

The effect of job characteristics on intrinsic and extrinsic job satisfaction: the moderating role of psychological capital¹

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Abstract

This paper analyzes the differential effects of autonomy, skill variety, work significance, feedback from the job, and information processing on intrinsic and extrinsic job satisfaction, and the moderating role of psychological capital (PsyCap) in these relationships. The influence of job characteristics on job satisfaction has been well established in previous research, but the distinction between intrinsic and extrinsic satisfaction has hardly been considered. Moreover, their effects also depend on workers' characteristics. PsyCap is a set of resources (self-efficacy, optimism, hope, and resilience) that could strengthen the positive effects of job characteristics and provide protection from negative ones. Hierarchical regressions analyzed data from 1647 workers in Spanish organizations. Results showed positive relationships between autonomy and feedback from the job and the two satisfaction dimensions, whereas significance and information processing were negatively related to extrinsic satisfaction. Moreover, PsyCap strengthens the positive effect of information processing and autonomy on intrinsic satisfaction, and it weakens the negative effect of information processing on extrinsic satisfaction. However, it also increases the negative effect of significance on extrinsic satisfaction. Therefore, job enrichment would be beneficial for intrinsic satisfaction, especially for people with high PsyCap, but it could be negative for extrinsic satisfaction.

Keywords: job characteristics; psychological capital; job satisfaction

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O efeito das características do trabalho na satisfação laboral intrínseca e extrínseca: o papel moderador do capital psicológico

Resumo

Este artigo analisa os efeitos diferenciais da autonomia, variedade de habilidades, significado do trabalho, feedback do trabalho e processamento de informação sobre a satisfação laboral intrínseca e extrínseca; assim como o papel moderador do capital psicológico (PsyCap) nessas relações. A influência das características do trabalho na satisfação laboral está bem estabelecida na literatura, mas a distinção entre a satisfação intrínseca e a satisfação extrínseca raramente foi considerada. Além disso, os seus efeitos também dependem das características dos trabalhadores, como o seu PsyCap. Este remete para um conjunto de recursos (autoeficácia, otimismo, esperança e resiliência) que pode potenciar os efeitos positivos das características do trabalho e oferecer proteção face aos negativos. Por recurso a regressões hierárquicas foram analisados dados de 1647 trabalhadores em organizações espanholas. Os resultados mostraram relações positivas entre autonomia e feedback no trabalho e ambas as dimensões da satisfação, enquanto o significado e o processamento de informação foram negativamente relacionados com a satisfação extrínseca. Embora o PsyCap aumente o efeito positivo do processamento de informação e da autonomia na satisfação intrínseca e enfraqueça o efeito negativo do processamento de informação na satisfação extrínseca, também aumenta o efeito negativo do significado na satisfação extrínseca. Portanto, o enriquecimento do trabalho tende a ser benéfico para a satisfação intrínseca, especialmente para pessoas com alto nível de PsyCap, mas negativo considerando a satisfação extrínseca.

Palavras-chave: características do trabalho; capital psicológico; satisfação laboral

INTRODUCTION

Job satisfaction is an important indicator of wellbeing at work (Peiró, Ayala, Tordera, Lorente, & Rodríguez, 2014), and it is related to many important aspects of organizations, such as performance, loyalty, or absenteeism (Aziri, 2011). Thus, it is not surprising that it has been extensively studied and that many companies try to increase their employees' job satisfaction by improving certain characteristics of work (Holman, Axtell, Sprigg, Totterdell, & Wall, 2010). However, job satisfaction is not a unitary attitude, and the relationships between job characteristics and different dimensions of satisfaction (i.e. intrinsic or extrinsic) might differ.

This would have been especially relevant during the recent economic crisis, when aspects affecting extrinsic job satisfaction (salary, job security, etc.) were seriously impacted by the austerity measures adopted (Markovits, Boer, & van Dick, 2014), and it could have practical implications. Thus, job redesign interventions that try to increase the value and challenging nature of work could have a positive impact on intrinsic job satisfaction, but a negative impact on extrinsic job satisfaction if rewards are not improved at the same time, accentuating the effort-reward imbalance (ERI, Siegrist, 1996) perceived by employees. However, the effect of the different job characteristics on job satisfaction also depend on workers' characteristics (Hackman & Oldham, 1980), and psychological capital (PsyCap) could be one of them. PsyCap is a set of resources (self-efficacy, optimism, hope and resilience) related to employees' well-being (Luthans & Youssef-Morgan, 2017). From the perspective of positive organizational behavior (POB), PsyCap has been presented as a set of personal resources that can interact with the work characteristics, protecting employees from their potentially detrimental effects and increasing potential benefits (Avey, Reichard, Luthans, & Mhatre, 2011; Newman, Ucbasaran, Zhu, & Hirst, 2014). However, this interaction related to the effect of the core characteristics of work on the intrinsic and extrinsic facets of job satisfaction has not been studied. Therefore, the aim of this paper is to explore the effects of job characteristics on both intrinsic and extrinsic job satisfaction, and the moderating role of PsyCap in these relationships.

Job characteristics and job satisfaction

Job satisfaction can be defined as an attitude, or set of attitudes, towards one's work or one or more of its facets (Peiró & Prieto, 2002). These facets can be intrinsic or extrinsic. Intrinsic satisfaction refers to satisfaction with the characteristics of the job itself, whereas extrinsic satisfaction refers to how satisfied people are with the things they can obtain from performing their job. Job satisfaction is an important indicator of wellbeing at work, and it is related to many fundamental aspects for organizations, including commitment, motivation, and performance (Davar & Bala, 2012; Judge, Weiss, Kammeyer-Mueller, & Hulin, 2017; Springer, 2011), as well as absenteeism, turnover, or complaints (Peiró & Prieto, 2002). Therefore, it is still relevant to try to understand the elements that can affect job satisfaction. In this regard, research has focused mainly on three fundamental aspects: job characteristics, individual characteristics, and the interactions between them. However, the first perspective has received more attention, even though wellbeing stems from both the individual and his or her interaction with the work environment (Warr, 2013).

For example, the *two-factor model* (Herzberg, Mausner, & Snyderman, 1959) points out that there are *intrinsic* or *critical* job characteristics linked to the possibilities of development, recognition, and responsibility, whose presence is beneficial for satisfaction and whose absence would produce indifference. In addition, there are *extrinsic* or *contextual* factors, such as company policies or salaries, whose presence would produce indifference, but whose absence would impair satisfaction. Other perspectives of job characteristics have also been identified as antecedents of job satisfaction, such as the knowledge-related requirements of work. For instance, the level of *information processing*, the extent to which a job requires the employee to process and manage information, is also related to job satisfaction (Humphrey, Nahrgang, & Morgeson, 2007).

Finally, another approach that has been especially relevant and received considerable empirical support is Hackman and Oldham's (1976, 1980) *Job Characteristics Theory (JCT)* (Loher, Noe, Moeller, & Fitzgerald, 1985; Parker, Morgeson, & Johns, 2017). According to this theory, some core characteristics of the job, namely *autonomy*, *task identity*, *task significance*, *skill variety*, and *job-based feedback*, are necessary in order for workers to be motivated, experience job satisfaction, and perform well. Although this model takes into account the moderating role of certain individual characteristics, such as *growth need strength* and the *level of work-relevant knowledge and skills*, the emphasis is on the job characteristics.

In addition, even though the influence of job characteristics on job satisfaction has been well established in previous research (e.g. Hackman & Oldham, 1980; Loher et al., 1985), the distinction between intrinsic and extrinsic facets of satisfaction has rarely been taken into account (Chiu & Chen, 2005). However, this distinction could be relevant. Let us imagine a job position that requires performing a wide variety of skills and managing large amounts of information. Moreover, let us suppose that the outcomes of this job are highly important to other people or society. Such a job would be challenging, interesting, and valuable, and, thus, its characteristics would be positive for intrinsic job satisfaction.

H1a. Autonomy, significance, skill variety, feedback from the job, and information processing will be positively related to intrinsic job satisfaction.

However, the relationship between these job characteristics and extrinsic job satisfaction could be different. In principle, extrinsic job satisfaction is more related to factors external to the job content itself, but it could also be affected by intrinsic factors such as job characteristics. As far as we know, this relationship has hardly been studied. Nevertheless, some studies (e.g. Chiu & Chen, 2005) found that job characteristics were related to both intrinsic and extrinsic satisfaction, but more to the former than the latter. In fact, we argue that some of these characteristics could even be detrimental because they could increase the effort-reward imbalance perceived

by the worker. The *ERI model* (Siegrist, 1996) posits that people make an effort at work as part of a contract based on the norm of social reciprocity. In exchange, the company rewards them with money, esteem, career opportunities, and job security (Siegrist et al., 2004). Moreover, the model also assumes that work contracts often fail to provide a symmetric effort-reward exchange, especially when alternatives in the labor market are scarce. Research has shown that this lack of reciprocity can result in negative emotions and feelings of not being fairly treated or appreciated, leading to impaired job satisfaction and wellbeing (Rugulies, Aust, & Madsen, 2017; Siegrist, 2016; Siegrist et al., 2004). Thus, the aforementioned job position with high value and complexity would be challenging and interesting (positive for intrinsic satisfaction). Nonetheless, the effort required to do the work would also increase, as well as the effort-reward imbalance perceived by the worker, with potential negative effects on (extrinsic) job satisfaction. More specifically, we expect job characteristics that increase the complexity and value of the job (skill variety, significance, and information processing) to be negatively related to extrinsic job satisfaction.

H1b. Skill variety, significance, and information processing will be negatively related to extrinsic job satisfaction.

The moderating role of PsyCap

Interactional models go beyond the mere presence of personal and environmental factors and focus on the interaction between them to explain job satisfaction and other variables such as performance. As a clear example, the *person-environment fit* theory (Caplan, 1987; Caplan & Van Harrison, 1993) posits that the better the fit between the characteristics of the job and those of the worker, the greater the worker's satisfaction and performance, and *vice versa*. Hackman and Oldham's model also proposes interactive effects between environmental and individual characteristics, as mentioned above. Specifically, the positive effects of job characteristics on job satisfaction are moderated by the *growth need strength*. However, other factors, including individual characteristics, could also play an important role in these relationships (Oldham & Fried, 2016). One of these characteristics could be PsyCap. The positive organizational behavior (POB) approach emphasizes its importance in work and employee outcomes (Luthans & Youssef-Morgan, 2017). PsyCap is a positive psychological state characterized by: the capacity to find and materialize ways to achieve one's goals (*hope*, Snyder, 2002); the belief in one's capacity to succeed in a certain activity or domain (*self-efficacy*, Bandura, 1997); the expectation of positive events at work (*optimism*, Seligman, 1998); and the capacity to bounce back from adversity (*resilience*, Luthans, 2002). It includes the investment

of time, effort, and skill development to improve performance and competitiveness in organizations (Luthans, Avolio, Walumbwa, & Li, 2005).

The literature shows that all four PsyCap components are related to desirable outcomes in organizations, including job satisfaction (Stajkovic & Luthans, 1998; Youssef & Luthans, 2007), but that the higher-order construct that binds them can be a better predictor. The four PsyCap components have complementary and synergistic effects (Luthans, Avolio, Avey, & Norman, 2007), becoming a source of positivity and contributing to a positive appraisal of one's circumstances and probabilities of success (Luthans et al., 2007).

PsyCap consists of a set of psychological resources that help employees to cope with difficulties and take greater advantage of potential benefits derived from their jobs. For example, high skill variety could be highly beneficial to the job satisfaction of a worker with high PsyCap, or it could become irrelevant or even detrimental to a worker with low PsyCap, who might not feel capable of achieving good performance in such a complex job. In addition, PsyCap could buffer the hypothesized negative effects of job characteristics on extrinsic satisfaction. For example, it could buffer the effect of job significance because it facilitates positive appraisals and expectations of future events, helping people to focus on the positive aspects of their jobs and their possibilities of improving the situation, rather than on the negative ones. In fact, there is evidence showing that PsyCap moderates the relationships between certain characteristics of the work context and the job and job satisfaction (Newman et al., 2014). For instance, Abbas, Raja, Darr and Bouckennooghe (2014) found that PsyCap diminished the negative relationship between certain organizational politics and job satisfaction. Cheung, Tang and Tang (2011) found moderating effects of PsyCap in the relationship between certain job characteristics and job satisfaction, diminishing the negative relationships of some characteristics (e.g. surface acting), and strengthening the positive ones (e.g. deep acting). Thus, we expect PsyCap to display a similar moderating role in the relationships between job autonomy, skill variety, significance, feedback from the job, and information processing and both facets of satisfaction. Specifically, we expect PsyCap to strengthen the positive effects of these job features on intrinsic job satisfaction and, at the same time, diminish the negative effects of some of them on extrinsic job satisfaction. Therefore:

H2a. PsyCap will enhance the positive job characteristics-intrinsic job satisfaction relationships.

H2b. PsyCap will mitigate the negative job characteristics-extrinsic job satisfaction relationships.

In sum, the literature indicates that jobs rich in autonomy, skill variety, significance, feedback from the job, and information processing are challenging and interesting and, thus, beneficial to intrinsic job satisfaction. However, based on the ERI model, we suggest that the same job characteristics could be detrimental to extrinsic job satisfaction. Moreover, based on previous literature, we also suggest that PsyCap is a resource that can be used to cope with work challenges, and a source of positivity that can act as a moderator in these relationships. Thus, PsyCap would enhance the positive job characteristics-satisfaction relationships and reduce the negative ones. First, we aim to analyze the differential effects of autonomy, skill variety, significance of work, feedback from the job, and information processing on intrinsic and extrinsic job satisfaction and, second, explore the moderating role of PsyCap in these relationships.

METHOD

Sample and procedure

The sample was composed of 1647 workers from 42 Spanish organizations, 276 in Almería (16.7%), 580 in Valencia (35.2%), 310 in the Balearic Islands (18.8%), and 482 in Barcelona (29.2%), working in the secondary (308, 18.7%) and tertiary (1340, 81.3%) sectors. Regarding sex and age, 702 were men (45.4%) and 843 women (54.6%); 432 (27%) were under 35 years old, 911 (55.3%) between 36 and 50, and 259 (16.2%) over 50 years old. Finally, 743 (46.5%) people had university education, 261 (16.3%) had vocational training, 332 (20.8%) had a high school education, 211 (13.2%) had basic education, 30 (1.8%) had other types of education, and 20 (1.3%) had no academic credentials.

We gathered the data through a questionnaire that was available on paper, tablet, or online. The research team met with the HR managers of the companies interested in the study to explain the details of the project and solicit corporate data, as well as permission to contact their employees. Then, we contacted the workers to get their voluntary participation, guaranteeing confidentiality.

Measures

Demographics: Age and gender were measured and introduced as control variables. Gender was codified as 0 for women and 1 for men.

Job Characteristics were measured through a reduced 27-item Likert scale, from 1 (strongly disagree) to 5 (strongly agree), from the Work Design Questionnaire (Morgerson & Humphrey, 2006). We used the three-item subscales related to the content of the work: autonomy, significance, skill variety, feedback from the job, and information processing. Sample items on the subscales are: “During the last journey in my work my work, [...] Allowed me to make my own decisions about how to schedule my work”, for autonomy ($\alpha = .77$); “[...] Significantly affected the lives of other people”, for significance ($\alpha = .69$); “[...] Required me to utilize a variety of different skills in order to complete the work”, for skill variety ($\alpha = .76$); “[...] Provided direct and clear information about the effectiveness (e.g., quality and quantity) of my job performance”, for feedback from job ($\alpha = .76$); and “[...] Required me to monitor a great deal of information”, for information processing ($\alpha = .78$).

PsyCap was measured with a modified version of the Psychological *Capital Questionnaire-12* (Luthans et al., 2007), adapted by Djourova, Rodríguez and Lorente (2016). The instrument measures the four PsyCap components with Likert scales from 1 (strongly disagree) to 6 (strongly agree), each of which has 3 items. Sample items on each scale are: “I think I can make good contributions to the improvement of the company”, for self-efficacy ($\alpha = .83$); “If I should find myself in a jam at work, I could think of many ways to get out of it”, for hope ($\alpha = .78$); “I usually recover quickly from stressful experiences at work”, for resilience ($\alpha = .71$); and “When things are uncertain for me at work, I usually expect the best”, for optimism ($\alpha = .72$). To obtain the total PsyCap measure ($\alpha = .88$), all the items were averaged.

Job Satisfaction was measured with a 12-item version (Cooper, Rout, & Faragher, 1989) of the job satisfaction scale from Warr, Cook and Wall (1979). The scale includes five Likert items from 1 (very dissatisfied) to 7 (very satisfied) to measure intrinsic job satisfaction, and four items to measure extrinsic job satisfaction. A sample item on the intrinsic job satisfaction subscale ($\alpha = .86$) is “indicate to what degree you feel satisfied with each of the aspects [...] Opportunity to use your ability”; and on the extrinsic job satisfaction subscale ($\alpha = .62$) “[...] Your rate of pay”.

Analysis

We used IBM SPSS version 24 to conduct the data analysis. To test our hypotheses, we performed two moderated hierarchical regression analyses, with intrinsic and extrinsic job satisfaction as dependent variables, respectively. In both models, we introduced the control variables, gender, and age in the first step, all the independent variables (autonomy, significance, skill variety, feedback from the job, information processing, and PsyCap) in the second step, and, finally, the interaction between

each of the job characteristics and PsyCap in the third and last step. In the case of extrinsic satisfaction, autonomy and feedback from the job were kept in the model, even though their relationships were not hypothesized, in order to control their potentially confounding effects. The interactions are represented by the product of each job characteristic and PsyCap, computed with mean-centered variables to avoid multicollinearity problems (Cohen & Cohen 1983). On the other hand, moderated multiple regression has more validity than subgroup analysis, but it is a conservative procedure (Champoux & Peters, 1987). Therefore, in order to increase the power of the analyses, the type I error rate was set at $p = 0.10$, which some authors recommend for moderated multiple regression (Dormann & Zapf, 1999; Stone, 1986).

RESULTS

The correlations among the variables and their respective means, standard deviations, and reliabilities (Cronbach's alpha) are shown in Table 1.

Table 1
Descriptive statistics of the study variables (reliability on diagonal of the correlation matrix)

	\bar{X}	s	1	2	3	4	5	6	7	8	9	10
1. Age	-	-	-	-								
2. Gender	-	-	-	-								
3. Autonomy	3.98	.96	.03	-.09**	(.77)							
4. Significance	3.34	1.02	.04	-.13**	.36**	(.69)						
5. Skill Variety	4.23	.77	-.04	-.02	.37**	.36**	(.76)					
6. Info. Proc.	3.85	.96	-.07**	-.05*	.42**	.36**	.56**	(.78)				
7. Feedback	3.78	.88	-.03	-.01	.43**	.33**	.37**	.36**	(.76)			
8. PsyCap	4.66	.68	.02	.03	.33**	.24**	.26**	.25**	.33**	(.88)		
9. I. Satisf.	5.21	1.07	-.02	-.04	.55**	.25**	.25**	.27**	.44**	.47**	(.86)	
10. E. Satisf.	5.07	1.01	-.06*	.01	.27**	.07**	.08**	.08**	.27**	.32**	.64***	(.62)

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

All the job characteristics present average scores above the mid-point of the scale, with skill variety having the highest score ($\bar{X} = 4.23$, $SD = 0.77$). The average score on PsyCap is moderately high, 4.66 ($SD = 0.68$). Finally, both the intrinsic ($\bar{X} = 5.21$, $SD = 1.07$) and extrinsic job satisfaction levels ($\bar{X} = 5.08$, $SD = 1.01$) are above the mid-points of the scales. The five job characteristics and PsyCap have significant positive correlations with both intrinsic and extrinsic job satisfaction. Except for extrinsic satisfaction, all the alpha values meet the criterion of .70 (Nunnally, 1978).

Table 2
Results of moderated regression with intrinsic job satisfaction as criterion variable

Step	ΔR^2	F	Predictor	β
1	.003	2.03	Age	-.05
			Gender	-.06
2	.415**	183.06**	Autonomy	.44**
			Significance	.01
			Skill Variety	-.02
			Info. Processing	-.03
			Feedback from job	.23**
			PsyCap	.45**
3	.009**	4.62**	PCxAuto	.07†
			PCxSignificance	.00
			PCxSkillV.	.01
			PCxInfoP.	.11**
			PCxFeedback	-.08 †
Overall	.43	87.80**		

† $p < .10$; * $p < .05$; ** $p < .01$; β are unstandardized regression coefficients from the final stage of the regression analysis

Table 2 shows the results of the moderated regression analysis with intrinsic job satisfaction as criterion variable. There is a significant positive effect of autonomy ($\beta = .44, p < .01$), feedback from the job ($\beta = .23, p < .01$), and PsyCap ($\beta = .45, p < .01$) on intrinsic job satisfaction. There is no significant effect of significance, skill variety, information processing, age, or gender. These results provide partial support for H1a. With regard to the interaction effects, there is a significant moderator effect of PsyCap only in the case of autonomy ($\beta = .07, p < .10$), information processing ($\beta = .11, p < .01$), and feedback from the job ($\beta = -.08, p < .10$), providing partial support for H2a.

In order to clarify the nature of the interaction effects, graphical representations are presented in Figure 1. Independent regression lines have been plotted to represent the relationship between job characteristics and intrinsic job satisfaction, taking values of characteristics and PsyCap one standard deviation above and below the mean.

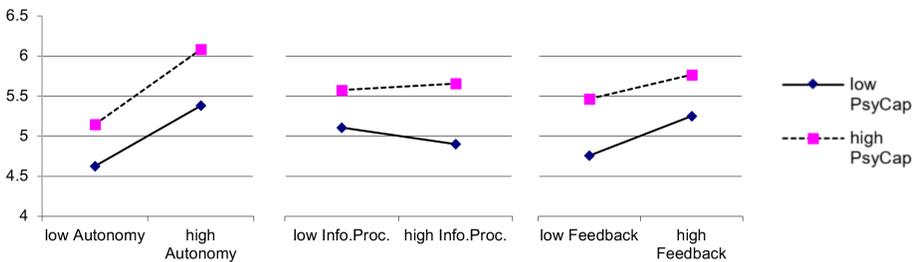


Figure 1. Interaction effects on intrinsic job satisfaction.

As Figure 1 shows, there is a main effect of PsyCap. Higher levels of PsyCap are related to higher levels of intrinsic satisfaction.

In addition, the relationship between job conditions (autonomy, information processing, and feedback) and intrinsic satisfaction depends on PsyCap. Autonomy is positively related to intrinsic satisfaction, and this relationship is higher for employees with high PsyCap. In the case of information processing, the moderating effect is even more relevant because the relationship between information processing and satisfaction is positive only for employees with high PsyCap, but it is negative for those with low PsyCap. Finally, there is no enhancing effect of PsyCap in the case of feedback from the job. Contrary to what was expected, the positive relationship between feedback from the job and intrinsic satisfaction is a bit higher for employees with low PsyCap. Therefore, the results partially support H2a.

Table 3
Results of hierarchical regression with extrinsic job satisfaction as criterion variable

Step	ΔR^2	F	Predictor	β
1	0.003	2.40	Age	-.10**
			Gender	-.03
2	.154**	47.02**	Autonomy	.18**
			Significance	-.6*
			Skill Variety	-.07
			Info. Processing	-.08*
			Feedback from job	.19**
			PsyCap	.38**
3	.007*	2.59*	PCxAuto.	-.01
			PCxSignificance	-.08*
			PCxSkillV.	-.01
			PCxInfoP.	.11*
			PCxFeedback	.03
Overall	.16	23.24**		

† $p < .10$; * $p < .05$; ** $p < .01$; β unstandardized regression coefficients from the last step of the analysis.

Table 3 shows the results of the hierarchical regression analysis with extrinsic job satisfaction as criterion variable. There are significant positive effects of age ($\beta = -.10$, $p < .01$), autonomy ($\beta = .18$, $p < .01$), feedback from the job ($\beta = .19$, $p < .01$), and PsyCap ($\beta = .38$, $p < .01$) on extrinsic satisfaction. Significance ($\beta = -.06$, $p < .05$) and information processing ($\beta = -.08$, $p < .05$) have a significant negative effect. Finally, there is no effect of gender or skill variety. These results also provide partial support for H1b.

With regard to the interaction effects, there is a significant moderating effect of PsyCap only in the case of information processing ($\beta = .11$, $p < .05$) and significance ($\beta = -.08$, $p < .05$), providing partial support for H2b.

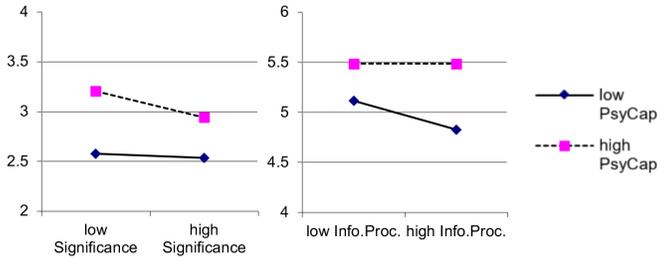


Figure 2. Interaction effects on extrinsic job satisfaction.

As Figure 2 shows, there is a main effect of PsyCap. Higher levels of PsyCap are related to higher levels of extrinsic satisfaction. In addition, the relationship between job conditions (significance and information processing) and extrinsic satisfaction depends on PsyCap. In the case of significance, the results are contrary to what was expected. The relationship between significance and extrinsic satisfaction is negative for people with high PsyCap, and there is no relationship for those with low PsyCap. Therefore, there is a buffering effect of low PsyCap. However, PsyCap has a buffering effect on information processing. There is a negative relationship between information processing and extrinsic satisfaction in people with low PsyCap, and there is no relationship for those with high PsyCap. Therefore, the results partially support H2b.

Overall, the results provide partial support for H1a, H1b, H2a, and H2b, with some of the hypothesized relationships supported by the data, whereas others are not significant or contrary to what was expected. Finally, the positive main effect of PsyCap on both intrinsic and extrinsic job satisfaction is also noteworthy.

DISCUSSION AND IMPLICATIONS

The aim of this study was (1) to analyze the differential effects of the characteristics of work on intrinsic and extrinsic job satisfaction, and (2) explore the moderating role of PsyCap in these relationships. First, drawing on the ERI model, we hypothesized that, even though some features of work (autonomy, significance, feedback from the job, information processing, and skill variety) are generally considered positive for employee satisfaction, some of them also produce increases in the value of the job (significance) and the effort required (information processing and skill variety). This could affect the effort-reward imbalance perceived by the employees and, thus, be negative for extrinsic job

satisfaction. In addition, we expected that PsyCap would enhance the hypothesized positive effects of the job characteristics on satisfaction and mitigate the negative ones.

The results partially supported the hypotheses. As expected, autonomy and feedback from the job were positively related to intrinsic job satisfaction. Previous literature pointed out that workers who have discretion over their jobs are more satisfied (Clark, 2001; Hackman & Oldham, 1976; Thompson & Prottas, 2006). Both characteristics can be considered basic conditions for workers to feel satisfied with their work because they allow them to feel responsible for the outcomes and the quality of their performance (Hackman & Lawler, 1971) and experience their work as meaningful (Grant, 2008). However, contrary to previous literature (e.g. Hackman & Lawler, 1971; Hackman & Oldham, 1976; Humphrey et al., 2007), the effect of significance, skill variety, and information processing is not significant. The effect of significance and skill variety might be moderated by other variables not included in our model, such as the ones proposed in the original JCT, growth need strength and job-related knowledge and skills (Oldham & Hackman, 2010). In the case of information processing, the main effect is not significant, but it is moderated by PsyCap.

Coinciding with previous literature (e.g. Cheung et al., 2011), the positive relationship of autonomy and information processing with intrinsic satisfaction seems to be strengthened by PsyCap. Workers with high PsyCap could benefit more from discretion over their jobs because they feel better able to respond to the responsibility of doing highly autonomous work. In the case of information processing, the relationship seems to be positive only for employees with high PsyCap, whereas it seems to be negative for those with low PsyCap levels. This moderating role of PsyCap is similar to the roles of growth need strength and job-related knowledge and skills proposed in the JCT. According to Oldham and Hackman (2010), these individual characteristics are needed in order for the worker to succeed on a challenging task and feel positive about it. Similarly, high levels of PsyCap seem to allow employees to feel that they can succeed on a challenging task with plenty of information to manage and overcome the possible difficulties arising from it. However, large amounts of information could be overwhelming to workers with low PsyCap, who might not feel completely capable of performing their work well, which would be detrimental to their intrinsic satisfaction. Finally, the positive relationship between feedback from the job and intrinsic satisfaction appears to be weakened by PsyCap, contrary to what we expected. It seems that the benefits of having clear information from the job about one's performance is somewhat higher for workers with low PsyCap than for those with high levels. Workers with high PsyCap may be more confident about their own performance

and less dependent on direct feedback from the job, thanks to their greater capacity to positively appraise their circumstances and probability of success (Luthans et al., 2007). By contrast, low-PsyCap employees could need direct feedback from the job about their performance to confirm that they are doing well.

As expected, the results showed a significant negative effect of significance and information processing on extrinsic satisfaction. It is likely that, as suggested, increases in the complexity and value of the job accentuate the effort-reward imbalance (Siegrist, 1996) perceived by the employees. This effect would result in lower satisfaction with the rewards they receive for work that requires greater effort to process large amounts of information and is valuable to other people or society. However, this did not apply to skill variety, which was not related to extrinsic job satisfaction. The number of skills the job involves might not be important, but rather their difficulty and the extent to which they require the employee's effort.

Finally, there is a non-hypothesized positive effect of autonomy and feedback from the job on extrinsic job satisfaction. However, these results are consistent with those obtained by Good and Fairhurst (1999).

The results also showed a significant moderating effect of PsyCap in the case of information processing and significance. As expected, PsyCap has a buffering effect on information processing. There is a negative relationship between information processing and extrinsic satisfaction in people with low PsyCap, and there is no relationship in those with high PsyCap. However, in the case of significance, the results are contrary to what was expected. The relationship between significance and extrinsic satisfaction is negative in people with high PsyCap, and there is no relationship in those with low PsyCap. Therefore, PsyCap can increase the negative effects of work significance. This unexpected result can be better understood within a dynamic view of job satisfaction (Bussing, Bissels, Fuchs, & Perrar, 1999). Bussing et al. propose that people react to satisfaction or dissatisfaction with their aspirations, which leads to different modalities of job satisfaction. Applied to our results, high PsyCap workers who are dissatisfied with the rewards they receive for valuable work could believe that they can change the situation and try to do so (constructive job dissatisfaction). Thus, they would be likely to invest effort in getting better rewards and recognition for their work (e.g. re-negotiating salary or other rewards, increasing the visibility of the value of their work, etc.), even though they would continue to feel (perhaps increasingly) dissatisfied until the situation changed.

These findings have implications for practice in job (re-)design. Many companies try to increase the satisfaction of their workers by making their jobs more challenging and appealing, increasing certain work characteristics that are considered beneficial to job satisfaction. Our results suggest that the distinction

between intrinsic and extrinsic job satisfaction can be quite relevant, especially in periods like the recent economic crisis, when the economic rewards and other compensations workers receive have been especially impaired (Markovits et al., 2014). When there is a need to improve extrinsic job satisfaction, but not intrinsic job satisfaction, a redesign intervention to enrich the jobs might not be recommendable because it could have little effect or even detrimental effects. Instead, PsyCap development interventions would improve both facets of satisfaction. Both the main effects and the moderating effects of PsyCap are generally positive for both facets of satisfaction. The only exception is the enhancing effect on the negative relationship between job significance and extrinsic satisfaction. Nevertheless, this constructive dissatisfaction (Bussing et al, 1999) in high-PsyCap employees could encourage them to change the situation and ultimately improve their satisfaction.

Despite its contribution, our study has some limitations. The main one is its cross-sectional design, which does not allow us to draw strong causal conclusions.

Further research should use longitudinal designs. Moreover, we suggest some possible explanations related to the ERI model, the dynamic model of job satisfaction, and the effect of other possible moderators that have not been tested. Therefore, they should be explicitly tested in future studies.

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