PSYCHOLOGICAL CAPITAL AND PERFORMANCE OF CIVIL SERVANTS: EXPLORING NEUTRALIZERS IN THE CONTEXT OF AN APPRAISAL SYSTEM

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ABSTRACT
The literature suggests that psychological capital (PsyCap) predicts work performance. Our case-study, being carried out in the context of a performance appraisal system (SIADAP) recently

1 We are grateful to Fred Luthans, Bruce J. Avolio and Carolyn M. Youssef for giving us permission to use the
implemented in the Portuguese Public Administration, does not corroborate such a prediction. A sample comprising 278 civil servants was collected. The main findings are: (a) no PsyCap dimension predicts supervisor-rated performance; (b) PsyCap predicts 39% of the variance of self-reported performance; (c) there is no significant relationship between self- and supervisor-rated performance. The findings call the attention to SIADAP features that may neutralize the impact of PsyCap on individual performance, or even make it irrelevant. Alternatively, it is suggested that PsyCap influences performance, but the supervisor-rated performance scores do not reflect real worker performance, which means that the SIADAP may actually reward the “wrong” workers.

**Keywords:** psychological capital; performance appraisal; Portuguese Public Administration
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ABSTRACT

The literature suggests that psychological capital (PsyCap) predicts work performance. Our case-study, being carried out in the context of a performance appraisal system (SIADAP) implemented in the Portuguese Public Administration, does not corroborate such a prediction. A sample comprising 278 individuals was collected. The main findings are: (a) no PsyCap dimension predicts supervisor-rated performance; (b) PsyCap predicts 39% of the variance of self-reported performance; (c) self- and supervisor-rated performance do not correlate. The findings call the attention to SIADAP features that may neutralize the impact of PsyCap on performance. Alternatively, we suggest that PsyCap influences performance, but the supervisor-rated performance scores do not reflect real worker performance, which means that the SIADAP may actually reward the “wrong” workers.

Keywords: psychological capital; performance appraisal; Portuguese Public Administration

INTRODUCTION

More and more public services and administrations in different countries implement and/or change their performance appraisal systems. One of the most important aims of such systems is to secure individuals’ performance improvement, the other one being the enhancement of the performance of the organization as a whole (Boice & Kleiner 1997; Daley & Vasu 2005; Rix 1990). Some appraisal systems also intend to develop people’s strengths (Harrison & Goulding, 1997). However, several authors call attention to the drawbacks associated with such systems (Heathfield 2007; Martin & Bartol 1998; Nickols 2007; Rix 1990; Schraeder et al. 2007). Some authors have even suggested their removal (Waite & Stites-Doe 2000). Most researchers, however, agree that such systems have high potential for improving performance, when some conditions and steps are observed and implemented.

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We are grateful to Fred Luthans, Bruce J. Avolio and Carolyn M. Youssef for giving us permission to use the PsyCap questionnaire, and to Carlos Alves Marques for his helpful comments.
This paper focuses on a new performance appraisal system implemented in the Portuguese Public Administration (SIADAP – Sistema Integrado de Avaliação do Desempenho: Integrated System of Performance Appraisal), and explores why some of its features may be detrimental for the civil servants’ strengths and performance. The research can be contextualized in the Positive Organizational Behavior (POB) movement. POB has been defined as “the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement” (Luthans 2002, p. 59). Among the positive psychological constructs that meet the three criteria mentioned above, hope, resilience, optimism and self-efficacy have prevailed in the literature. They represent what has been called psychological capital (PsyCap). Both theory-building and prior research indicate that they are amenable to development. The empirical findings have shown that PsyCap predict absenteeism (Avey et al. 2006), job satisfaction and organizational commitment (Larson & Luthans 2006; Luthans, Avolio et al., 2007), and leadership behaviors of entrepreneurs and their impact on employees’ attitudes and happiness (Jensen & Luthans 2004). Studies have also shown that PsyCap predicts work performance (Luthans et al. 2007; Luthans, Avolio et al. 2007; Luthans et al. 2005).

We use the SIADAP case study to discuss possible conditions under which PsyCap may not improve individual performance. We also discuss possible negative consequences of some features of the SIADAP and its implementation. The paper’s contribution is twofold: (1) it discusses how certain features of the performance appraisal systems may neutralize the potential impact of PsyCap on performance; (2) it alternatively suggests that, in the absence of such neutralizer effects, the appraisal systems may reward the wrong behaviors and damage performance. The remaining of the paper starts with a critical view of the SIADAP. Next, we discuss the relationships between PsyCap and performance, and explore why some features of the SIADAP may mitigate or neutralize such relationships. We then follow the usual scheme: method, results and discussion/conclusions.

PERFORMANCE APPRAISAL IN THE PORTUGUESE PUBLIC ADMINISTRATION

In 2004, a new performance appraisal system was introduced in the Portuguese public administration. The system included clerks and middle managers. Changes were introduced in 2008, with new rules
applying to the performance appraisal of top managers and services/organizations. Regarding clerks, the focus of this paper, the main features of the system remain unchanged. Because our research was conducted in 2007, we focus on the rules introduced in 2004.

The SIADAP represents a step forward in the articulation of an effort to achieve performance management. It is understandable that the Government decided to use forced distribution: it may be the most effective way of diminishing leniency in the short run. The restructuring of public administration and a context of economic difficulties complete the scenario in which the paper was developed. The nature of the system and the lack of a culture of performance assessment management (Jesuino 2002; Nikandrou et al. 2003) would naturally produce a number of implementation difficulties. In this paper, we focus on some of these difficulties. Two researchers of the Instituto Nacional de Administração (National Institute of Administration), Madureira and Rodrigues (2007, p.14), have noted that “SIADAP’s implementation process was abrupt, difficult and lacking the due preparation of the main interveners, which resulted, in many cases, in resistance from the clerks and managers”. They argued that the “managers seldom participated, in a constructive way, in the process of goal setting and negotiation” (p.15). Next, we explain how the system has functioned.

The SIADAP is based on three components: goal attainment, behavioral competencies and “personal attitude”. Appraisals take place at the beginning of each year regarding the performance of the previous year. The goal attainment component assesses the degree to which the results contained in the goals are achieved. The goals and the indicators to measure them must be agreed upon between supervisor and subordinate. If the agreement is impossible, the supervisor’s position prevails. In the Portuguese paternalistic and high power distance culture, the formal and apparent “agreements” may hide real disagreements, resulting from the employees’ fears and their will to cultivate positive impressions in supervisors. Since appraisals are constrained by the preset quotas, great efforts are made by some workers to negotiate modest goals and, thus, increase the probability of exceeding goal attainment, thus receiving higher performance scores.

The behavioral competencies component evaluates the degree to which the worker demonstrated the “personal characteristics” necessary for the job. The third component, “personal attitude”, includes effort, work motivation and commitment. The evaluation of both components
involves great subjectivity/discretionarity of the appraiser. Some appraisees complain that appraisers use evaluation to retaliate against less obedient and more assertive subordinates, and to favor docile and submissive ones. This is consistent with a context characterized by paternalism, low assertiveness and a high power distance. In this setting, confrontation is avoided, assertiveness can be confounded with aggressiveness, employees tend to please their supervisors, and disagreement with them is to be considered at the least to be impolite (Cunha 2005; Cunha & Rego 2008). Such a context also helps to explain why impression management tactics (e.g., flattery) are adopted, mainly when the evaluation cycle is coming to an end. This trend is reinforced by the competitive nature of the system, which may pit people against each other rather than against job mastery (Berger 1983). Noteworthy, the performance appraisal of the intermediate managers did not include the “personal attitude” component and it was not constrained by the preset quotas. Such “discrimination” (eliminated by the rules enacted in 2007) has been a source of cynicism and lack of credibility of the system. The final score (range: 1-5) results from the weighted average of the scores in each component.

Before communicating the score to the worker, members of the Coordination Council (Conselho Coordenador da Avaliação) meet to “harmonize” the assessments, in order to make sure that quotas are respected for the service/organization on the whole. If two employees have the same score but only one is allowed to receive the highest score (as called for in the quotas), the Coordination Council decides who has priority. This implies, for example, that the “excellent” score of an employee from a certain unit may be replaced by a “very good” score. This “downgrade” may be less likely if the supervisor of such an employee belongs to the Coordination Council and has the will and political power to maintain the initial score. Although the final score should be communicated to the subordinate only after this “harmonization” (in the course of the annual assessment interview), in some cases the “unofficial” score is informally communicated to the worker. This may result in great discomfort and displeasure of the “downgraded” worker, as well as in a poorer relationship with his/her supervisor. Workers may appeal. However, in the Portuguese high-distance culture, such actions are uncommon and even “ill-advised” for those who do not want to be penalized in the next appraisal. The appraisals have implications for career advancement, conversion of provisional appointment to permanent one, and contract renewal. Regarding career advancement,
“very good” and “excellent” scores grant a reduction in the service time for advancement. However, this reward is often expected to be received several years later and, in many cases, due to other factors (e.g., the lack of vacancies; being already at the top of the career; budgetary restraints), no reward is actually given, except one or two leave days. Monetary rewards are being introduced.

Another unintended consequence of such a system occurs when the quotas are applied inside each unit of a service/organization. In truly high-performing units, some workers are ranked low despite being good performers. In low-performing units, workers with high scores may perform worse than workers with low scores in the high-performing units. This destroys the credibility of the system. Individuals feel that their scores depend on discretionary aspects, and perceive that high efforts, work commitment and outcomes may be “rewarded” more poorly than average efforts, work commitment and outcomes. The appraisees may perceive the process as unfair because someone “has to be” rated as a poor performer, thus being less receptive to the process and to “hearing” the results of it. Other unintended consequences include adverse motivational impacts, negative effects on teamwork, lower self-esteem and the erosion of the quality of subordinate-supervisor relationships. The focus is frequently on identifying different levels of performance, rather than on helping individuals to develop and improve their performance. In short, the SIADAP, while solving a number of problems, may also produce several negative effects in terms of worker motivation and performance. In this case, we focus on the discussion of the possible neutralization of the PsyCap dimensions.

**PSYCAP AND WORK PERFORMANCE: EXPLORING NEUTRALIZERS**

The existing literature suggests that PsyCap associates with workplace performance. We consider that some neutralizers can mitigate or nullify such positive consequences. Some features of the SIADAP are used for illustrating how this can happen.

**Self-efficacy.** Self-efficacious people tend to choose challenging tasks, apply their efforts and motivational resources to accomplish their goals, and persevere in the face of difficulties. Challenging goals motivate these people to stretch their abilities and efforts, master new challenges and exceed previous performance (Brown *et al.* 2005). Literature (Stajkovic & Luthans 1998) has suggested a
strong positive correlation between self-efficacy and work-related performance. However, some features of SIADAP may neutralize such relationship. One neutralizer relates to feedback, without which people with high self-efficacy remains “blind” about the efforts necessary for improving performance. The SIADAP only calls for an annual feedback and no intermediary review is expected. Another potential neutralizer is goal setting. Goals conducive to performance enhancement need to be clear, specific, measurable, challenging and achievable (Locke & Latham 1990). If they are not, and if feedback is neither credible nor continuous, individuals may lose their sense of control over work (Speier & Frese 1997) and face difficulties in identifying instrumentality between behaviors and goals. Individuals with high self-efficacy may thus not direct their efforts and motivational resources toward performance improvement. Another problem stems from the fact that self-efficacious people may set/negotiate more challenging goals than individuals with low self-efficacy (Bandura 1997; Locke & Latham 1990). However, the risks of not reaching the goal (and, thus, to be “harmed” when goals attainment is evaluated) are higher. Consequently, individuals may be tempted to negotiate more modest goals, this having negative consequences for their performance (Brown et al. 2005). Another neutralizer results from the Portuguese culture and the epitome of the good subordinate. Empowerment and participation are low (Mathews et al. 2001), assertiveness can be confounded with aggressiveness, and disagreement with supervisors is considered impolite at the least. This can be detrimental for the performance scores of individuals with high self-efficacy, who tend to be more assertive and proactive (Parker 1998; Sadri 1996).

**Hope.** Hopeful individuals possess more goal-related strategies and are more motivated to achieve their goals than their low hope counterparts (Peterson & Byron 2008). They show higher job performance than low hope individuals (Luthans, Avolio et al. 2007; Peterson & Byron 2008). Some features of the SIADAP may neutralize the impact of hope on performance. Luthans et al. (2007, p. 69) argued that “[g]oals that are conducive to developing and nurturing hopeful thinking – and, consequently, performance enhancement – [...] need to be specific, measurable, challenging and yet achievable”. Some of these features are potentially absent from the SIADAP. Furthermore, considering that goal setting negotiation and the performance appraisal process are exposed to
impression management tactics and to personal preferences, reaching higher performance scores may be more dependent on such tactics and preferences than on the willpower and waypower employed to pursue goals. Hopeful employees possess an internal locus of control. They need a high degree of autonomy in order to express and utilize their agency (Luthans et al. 2007). Considering that, in the cultural context mentioned above, initiative and assertiveness may reduce supervisor’s liking for the subordinate and be detrimental for performance rating (Vilela et al. 2007), it is possible that hopeful individuals feel that their willpower and waypower may be irrelevant, or even detrimental, to performance evaluation. Thus, it is also possible that they refrain from investing their hope resources in performing tasks. On the other side of the coin, low-hopers may conform to organizational rules and be obedient to supervisors (Luthans et al. 2007). They may be perceived by managers and coworkers as cooperative. This may occur with a number of supervisors of Portuguese civil servants. “Personal attitude” – one of the three components of the SIADAP – is often interpreted as meaning “obedience” and “not to say a word”. A connected neutralizer is related to stepping, an integral component of hopeful goal achievement (Luthans et al. 2007). In SIADAP, the feedback is infrequent (annual) and generic (Ilgen et al. 1979; Waite & Stites-Doe 2000). Continuous feedback, in order to make regular adjustments aimed to reach the goals, is missing – at least formally. Furthermore, rewards for excellent performance scores are uncertain and may come only years later.

**Optimism.** Optimists attribute positive events to internal, permanent and pervasive causes, and negative events to external, temporary and situation-specific ones (Luthans et al. 2007). They take credit for favorable events in their lives, strengthening their self-esteem and morale. They distance themselves from unfavorable life events, thus diminishing the likelihood of experiencing depression, guilt, self-blame and despair. Evidence suggests that optimism relates to workplace performance (Jensen et al. 2007). However, some SIADAP features may neutralize/reduce such relationship. Because feedback is infrequent and resulting from factors outside the workers’ control, optimists have fewer possibilities to take credit from positive feedback, thus it being less probable that they persevere and strive for goals. This can be worsened by the lack of empowerment (Avey et al. 2008) and goal clarity, and by the uncertainty about receiving rewards after reaching high performance scores. Such
issues distract optimistic individuals from the work task (Kanfer & Ackerman 1989), thus decreasing their tendency to apply their optimistic resources in improving performance (Kanfer & Ackerman 1989; Schraeder et al. 2007).

**Resilience.** Resilient people are able to deal with adversity, uncertainty and failure, as well as with positive overwhelming events and changes (e.g., increased responsibility) (Luthans et al. 2007; Masten 2001). Resilience relates with workplace performance (Luthans et al. 2005; Luthans, Avolio et al. 2007). However, some features of SIADAP may act as neutralizers of such relationship. Without frequent and timely performance feedback, individuals do not know in what direction they should apply their efforts while trying to overcome obstacles and improve performance. It is also less likely that they reinforce the behaviors that are most effective. They may feel more difficulties in identifying and correcting the source of the problem. Thus, it is less likely that they apply energies toward solving the problems that really count for performance (Luthans et al. 2007). Furthermore, impression management tactics and politics may prevent the allocation of adequate resources/support to risky but high potential ideas that resilient people would propose and attempt to implement (Hamel & Välikangas 2003; Luthans et al. 2007). Paternalistic leadership may also lead managers to handle every problem of their employees, thus not taking advantage of their subordinates’ resilience.

**METHOD**

A convenience sample comprising 278 civil servants (working in one state university and two polytechnic institutes, located in three cities) was collected. Seventy three percent were female. Sixteen percent had nine or fewer schooling years, 44% had at least 12 years, 40% had a bachelor degree or higher. Mean age was 41.6 years (standard deviation: 8.7) and mean organizational tenure was 13.6 years (SD: 8.1). Self-reported and supervisor-reported performance measures were used for exploring the degree to which individuals perceive that the performance scores given by their supervisors reflect their opinions of their own performance. Answers were anonymous and individuals put the completed questionnaire in a sealed envelope. Individuals were first asked to self-report their individual performance, then to mention the supervisor-rated performance score they received in the
last year in the context of SIADAP, and finally to report their PsyCap. Supervisor-reported
performance was not collected from the official records because such a method would require
identifying the respondents. The cultural context and the controversy around the SIADAP cautioned
us not to rely on such a method, considering the risks of high response bias and refusal to participate.

Self-reported individual performance was measured with four seven-point self-report scales
(Rego & Cunha 2008; Staples et al. 1999). Each individual reported the degree to which each
assertion applied to him/her (1: the statement does not apply to me at all; …; 7: the statement applies
to me completely). Cronbach Alpha is 0.77. The PsyCap questionnaire (24 scales) proposed by
Luthans et al. (2007) was used. For assuring the semantic equivalence between the original and the
translated scales, the back translation technique proposed by Brislin (1970) was used, with some
modifications. Five-point scales were used (1: “the statement doesn’t apply to me at all”; …; 5: “the
statement applies to me completely). Considering that the absolute values of skewness regarding all
Psycap items were lower or equal than 1 (mean: 0.48; range: from -1.0 to 0.69) and all absolute values
of kurtosis were lower than 3 (0.47; from -0.64 to 2.45; Curran et al. 1996; Hair et al. 2007), the data
appears approximately normally distributed. A confirmatory factor analysis (maximum likelihood)
was then carried out to test the four-factor model. Considering the unsatisfactory fit indices (e.g., GFI:
0.82), standardized residuals and modification indices were analyzed for locating sources of mis-
specification. After deliberate consideration based on both techniques, 7 items were removed. The
resulting model is represented in Table 1. Although the relative chi-square (Kline 1998) and the
RMSEA (Browne & Cudeck 1993; Byrne 1998) can be considered acceptable, the other indices are
slightly under the satisfactory level (Byrne 1998; Hu & Bentler 1999). Considering that the literature
mentions two components of hope (willpower and waypower), a five-factor model was also tested. Fit
indices improved slightly, although the Cronbach Alpha regarding waypower is lower than 0.70. A
single factor model was also tested, the fit indices being unsatisfactory. Considering that five-factor
model fits the data satisfactorily, it was kept for further analysis.

Table 1 about here
RESULTS

All PsyCap dimensions intercorrelate and correlate positively with self-reported individual performance (Table 2). Age relates positively with optimism, waypower, resilience and overall PsyCap. Tenure relates positively with optimism, resilience and overall PsyCap. Gender does not correlate significantly with any variable. Education correlates positively with self-efficacy, and negatively with the other PsyCap dimensions. Education also relates positively with supervisor-reported (but not with self-reported) performance and negatively with age and tenure. No PsyCap dimension correlates significantly with supervisor-rated performance. Self-reported and supervisor-reported performance do not intercorrelate. The findings are very similar for the three organizations. For example, while all PsyCap dimensions correlate significantly with self-reported performance in the three organizations, they do not correlate with supervisor-reported performance in any one.

Table 2 about here

Hierarchical regression analyses were carried out for predicting self-reported and supervisor-reported performance. Age, tenure and education were included as control variables. In the second step, PsyCap variables entered. Lastly, supervisor-rated performance (for predicting self-reported performance) and self-reported performance (for predicting supervisor-reported performance) were entered. PsyCap predicts 39% of variance of self-reported performance. Only optimism and willpower are significant predictors. Supervisor-rated performance does not predict any variance of self-reported performance. Neither PsyCap dimension nor self-reported performance predicts supervisor-rated performance. The single predictor is education, with more-educated workers receiving higher performance scores. More educated workers do not consider themselves better performers.

Table 3 about here

DISCUSSION AND CONCLUSIONS
Although predicting self-reported performance, PsyCap does not predict supervisor-reported performance. And these two performance measures do not intercorrelate. This second finding is especially unexpected because self-reported performance measure includes an item focused on supervisor perceptions (“My manager believes I am an efficient worker”). Even we consider only this item for measuring self-reported performance, its correlation with supervisor-reported performance is not significant. Two main interpretations are plausible. The first considers that supervisor-reported performance, but not self-reported individual performance, is the valid measure. PsyCap does not relate with workers’ performance due to neutralizers. From this point of view, the ways in which SIADAP has been implemented prevent individuals with higher PsyCap from making use of their strengths to improve performance. The second interpretation is that self-reported performance is a valid measure and PsyCap actually promotes performance. Obviously, asking individuals about their individual performance is not free of risk and criticism (Fox & Dinur 1988; Van der Heijden & Nijhof 2004). However, several authors have suggested that self-assessments can be of great value, especially when anonymity is guaranteed and/or individuals perceive no need to present themselves favorably for career, performance appraisal and/or social acceptance purposes (Baruch 1996; Longenecker & Fink 2006; Van der Heijden & Nijhof 2004). On the contrary, supervisor-reported performance is not valid. The context in which the SIADAP is implemented fosters the use of political considerations in performance appraisal (Tziner 1999). Thus, it is not surprising that PsyCap does not relate with such a performance measure. Supervisor ratings are subject to biases, are not credible from the workers’ perspective and have little value as a source of feedback for improving their performance and promoting self-confidence. If this interpretation is correct, negative effects may occur if changes in the system are not implemented. If the supervisor-reported performance scores are unrelated with the “true” performance levels, then the high performance scores and the rewards are being ascribed to individuals who do not deserve them, thus harming the best performers and decreasing their motivation and performance. If the supervisor-reported performance scores reflect the “true” performance levels, but there is no agreement between self-appraisals and such scores, the same perverse consequences may occur. As suggested by Fletcher (1997 p. 186), if self-perceptions differ from those of others “then it is difficult to see how one can manage work relationships successfully,
contribute properly as a team member and adapt one's behavior to circumstances and individuals”. This may be detrimental for performance (Ostroff et al., 2004).

The findings suggest that there is room for SIADAP’s improvement in order to make it more effective in tapping the Portuguese civil servants’ PsyCap. The evaluation of the services/organizations introduced by the new rules enacted in 2008 may mitigate some problems if the preset quotas are differentiated according to the service/organization performance (i.e., allowing a higher percentage of “excellent” performers in high performance services). This process will ensure that employees understand how their personal performance contributes to the overall performance of the unit, thus boosting teamwork and shared responsibility. It is also necessary to provide feedback more frequently to workers and implement more frequent review of workers’ targets and performance. Setting discussion meetings periodically with each worker may also be appropriate. Considering the cost and time impacts of such formal discussions, half-yearly meetings appear to be a judicious compromise between the (excessively spaced) annual discussions and the (ideal) quarterly ones. It is also necessary to clarify and grant rewards and recognition to those with higher performance scores, instead of making them wait for uncertain rewards. Goal setting may also be improved, reducing the risks of biased negotiations that harm more ambitious and committed individuals and benefit those who are more scheming/political (Bratton & Kacmar 2004, p. 293).

The study is not exempt of limitations. The dependent and independent variables were collected simultaneously from the same source. This makes the study vulnerable to common method variance. Future studies could collect data for dependent and independent variables at separate moments. Another way to minimize these risks is to use a double-source method, with workers reporting their PsyCap, and supervisor-reported performance being collected in the official system records. Another limitation is that the measures of self- and supervisor-reported performance are based on different criteria, which makes comparison problematic. The organizations where the sample was collected may be not representative of the Portuguese Public Administration system. Future studies must embrace other kinds of organizations. Studying other potential neutralizers and carrying out studies in other cultures is also recommendable. Future studies may explore if the non-significant relationship
between PsyCap and supervisor-reported performance proceeds from features of SIADAP or from other Portuguese public administration features not studied here.

In any case, our evidence suggests that performance appraisal is a complex subject whose effectiveness depends on a complex range of factors. It also stimulates POB researchers to identify (a) the possible contingencies that neutralize the potential positive impact of PsyCap, and (b) the conditions necessary for PsyCap to become fruitful for both individuals and for public organizations.

REFERENCES


### Table 1

Confirmatory factor analysis: PsyCap*

<table>
<thead>
<tr>
<th>Item</th>
<th>Four-factor model</th>
<th>Five-factor model</th>
<th>Single factor model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-efficacy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel confident in representing my work area in meetings with management.</td>
<td>0.73</td>
<td>0.72</td>
<td>0.36</td>
</tr>
<tr>
<td>I feel confident contributing to discussions about the organization’s strategy.</td>
<td>0.65</td>
<td>0.65</td>
<td>0.33</td>
</tr>
<tr>
<td>I feel confident contacting people outside the organization (e.g. suppliers, customers,) to discuss problems.</td>
<td>0.74</td>
<td>0.75</td>
<td>0.54</td>
</tr>
<tr>
<td><strong>Optimism</strong></td>
<td>(0.74)</td>
<td>(0.74)</td>
<td></td>
</tr>
<tr>
<td>When things are uncertain for me at work, I usually expect the best.</td>
<td>0.60</td>
<td>0.60</td>
<td>0.53</td>
</tr>
<tr>
<td>I always look on the bright side of things regarding my job.</td>
<td>0.76</td>
<td>0.76</td>
<td>0.65</td>
</tr>
<tr>
<td>I’m optimistic about what will happen to me in the future as it pertains to work.</td>
<td>0.73</td>
<td>0.72</td>
<td>0.66</td>
</tr>
<tr>
<td>I approach this job as if “every cloud has a silver lining”.</td>
<td>0.52</td>
<td>0.53</td>
<td>0.52</td>
</tr>
<tr>
<td><strong>Hope</strong></td>
<td>(0.76)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hope-waypower</strong></td>
<td></td>
<td>(0.65)</td>
<td></td>
</tr>
<tr>
<td>If I should find myself in a jam at work, I could think of many ways to get out of it.</td>
<td>0.50</td>
<td>0.52</td>
<td>0.48</td>
</tr>
<tr>
<td>There are lots of ways around any problem.</td>
<td>0.57</td>
<td>0.59</td>
<td>0.56</td>
</tr>
<tr>
<td>I can think of many ways to reach my current work goals</td>
<td>0.74</td>
<td>0.77</td>
<td>0.71</td>
</tr>
<tr>
<td><strong>Hope-willpower</strong></td>
<td></td>
<td>(0.70)</td>
<td></td>
</tr>
<tr>
<td>At the present time, I am energetically pursuing my work goals.</td>
<td>0.62</td>
<td>0.64</td>
<td>0.60</td>
</tr>
<tr>
<td>Right now I see myself as being pretty successful at work.</td>
<td>0.61</td>
<td>0.72</td>
<td>0.59</td>
</tr>
<tr>
<td>At this time, I am meeting the work goals that I have set for myself.</td>
<td>0.52</td>
<td>0.63</td>
<td>0.47</td>
</tr>
<tr>
<td><strong>Resilience</strong></td>
<td>(0.71)</td>
<td>(0.71)</td>
<td></td>
</tr>
<tr>
<td>I usually manage difficulties one way or another at work.</td>
<td>0.62</td>
<td>0.62</td>
<td>0.58</td>
</tr>
<tr>
<td>I usually take stressful things at work in stride.</td>
<td>0.65</td>
<td>0.65</td>
<td>0.59</td>
</tr>
<tr>
<td>I can get through difficult times at work because I’ve experienced difficulty before</td>
<td>0.59</td>
<td>0.60</td>
<td>0.53</td>
</tr>
<tr>
<td>I feel I can handle many things at a time at this job.</td>
<td>0.60</td>
<td>0.60</td>
<td>0.58</td>
</tr>
</tbody>
</table>

| Fit indices                                                          |                   |                   |                    |
| Relative chi-square (chi-square/degrees of freedom)                 | 2.4               | 2.3               | 4.3                |
| Root mean square error of approximation                              | 0.08              | 0.07              | 0.11               |
| Goodness of fit index                                                | 0.89              | 0.90              | 0.82               |
| Adjusted goodness of fit index                                       | 0.85              | 0.86              | 0.77               |
| Comparative fit index                                                | 0.88              | 0.90              | 0.77               |
| Incremental fit index                                                | 0.88              | 0.90              | 0.77               |
| Relative fit index                                                   | 0.79              | 0.80              | 0.67               |

* Completely standardized solution In brackets: Cronbach Alphas
### Table 2

Means, standard deviation and correlations

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
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<tbody>
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<td>1. Self-efficacy</td>
<td>3.8</td>
<td>0.8</td>
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<td>2. Optimism</td>
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<tr>
<td>3. Hope-waypower</td>
<td>4.1</td>
<td>0.5</td>
<td>0.35***</td>
<td>0.56***</td>
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<tr>
<td>4. Hope-willpower</td>
<td>4.0</td>
<td>0.6</td>
<td>0.29***</td>
<td>0.55***</td>
<td>0.47***</td>
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<tr>
<td>5. Resilience</td>
<td>4.0</td>
<td>0.5</td>
<td>0.40***</td>
<td>0.57***</td>
<td>0.58***</td>
<td>0.44***</td>
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<tr>
<td>6. Overall PsyCap(a)</td>
<td>3.9</td>
<td>0.5</td>
<td>0.67***</td>
<td>0.78***</td>
<td>0.77***</td>
<td>0.73***</td>
<td>0.78***</td>
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<td>7. Self-reported performance</td>
<td>5.4</td>
<td>0.8</td>
<td>0.27***</td>
<td>0.45***</td>
<td>0.38***</td>
<td>0.56***</td>
<td>0.52***</td>
<td>0.58***</td>
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<tr>
<td>8. Supervisor-reported</td>
<td>2.3</td>
<td>0.6</td>
<td>0.12</td>
<td>0.02</td>
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<td>0.05</td>
<td>0.03</td>
<td>0.06</td>
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<tr>
<td>performance (b)</td>
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<tr>
<td>9. Age</td>
<td>41.6</td>
<td>8.7</td>
<td>0.00</td>
<td>0.21***</td>
<td>0.14*</td>
<td>0.11</td>
<td>0.19**</td>
<td>0.16**</td>
<td>0.08</td>
<td>-0.04</td>
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<tr>
<td>10. Org. tenure</td>
<td>13.6</td>
<td>8.1</td>
<td>0.02</td>
<td>0.12*</td>
<td>0.11</td>
<td>0.10</td>
<td>0.16**</td>
<td>0.13*</td>
<td>0.10</td>
<td>-0.00</td>
<td>0.66***</td>
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<tr>
<td>11. Gender(c)</td>
<td>-</td>
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<td>0.11</td>
<td>-0.08</td>
<td>-0.09</td>
<td>-0.08</td>
<td>-0.04</td>
<td>-0.06</td>
<td>0.02</td>
<td>-0.00</td>
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<td>12. Education(d)</td>
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<td>0.12*</td>
<td>-0.20***</td>
<td>-0.14*</td>
<td>-0.15*</td>
<td>-0.13*</td>
<td>-0.11</td>
<td>-0.03</td>
<td>0.21***</td>
<td>-0.57***</td>
<td>-0.47***</td>
<td>-0.07</td>
</tr>
</tbody>
</table>

*p<0.05  **p<0.01  ***p<0.001

(a) Mean score of the five dimensions.

(b) The 1.0-1.9 range means “poor”; 2.0-2.9 means “needing development”; 3.0-3.9 means “good”; 4.0-4.4 means “very good”; 4.5-5.0 means “excellent”.

(c) 0: female; 1: male.

(d) 1: nine or fewer schooling years; 2: at least 12 schooling years; 3: baccalaureate or higher.
Table 3
How PsyCap predicts performance

<table>
<thead>
<tr>
<th></th>
<th>Self-reported performance</th>
<th>Supervisor-reported performance</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>0.12 0.02 0.02</td>
<td>0.06 0.06 0.05</td>
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<tr>
<td>Age</td>
<td>0.08 0.02 0.01</td>
<td>0.09 0.08 0.08</td>
</tr>
<tr>
<td>Org. tenure</td>
<td>0.07 0.11 0.09</td>
<td>0.28*** 0.27** 0.25**</td>
</tr>
<tr>
<td>Education</td>
<td>0.02 0.02</td>
<td>0.07 0.07</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>0.15* 0.15*</td>
<td>0.06 0.04</td>
</tr>
<tr>
<td>Optimism</td>
<td>-0.02 -0.02</td>
<td>-0.06 -0.06</td>
</tr>
<tr>
<td>Hope-waypower</td>
<td>0.40*** 0.40***</td>
<td>0.06 0.01</td>
</tr>
<tr>
<td>Hope-willpower</td>
<td>0.25*** 0.25***</td>
<td>-0.05 -0.08</td>
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<tr>
<td>Resilience</td>
<td>0.08</td>
<td>-</td>
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<tr>
<td>Supervisor-rated</td>
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<tr>
<td>performance</td>
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<tr>
<td>F</td>
<td>1.68 17.98*** 16.32***</td>
<td>3.87** 1.73 1.78</td>
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<tr>
<td>Adjusted R²</td>
<td>0.01 0.40 0.40</td>
<td>0.04 0.04 0.04</td>
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<tr>
<td>Adjusted R² change</td>
<td>0.39 0.00</td>
<td>0.00 0.00</td>
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</table>

*p<0.05  **p<0.01  ***p<0.001