

Learning culture and affective well-being at work: How does the need for individual growth matter in this relationship?

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The present research aims (a) to assess the impact that a learning context has on people, namely in terms of their affective well-being at work; and (b) to understand the role of individual growth need strength in this relationship. A cross-sectional research design was conducted, in which were surveyed 145 public service workers. A structured additive regression (STAR) model was proposed for the analysis of the data. A linear effect of one dimension of learning culture (external adaptation), and a nonlinear effect of individual growth need on affective well-being were identified. Although the moderation effects were not statistically significant, the findings suggested a pattern where a balance between learning culture and individual growth need levels lead to higher values of affective well-being.

Keywords: organizational learning culture; job-related affective well-being; individual growth need strength; STAR models

Highlights:

- Learning culture is positively related with affective well-being at work
- Non-linear effects identified between individual growth needs and affective well-being
- A high individual growth need does not increase workers' positive affective states
- Further research on the relationship between learning culture - individual growth need fit and well-being is required

In organizational learning and learning organization literature (especially in the later), organizational culture is mostly seen as a facilitating factor, and an essential condition for organizational learning to occur. This orientation of culture towards learning is called in literature learning-oriented culture or, simply, learning culture. In short, it is the type of culture that a learning organization should have at the core of its functioning (Wang, Yang, & McLean, 2007).

The majority of studies on learning culture are centered on the impact that a learning culture has on performance issues. This is mainly due to the fact that organizational learning is frequently seen as a source of sustainable competitive advantage (DeNisi, Hitt, & Jackson, 2003). So other outcomes of a learning culture such as its impact on individuals have been neglected. Studying the consequences of this kind of culture on employees becomes relevant as some criticisms have been about the normative and even the coercive role played by an organization, when learning becomes an obligation for employees in favor of organizational performance (e.g., Marsick & Watkins, 1999; Schein, 1999). Furthermore, employees' reaction to a learning context in organizations may differ since it might be related to their personal characteristics and their career goals and motives. It is possible that a person who wants to rise within a company and reach a more challenging job, or who enjoys challenging tasks should be more willing to learn and to enjoy an organizational context which promotes learning than a person who does not. In this way, and inspired by the Hackman and Oldham job characteristics model (1974), this study aims to understand the role that the need for individual growth plays in the relationship between a learning culture and the employee's affective well-being at work.

Literature Review

The Learning Culture. Organizational culture, despite its complexity, is now a well-established concept in literature and can be defined as “a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems” (Schein, 1992, p. 12). Organizational culture is like a behavioral guide for action, that is to say, the way of doing things in the organization, which is the widely used Deal and Kennedy's (1982) well-known statement for briefly defining organizational culture. Therefore, different organizations have different organizational cultures with different foci and orientations. Depending on shared assumptions, beliefs, values, routines, norms, and patterns of behaviors that exist in the organization, culture can stimulate or, on the contrary, can create barriers for other organizational processes (Rebelo & Gomes, 2011a). Organizational learning is one of these processes (Brown, 1998). Culture is a key concept on organizational learning literature. In fact, organizational culture is mainly conceived as an essential condition to facilitate and support learning in organizations (e.g., Campbell &

Cairns, 1994; Marquardt, 1996; Marsick & Watkins, 2003; Pedler, Burgoyne, & Boydell, 1997), and, consequently, is an important feature in order to achieve good organizational performance. In fact, when we are talking about learning culture, we are speaking about the positive relationship between an organizational culture (with some specific characteristics) and learning. Accordingly, a learning culture can be defined as an organizational culture that is oriented towards the promotion and facilitation of workers' learning, its sharing and dissemination, in order to contribute to organizational development and performance (Rebelo & Gomes, 2011b). Regarding the characteristics that distinguish this kind of culture from other cultures, we could highlight several points of convergence among authors, such as learning as one of the organization's core values, a focus on people, concern for all stakeholders, stimulation of experimentation, encouraging an attitude of responsible risk, readiness to recognize errors and learn from them, and promotion of open and intense communication, as well as promotion of cooperation, interdependence, and sharing of knowledge (e.g., Marquardt, 1996; Marsick & Watkins, 2003; McGill & Slocum, 1993).

The idea that a cultural orientation towards learning promotes organizational success has been responsible for the relevance of learning culture from the nineties up to the present. The rationale is that, when facing more and more global, dynamic, and uncertain environments, an organizational culture centered on productive learning, leading to new and useful knowledge and to innovative ways to solve problems or optimize processes, increases the probability of an organization being successful (Rebelo & Gomes, 2011a). This is probably the reason that most of the previous research on the outcomes of a learning culture was centered on performance issues, such as innovation (e.g., Škerlavaj, Song, & Lee, 2010), customer satisfaction (e.g., Pantouvakis & Bouranta, 2013), or economical-financial performance (e.g., Hung, Yang, Lien, McLean, & Kuo, 2010; Škerlavaj, Štemberger, Škrinjar, & Dimovski, 2007; Song & Kolb, 2013; Yang, 2003). By contrast, we noticed a lack of research on the consequences of a learning culture on individuals. Despite some previous research about the effects on job satisfaction (e.g., Chang & Lee, 2007; Dekoulou & Trevillas, 2015; Dirani, 2009; Egan, Yang, & Bartlett, 2004) or, for instance, on turnover intention (e.g., Islam, Khan, Ahmad, & Ahmed, 2013; Islam, Khan, & Bukhari, 2016; Joo & Park, 2010), to the best of our knowledge no previous research has been developed that seeks to understand the relationship of this kind of cultural orientation with the employees' affective well-being.

Affective Well-Being at Work. Affective well-being refers to feelings (which are experiences that occur throughout life as components of, for instance, emotions, moods, values) about either life in general (i.e., 'context-free'), or in relation to a specific domain (e.g., 'job-related') (Hosie & Sevastos, 2010; Warr, 2013).

Research on affective well-being has pointed to the existence of two orthogonal dimensions: pleasure and arousal (Warr, 1990). The former relates to the valence (negative-positive, horizontal axis) and the latter to the degree

of activation of the affective states (vertical axis). Each dimension could be seen as bipolar (displeasure-pleasure, low-high arousal) and, together, these two dimensions originate four quadrants. These two dimensions derived from Russell's (1979, 1980) circumplex model of affect and has been supported in many different settings (Van Katwyk, Fox, Spector, & Kelloway, 2000).

In relation to job-related affective well-being, and based on the structure pleasure/arousal, Warr (1987) suggested that three main axes should be considered, proposing three indicators of affective well-being: displeased-displeased, anxious-contented, and depressed-enthusiastic. Later on, Van Katwyk et al. (2000) also supported the dimensions of displeasure-pleasure and degree of arousal. The structure they founded pointed to two distinct groups of affective states, positive and negative states, representing positive and negative job-related affective well-being, respectively. Differing on a continuum of displeasure-pleasure, and combined with the degree of arousal, they proposed four categories for classifying affective states: high-arousal pleasure, low-arousal pleasure, high-arousal displeasure and low-arousal displeasure affects.

Previous research has linked job-related affective well-being to several job and workplace characteristics, such as job control and organizational climate (Mäkikangas, Feldt, & Kinnunen, 2007), job demands, job autonomy, and workplace social support (De Jonge & Schaufeli, 1998), or organizational constrains, interpersonal conflict, and workload (Van Katwyk et al., 2000). Furthermore, due to the closeness to job satisfaction (Van Katwyk et al., 2000) the displeasure-pleasure axis of Warr's model has often been measured via job satisfaction scales (Warr, 1990). According to this rationale, it follows that the culture of an organization, as a workplace characteristic, influences employees' affective well-being, since it rules the way things are done within an organization. In addition, based on previous research on the outcomes of a learning culture, which suggests a positive relationship with job satisfaction (e.g., Egan et al., 2004; Pantouvakis & Bouranta, 2013), it is possible to expect that this kind of cultural orientation will also establish a positive relationship with positive affective states. Moreover, the job demands-resources (JD-R) model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) helps to understand this relationship. The JD-R model represents a way of thinking about how job characteristics may influence employee outcomes, such as well-being, and its broad scope assumes that any demand (negative job characteristics) and any resource (positive job characteristics) may affect employee health and well-being (Schaufeli & Taris, 2014). As we have already mentioned, organizational culture is mostly seen as a potential facilitator for learning in (and by) organizations, that is to say, it is seen as a resource. So is it expectable that this kind of cultural orientation will establish a positive relationship with employees' affective well-being. Accordingly, we can formulate our first hypothesis as:

H1: A learning culture is positively related to employees' positive affective states regarding their job and workplace.

Individual Growth Need Strength. The Hackman and Oldham's model was developed to specify how job characteristics and individual differences interact to affect satisfaction, motivation and productivity of individuals at work (Casey & Robbins, 2009). In light of this model, individual growth need is defined as the strength of the employee's desire to obtain growth satisfaction from his or her work (Hackman, & Oldham, 1974). The need strength influences how positively an employee will respond to a job with learning potential or, following this rationale, to a learning culture. Hence, as a personal characteristic, the strength of one's need for individual growth makes the difference in the way people feel and act when faced with the same job and organizational circumstances. Oldham, Hackman, and Pearce (1976) mentioned that a number of studies showed that the strength of one's need for individual growth moderates the relationship between the motivating potential of a job and employees' reactions to it. Thus, despite the support of a positive relationship between a learning culture and job satisfaction offered by previous research, it can be expected that, when the culture of the organization promotes and supports learning, employees with high levels of strength in one's need for growth will tend to feel more satisfaction and more positive job-related affects than employees with low levels. Consequently, one's need for growth could play a moderating role in the relationship learning culture – affective well-being. The inclusion of this moderator could contribute to the debate regarding the benefits and the disadvantages that a cultural orientation towards learning can have on individuals. In fact, a learning culture could have greater or lesser positive consequences, depending on the individual and mainly on the extent to which he/she fits within this type of organizational culture. In Hackman and Oldham's job characteristics model it is suggested that the individual characteristics need to be considered when looking at the relationship between job or organizational characteristics and outcomes, because the interaction between organizational, job and employee characteristics shapes the results. Additionally, the recent integration of personal resources (psychological characteristics or aspects of the self that are functional in achieving work goals, and they stimulate personal development) into the JD-R model has been done in several ways, namely as a moderator of the relation between job characteristics and well-being (Schaufeli & Taris, 2014). Consequently, we hypothesize that:

H2: Strength for one's need for individual growth moderates the learning culture-affective well-being relationship.

Linear or non-linear relationships. Concerning one's need for individual growth and learning culture, what form of relationship can be assumed with job-related affective well-being? High levels of one's need for individual growth or organizational orientation towards learning could become, to some extent, dysfunctional and stressful to an employee due to a possible feeling of lack of personal fulfillment and a feeling of organizational pressure, respectively. Therefore, this study will try to capture the model that best explains these

relationships, either of a linear or a non-linear type. This objective was inspired by Warr's (1987) vitamin model that suggests non-linear relationships between job characteristics and employee affective well-being. In short, this model claims that affective well-being is affected by environmental psychological features in the same way of the non-linear effects that vitamins have on physical health (De Jonge & Schaufeli, 1998). Following Warr's vitamin model, some job or organizational characteristics could initially have a beneficial effect on affective well-being, but after a certain level, a plateau is reached and the level of affective well-being remains constant. Further, increase of work characteristics may either produce a constant effect or may work as impairment for affective well-being (De Jonge & Schaufeli, 1998). However, the empirical evidence for a non-linear behavior of these relationships has not only been consensus, but also, "these associations have generally been minor, and not all expected relations have been found. In addition, in some studies the curvilinear associations have been opposite to what was expected on the basis of the vitamin model" (Mäkikangas et al., 2007, p. 201). Thus, our study will consider a structured additive regression (STAR) model that will allow us to understand whether the relationships between the variables considered are of a linear or a non-linear form.

Method

Sample

The sample was made up of 145 public service workers from different units of a large Portuguese public organization. The fact that employees belong to different departments (whose functioning has high autonomy) allowed us to capture different cultural orientation perceptions. Seventy-five percent of the respondents were male, and the majority of them were above 30 years old (82%), with the median class being the 41–50 years of age. Sixty-eight percent of the respondents had more than 10 years of work experience within the current organization, and 57% have more than 10 years of experience in the current job. In addition, 50% had nine years of schooling, 28% completed high school, and 8% had a higher education background.

Data Collection Procedures

After the agreement of the organization to participate in the study, meetings were held with the board of directors to define the protocol for the data collection. In these meetings the organization chart was analyzed in order to better define the demographic items and plan the process of distributing the self-report questionnaire. The presentation of the study to the organization employees was also planned. The participation in the study was voluntary, informed consented, and anonymous, with employees delivering their questionnaires in closed boxes situated in common spaces of the organization's departments.

Measures

Organizational learning culture. An adaptation of the OLC (Organizational Learning Culture) scale (Rebelo & Gomes, 2011b) for public administrations context was used. This instrument is a 5-point Likert-type scale (from 1 – *almost doesn't apply* to 5 – *almost totally applies*). Previous studies revealed two inter-correlated dimensions: internal integration and

external adaptation (Rebelo & Gomes, 2011b). The internal integration dimension is related to the way internal organizational processes are structured and coordinated in order to value and promote learning (e.g., “this organization stimulates the professional development of its workers”). External adaptation is related to the orientation of the organization to the environment in order to successfully learn from it and correspond to its demands (e.g., “we know that it is important to contribute with innovative ideas for the improvement of work processes”). In the present sample, this bi-dimensional structure has emerged from an exploratory factor analyses (EFA), with the internal integration dimension composed by 11 items (Cronbach’s $\alpha = .94$) and the external adaptation dimension by seven items (Cronbach’s $\alpha = .86$). The two dimensions account for 56.30% of the total variance, with items’ loadings ranging from .47 to .98, and all communalities higher than .40.

Job-related affective well-being. We used a Portuguese adaptation of JAWS (Job-Related Affective Well-Being Scale) originally developed by Van Katwyk et al. (2000). It is composed of 30 items that measure the affects experienced by a person concerning her/his workplace on a 5-point Likert scale, ranging from (1) *never* to (5) *always* (15 items related to positive affect, for instance, “excited”, and 15 items related to negative affect, for example, “frustrated”). EFA led to a two-dimensional structure, one for positive affect (12 items, $\alpha = .94$) and one for negative affect (11 items, $\alpha = .93$). This structure accounts for 57.09% of the total variance, with items’ loadings ranging from .58 to .80, and all communalities higher than .36. In this sample the four categories of affective states failed to emerge, so both dimensions (positive and negative) comprise high and low arousal affects. Only the dimension related to positive well-being was considered in this study due to the presence of a high correlation between the two dimensions ($r = -.69$).

Individual growth need strength. A Portuguese adaptation of six items, derived from section six of the job diagnostic survey (JDS) (Hackman & Oldham, 1974), was used. It is a 7-point Likert scale ranging from 1 (*unimportant*) to 7 (*extremely important*), with items such as “(It’s important to me...) a stimulating and challenging work”. An EFA suggested a single dimension solution that accounts for 65.29% of the total variance, with all six items displaying adequate loadings, ranging from .66 to .87 and communalities higher than .40 ($\alpha = .91$).

Results

Since one of the main goals of this study is to explore whether the relationships between the variables are of a linear or non-linear form, structured additive regression (STAR) models will be used. STAR models allow the placement within the same framework of non-linear effects of continuous covariates, spatial effects, time trends and the usual linear or fixed effects in regression models with non-Gaussian responses (Kneib, 2006). A suitable STAR model for our model under study can be written as:

$$\eta_i = f_1(x_{i1}) + \dots + f_k(x_{ik}) + u'_i \gamma,$$

where η_i is the additive predictor for observation i , $f_1(x_{i1}), \dots, f_k(x_{ik})$ are smooth functions of the continuous covariates x_{i1}, \dots, x_{ik} , and $u'_i \gamma$ represents the parametric component with γ being the parameter vector of the fixed effects.

For smooth non-linear effects of continuous covariates, Bayesian penalized splines are used (Brezger & Lang, 2006; Lang & Brezger, 2004). Inference in the above STAR model can be made through a full (FB) or empirical Bayesian (EB) approach. In a FB approach the unknown variance or smoothing parameters are considered as random variables with suitable hyperpriors and are estimated together with the unknown functions and covariate effects, using

MCMC simulation techniques (Fahrmeir & Lang, 2001). EB approach is based on penalized likelihood inference for the regression coefficients and restricted maximum likelihood estimation (REML) for the variance components (Fahrmeir, Kneib, & Lang, 2004; Fahrmeir & Lang, 2001; Kneib, 2006).

As mentioned before, one of our goals in this study is to ascertain whether individual growth need strength moderates the relationship between learning culture and affective well-being and what type of relationship exists between these variables. The following diagram (Figure 1) represents the model that was analyzed.

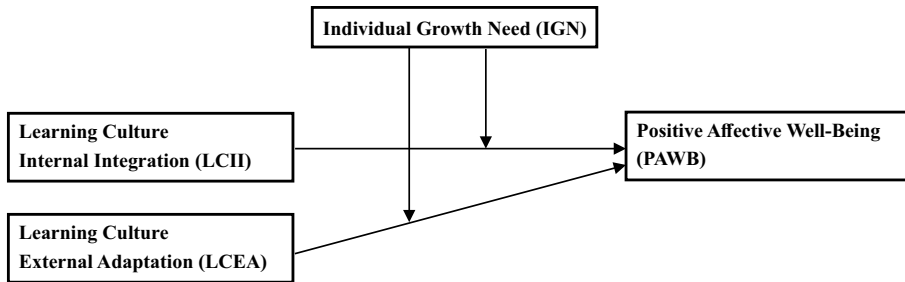


Figure 1. Hypotheses model

For this model, Y_i , the affective well-being result (PAWB) for the i th individual, was considered as the response variable, learning cultural internal integration (LCII) and learning cultural external adaptation (LCEA) as the independent variables, and individual growth need (IGN) the moderator of the two dimensions that compose learning culture. The final moderation model can then be specified as:

$$\eta_i = f_{LCII}(x_{iLCII}) + f_{LCEA}(x_{iLCEA}) + f_{IGN}(x_{iIGN}) + f_{LCII,IGN}(x_{iLCII}, x_{iIGN}) + f_{LCEA,IGN}(x_{iLCEA}, x_{iIGN}),$$

where $\eta_i = E(Y_i)$ represents the additive predictor for the $i = 1, \dots, 145$ individuals. The functions $f_{LCII}(\cdot)$, $f_{LCEA}(\cdot)$ and $f_{IGN}(\cdot)$ are smooth functions estimated using a Bayesian cubic P-spline with second order random walk penalty with 20 inner knots. The interaction surfaces $f_{LCII,IGN}(\cdot)$ and $f_{LCEA,IGN}(\cdot)$ are smooth functions estimated from bivariate P-splines (Brezger & Lang, 2006; Lang & Brezger, 2004).

Table 1 shows the descriptive statistics of the variables included in the STAR model. The results of the effects of LCII, LCEA and IGN can be observed in Figure 2, while the moderation effect, i.e. the two-way interaction effects between IGN, LCII, and LCEA are given in Figure 3 and 4, respectively.

Table 1
Descriptive statistics of the variables

	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
LCII	2.81	0.86	0.05	-0.22
LCEA	3.37	0.77	-0.30	0.22
IGN	5.87	0.97	-1.24	2.03
PAWB	3.46	0.73	-0.26	-0.31

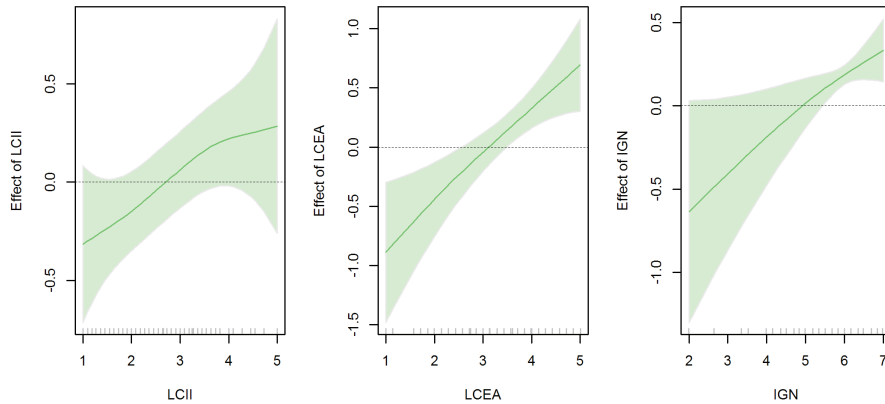


Figure 2. Estimated nonlinear effects of LCII, LCEA and IGN on the dependent variable PAWB, along with their corresponding 95% pointwise credible intervals.

From Figure 2 we see that all the variables considered are positively correlated with the dependent variable PAWB. LCEA is the one which shows the most linear effect on PAWB, with LCII and IGN showing a slight departure from this linearity towards larger values of the scale. We observe that for large values of LCII and IGN the effect on the variable PAWB is smoother. From the observation of the 95% confidence intervals we can say that only the effects of LCEA and IGN are statistically significant (i.e. zero is not contained in the credible interval throughout or in some part of the range of the variables under study).

In Figure 3 we can clearly see that stronger positive effects occur in intermediate-low values of LCII (around 2.5) and intermediate-high values of IGN (around 5) – the dark blue areas; and, at the other extreme (the dark red areas) we see that moderate values of LCII (around 2.8) and higher values of IGN (around 6.8) lead to a negative effect on the variable PAWB ($f(\text{LCII}, \text{IGN})$). The effects observed in Figure 4 are similar, with stronger positive effects occurring in intermediate-low values of LCEA (around 2.4) and intermediate-high values of IGN (around 4.8), and with a negative effect on the variable PAWB ($f(\text{LCEA}, \text{IGN})$) for intermediate-low values of LCEA and IGN (around 2.4 and 2.0, respectively), moderate-high values of LCEA (around 3.7) and high values of IGN (around 6.7), and low values of LCEA (around 1.1) and high values of IGN (around 7.0). Nevertheless, these effects were not found to be statistically significant at 5% significance level.

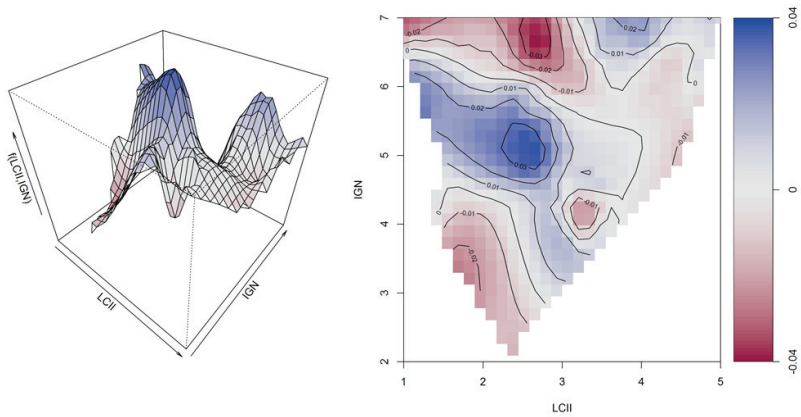


Figure 3. Posterior mode estimates for the interaction effect of IGN and LCII.

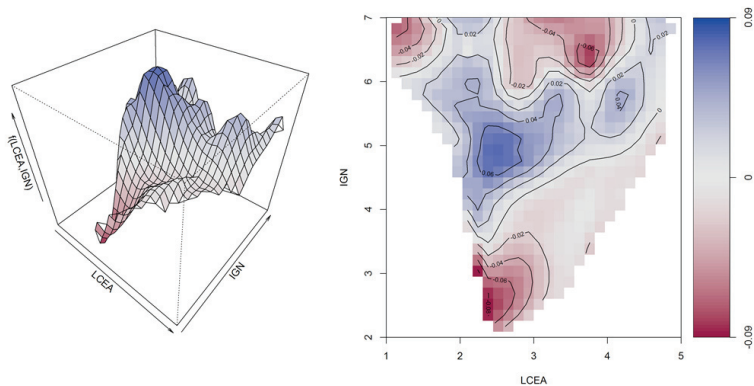


Figure 4. Posterior mode estimates for the interaction effect, of IGN and LCEA.

Discussion

Concerning the first hypothesis of this study, i.e. a learning culture is positively related with employees' positive affective states regarding their job and workplaces, the findings partially supported it, since only one of the dimensions (LCEA) reached statistical significance. The positive linear effect of LCEA on job-related well-being suggests that a culture valuing quality standards, innovation and continuous improvement, as well as the expectations of external stakeholders (namely clients), contributes to workers' experience of positive affects in the workplace. This finding is in line with previous research, which found positive effects of a learning culture on workers' attitudes and feelings, such as job satisfaction (e.g., Egan et al., 2004) or commitment (Islam

et al., 2013). Thus, it offers one more piece of empirical evidence that this kind of cultural orientation has positive effects, not only on performance, but also on individuals.

In spite of the fact that the relationship of LCII dimension with PAWB did not reach statistical significance, from Fig. 2 it can be observed that the relationship is also positive, albeit with a different shape. A departure from the linearity towards larger values of LCII can be observed, that is to say, the effect of higher values of LCII on the variable PAWB is smoother. Thus, this finding suggests that a very strong cultural emphasis on opportunities and time for learning, reward learning, leadership committed to learning, sharing information and knowledge, and on learn towards failure, does not produce more job-related well-being than a less strong cultural emphasis. However, we can only take this result as a tendency, further research is needed to give empirical evidence to this pattern of relationship.

Of note, a similar shape is observed in the IGN and PAWB relationship, and it is statistically significant. However, the smoothing of PAWB in face of high values of IGN is less pronounced. This result suggests that high individual growth need does not directly increase workers' positive affective states. This shape, to some extent, fit Warr's vitamin model (1987), because IGN seems to have a beneficial effect on PAWB, but beyond a certain threshold, a plateau seems to be reached and the level of affective well-being remains constant or increases more moderately. In addition, the results suggest that the relationship of LCEA with PAWB is of a linear form. Therefore, these results give partial support to the vitamin model and reinforce the empirical evidence for the existence of non-linear patterns among the relationships under study and possible reasons for the non conclusive results in other studies (Mäkikangas et al., 2007).

In regard to the second hypothesis of this study, the strength of one's need for individual growth moderating the learning culture-affective well-being relationship, the moderation effects were not found to be statistically significant so the hypothesis was not supported. Nevertheless, Figs. 3 and 4 clearly indicate a tendency for a non-linear behavior among the moderation effects considered in this study. Although not statistically significant, it can be observed that intermediate values of LCII and IGN lead to high values of PAWB, as well as intermediate values of LCEA and IGN. In addition, moderate values of LCII and higher values of IGN, as well as low and moderate values of LCEA and high values of IGN lead to a negative effect on PAWB. These patterns suggest that individuals with high levels of one's need to grow, when working in a workplace characterized by a poor or medium cultural orientation towards learning (i.e. one which does not meet their development needs), tend to experience less job-related affective well-being. It is worth noticing that Figs 3 and 4 also show a tendency for a positive effect on PAWB when high levels of a learning cultural orientation and one's need to individual growth are present. More generally, the tendency of the patterns that emerged in the present research is in line with the Person-Organization (P-O) fit approach, which is about the compatibility between persons and the organizations where they work in terms of fundamental

characteristics (Kristof, 1996). Therefore, the suggestion that the fit between the cultural orientation and one's individual need (moderate-moderate or high-high) contributes to a positive experience in terms of job-related well-being deserves further research. In as much as, in terms of practical implications, might alert managers and team supervisors that it is the fit between the culture of the organization or team with individual characteristics that counts for the outcomes, such as job-related well-being.

Conclusion

The present study attempts to analyze the relationship that a learning culture has with job-related affective well-being and also to analyze the role that one's need for individual growth has in this relationship. The main findings hold the idea that an organizational learning culture tends to generate positive outcomes in workers, and suggest that the strength of its impact seems to mainly depend on the fit with the persons' willingness to learn, face challenges, and self-develop. Despite the agreement of the results within the available literature on this subject, the moderation effects were not found to be statistically significant, and therefore these results should be interpreted with caution. According to Lubinski and Humphreys (1990) and also Evans (1985), the existence of moderator effects is often harder to demonstrate in a field context than in a laboratory setting. And a relatively small sample (as is the case of the present study) may also limit some analyses, particularly the moderator analyses. Thus, a replication of this study with a larger sample is desirable. It will also be interesting to carry out some further research with employees belonging to other kinds of organization in order to understand if the patterns found in a public service workers' sample are similar to the patterns found in a sample with different characteristics. Finally, in order to refine the research on the effects of a learning culture on job-related affective well-being, it will be interesting to achieve an instrument for well-being capable of discriminating high from low arousal states.

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RECEIVED 02.05.2016.

REVISION RECEIVED 20.02.2017.

ACCEPTED 04.03.2017.

