

Proactive Personality and Training Motivation among Older Workers: A Mediational Model of Goal Orientation

Abstract

Purpose. In a context characterized by growing ageing of the global population, this paper aims to examine the relationship between proactive personality and training motivation among older workers (aged over 55). We have hypothesized that proactive personality predicts the motivation to learn of older workers, and furthermore that this relationship is mediated by goal orientation. In particular, the proposal is that *learning* goal orientation mediates the relationship between proactive personality and learning motivation.

Methodology. Employees of an Italian bank completed an on-line questionnaire. AMOS 17 was used in order to carry out Confirmatory Factor Analysis, and SPSS-macro to test the mediational model.

Findings. Our results confirm 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 a practical point of view, this study may have implications for organizations which 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 to strengthen proactive personality that, in turn, may affect levels of training motivation.

Originality. Even if proactive personality has been already found as a predictor of learning motivation, to the best of our knowledge this is the first study demonstrating the mediating role of goal orientation in the relationship between proactive personality and training motivation.

Keywords: training motivation; proactive personality; goal orientation; older workers

Introduction

Global population is ageing to unprecedented rate (Vaupel, 2010). In 2009, it was estimated that one out of nine persons were aged 60 and over; this index is expected to grow and reach one out of every five persons. In the most developed countries, it is estimated that one out three persons will be 60 years old, or over, by 2050 (United Nations, 2013), with Europe countries make no exceptions. Italy is one of the first countries (with Japan, Germany and Sweden) that is facing with a particular increasing 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 persons aged 20-64 (55.6%; Eurostat, 2013). Moreover, the Italian participation rate of people aged 55-64 is at least at the bottom of 16 EU members. The main reasons of this global change are the lower fertility and the improvement of the health conditions (Kinsella and Velkoff, 2001). Those 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 organisations 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.*, in press).

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 retirement age (Armstrong-Stassen, 2008). In this view, encouraging motivation towards training may increase older workers' desire for staying employed longer (Bal *et al.*, 2012). The importance of studying training motivation among elderly workers is also 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, also 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, in press).

Who is an older worker?

Ageing refers to 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 conceptualisations of age in organisational contexts: 1) *chronological age*, referred to the actual calendar age; 2) *physiological, functional or performance-based age*, represented by 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 on the ageing process. More easily, according to Schalk and colleagues (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, and furthermore it may be considered as a result of the person-environment interaction. In this view, chronological age is an example of age as individual characteristic, social age - based on age stereotypes - is a result of environment, and work seniority concerns the person-environment interaction.

A clear conceptualisation 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, Schultz and Adams (2007) even assert that "*One avenue for dealing with the dilemma of where to set the cut off is not to set any cut off*" (p. 310). Nevertheless, the need to establish a cut off 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). The reasons why in the present study we have chosen the 55 years cut off are better explained in the Method section.

With regard to older workers' cognitive skills, there is 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 doesn't 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).

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, influence of personal and psychological characteristics on job performance has been found (e.g., 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 behaviours 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 he or she is to reap the intended benefits from the training experience (Facteau *et al.*, 1995; Noe and Wilk, 1993). Several studies (see for example 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 facing with an extended working life and, with age, employees seem to be more focused on intrinsic aspects rather than on extrinsic ones (e.g. money) (see De Lange *et al.*, 2010; Kooij *et al.*, 2008). This study aims to share 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, in press). Together considered, 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). But 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 paid attention also on older workers' training motivation and on the strategies by which supporting their later career (Tannenbaum and Yukl, 1992). With regard to this, among the main theoretical models, Mathieu and colleagues' instrumentality approach (1992) 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). 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). Examples of individual variables which may influence training motivation are: attitude towards 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 towards training activities (Bertolino *et al.*, 2011). Unsworth and Parker (2003) 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*” (p. 177). Personal initiative in the work setting refers to going beyond what is formally required, persevering to achieve goals in order to improve performance levels (Seibert *et al.*, 1999). It also concerns 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 in order to 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 behaviours represent an important requirement for optimal organizational functioning, as self-directed and future-focused actions allow employees to effectively manage and take advantage of changes (Bindl and Parker, 2010). That is, active - rather than passive - performance and behaviours are highly valued concepts within current organizations (Unsworth and Parker, 2003).

Proactivity trait has been revealed to be unrelated to mental ability (Bateman and Crant, 1993), and it doesn't change during 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 towards 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 behavioural, such as performance and organisational citizenship, and attitudinal, such as job satisfaction, affective organisational 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 proactivity trait and motivation to learn (see, for example, 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 co-varies with the individual's implicit theory of ability (Bempechat *et al.*, 1991; Dweck, 1989). Several researchers (see for example

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 persons, if compared to younger ones. In this field of study, the goal approach to achievement motivation is a theoretical framework which allows to understand 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 confirmed also by life-span theories, according to which achievement motivation becomes more intrinsic, i.e. mastery-related, with ageing (see for example 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 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 mediate the relationship between proactive personality and training motivation among older workers.

So 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 cut off of 55 years or 65 years in order to describe “older workers” (Bertolino *et al.*, 2011; Dohm and Shniper, 2007; James *et al.*, 2011; Rix, 2001). In particular, discussions about the labour force participation tend to consider those aged over 55 as “older workers” because participation in labour market significantly decreases among workers aged over 55 (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 old to statutory retirement ages of 65/68 years old, we jointed the 55 years cut off (Pitt-Catsoupes and Smyer, 2006; Stein and Rocco, 2001). Even if we are aware of the limitation inherent in the choice of a specific cut off, because individuals equally aged may be differently affected by the ageing process (Kooij *et al.*, 2008), we needed to define a specific cut off in order to carry out the present research.

Employees belonging to an Italian financial institution were asked to complete a questionnaire. 3909 questionnaires were sent to all the bank employees aged over 55. 2215 on-line questionnaires (response rate: 71.2%) were filled in anonymously and voluntarily. The majority of participants

were male (76.3%), in line with the Italian occupational rate: even if female occupation is gradually growing, males still represent the majority of people employed in credit and insurance sector (see ABI, 2012). 87.7% were aged 55-60 and 61.9% had a work seniority in their current job of over 30 years. The majority of participants were employed in managerial roles (63.3%), in line with the national occupational trend: Italian managers are mainly aged between 40 and 69, and our sample is mainly made of managers aged 55-60 (ABI, 2012).

Procedure

Data were collected from January to March 2014. Before to complete the on-line questionnaire, participants 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. Participants were also invited to fill in a socio-demographic questionnaire.

Measurements

Proactive personality. To measure the proactive trait, we used Seibert and colleagues' scale (1999). Respondents were asked to indicate their capacity to lookout for new ways to improve themselves and their interest in findings better ways to do things. An example of item is "*I excel at identifying opportunities*". Items are rated on a 5-point Likert scale (1 = totally agree; 5 = totally disagree). The Cronbach's alpha of this scale was .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 doing a difficult task (example of item: "*I prefer to work on tasks that force me to learn new things*"). The Cronbach's alpha of this sub-scale was .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 (example of item: "*I prefer to do things that I can do well rather than things that I do poorly*"). Items were rated

using a 5-point Likert scale (1 = totally agree; 5 = totally disagree). The Cronbach's alpha of this sub-scale was .61.

Training Motivation. In order to evaluate the level of motivation towards 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. Example of item is: "*I believe the training activity is useful for workers who occupy a job position similar to mine*". Items were rated on a five-point Likert scale (1= strongly disagree; 5= strongly agree). The Cronbach's alpha of this scale was .90.

Data Analysis

Testing was done in two steps: (a) the measurement model and (b) 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 (CFA). We tested and compared the hypothesised measurement model with two alternative models. The hypothesised 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 (1) 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); (2) a one-factor model in which all items loaded on the same factor. In 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 covariances among the items. Moreover, we further examined the risk of common method variance testing a model including an unmeasured latent factor (3). 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: 1 - the Non-Normed Fit Index (NNFI); 2 - the Comparative Fit Index (CFI); 3 - Root Mean Square Error of Approximation (RMSEA); 4 - Standardized Root Mean Square Residual (SRMR). For NNFI and CFI, values between .90 and .95 are acceptable. RMSEA and SRMR values indicate a good fit when they are smaller than or equal to .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 to compare the strength of the two indirect effects in order 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).

< INSERT FIGURE 1 ABOUT HERE >

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%

bootstrap confidence intervals (5000 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% 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), 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 1. 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.

< INSERT TABLE 1 ABOUT HERE >

Measurement model

The hypothesised measurement model with four latent variables (proactive personality, performance goal orientation, learning goal orientation, training motivation) provided a good fit to the data: $\chi^2_{(82)} = 1343.14$; NNFI = .90; CFI = .92; RMSEA = .07 with C.I.= .07 - .08; SRMR = .06. All items loaded significantly on their corresponding latent factors, ranging from .57 to .90 (a table with the detailed findings of the CFAs is available upon request from the first author). The competing models were (1) a three-factor model ($\chi^2_{(85)} = 1466.83$, $p < .001$), (2) a one-factor model ($\chi^2_{(88)} = 1908.26$, $p < .001$) and (3) the five-factor model with the unmeasured latent factor ($\chi^2_{(63)} = 925.31$, $p < .001$). The hypothesized measurement model fitted the data better than each of the

alternative models (see Table 2). 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% of the variance, which is well below the threshold of 25% suggested (Williams, *et al.*, 1989). Consequently, we decided to use the four scales proposed in the measurement model to test the study hypotheses.

< INSERT TABLE 2 ABOUT HERE >

Test of the mediated-effects hypotheses

As suggested by Preacher and Hayes (2008), investigating multiple mediation involves two parts: (1) investigating the total indirect effect; and (2) testing hypotheses regarding individual mediators, i.e., investigating the indirect effects associated with each mediator. Therefore, as shown in Table 3, 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 .40 ($p < .001$). Specifically, the relationship between proactive personality and performance goal orientation is positive (.26, $p < .001$). Proactive personality also has a positive relationship with learning goal orientation (.48, $p < .001$). These relationships are referred to as paths A in Figure 1. In turn, performance goal orientation is positively related to training motivation (.20, $p < .001$) as well as learning goal orientation (.47, $p < .001$). These relationships are considered as paths B in Figure 1.

Furthermore, the direct relationship between proactive personality and training motivation is positive and significant (path C' .12, $p < .001$). This result supports Hypothesis 1. 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 (.05, $p < .001$). Moreover, the relationship between proactive personality and training motivation was also mediated by learning goal

orientation (indirect effect .23, $p < .001$). These results are support Hypothesis 2. Specifically, 70% 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% respectively.

In order to verify Hypothesis 3, we conducted a test of the difference between the indirect effects of both mediators (contrast test). We found that learning goal orientation was the most important factor in mediating the impact of proactive personality on training motivation (see the contrast test result in Table 3).

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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). In order to respond to the need of the current demographic situation, organizational HR policies and practices are struggling with retaining and motivating their ageing workers (Kanfer and Ackerman, 2004).

More in detail, to the contrary of several common negative stereotypes towards older workers' training motivation (Ng and Feldman, 2012), and in line with previous research (see for example Villosio, 2008), our results show that they may be motivated to participate in training activities. In particular, the role of proactive personality in predicting motivation to learn has been already demonstrated by 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 towards learning

activities. This result is in line with the Selection Optimization with Compensation Theory (SOC; Baltes *et al.*, 1999), and the Socio-emotional Selectivity Theory (Carstensen, 1998): as people get older, their work motivation usually shift from a more extrinsic, i.e. competitive, to a more intrinsic, i.e. mastery-related, pattern.

Although this paper provides some first evidence for the study of older workers' training motivation, it is also limited in several respects. 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. Secondly, 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 results generalization, even if the characteristics of the sample follow the distribution of general Italian workforce in credit and insurance sector (ABI, 2012), future studies should be extended to other Italian financial institutions, in order to confirm the results obtained; moreover, we would suggest to reply the research to older workers belonging to different sectors. Finally, the proposed model could also be explored among junior and middle aged workers, in order to compare the results among workers of different age cohorts (Bertolino *et al.*, 2011): results would lead to different behavioural manifestations depending on 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, in order 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 HRM challenge is to recognize and use older workers' human capital for the mutual benefit of workers and organisations alike (McCarthy *et al.*, 2014).

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 HRD (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 towards training (Ng and Feldman, 2012), trainers should pay attention also to some methodological aspects that could influence elderlys' 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 which demonstrated that informal education, more than formal training courses, could be related to higher well-being for older workers (Jenkins and Mostafa, in press), it is possible to suggest mentoring - and also reverse mentoring - interventions as potential effective and low-expensive solutions for today's organizations (Ropes, 2013). More 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 towards 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

- ABI (Associazione Bancaria Italiana) (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", 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 Inc, Chicago.
- Armstrong-Stassen, M. (2008), "Organisational practices and post-retirement employment experience of older workers", *Human Resource Management Journal*, Vol. 18, pp. 36-53.
- 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., De Jong, S. B., Jansen, P. G. W., 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., Kooij, D. T. A. M. and Rousseau, D. M. (2015), *Aging Workers and the Employee-Employer Relationship*, Springer Publishers.
- 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, 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, 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, pp. 248-263.
- Bindl, U. K. and Parker, S. K. (2010), "Proactive work behavior: Forward-thinking and change-oriented action in organizations", Zedeck, S. (Ed.), *APA handbook of industrial and*

organizational psychology, Vol. 2, American Psychological Association, Washington, DC, 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, 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, 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, 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, pp. 325-334.

Crant, J. M. (2000), "Proactive behavior in organizations", *Journal of Management*, Vol. 26, 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., Van Yperen, N. W., Van der Heijden, B. I. J. M., Matthijs Bal, P. (2010), "Dominant achievement goals of older workers and their relationship with motivation-related outcomes", *Journal of Vocational Behavior*, Vol. 77, pp. 118-125.

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.

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

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: <http://www.bls.gov/opub/mlr/2007/11/art5full.pdf>.

Dordoni P. and Argentero P. (in press), "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), "Motivation", Lesgold, A. and Glaser, R. (Eds), *Foundations for a Psychology of Education*, Hillsdale, New Jersey.

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, pp. 664-678.

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

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

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. (in press), "An introduction to facing the challenges of a multi-age workforce: A use-inspired approach", Finkelstein, 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.

Freund, A. M. (2006), "Age-differential motivational consequences of optimization versus compensation focus in younger and older adults", *Psychology and Aging*, Vol. 21, 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, pp. 408-420.
- Hedge, J. W. and Borman, W. C. (2012), "Work and aging", Koslowski, S. W. J. (Ed.), *The Oxford handbook of organizational psychology*, Vol. 2, Oxford University Press Inc, New York, NY, 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, pp. 1-55.
- Ilmarinen, J. E. (2006), "Aging workers", *Occupational and Environmental Medicine*, Vol. 58, 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. (in press), "The effects of learning on wellbeing for older adults in England", *Ageing & Society*, published online on 24 July 2014. DOI 10.1017/S0144686X14000762.
- Kanfer, R. and Ackerman, P. L. (2004), "Aging, adult development, and work motivation", *Academy of Management Review*, Vol. 29, pp. 440-458.
- Kinsella, K. and Velkoff, V. A. (2001), *An aging world: 2001*, U.S. Government Printing Office, Washington, DC.
- Kooij, T. A. M., De Lange, A. H, Jansen, P. G. W. and Dijkers, J. S. E. (2008), "Older workers' motivation to continue to work: Five meanings of age: A conceptual review", *Journal of Managerial Psychology*, Vol. 23, pp. 364-394.
- Lee S. H., Qureshi I., Konrad A. M., 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.
- 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", Ford, J. K., Kozlowski, S. W. J., Kraiger, K., Salas, E. and Teachout, M. S. (Eds.), *Improving training effectiveness in organizations*, Hillsdale, New Jersey, 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.

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, pp. 11-17.

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, 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, D.C., pp. 1-16.

Ropes, D. (2013), "Intergenerational learning in organizations", *European Journal of Training and Development*, Vol. 37, No. 8, 2013, 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, pp. 416.

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, pp. 45-57.

Spector, P. E. (2006), "Method variance in organizational research: Truth or urban legend?" *Organizational Research Methods*, Vol. 9, pp. 221-232.

Spirduso, W. W. (1995), "Job performance of the older worker", 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*, 18, Columbus, OH.

Sterns, H. L. and Doverspike, D. (1989), "Aging and the training and learning process", Goldstein, S. W. and Irwin, L. (Eds), *Training and development in organizations*, San Francisco, California.

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*, Oregon Nurses Association, Portland, Oregon.

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*, Rovereto, Italy: European Association of Work and Organisational

Psychology. Available at:
http://www.eawop.org/ckeditor_assets/attachments/134/age_small_group_meeting_white_paper_14_march_2012.pdf?1336095725 , accessed 7 April 2013.

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

Unsworth, K. L. and Parker, S. (2003), "Proactivity and Innovation: Promoting a New Workforce for the New Workplace", 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, Ltd, Chichester, UK.

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, The Netherlands.

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, 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 Communities, Luxembourg.

Waldman, D. A. and Avolio, B. J. (1986), "A meta-analysis of age differences in job performance", *Journal of Applied Psychology*, Vol. 71, 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, 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.

Figure 1. Model proposed with specific paths.

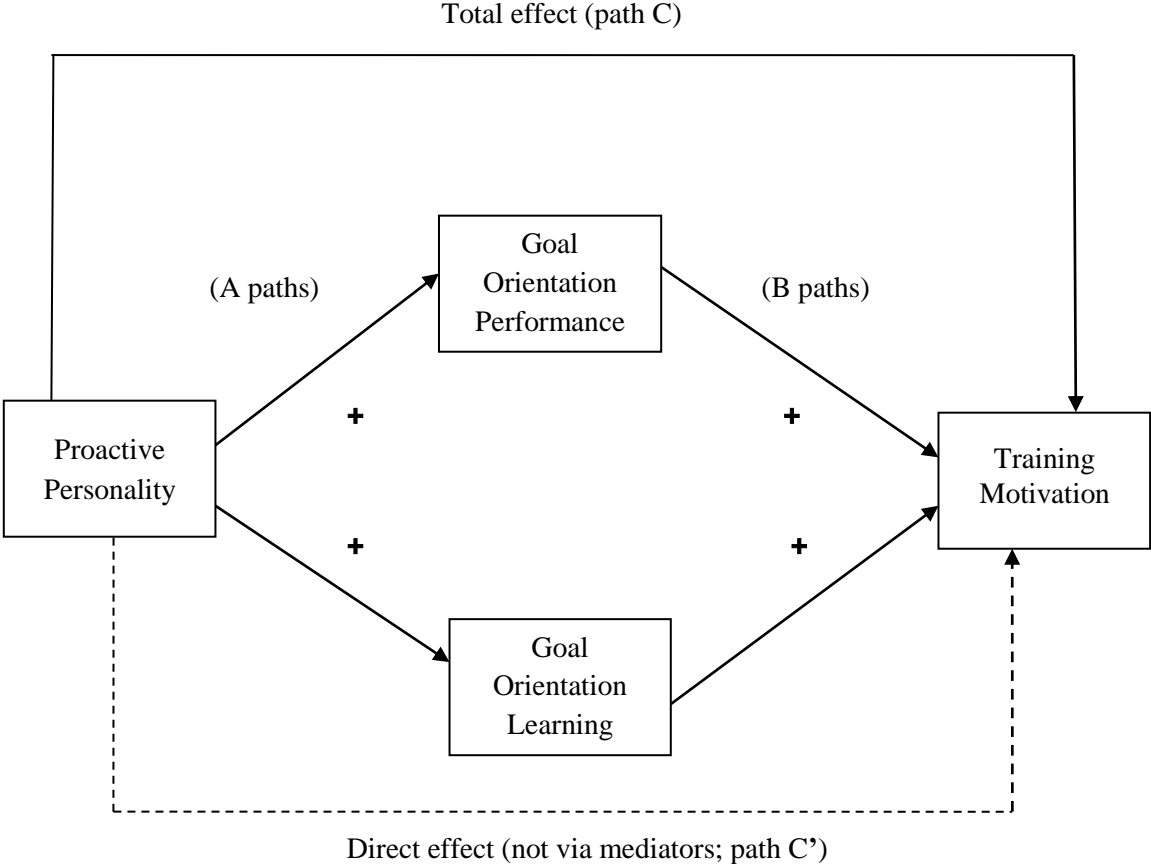


Table 1. Means, Standard Deviations, Internal Consistencies (Cronbach's Alpha),and Correlations among the variables

Variable	M (SD)	Alpha	1	2	3
1. Proactive personality	3.96 (.58)	.62			
2. Performance goal orientation	3.60 (.76)	.61	.21**		
3. Learning goal orientation	4.10 (.61)	.65	.46**	.43**	
4. Training motivation	3.91 (.74)	.90	.26**	.30**	.41**

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

Table 2. Confirmatory Factor Analysis for all measurement models

Model	χ^2	<i>df</i>	<i>p</i>	NNFI	CFI	RMSEA (C.I.)	SRMR	Model comparison	$\Delta\chi^2$
1. Four-factor model (hypothesised model)	1343.14	82	<.001	.90	.92	.07 (.07 - .08)	.06		
2. Three-factor model (PP, PGO + LGO, TM)	1466.83	85	<.001	.86	.87	.09 (.06 - .09)	.09	2 versus 1	123.73***
3. One-factor model (all items on the same factor)	1908.26	88	<.001	.65	.76	.13 (.11 - .16)	.10	3 versus 1	565.12***
4. Measurement model with unmeasured latent factor	925.31	63	<.001	.87	.88	.09 (.04 - .09)	.07	4 versus 1	417.83***

Notes. PP = proactive personality; PGO = performance goal orientation; LGO = learning goal orientation; TM = training motivation.

*** $p < .001$

Table 3. Results of the analyses for the multiple mediation model using the SPSS-macro of Preacher and Hayes (2008)

	Training motivation				
	Coefficient	SE	<i>p</i>	Bootstrap 95% CI ^a	Effect ratio ^b
<i>IV to mediators (A paths)</i>					
Performance goal orientation	.26	.05	< .001		
Learning goal orientation	.48	.06	< .001		
<i>Direct effects of mediators to DV (B paths)</i>					
Performance goal orientation	.20	.03	< .001		
Learning goal orientation	.47	.02	< .001		
<i>Total effect of IV on DV (C path)</i>	.40	.03	< .001		
<i>Direct effect of IV on DV (C' path)</i>	.12	.05	< .001		
<i>Total indirect effect of IV on DV through proposed mediators</i>	.28	.02	< .001	[.05; .11]	.70
Performance goal orientation	.05	.01	< .001	[.01; .06]	.12
Learning goal orientation	.23	.01	< .001	[.01; .07]	.58
<i>Contrast test</i>					
<i>Performance goal orientation vs. Learning goal orientation</i>	.01	.02	< .001	[.03; .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