Professional skills in public employees

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Abstract. *Background: Professional competencies have become a key aspect of Human Resources Management in the new Public Administration paradigm. One of the basic elements of the new Public Administration in Spain is professional skills, understood as the ability of a worker to perform the tasks inherent to a specific job. This paper examines the capacity of the variables Personality, Engagement, Job Characteristics, Job Demands, and Effort–Reward Imbalance to predict Professional Competencies (Professional Responsibility, Professional Risks, and Professional Growth/Development).*

Method: A multi-occupational sample of 502 employees from the General Body of the Public Administration of Spain (men: 35.1%; women: 64.9%) was obtained through non-probabilistic sampling, and the data collected were processed with the SPSS 26.0 program. Pearson's correlations were calculated to generate the correlation matrix between the predictor variables and the criterion variables. Subsequently, a multiple regression model was applied to test the effects of the predictor variables on the criterion variables for professional skills.

Results: Significant correlations were found with Professional Responsibility, Professional Threats and Risks, and Professional Growth and Development, along with several contrast variables and external correlates. The results confirm a significant positive predictive relationship between Professional Competencies and various predictor variables.

Conclusions: The findings of this study provide valuable insights for research on the factors that promote professional competencies in Public Administration. The variable Dedication is the best predictor of the Professional Responsibility and Professional Growth and Development variables, while the variable Control is the best predictor of Professional Threats and Risks. These results have direct implications for Human Resources Management in Public Administration.

Keywords: *Public administration; professional competencies; Zenger and Folkman model; human resource management; job performance.*

Competencias profesionales en empleados públicos

Resumen. *Antecedentes: Las competencias profesionales se han convertido en un aspecto clave de la Gestión de Recursos Humanos en el nuevo paradigma de la Administración Pública. Uno de los elementos básicos de la nueva Administración Pública en España son las habilidades profesionales, entendidas como la capacidad de un trabajador para realizar las tareas inherentes a un puesto de trabajo específico. Este estudio examina la capacidad de las variables Personalidad, Compromiso, Características del Puesto, Demandas del Puesto y el Desajuste Esfuerzo–Recompensa para predecir las Competencias Profesionales (Responsabilidad Profesional, Riesgos Profesionales y Crecimiento/Desarrollo Profesional).*

Método: Se obtuvo una muestra multi-ocupacional de 502 empleados del Cuerpo General de la Administración Pública de España (hombres: 35.1%; mujeres: 64.9%) mediante un muestreo no probabilístico, y los datos recopilados se procesaron con el programa SPSS 26.0. Se calcularon las correlaciones de Pearson para generar la matriz

de correlaciones entre las variables predictoras y las variables criterio. Posteriormente, se aplicó un modelo de regresión múltiple para probar los efectos de las variables predictoras sobre las variables criterio de las competencias profesionales.

Resultados: Se encontraron correlaciones significativas con la Responsabilidad Profesional, las Amenazas y Riesgos Profesionales, y el Crecimiento y Desarrollo Profesional, junto con varias variables de contraste y correlatos externos. Los resultados confirman una relación predictiva positiva significativa entre las Competencias Profesionales y varias variables predictoras.

Conclusiones: Los hallazgos de este estudio ofrecen valiosos conocimientos para la investigación sobre los factores que promueven las competencias profesionales en la Administración Pública. La variable Dedicación es el mejor predictor de las variables Responsabilidad Profesional y Crecimiento y Desarrollo Profesional, mientras que la variable Control es el mejor predictor de las Amenazas y Riesgos Profesionales. Estos resultados tienen implicaciones directas para la Gestión de Recursos Humanos en la Administración Pública.

Palabras clave: *Administración pública; competencias profesionales; modelo de Zenger y Folkman; gestión de recursos humanos; desempeño laboral.*

1. Introduction

The normative selection model in the Spanish Public Administration is based on the National Institute of Public Administration criteria, according to which candidates are selected based on merit (by evaluating the candidate's individual effort, knowledge, and experience) and ability (by evaluating potential skills for the performance of job functions). Agile procedures that respect the principles of equality, merit, capacity, and public interest are used to select interim officials. Human resources management contributes to an organization's effectiveness by providing job descriptions that define specific tasks, as well as professional profiles that outline the requirements that candidates need to occupy the positions. Public administrations are obliged to establish systems that allow their employees' performance to be evaluated, without distinguishing between civil-servant and labor personnel. This requires important organizational skills, as well as large doses of political leadership, communication, and maturity in the management of people. Enquiring about who works best and who performs poorly is more or less difficult depending on the public organization involved.

For this reason, we set out to identify how certain variables—both personality traits and job characteristics—can act as predictive variables for workers' professional competencies in administration, as measured by the COM.AD-18 (Professional Responsibility, Professional Risks, and Professional Growth/Development). The Zenger and Folkman model (Zenger and Folkman, 2011) considers that leadership has a direct relationship with employees' commitment and the organization's results. These authors assert that leadership has a significant impact because, firstly, it affects all the measurable dimensions of organizational performance; secondly, it is highly uniform; and thirdly, it has highly interrelated areas of impact. Zenger and Folkman established a framework of 16 differentiating competencies that are essential for predicting the successful performance of employees, especially those in management or leadership positions. The 16 competencies are: displays high integrity and honesty, has technical and professional expertise, solves problems and analyzes issues, innovates, practices self-development, drives for results, establishes stretch goals, takes initiative by taking responsibility for results, communicates powerfully and prolifically, inspires and motivates others to achieve high performance, builds relationships, develops others, collaborates and works as a member of a team, develops a strategic perspective, champions change, and connects the group to the outside world. It is interesting to take these variables into account, given that there are recent studies that identify the requirements for competences necessary for the effective

performance of job positions in public administration in the Czech Republic (Krpálek et al., 2021), and another study assesses the role of project planning and the project manager's competency in project success in the context of the project management methodology defined by the Project Management Institute (Irfan et al., 2021).

To assess psychosocial factors at work, the Effort–Reward Imbalance (ERI) model by Siegrist (2000) has been used. This model combines information about demands and rewards at work (extrinsic component) with information about how these demands and challenges are handled (intrinsic component), which is determined by a strong commitment and a need for approval. The model therefore considers the relationship between employees' physical and psychological effort and their reward for this effort, assuming there is a theoretical relationship between their personal needs (such as self-esteem and self-efficacy) and the social opportunities related to the social network at work. This means that employees must perceive a trade-off between their contribution and performance on the one hand, and their being rewarded and belonging to a group of significant people on the other. According to this model, a lack of reciprocity between costs and benefits leads to an emotional state tending towards the stress response, which, if recurrent, can cause the worker to perceive that they are being treated unfairly and seriously affect their self-esteem. However, proper approval and esteem (through salary, recognition, promotion, or job stability) improve self-esteem and employee satisfaction. Recent evidence suggests that workers experiencing this effort–reward imbalance are at greater risk of cardiovascular disease, depression, musculoskeletal disease, and a poorer perception of health (Ravalier et al., 2014). For example, it has been found that Generation Z young people find the stability and salary provided by public administration attractive (Acheampong, 2021; Krishna and Agrawal, 2025).

The Demand–Control–Social Support Model (Karasek and Theorell, 1990) has been used to analyze work situations with chronic stressors and emphasizes the psychosocial aspects of the work environment. Karasek's model considers that the consequences of work on workers and their performance are the result of a combination of the demands and structural conditions of the work, the workers' margin for decision-making, and the possibility of using their own capacities. Therefore, a high level of demand and low level of freedom become stressors, while a high level of demand and a high level of freedom are stimulating for developing and empowering talents. These two effects are thought to be mediated by social support from co-workers and supervisors acting as moderators of the relationship between demands and control over the employee's own work.

Public agencies encouraging employees to voice their rights outperformed their counterparts when faced with high or very high levels of competing demands from citizens, after controlling for various factors (Kim and Cho, 2024).

Other characteristics of the job were also taken into account. We used the Job Characteristics Model (Hackman and Oldham, 1980; Oldham and Hackman, 2010), which is closely related to motivation and job satisfaction. It is based on characteristics that affect work results due to the changes generated in the workers' psychological states: the range of skills and knowledge required for the work, which refers to the extent to which employees can use different skills in their work; the identity of the task, which refers to the weight of the employee's work in the final result of the organization; the meaning of the task, which refers to the importance of the employee's performance for the lives of others; the level of autonomy, which refers to the degree of independence and freedom that the employee has for planning and carrying out their tasks; and feedback from work, which indicates the extent to which an employee's knowledge influences their work performance. This model has been used in public administration, particularly in the education sector, as Chan (2023) indicates.

Furthermore, personality variables have been considered. In this research, we used the Big Five model, the traits of which are bipolar (Costa and McCrae, 1992; Vigil-Colet et al., 2013), and most of the population falls at intermediate points in each dimension. Each of the five major features is supported by a large number of second-order factors. Although there is no total agreement on the names used to designate these factors, the most common ones are: (i) Extraversion, also called sociability or energy, which describes the degree of well-being in relationships with other people. At one pole are sociable, energetic, and assertive individuals, and at the other are those who are shy and lacking in assertiveness; (ii) Agreeableness, also called affability, which indicates the tendency to adapt to others. At one pole are individuals who place trust in others and are cooperative and sympathetic, and at the other are those who are highly independent, cold, or hostile; (iii) Conscientiousness, also called scrupulosity or tenacity. At one pole are individuals with discipline, responsibility, persistence, and orientation to achievement, and at the other are those who behave impulsively, irresponsibly, or frivolously; (iv) Emotional stability or adjustment shows a person's willingness to withstand tension. At one pole are the most stable, unconcerned, confident, and relaxed individuals, and at the other are those who exhibit habitual behaviors of nervousness, doubt, tension, or negative emotions; and (v) Openness to experience, which indicates a taste for new situations. At one pole are the most imaginative, curious individuals who are open to change, and at the other are those who are usually closed to new situations and lack imagination or a desire to experiment.

According to Feng et al. (2022), self-efficacy, resilience, and personality traits were important factors influencing job burnout of grassroots civil servants. Neuroticism played a regulating role in the relationship between self-efficacy and mental resilience. It is imperative to consider the active involvement of employees in their job performance, as it encompasses the physical, cognitive, and emotional dimensions through which they express themselves. In other words, engagement implies the psychological presence of employees when they are performing their tasks in the organization, integrating the idea that they need both self-expression and self-employment in their working life. Engagement is therefore key to explaining the relationship between numerous individual features, organizational factors, and work performance. Some studies suggest that engagement mediates the relationship between value congruence, perceived organizational support, and basic self-assessments, and two dimensions of job performance: task performance and organizational citizenship behavior (Reis De Souza Camões and De Oliveira Camoes, 2024). Other studies suggest that engaged employees have high levels of energy and mental toughness and are therefore willing to invest effort and persist in their work, have high levels of enthusiasm, and strongly identify with their work (Karanika-Murray et al., 2015). It has also been shown that engagement is positively related to how employees identify with the organization in which they work. Therefore, in practice, organizations should use resources to improve organizational identification in order to promote engagement and discretionary behavior among their employees, which in turn can contribute to the organization's efficiency and productivity (Zhang et al., 2017), as well as measuring the effect of discrimination on engagement, concluding that it alters job satisfaction (Palumbo, 2024).

This study follows the data-driven research approach, which is characterized by the premise that induction from existing data is a form of scientific inference that can guide research (Woo et al., 2017). Our aim was to determine how to explain the maximum variance of the three criterion variables used (Professional Responsibility, Professional Threats and Risks, and Professional Growth and Development) with the fewest possible predictive variables. For this, we have proposed the following hypotheses:

Hypothesis 1: If Professional Responsibility is influenced by personal variables, job characteristics, job demands, and effort–reward imbalance, then a good prediction can be made from a model that incorporates these predictors.

Hypothesis 2: If Professional Threats are influenced by personal variables, job characteristics, job demands, and effort–reward imbalance, then a good prediction can be made from a model that incorporates these predictors.

Hypothesis 3: If Professional Growth and Development are influenced by personal variables, job characteristics, job demands, and effort–reward imbalance, then a good prediction can be made from a model that incorporates these predictors.

2. Method

2.1 Participants

The study population comprised 502 employees from the General Body of the Public Administration of Spain (men: 35.1%; women: 64.9%). A third of the employees were men, and there was a predominance of married individuals (52.8%). Employees with a university degree made up 47% of the sample. The average seniority in the current position was 6.91 years (SD = 7.74), and average seniority in the Public Administration was 12.18 years (SD = 22.75). Additionally, 62.6% of the participants were civil servants, 33.3% were temporary employees, and 4.1% held contingent or trust-based positions.

2.2 Instruments

The Professional Competence Scale of Public Administration (COM.AD-18; Macip-Simó, 2015) comprises 18 items and three subscales and uses a five-point Likert-type response format. The factors are: "F1. Professional Responsibility", consisting of nine items (α =.70); "F2. Threats and Professional Risks", consisting of five items (α =.72); and "F3. Growth and Professional Development", consisting of four items (α =.71).

The Engagement Scale (Salanova et al., 2000) comprises 15 items, uses a seven-point response scale (1 = strongly disagree to 7 = strongly agree), and has three factors: "F1. Vigour", "F2. Dedication", and "F3. Absorption", each made up of five items. Cronbach's alpha for all three factors ranges from.68 to.91.

The Job Diagnostic Survey (JDS-21; Fuertes et al., 1994; González, 1997) measures job satisfaction. It comprises 21 items grouped into seven factors, each consisting of three items, using a seven-point scale. The factors are: "F1. Variety of Skills" (α =.78); "F2. Identity of the Task" (α =.78); "F3. Meaning of the Task" (α =.71); "F4. Autonomy" (α =.73); "F5. Work Feedback" (α =.70); "F6. Feedback from Agents"; and "F7. Contact with Others".

The Spanish version of the Job Content Questionnaire (JCQ-25; Escribà-Agüir et al., 2001) comprises 29 items grouped into three factors. The response categories for each item are: totally disagree (1), disagree (2), agree (3), and

totally agree (4). The three factors are: "F1. Psychological Demands", comprising nine items (α =.74), e.g., "K19. My job requires me to work very hard"; "F2. Control over Work", comprising nine items (α =.74), e.g., "K4. My work allows me to make many decisions by myself"; and "F3. Support at Work", comprising 11 items (α =.87), e.g., "K41. The people I work with are interested in me."

The Spanish version of the Effort–Reward Imbalance scale (ERI-23; Macías-Robles et al., 2003) comprises 23 items using a Likert response scale from one to five. It includes three subscales: "F1. Effort" (α =.63), e.g., "ERI-2. In my work I am often interrupted and annoyed"; "F2. Reward" (α =.80), e.g., "ERI-9. In difficult situations I receive the necessary support"; and "F3. Overinvolvement" (α =.80), e.g., "OC-3. When I get home, I find it easy to relax and disconnect."

The Overall Personality Assessment Scale (OPERAS; Vigil-Colet et al., 2013), based on the Big Five model, comprises 42 items answered on a five-point scale (from 1 = completely disagree to 5 = completely agree), structured into five factors: "F1. Extraversion", seven items (α =.86); "F2. Emotional Stability", seven items (α =.86); "F3. Conscientiousness", seven items (α =.77); "F4. Agreeableness", eight items (α =.71); and "F5. Openness to Experience", eight items (α =.81).

The Spanish version of Dickman's Impulsivity Inventory (DII; Chico et al., 2003) comprises 23 items across two subscales with a dichotomous response format (1 = true / 0 = false). "F1. Functional Impulsivity" consists of 11 items (reliability =.77), e.g., "5. Most of the time I can focus on my tasks quickly"; and "F2. Dysfunctional Impulsivity" consists of 12 items (reliability =.76), e.g., "2. I often say the first thing that comes to mind without thinking much about it."

Finally, external indicators such as age, seniority (in the current position and in the Public Administration), weekly working hours, and days of presenteeism (attendance at work while sick) were also recorded.

2.3 Procedure

Participants were selected through non-probabilistic random sampling. The response rate was 55%. To obtain the sample, we employed a two-pronged approach: (1) networking, by directly contacting individuals employed in Local Administration, and (2) collective recruitment in various Public Administrations. Participation was both voluntary and unpaid. Volunteers were assured of data confidentiality and anonymity. Due to the reliance on voluntary participation, a fully random sampling method was not feasible. The study was conducted in accordance with the Declaration of Helsinki.

2.4 Data analysis

To begin, the Kolmogorov–Smirnov test was applied to assess the normality of the data, which indicated a good fit. Additionally, the diagrams for all the regressions were analyzed, and no issues related to homoscedasticity or excessive residuals were observed. We began data analysis by calculating Pearson's correlations to produce the correlation matrix between the predictor variables and the criterion variables. A multiple regression model was applied to test the effects of the predictor variables on the criterion variables for professional skills. This statistical technique is an objective way to evaluate a set of independent variables (Hinton et al., 2014). Accordingly, three multiple regression models were carried out to determine the relationship between several predictive variables and a criterion variable (Professional Responsibility, Professional Threats and Risks, and Professional Growth and Development). We used the stepwise method for the multiple linear regression analysis, whereby the program introduces each predictive variable into the model according to its contribution to explaining the variance. Our aim was to explain the maximum variance of the three criterion variables using the fewest possible predictive variables.

3. Results

3.1 Correlation analyses

The correlational study shown below (Table 1) displays only the correlations between the criterion variables and the predictor variables found in this study. We found a correlation between Professional Responsibility and eleven variables, eight of which were positive and three negatives. We also found positive correlations between Professional Threats and Risks and five predictor variables. Finally, we found positive correlations between Professional Growth and Development and twelve predictor variables.

3.2 Regression analysis

We used a multiple regression model to test the effects of predictor variables on criterion variables in connection with Professional Responsibility, Professional Threats and Risks, and Professional Growth and Development (COM.AD-18). Tables 3, 4, 5, and 6 show the data corresponding to the adjusted R^2 indices and significant standardized beta coefficients between the criterion variables and the predictor variables.

Table 1. Correlations between the predictor variables and the criterion variables

	CRITERION VARIABLES		
PREDICTIVE VARIABLE	Factor 1 COM.AD-18 Professional Responsibility	Factor 2 COM.AD-18 Professional Threats and Risks	Factor 3 COM.AD-18 Professional Growth and Development
Extraversion (OP.Ex)	-.02	.10	.02
Emotional Stability (OP. ES)	-.02	-.02	-.05
Conscientiousness (OP.Co)	-.07	-.03	-.09
Agreeableness (OP.A)	-.09	-.07	-.07
Openness to Experience (OP.OE)	.02	.05	.06
Vigor (EnV)	**.33****	**.12***	**.33****
Dedication (EnDt)	**.39****	**.14***	**.42****
Absorption (EnA)	**.34****	**.13***	**.37****
Functional Impulsivity (FI)	-.06	.01	**.20****
Dysfunctional Impulsivity (DI)	**-.27****	.02	-.05
Variety (JDS.V)	**.21****	.04	**.27****
Identity (JDS.I)	.10	.05	**.16****
Meaning (JDS.M)	**.16****	-.06	.01
Autonomy (JDS.AU)	**.17****	.05	**.22****
Work Feedback (JDS.F)	.04	.00	**.16****
Agents (JDS.AG)	.04	.04	.10
Contact (JDS.C)	**.13***	-.02	**.12***
Support (JCQ.S)	**.11***	.02	**.16****
Psychological Demands (JCQ.PD)	**.24****	**.22****	**.16****
Control (JCQ.C)	**.28****	**.22****	**.38****
Effort (ERI.E)	.00	.08	.07
Rewards (ERI.R)	**-.22****	-.05	-.09
Over-involvement (ERI.OI)	.06	0.11	.09
Age	.01	.10	.00
Seniority in Current Position	.03	.05	.09
Seniority in Administration	.02	.06	.05
Weekly Working Hours	.04	.01	.04
Days of Attendance at Work while Sick	**-.12***	.00	-.06

** p <.01; * p <.05

Table 2, in relation to Professional Responsibility, shows that Model 5, which includes Dedication (Engagement), Dysfunctional Impulsivity, Rewards (ERI), Control (JCQ), and Extraversion (OP1), explains 20.0% of the variance of the criterion variable. The Dedication variable (Engagement) is the best predictor, explaining 12.5% of the variance. The standardized beta coefficients indicate that the statistically significant predictor variables are Dedication (β =.186), Dysfunctional Impulsivity (β = -.184), Rewards (β = -.157), Control (β =.183), and Extraversion (β = -.144).

For Professional Threats and Risks, Model 3 explains the criterion variable with the highest variance (11.9%). This model includes Control (JCQ), Psychological Demands (JCQ), and Contact (JDS) as predictor variables (see Table 3), and the statistically significant predictor variables are Control (β =.24), Psychological Demands (β =.20), and Contact (β = -.19).

Table 4 summarizes the models for **Professional Growth and Development**. Here we can see that Model 5, which includes Dedication, Functional Impulsivity, Control, Meaning, and the number of work hours per week as predictor variables, explains the greatest variance (28.7%). These five predictor variables were all significant and yielded the following standardized beta coefficients: Dedication (β =.374), Functional Impulsivity (β =.194), Control (β =.209), Meaning (β = -.165), and hours worked per week (β = -.169).

Next, in Table 5, you can see a summary of the predictive models for the criterion variables.

4. Discussion

The main aim of this study was to determine the capacity of Personality, Engagement, Job Satisfaction (JDS), Effort-Reward Imbalance (ERI), and Psychosocial Risks based on Control, Support, and Psychological Demands (JCQ), along with some external correlates, to predict Professional Competencies (Professional Responsibility, Professional Threats and Risks, and Professional Growth and Development) in Public Administration. We have been able to confirm that if Professional Responsibility, Professional Threats and Risks, and Professional Growth and Development are influenced by these variables, then Professional Competencies can be predicted from a model that incorporates them.

4.1 Professional responsibility

Our results show that Hypothesis 1 is partially fulfilled. Clearly, there is a wide spectrum of elements that predict Professional Responsibility, including

Table 2. Model 5: Variables and coefficients of the regression analysis (Stepwise method) for Dimension Factor 1: Professional Responsibility (COM.AD-18)

Models and Variables	Models							Coefficients				
	R	R^2	R2 Adjusted	SE	R Change	F Change	sig	B	SE	β	t	sig
Model 5	.468	.219	.200	3.78	.016							
Dedication (Eng.D)								.126	.053	.186	2.37	.018
Dysfunct. Imp. (DI)								-.274	.095	-.184	-2.88	.004
Rewards (ERI.R)								-.095	.039	-.157	-2.42	.016
Control (JCQ.C)								.233	.096	.183	2.41	.016
Extraversion (OP1)								-.065	.028	-.144	-2.31	.021

Variables used in the model: Extraversion (OP.Ex), Emotional Stability (OP.ES), Conscientiousness (OP.Co), Agreeableness (OP.A), Openness to Experience (OP.OE), Vigor (EnV), Dedication (EngD), Absorption (EnA), Functional impulsivity (FI), Dysfunctional impulsivity (DI), Variety (JDS.V), Identity (JDS.I), Meaning (JDS.M), Autonomy (JDS.AU), Work feedback (JDS.F), Agents (JDS.AG), Contact (JDS.C), Support (JCQ.S), Psychological demands (JCQ.PD), Control (JCQ.C), Effort (ERI.E), Rewards (ERI.R), Over-involvement (ERI.OI).

Table 3. Model 3: Variables and coefficients of the regression analysis (Stepwise method) for Dimension Factor 2: Professional Threats and Risks (COM.AD-18)

Models and Variables	Models							Coefficients				
	R	R^2	R2 Adjusted	SE	R Change	F Change	sig	B	SE	β	t	sig
Model-3	.363	.132	.119	3.46	.029	16.12	.000					
Control (JCQ.C)								.273	.080	.246	3.42	.001
Psychol.demands (JCQ.PD)								.237	.081	.204	2.93	.004
Contact (JDS.C)								-.225	.078	-.194	-2.87	.004

Variables used in the model: Extraversion (OP.Ex), Emotional Stability (OP.ES), Conscientiousness (OP.Co), Agreeableness (OP.A), Openness to Experience (OP.OE), Vigor (EnV), Dedication (EngD), Absorption (EnA), Functional impulsivity (FI), Dysfunctional impulsivity (DI), Variety (JDS.V), Identity (JDS.I), Meaning (JDS.M), Autonomy (JDS.AU), Work feedback (JDS.F), Agents (JDS.AG), Contact (JDS.C), Support (JCQ.S), Psychological demands (JCQ.PD), Control (JCQ.C), Effort (ERI.E), Rewards (ERI.R), Over-involvement (ERI.OI).

Table 4. Model 5: Variables and coefficients of the regression analysis (Stepwise method) for Dimension Factor 3: Professional Growth and Development (COM.AD-18)

Models and Variables	Models							Coefficients				
	R	R^2	R2 Adjusted	SE	R Change	F Change	sig	B	SE	β	t	sig
Model-5	.551	.303	.287	2.28	.021							
Dedication (Eng.D)								.163	.031	.374	5.28	.018
Funct Impul (FI)								.228	.069	.194	3.28	.001
Hours work per week								-.054	.019	-.169	-2.84	.005
Control (JCQ.C)								.170	.059	.209	2.90	.004
Meaning (JDS.M)								-.129	.048	-.165	-2.68	.008

Variables used in the model: Extraversion (OP.Ex), Emotional Stability (OP.ES), Conscientiousness (OP.Co), Agreeableness (OP.A), Openness to Experience (OP.OE), Vigor (EnV), Dedication (EngD), Absorption (EnA), Functional impulsivity (FI), Dysfunctional impulsivity (DI), Variety (JDS.V), Identity (JDS.I), Meaning (JDS.M), Autonomy (JDS.AU), Work feedback (JDS.F), Agents (JDS.AG), Contact (JDS.C), Support (JCQ.S), Psychological demands (JCQ.PD), Control (JCQ.C), Effort (ERI.E), Rewards (ERI.R), Over-involvement (ERI.OI).

Table 5. Summary of the predictive models for the criterion variables

PREDICTOR VARIABLE	Professional Responsibility		Professional Risk		Professional Growth and Development	
	ΔR2 Corrected	β	ΔR2 Corrected	β	ΔR2 Corrected	β
Dedication (EnD)	.125	.186	---	---	.203	. 374
Dysfunctional impulsivity (DI)	.029	-.184	---	---	---	---
Functional impulsivity (FI)	---	---	---	---	.026	.194
Rewards (ERI.R)	.017	-.157	---	---	---	---
Control (JCQ.C)	.013	.183	.065	.240	.017	.209
Extraversión (OP.Ex)	.016	-.144	---	---	---	---
Psychol Demands (JCQ.PD)	---	---	.025	.200	---	---
Contact (JDS.C)	---	---	.029	-.190	---	---
Hours work per week	---	---	---	---	.020	-.169
Meaning (JDS.M)	---	---	---	---	.021	-.165
Total explained variance (%)	20,00		11,9		28,7	

All the data are significant at <.01 (bilateral).

Variables used in the model: Extraversion (OP.Ex), Emotional Stability (OP.ES), Conscientiousness (OP.Co), Agreeableness (OP.A), Openness to Experience (OP.OE), Vigor (EnV), Dedication (EngD), Absorption (EnA), Functional impulsivity (FI), Dysfunctional impulsivity (DI), Variety (JDS.V), Identity (JDS.I), Meaning (JDS.M), Autonomy (JDS.AU), Work feedback (JDS.F), Agents (JDS.AG), Contact (JDS.C), Support (JCQ.S), Psychological demands (JCQ.PD), Control (JCQ.C), Effort (ERI.E), Rewards (ERI.R), Over-involvement (ERI.OI).

Personality, Engagement, Job Satisfaction (JDS), Effort-Reward Imbalance (ERI), Psychosocial Risks (JCQ), and some external correlates. The best predictive model comprises a total of five variables, with a direct relationship with Engagement and Control (JCQ), and an inverse relationship with Extraversion, Dysfunctional Impulsivity, and Rewards (ERI). Therefore, these are the variables that most efficiently predict Professional Responsibility. This highlights that Dedication (Engagement) provides the greatest predictive capacity for this factor. Although the predictive model accounted for 20% of the variance in Professional Responsibility, several items predicted in Hypothesis 1 to be included in this model were ultimately excluded (Age, Seniority in the current job, Seniority in Public Administration, and Hours worked per week). It is also shown that Professional Responsibility is positively related to Vigour, Dedication, and Absorption (Engagement); Variety, Meaning, and Autonomy (JDS); Contact (JDS); and Control, Support, and Psychological Demands (JCQ); and that it is inversely related to Dysfunctional Impulsivity, Rewards (ERI), and the external correlate Days attending work while sick.

The fact that Dedication (Engagement) and Control (JCQ) established a positive relationship with Professional Responsibility can be contextualized within the framework of the Job Demands-Resources (JD-R) model (Demerouti et al., 2001), which postulates that having professional resources enhances employee engagement. These professional resources include the Control variable (Bakker et al., 2007; Hakanen et al., 2006; Llorens et al., 2006). This line of results has also been replicated in studies specifically focused on samples of public employees (Dikkers et al., 2010). More recently, Inoue et al. (2013) replicated this relationship among Japanese employees, concluding that Control plays a prominent role in predicting engagement and that autonomy and freedom in an employee's decision-making are therefore basic elements for fostering work commitment. An inverse causality is also plausible, whereby employees who initially show a high level of Professional Responsibility may motivate their environment to facilitate greater levels of Control.

The predictive value of Dedication (Engagement) for Professional Responsibility aligns with conclusions obtained by Mañas Rodríguez et al. (2014) regarding organizational commitment. The study by Ibrahim and Al Falasi (2014) also found a significant relationship between Professional Responsibility and involvement. We did not find any previous studies that support the result of the inverse relationship between Extraversion and Professional Responsibility. However, a study by Bozionelos (2004) questions the influence of Extraversion on work implication. The author asserts that because Extraversion plays a limited role

in channeling the pursuit of activity, action, and sensation-seeking—which are basic elements for learning and facing job challenges—it plays only a secondary role. The inverse relationship between Dysfunctional Impulsivity and Professional Responsibility can be explained by the fact that individuals with high Functional Impulsivity are characterized by rapid information processing, while Dysfunctional Impulsivity is associated with an inability to inhibit inappropriate responses (Brunas-Wagstaff et al., 1994).

Finally, the negative relationship between Rewards and Professional Responsibility is striking, given that nearly every organization establishes its own reward system to motivate workers and promote efficiency. Seligman (2011) identifies positive emotion, commitment, relationships, meaning, and achievement as the elements employees primarily seek—provided they have the material conditions to live reasonably well. Fisher (2010) also provides an overview of work in relation to happiness and concludes that happiness at work is probably the nexus that retains and motivates employees. Moreover, Rowland and Hall (2014) concluded that many employees do not trust work-related compensation or believe it leads to performance improvements. The employees surveyed cited the difficulty of measuring and weighing the value of different activities, expressed distrust in statistics, and viewed them as manipulative.

4.2 Professional Threats and Risks

With regard to Hypothesis 2, the best predictive model was the one that included the variables *Psychological Demands* and *Control* (JCQ), and, inversely, *Contact* (JDS). *Control* was the element that contributed most to the model. We also found that *Vigor*, *Control*, and *Absorption* (Engagement), along with *Psychological Demands* and *Dedication* (JCQ), had a positive correlation with *Professional Risks and Threats*. Hypothesis 2 was therefore partially confirmed, since there were links between the criterion variable and the predictor variables (Personality, ERI model, JDS model, Age, Seniority in the current job, Seniority in Public Administration, Hours worked per week, and Days worked while sick).

The *Psychological demands of work* and *Control over work* are the two central dimensions of Karasek's Demand-Control Model (Karasek, 1992). Stress (or tension) results from the interaction between these two characteristics, and four categories are defined based on the demand-control relationship. The most negative category (high tension) occurs in situations of high demand and low control over work, while the most positive (low tension) occurs in cases of low demand and high control. The other two categories are active workers (high demand and high control) and passive workers (low demand and low control).

Incorporating *Psychological Demands* into the model as a predictor of *Professional Risks and Threats*, therefore, aligns well with the expectations of the demand-control model. *Control* should, in theory, have an inverse relationship with professional risks, in accordance with the model's formulation. However, our data show a positive relationship. *Contact* is the only variable from the JDS model that fits the predictive model for professional risks and threats, and the established relationship is negative. It should therefore be considered that interpersonal relationships in the work environment offer employees a sense of security, which reduces the perception of risk.

Indeed, social support is considered crucial in addressing workplace stress, as interpersonal relationships foster social inclusion, comfort, guidance, and material assistance.

Finally, the relationship between *Engagement* and *Professional Threats and Risks* appears to align with the findings of Ravalier et al. (2014), who reported improvements in professional efficiency under conditions of rising stress. Similarly, Shalley et al. (2004) suggested that the relationship between pressure felt by employees and their performance follows an inverted "U" curve; that is, only a moderate amount of pressure enhances performance, whereas too much or too little can have a detrimental effect (Robbins and Judge, 2008).

4.3 Professional Growth and Development

Finally, the analysis of Hypothesis 3 indicates that the optimal explanatory model includes the predictive variables *Dedication* (Engagement), *Functional Impulsivity*, and *Control* (JCQ), and correlates inversely with *Meaning* (JDS) and *Hours worked per week*.

According to our results, *Professional Growth and Development* is directly related to *Vigour*, *Dedication*, and *Absorption* (Engagement); *Functional Impulsivity*; *Variety*, *Identity*, *Autonomy*, *Work Feedback*, and *Contact* (JDS); as well as *Psychological Support*, *Control*, and *Psychological Demands* (JCQ). These findings support the partial fulfillment of Hypothesis 3. Part of the hypothesis was not corroborated, as no relationship was found with the predictive variables *Age*, *Seniority in the current position*, *Seniority in Public Administration*, or *Days of attendance at work while sick*.

The inclusion of *Engagement* (specifically the *Dedication* variable) in the predictive model for *Professional Growth and Development* can be linked to studies by Karim and Behrend (2013), who concluded that there is a significant connection between employees' engagement and their willingness to commit to training. These findings are also consistent with Örtenblad (2004) and Farhang (2011),

who demonstrated that learning and knowledge sharing for personal and professional development are strongly associated with engagement.

According to Dickman (1990), individuals with high *Functional Impulsivity* are characterized by a rapid information processing style. Likewise, other studies have shown that speed in information processing is related to intelligence (Jensen, 1993).

The *Control* variable (JCQ model) is included in the predictive model for the *Professional Growth and Development* factor because employees with high scores in this area tend to be active workers who proactively seek growth and professional development (Karasek and Theorell, 1990). Therefore, the results obtained in our study are consistent with the postulates of Karasek's Demand-Control-Support Model.

An inverse relationship was observed between *Meaning of the Task* (JDS model) and *Professional Growth and Development*. In a study conducted specifically with Public Administration employees, Camilleri (2007) considered that, among all elements of the Job Characteristics Model (Hackman and Oldham, 1980), *Meaning of the Task* best predicts the motivational state of civil servants. Our findings diverge from this, as we observed that those who attribute greater meaning to their work appear to have a lower need for professional development. However, we have found no previous research supporting this correlation. This effect might be explained by the possibility that employees who find deep meaning in their tasks feel they have already reached a mature stage in their role and, thus, reduce the urgency for further growth.

Finally, the inverse relationship between *Hours worked per week* and *Professional Growth and Development* may arise from several factors. Long working hours clearly limit the practical opportunities for growth beyond one's immediate job duties. Additionally, extended work hours often lead to decreased work intensity and increased errors (Kodz et al., 2003). Employees may compensate for the long hours by lowering their hourly productivity. Thus, the traditional approach that equates more time spent at work with greater performance—and evaluates an employee's productivity as a function of hours worked—may actually contradict the conditions necessary for professional growth and development.

5. Conclusion

The results of this study provide relevant information for research into the factors that favour Professional Competencies in Public Administration. The Dedication variable is the best predictor of the Professional Responsibility and

Professional Growth and Development variables, and the Control variable is the best predictor of Professional Threats and Risks. These findings can greatly aid in designing HR management policies, including selection processes, career development plans, and training programs. They can also provide information on the general state of certain groups of workers, and by identifying their factors (Professional Responsibility, Professional Risks and Threats, and Professional Growth and Development) we can also identify, for example, the organization's ability to engage in processes of change. The concept of Professional Responsibility is little used in the public administration and, in general, in HR Management, probably because it is a wide ranging and indeterminate construct. However, work in the public administration has some special features such as guaranteed tenure and the provision of public service. Given these features, the level of Professional Responsibility that public employees have is particularly important for predicting the level of involvement and execution of the entrusted tasks. Professional Responsibility as an element intrinsically linked to aspects such as the involvement, commitment or loyalty of employees, is one of the essential intangibles for the smooth running of any organization. The construct Occupational Threats and Risks is also very typical of public service, while the system itself is usually characterized by dynamics that seek high security in its procedures. Public employees themselves may tend to be conservative in the execution of their duties, since they do not usually work for objectives or in professional environments that encourage new professional challenges. Therefore, high levels of Threats and Occupational Risks will make it difficult for organizations to improve and modernize so, consequently, the corresponding corrective measures must be applied. Every organizational change requires employees to change some of their routine operations, the way they do their work, and their behaviour. Reducing resistance to change is important because the way in which employees react is critical to the success of change. There is considerable consensus that one of the key factors in the success of any change in the organization is acceptance by employees. The Growth and Professional Development factor will provide us with information regarding the individual and collective ability to carry out improvement processes in a particular organization. In this regard, the level of Professional Growth and Development could be related to continuous training and, more recently, processes of coaching and mentoring. The results of this study are also revealing in terms of the significant absence of correlations between the Professional Competences factors (COM.AD-18) and external correlates such as age, seniority in the position, seniority in the public administration and hours worked per week. Transferring these results to the practical level

of human resources management means that compensation for or recognition of seniority is unproductive, since no relationship has been found between age or seniority and the level of responsibility or growth in the job.

5.1 Limitations and implications

This study is not without limitations. Firstly, the data were obtained through self-reports, and this can produce biases ranging from social desirability to lack of sincerity (Alzghoul et al., 2018). Future research should include evaluations of employees made by co-workers and/or supervisors (Andreassen et al., 2010). Furthermore, the research could be enhanced by using structural equation modelling in the data analysis. The multiple regression analysis used to study the relationship between the predictor variables and the criterion variables only allowed us to draw conclusions about the direct and inverse influence between the variables used.

Here we can highlight the following main practical implications of this study:

The results are highly useful for designing Human Resources Management policies in the public administration, such as selection processes, career plans, and training plans, among others. It can also provide information on the general state of a specific group of workers, and by identifying their factors, we can determine, for example, the organization's capacity to undergo change processes. On the other hand, Professional Responsibility is an element intrinsically linked to aspects such as employee involvement, commitment, or loyalty, and is part of the intangibles that are essential for the smooth running of any public organization.

The results of this study are revealing in terms of the significant absence of correlations between professional competencies and external correlates such as age, seniority in the position, seniority in the Public Administration, and hours worked per week. If we apply these results to the practice of Human Resources Management in this area, it would suggest that compensation (e.g., salary) based on seniority is an unproductive practice, since no relationship has been found between age and seniority with the level of responsibility or career growth.

Furthermore, it can be considered that high levels of Professional Responsibility and Professional Growth aHRnd Development identify an ideal profile to adequately perform a position in Public Administration. Therefore, implementing training and development programs based on these areas could improve the effectiveness and efficiency of these public employees.

The conclusions provided by this study could be useful for designing HR Management policies such as selective processes, career plans and training plans, etc.

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