationships are considered as B paths in Figure 1.

Furthermore, the direct relationship between proactive personality and training motivation is positive and significant (path C' 0.12, $p < 0.001$). This result supports *H1*. In particular, as the relationship remained significant when considering the two mediators, this suggests a partial mediation model.

In addition, performance goal orientation mediates the relationship between proactive personality and training motivation, considering the indirect effect (0.05, $p < 0.001$). Moreover, the relationship between proactive personality and training motivation was also mediated by learning goal orientation (indirect effect 0.23, $p < 0.001$). These results support *H2*. Specifically, 70 per cent of the relationship between proactive personality and training motivation was explained by performance goal orientation and learning goal orientation. Each mediator significantly accounted for the relationship, 12 and 58 per cent respectively.

To verify *H3*, we conducted a test of the difference between the indirect effects of both the mediators (contrast test). We found that learning goal orientation was the most

| Model | $\chi^2$ | *df* | *p* | NNFI | CFI | RMSEA (CI) | SRMR | Model comparison | $\Delta\chi^2$ |
|---|---|---|---|---|---|---|---|---|---|
| Four-factor model (hypothesized model) | 1,343.14 | 82 | < 0.001 | 0.90 | 0.92 | 0.07 (0.07-0.08) | 0.06 | | |
| Three-factor model (PP, PGO + LGO, TM) | 1,466.83 | 85 | < 0.001 | 0.86 | 0.87 | 0.09 (0.06-0.09) | 0.09 | 2 vs 1 | 123.73*** |
| One-factor model (all items on the same factor) | 1,908.26 | 88 | < 0.001 | 0.65 | 0.76 | 0.13 (0.11-0.16) | 0.10 | 3 vs 1 | 565.12*** |
| Measurement model with unmeasured latent factor | 9,25.31 | 63 | < 0.001 | 0.87 | 0.88 | 0.09 (0.04-0.09) | 0.07 | 4 vs 1 | 417.83*** |

**Notes:** PP = proactive personality; PGO = performance goal orientation; LGO = learning goal orientation; TM = training motivation; ***$p < 0.001$

**Table II.**
Confirmatory factor analysis for all measurement models

**Table III.**
The results of the analyses for the multiple mediation model using the SPSS macro of Preacher and Hayes (2008)

| Variables | Coefficient | SE | Training motivation *p* | Bootstrap 95% CI [a] | Effect ratio [b] |
|---|---|---|---|---|---|
| *IV to mediators (A paths)* | | | | | |
| Performance goal orientation | 0.26 | 0.05 | < 0.001 | | |
| Learning goal orientation | 0.48 | 0.06 | < 0.001 | | |
| *Direct effects of mediators to DV (B paths)* | | | | | |
| Performance goal orientation | 0.20 | 0.03 | < 0.001 | | |
| Learning goal orientation | 0.47 | 0.02 | < 0.001 | | |
| *Total effect of IV on DV (C path)* | 0.40 | 0.03 | < 0.001 | | |
| *Direct effect of IV on DV (C' path)* | 0.12 | 0.05 | < 0.001 | | |
| *Total indirect effect of IV on DV through proposed mediators* | 0.28 | 0.02 | < 0.001 | [0.05; 0.11] | 0.70 |
| Performance goal orientation | 0.05 | 0.01 | < 0.001 | [0.01; 0.06] | 0.12 |
| Learning goal orientation | 0.23 | 0.01 | < 0.001 | [0.01; 0.07] | 0.58 |
| *Contrast test Performance goal orientation vs Learning goal orientation* | 0.01 | 0.02 | < 0.001 | [0.03; 0.04] | |

**Notes:** IV = independent variable, i.e. proactive personality; DV = dependent variable, i.e. training motivation; [a] if zero is not included in the interval, the effect is significant; [b] the portion of the relationship of proactive personality and training motivation that was explained by mediators

important factor in mediating the impact of proactive personality on training motivation (see the contrast test result in Table III).

## Discussion

This study aims to provide an evidence of the relationship between older workers' proactive personality and their training motivation, as mediated by goal orientation.

Based on their age, older adults may be stereotyped and discriminated, whereas diversity amongst them is often neglected (Letvak, 2002). To respond to the need of the current demographic situation, organizational human resource policies and practices are struggling with retaining and motivating their ageing workers (Kanfer and Ackerman, 2004).

More in detail, to the contrary belief of several common negative stereotypes toward older workers' training motivation (Ng and Feldman, 2012) and in line with a previous research (Villosio, 2008), our results show that older workers' may be motivated to participate in training activities. In particular, the role of proactive personality in predicting motivation to learn has already been demonstrated by a previous research (Major *et al.*, 2006). Furthermore, we have also demonstrated that the relationship between these two constructs is mediated by goal orientation. In particular, we provide evidence for the important mediating role of older workers' "learning" goal orientation in the relationship between proactive personality and training motivation, and this finding suggests that training motivation could be increased by strengthening levels of orientation toward learning activities. This result is in line with the selection optimization with compensation theory (Baltes *et al.*, 1999), and the socioemotional selectivity theory (Carstensen, 1998): as people get older, their work motivation usually shifts from a more extrinsic, i.e. competitive, to a more intrinsic, i.e. mastery-related, pattern.

Although this paper provides some new evidences for the study of older workers' training motivation, it also has limitations in several aspects. First, the cross-sectional design does not allow interpretations of the postulated relationships among variables in a causal perspective: a future longitudinal study may give more support to our hypotheses. Second, the common method variance bias could be controlled in future studies, for example, through the "Harman's single factor test" (Spector, 2006). With respect to the generalization of results, even if the characteristics of the sample follow the distribution of general Italian workforce in the credit and insurance sector (ABI, 2012), future studies should be extended to other Italian financial institutions to confirm the results obtained; moreover, we would suggest applying the research to older workers belonging to different sectors. Finally, the proposed model could also be explored among junior and middle aged workers to compare the results among workers of different age cohorts (Bertolino *et al.*, 2011): results would lead to different behavioral manifestations depending on the individuals' career stage (Bertolino *et al.*, 2011).

From a theoretical perspective, the mediation role of goal orientation suggests that the relationship between older workers' proactive personality and their training motivation is not linear, but is characterized by a dynamic feature.

From a general applied perspective, it should be advantageous that a "fit" between organizations and employees, in terms of their mutual expectations, should be pursued to guarantee high levels of commitment (De Lange *et al.*, 2011). In other words, organizations should realize different goals, based on the different needs of their employees (Kooij *et al.*, 2008; Van der Heijden *et al.*, 2009). More specifically, if younger workers are usually concerned with different job aspects (Schalk *et al.*, 2010), older workers are more focused on their relationship with the organization. Therefore, the human resource management challenge is to recognize and use older workers' human capital for the mutual benefit of workers and organizations alike (McCarthy *et al.*, 2014).

The results are important from practitioners' point of view. Indeed, organizations that aim to enhance and support older workers' employability have to encourage them to undertake training programs and to participate in human resource development initiatives. In this view, training represents one of the most important tools in age management interventions, through which older employees could be motivated.

Because the results of the present study revealed that mastery orientation has the major effect on elderly motivation, managers should facilitate the development of this aspect (Ames, 1992) through the evaluations of progress and improvement and the acceptance of mistakes as a part of the learning process during training programs. Furthermore, training goals should be strictly aligned with the working ones (Carmichael and Ercolani, 2014): the "type" of training activity should be designed to be work-relevant. Moreover, because older workers may be lower motivated toward training (Ng and Feldman, 2012), trainers should pay attention also to some methodological aspects that could influence the elderly's training participation. In particular, when training programs involve new technologies (such as Web-based instruction or virtual reality), older workers may feel less comfortable (Colquitt *et al.*, 2000). Finally, based on previous studies that demonstrate that informal education, more than formal training courses, could be related to higher well-being for older workers (Jenkins and Mostafa, 2014), it is possible to suggest mentoring – and also reverse mentoring – interventions as potential effective and

low-expensive solutions for today's organizations (Ropes, 2013). Furthermore, in general, active ageing policies need to be promoted and, in turn, they may hinder early retirement (Midtsundstad, 2011), and "age-aware" policies, practices and training that limit negative stereotypes toward older workers are also recommended (McCarthy *et al.*, 2014).

In conclusion, to date, this is one of the first studies that explored the relationship between two individual characteristics – proactive personality and training motivation – as mediated by goal orientation among older workers. In particular, our results suggest that organizations can contribute to increase training motivation levels strengthening learning goal orientation, a personality feature that can be also influenced by situational (i.e. organizational) characteristics (Mathieu and Martineau, 1997).

## References

Associazione Bancaria Italiana (ABI) (2012), "L'occupazione per tipologia contrattuale nel 2012 (Italian Bank Association, Employment for contractual typology in 2012)", available at: www.abi.it

American Association of Retired Persons (2010), "Older workers: the new unemployables", *AARP Bulletin*, 18 November.

Ames, C. (1992), "Achievement goals, motivational climate and motivational processes", in Roberts, G.C. (Ed.), *Motivation in Sport and Exercise*, Human Kinetics Books, Champaign, IL, pp. 161-176.

Arbuckle, J.L. (2008), *AMOS 17 User's Guide*, SPSS, Chicago, IL.

Armstrong-Stassen, M. (2008), "Organisational practices and post-retirement employment experience of older workers", *Human Resource Management Journal*, Vol. 18 No. 1, pp. 36-53.

Bal, P.M., De Jong, S.B., Jansen, P.G.W. and Bakker, A.B. (2012), "Motivating employees to work beyond retirement: a multi-level study of the role of I-Deals and Unit Climate", *Journal of Management Studies*, Vol. 49 No. 2, pp. 306-331.

Bal, P.M. and Dorenbosch, L. (2015), "Age-related differences in the relations between individualised HRM and organisational performance: a large-scale employer survey", *Human Resource Management Journal*, Vol. 25 No. 1, pp. 41-61.

Bal, P.M., Kooij, D.T.A.M. and Rousseau, D.M. (2015), *Aging Workers and the Employee-Employer Relationship*, Springer Publishers, London.

Baltes, P.B., Staudinger, U.M. and Lindenberger, U. (1999), "Life span psychology: theory and application to intellectual functioning", *Annual Review of Psychology*, Vol. 50 No. 1, pp. 471-507.

Bassi, L.J. and McMurrer, D.P. (1998), "Training investment can mean financial performance", *Training & Development*, Vol. 52 No. 5, pp. 40-42.

Bateman, T.S. and Crant, J.M. (1993), "The proactive component of organizational behavior: a measure and correlates", *Journal of Organizational Behavior*, Vol. 14 No. 2, pp. 103-118.

Bempechat, J., London, P. and Dweck, C.S. (1991), "Children's conceptions of ability in major domains: an interview and experimental study", *Child Study Journal*, Vol. 21 No. 1, pp. 11-36.

Bertolino, M., Truxillo, D.M. and Fraccaroli, F. (2011), "Age as moderator of the relationship of proactive personality with training motivation, perceived career development from training, and training behavioral intentions", *Journal of Organizational Behavior*, Vol. 32 No. 2, pp. 248-263.

Bindl, U.K. and Parker, S.K. (2010), "Proactive work behavior: forward-thinking and change-oriented action in organizations", inZedeck, S. (Ed.), *APA Handbook of Industrial and Organizational Psychology*, American Psychological Association, Washington, DC, Vol. 2, pp. 567-598.

Birdi, K., Allan, C. and Warr, P. (1997), "Correlates and perceived outcomes of four types of employee development activity", *Journal of Applied Psychology*, Vol. 82 No. 6, pp. 845-857.

Button, S.B., Mathieu, J.E. and Zajac, D.M. (1996), "Goal orientation in organizational research: a conceptual and empirical foundation", *Organizational Behavior and Human Decision Processes*, Vol. 67 No. 1, pp. 26-48.

Carlson, D., Bozeman, D., Kacmar, M., Wright, P. and McMahan, G. (2000), "Training motivation in organizations: an analysis of individual level antecedents", *Journal of Managerial Issues*, Vol. 12 No. 3, pp. 271-287.

Carmichael, F. and Ercolani, M.G. (2014), "Age-training gaps in the European Union", *Ageing and Society*, Vol. 34 No. 1, pp. 129-156.

Carstensen, L.L. (1998), "A life-span approach to social motivation", Heckhausen, J. and Dweck, C.S. (Eds), *Motivation and Self-regulation Across the Life Span*, Cambridge University Press, New York, NY, pp. 341-364.

Colquitt, J.A., LePine, J.A. and Noe, R.A. (2000), "Toward an integrative theory of training motivation: a meta-analytic path analysis of 20 years of research", *Journal of Applied Psychology*, Vol. 85 No. 5, p. 678-707.

Conway, J.M. and Lance, C.E. (2010), "What reviewers should expect from authors regarding common method bias in organizational research", *Journal of Business and Psychology*, Vol. 25 No. 3, pp. 325-334.

Crant, J.M. (2000), "Proactive behavior in organizations", *Journal of Management*, Vol. 26 No. 3, pp. 435-462.

De Lange, A.H., Taris, T.W., Jansen, P., Smulders, P., Houtman, I. and Kompier, M. (2006), "Age as a factor in the relation between work and mental health: results of the longitudinal TAS survey", *Occupational Health Psychology: European Perspectives on Research, Education and Practice*, Vol. 1, pp. 21-45.

De Lange, A.H., Bal, P.M., Van der Heijden, B.I.J.M., De Jong, N. and Schaufeli, W.B. (2011), "When I'm 64: psychological contract breach, work motivation and the moderating roles of future time perspective and regulatory focus", *Work & Stress*, Vol. 25 No. 4, pp. 338-354.

De Lange, A.H., Van Yperen, N.W., Van der Heijden, B.I.J.M. and Matthijs Bal, P. (2010), "Dominant achievement goals of older workers and their relationship with motivation-related outcomes", *Journal of Vocational Behavior*, Vol. 77 No. 1, pp. 118-125.

Department of Employment, Labour and Social Affairs (DELSA) (2006), "Older workers", *DELSA Newsletter*, OECD, Paris.

Dohm, A. and Shniper, L. (2007), "Employment outlook: 2006-16, Occupational Employment projections to 2016", *Monthly Labor Review*, Vol. 130, pp. 86-125, available at: www.bls.gov/opub/mlr/2007/11/art5full.pdf

Dordoni, P. and Argentero, P. (2015), "When age stereotypes are employment barriers: a conceptual analysis and a literature review on older workers stereotypes", *Ageing International*. doi: 10.1007/s12126-015-9222-6.

Dweck, C.S. (1989), in Lesgold, A. and Glaser, R. (Eds), "Motivation", *Foundations for a Psychology of Education*, Hillsdale, NJ.

Ebner, N.C., Freund, A.M. and Baltes, P.B. (2006), "Developmental changes in personal goal orientation from young to late adulthood: from striving for gains to maintenance and prevention of losses", *Psychology and Aging*, Vol. 21 No. 4, pp. 664-678.

Elliot, A.J. (2005), "A conceptual history of the achievement goal construct", in Elliot, A.J. and Dweck, C.S. (Eds), *Handbook of Competence and Motivation*, The Guilford Press, New York, NY, pp. 52-72.

Eurostat (2013), "Employment statistics", available at: http://ec.europa.eu/eurostat/statistics-explained/index.php/Main_Page (accessed May 2015).

Facteau, J.D., Dobbins, G.H., Russell, J.E.A., Ladd, R.T. and Kudisch, J.D. (1995), "The influence of general perceptions of the training environment on pretraining motivation and perceived training transfer", *Journal of Management*, Vol. 21 No. 1, pp. 1-25.

Finkelstein, L.M., Truxillo, D.M., Fraccaroli, F. and Kanfer, R. (2015), "An introduction to facing the challenges of a multi-age workforce: a use-inspired approach", inFinkelstein, L., Truxillo, D., Fraccaroli, F. and Kanfer, R. (Eds), *Facing the Challenges of a Multi-Age Workforce: A Use-Inspired Approach, SIOP Frontiers Series*, Taylor & Francis/Routledge, London.

Freund, A.M. (2006), "Age-differential motivational consequences of optimization versus compensation focus in younger and older adults", *Psychology and Aging*, Vol. 21 No. 2, pp. 240-252.

Fugate, M., Kinicki, A.J. and Ashforth, B.E. (2004), "Employability: a psycho-social construct, its dimensions, and applications", *Journal of Vocational Behavior*, Vol. 65 No. 1, pp. 14-38.

Fuller, B. Jr. and Marler, L.E. (2009), "Change driven by nature: a meta-analytic review of the proactive personality literature", *Journal of Vocational Behavior*, Vol. 75 No. 3, pp. 329-345.

Gonyea, J. (2009), *The Older Worker and the Changing Labor Market: New Challenges for the Workplace*, Routledge, London and New York.

Grant, A.M. and Ashford, S.J. (2008), "The dynamics of proactivity at work", *Research in Organizational Behavior*, Vol. 28, pp. 3-34.

Grossman, R. and Salas, E. (2011), "The transfer of training: what really matters", *International Journal of Training and Development*, Vol. 15 No. 2, pp. 103-120.

Hayes, A.F. (2009), "Beyond baron and Kenny: statistical mediation analysis in the new millennium", *Communication Monographs*, Vol. 76 No. 4, pp. 408-420.

Hedge, J.W. and Borman, W.C. (2012), "Work and aging", inKoslowski, S.W.J. (Ed.), *The Oxford Handbook of Organizational Psychology*, Oxford University Press, New York, NY, Vol. 2, pp. 1245-1283.

Hu, L.T. and Bentler, P.M. (1999), "Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives", *Structural Equation Modeling*, Vol. 6 No. 1, pp. 1-55.

Ilmarinen, J.E. (2006), "Aging workers", *Occupational and Environmental Medicine*, Vol. 58 No. 8, pp. 546-552.

James, J.B., McKechnie, S. and Swanberg, J. (2011), "Predicting employee engagement in an age-diverse retail workforce", *Journal of Organizational Behavior*, Vol. 32 No. 2, pp. 173-196.

Jenkins, A. and Mostafa, T. (2014), "The effects of learning on wellbeing for older adults in England", *Ageing & Society*. doi: 10.1017/S0144686X14000762.

Kanfer, R. and Ackerman, P.L. (2004), "Aging, adult development, and work motivation", *Academy of Management Review*, Vol. 29 No. 3, pp. 440-458.

Kinsella, K. and Velkoff, V.A. (2001), *An Aging World: 2001*, US Government Printing Office, Washington, DC.

Kooij, T.A.M., De Lange, A.H., Jansen, P.G.W. and Dikkers, J.S.E. (2008), "Older workers' motivation to continue to work: five meanings of age: a conceptual review", *Journal of Managerial Psychology*, Vol. 23 No. 4, pp. 364-394.

Lee, S.H., Qureshi, I., Konrad, A.M. and Bhardwaj, A. (2014), "Proactive personality heterophily and the moderating role of proactive personality on network centrality and psychological outcomes: a longitudinal study", *Journal of Business and Psychology*, Vol. 29 No. 3, pp. 381-395.

Letvak, S. (2002), "Myths and realities of ageism and nursing", *AORN Journal*, Vol. 75 No. 6, pp. 1101-1107.

McCarthy, J., Heraty, N. and Cross, C. (2014), "Who is considered an 'older worker'? Extending our conceptualisation of 'older' from an organisational decision maker perspective", *Human Resource Management Journal*, Vol. 24 No. 4, pp. 374-393.

McEvoy, G.M. and Cascio, W.F. (1989), "Cumulative evidence of the relationship between employee age and job performance", *Journal of Applied Psychology*, Vol. 74 No. 1, pp. 11-17.

Major, D.A., Turner, J.E. and Fletcher, T.D. (2006), "Linking proactive personality and the big five to motivation to learn and development activity", *Journal of Applied Psychology*, Vol. 91 No. 4, pp. 927-935.

Mathieu, J.E. and Martineau, J.W. (1997), "Individual and situational influences in training motivation", in Ford, J.K., Kozlowski, S.W.J., Kraiger, K., Salas, E. and Teachout, M.S. (Eds), *Improving Training Effectiveness in Organizations*, Hillsdale, NJ, pp. 193-222.

Mathieu, J.E., Tannenbaum, S.I. and Salas, E. (1992), "Influences of individual and situational characteristics on measures of training effectiveness", *Academy of Management Journal*, Vol. 35 No. 4, pp. 828-847.

Maurer, T.J., Weiss, E.M. and Barbeite, F.G. (2003), "A model of involvement in work-related learning and development activity: the effects of individual, situational, motivational, and age variables", *Journal of Applied Psychology*, Vol. 88 No. 4, pp. 707-724.

Midtsundstad, T.I. (2011), "Inclusive workplaces and older employees: an analysis of companies' investment in retaining senior workers", *International Journal of Human Resource Management*, Vol. 22 No. 6, pp. 1277-1293.

Ng, T.W. and Feldman, D.C. (2012), "Employee voice behavior: a meta-analytic test of the conservation of resources framework", *Journal of Organizational Behavior*, Vol. 33 No. 2, pp. 216-234.

Noe, R.A. and Wilk, S.L. (1993), "Investigation of the factors that influence employees' participation in development activities", *Journal of Applied Psychology*, Vol. 78 No. 2, pp. 291-302.

Organisation For Economic Co-Operation And Development (OECD) (2006), *OECD Annual Report 2006*, OECD Publication, Paris.

Pen-Yuan, L. (2015), "The role of self-concept in the mechanism linking proactive personality to employee work outcomes", *International Review of Applied Psychology*, Vol. 64 No. 2, pp. 421-443.

Pitt-Catsouphes, M. and Smyer, M. (2006), "How old are older workers?", *Issue Brief 04*, The Center on Aging and Work/Workplace Flexibility, Chestnut Hill, MA.

Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y. and Podsakoff, N.P. (2003), "Common method biases in behavioral research: a critical review of the literature and recommended remedies", *Journal of Applied Psychology*, Vol. 88 No. 5, pp. 879-903.

Preacher, K.J. and Hayes, A.F. (2008), "Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models", *Behavior Research Methods*, Vol. 40 No. 3, pp. 879-891.

Rix, S. (2001), *Health and Safety Issues in an Aging Workforce*, AARP Public Policy Institute, Washington, DC, pp. 1-16.

Ropes, D. (2013), "Intergenerational learning in organizations", *European Journal of Training and Development*, Vol. 37 No. 8, pp. 713-727.

Schalk, R., van Veldhoven, M., de Lange, A.H., de Witte, H., Kraus, K., Stamov-Rosßnagel, C., Tordera, N., van der Heijden, B., Zappalà, S., Bal, M., Bertrand, F., Claes, R., Crego, A., Dorenbosch, L., de Jonge, J., Desmette, D., Gellert, F.J., Hansez, I., Iller, C., Kooij, D., Kuipers, B., Linkola, P., van den Broeck, A., van der Schoot, E. and Zacher, H. (2010), "Moving European research on work and ageing forward: overview and agenda", *European Journal of Work and Organizational Psychology*, Vol. 19 No. 1, pp. 76-101.

Seibert, S.E., Crant, J.M. and Kraimer, M.L. (1999), "Proactive personality and career success", *Journal of Applied Psychology*, Vol. 84 No. 3, p. 416.

Shultz, K.S. and Adams, G.A. (2007), "In search of a unifying paradigm for understanding aging and work in the 21st century", in Shultz, K.S. and Adams, G.A. (Eds), *Aging and Work in the 21st Century*, Chapter 14, Lawrence Erlbaum Associates, Mahwah, NJ, pp. 303-319.

Shultz, K.S., Morton, K.R. and 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*, Vol. 53 No. 1, pp. 45-57.

Spector, P.E. (2006), "Method variance in organizational research: truth or urban legend?", *Organizational Research Methods*, Vol. 9 No. 2, pp. 221-232.

Spirduso, W.W. (1995), "Job performance of the older worker", in Spirduso W.W. (Ed.), *Physical Dimensions of Aging*, Human Kinetics Champaign, IL, pp. 367-387.

Stein, D. and Rocco, T.S. (2001), "The older worker: myths and realities", *Eric Clearinghouse on Adult, Career, and Vocational Education*, Office of Educational Research and Improvement, Columbus, OH, Vol. 18.

Sterns, H.L. and Doverspike, D. (1989), "Aging and the training and learning process", in Goldstein, S.W. and Irwin, L. (Eds), *Training and Development in Organizations*, University of Akron, San Francisco, CA.

Tannenbaum, S.I. and Yukl, G. (1992), "Training and development in work organizations", *Annual Review of Psychology*, Vol. 43, pp. 399-441.

Taylor, P. and Walker, A. (1998), "Employers and older workers: attitudes and employment practices", *Ageing and Society*, Vol. 18 No. 6, pp. 641-658.

Touron, D.R. and Hertzog, C. (2004), "Distinguishing age differences in knowledge, strategy use, and confidence during strategic skill acquisition", *Psychology and Aging*, Vol. 19 No. 3, pp. 452-466.

Truxillo, D.M. and Weathers, V.M. (2005), *Evaluation of a Substance Abuse Training Program for Supervisors: Some Preliminary Findings*, OR Nurses Association, Portland, OR.

Truxillo, D., Zaniboni, S., Fraccaroli, F. and Rineer, J. (2012), "White paper for EAWOP Small Group Meeting on Age Cohorts in the Workplace: understanding and building strength through differences", European Association of Work and Organisational Psychology, Rovereto, available at: www.eawop.org/ckeditor_assets/attachments/134/age_small_group_meeting_white_paper_14_march_2012.pdf?1336095725 (accessed 7 April 2013).

United Nations (2013), "Department of Economic and Social Affairs, Population Division", *World Population Ageing 2013, ST/ESA/SER.A/348*, United Nations.

Unsworth, K.L. and Parker, S. (2003), "Proactivity and innovation: promoting a new workforce for the new workplace", in Holman, D., Wall, T.D., Clegg, C.W., Sparrow, P. and Howard, A. (Eds), *The New Workplace: A Guide to the Human Impact of Modern Working Practices*, John Wiley & Sons, Chichester.

Van Der Heijde, C.M. and Van Der Heijden, B.I.J.M. (2006), "A competence-based and multidimensional operationalization and measurement of employability", *Human Resource Management*, Vol. 45 No. 3, pp. 449-476.

Van der Heijden, B. (2005), *No One Has Ever Promised you a Rose Garden*, Van Gorcum, Assen.

Van der Heijden, B.I.J.M., De Lange, A.H., Demerouti, E. and Van der Heijde, C.M. (2009), "Age as moderator in the relationship between self- versus supervisor ratings of employability and career success", *Journal of Vocational Behavior*, Vol. 2, pp. 156-164.

Van Scotter, J.R. and Motowidlo, S.J. (1996), "Interpersonal facilitation and job dedication as separate facets of contextual performance", *Journal of Applied Psychology*, Vol. 81 No. 5, pp. 525-531.

Vaughn, E.D. (2011), "A longitudinal examination of individual adaptability as an antecedent of training and transfer outcomes", *Doctoral Dissertation*, Auburn University.

Vaupel, J.W. (2010), "Biodemography of human ageing", *Nature*, Vol. 464 No. 7288, pp. 536-542.

Villosio, C. (2008), *Working Conditions of an Ageing Workforce*, Office for Official Publications of the European Communitie, Luxembourg.

Waldman, D.A. and Avolio, B.J. (1986), "A meta-analysis of age differences in job performance", *Journal of Applied Psychology*, Vol. 71 No. 1, pp. 33-38.

Wang, M. and Shultz, K.S. (2010), "Employee retirement: a review and recommendations for future investigation", *Journal of Management*, Vol. 36 No. 1, pp. 172-206.

Warr, P. and Fay, D. (2001), "Age and personal initiative at work", *European Journal of Work and Organizational Psychology*, Vol. 10 No. 3, pp. 343-353.

Williams, L.J., Cote, J.A. and Buckley, M.R. (1989), "Lack of method variance in self-reported affect and perceptions at work: reality or artefact?", *Journal of Applied Psychology*, Vol. 74 No. 3, pp. 462-468.

Zaniboni, S., Fraccaroli, F., Truxillo, D.M., Bertolino, M. and Bauer, T.N. (2011), "Training valence, instrumentality, and expectancy scale (T-VIES-it). Factor structure and nomological network in an Italian sample", *Journal of Workplace Learning*, Vol. 23 No. 2, pp. 133-151.

## About the authors

Ilaria Setti received PhD from the University of Pavia, Italy. Currently, she is a Post-Doctoral Fellow in work and organizational psychology and an Expert in occupational psychology at the University of Pavia, Italy. Ilaria Setti is the corresponding author and can be contacted at: ilaria.setti@unipv.it

Paola Dordoni is MSc and PhD in occupational psychology at the University of Pavia, Italy. Her topic focuses on aging workforce and older workers.

Beatrice Piccoli received PhD from the University of Verona, Italy and the Katholieke Universiteit of Leuven, Belgium. Currently, she is a Research Assistant in work and organizational psychology and an Expert in psychometrics at the University of Verona, Italy.

Massimo Bellotto is a Full Professor in work and organizational psychology at the University of Verona, Italy.

Piergiorgio Argentero a is Full Professor in work and organizational psychology at the University of Pavia, Italy.