

The Effect of Personality on Work Motivation and Its Impact on Organizational Citizenship Behavior of Employees of Public Department in Portugal

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Abstract: This work analyses the relationship between personality, work motivation and organizational citizenship behaviour. Participants were 129 employees of both genders, in public organizations in Portugal, who fulfilled three self-report questionnaires: Instrument of Measure of Organizational Citizenship Behaviors, Scale Multi-Factorial Motivation at Work and Revised NEO Personality Inventory. The second-order hierarchical latent variable model using partial least squares structural equation modelling was employed to test the relationship among the variables. Results show that only four dimensions of personality (extroversion, agreeableness, openness to experience, conscientiousness) and three dimensions of work motivation (work structure motivation, commitment motivation and, goal-setting motivation) have a significant effect on the organizational citizenship behaviour. The importance of psychological assessment in an organizational context is discussed.

Keywords: Organizational Citizenship Behaviors, Personality, Work Motivation, Organizational Context

1. Introduction

Over the past 30 years, research on the organizational citizenship behaviors (OCB), while the area of interest in understanding the working groups has been extensive (e.g., Fischer et al., 2020; Lepine et al., 2002; Najari et al., 2011; Ocampo et al., 2018; Organ & Ryan, 1995). Research has shown that the OCB can significantly affect the performance of organizations (Bergeron, 2007; Cunha & Rego, 2008; Mahmoud et al., 2021; Organ et al., 2006), as well as the effective functioning and competitiveness of these (Fischer et al., 2020; Mackenzie et al., 2011), maximizing the potential of the workforce and minimizing the waste of resources (Ng et al., 2021; Shang et al., 2021).

In order to improve organizational effectiveness, scholars have sought to understand the antecedents of OCB (e.g., Organ et al., 2006; Tang, & Ibrahim, 1998; Torlak & Koc, 2007). The attributes of personality

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(Organ & Lingl, 1995; Organ, 1994; Organ & Ryan, 1995; Salvati et al., 2011) and motivation (Barbuto et al, 2003; Organ, 1990; Rioux & Penner, 2001) have emerged as one of the most studied predictors. Podsakoff et al. (2000) showed that personality can produce organizational citizenship behaviors, as well as influence the motivation of individuals, affecting the way they interpret and react to different situations (Ucho, 2012).

However, to date, we are not aware of any studies that have investigated the relationship between the OCB, personality and motivation at work in the Portuguese context. Therefore, the aim of this study is to fill this research gap and to evaluate the relationship between these constructs to better understand the basis of dispositional OCB.

1.1 Organizational Citizenship Behaviors (OCB)

The OCB has been designed as a multidimensional construct, a cultural / contextual there is, however, consensus on its definition and dimensions that make up (Podsakoff et al., 2000; Podsakoff et al., 2009). The definition that has been the most traditional in the literature is presented by the Organ (1988), which states that the OCB are individual behaviors that are arbitrary, not directly or explicitly recognized by the formal reward system and that in aggregate promotes the effective functioning of the organization. In other words, the OCBs are outside the field of formal behavior, insofar as they are not explicitly authorized or measured system performance assessment, yet which facilitate organizational efficiency and interpersonal interaction. They are defined as affiliate behaviors and promoters and prosaically (Okediji et al., 2009) distinguishing behaviors challenging or contesting and, seen by the performer as less likely to lead to rewards come from the formal system. This means that "may influence organizational objectives performing actions not directly related to their main functions, but important because they shape the organizational contexts, social and psychological that serve as critical catalyst for task activities and processes" (Rego, 2002, p.51). Rego (2000) by analysis of eighty-seven works devoted to the subject of OCB, it was found that there are five dimensions, eighteen present in these studies and at least three of them in thirty-one articles, namely: (i) Generalized compliance - is the execution of activities in order to exceed the minimum requirements normally expected or (ii) Sportsmanship - no awkward circumstances condone excessive lamentations and complaints to avoid problems, (iii) Civic Virtue - implies the involvement and responsible participation in the political life of the organization, (iv) Altruism - is to help people with specific problems or tasks and organizationally relevant; (v) Courtesy - defines behaviors that aim to prevent the occurrence of problems with others.

Research suggests that employees may also engage in OCB because they feel obligated to do so (Bolino et al., 2013; Organ et al., 2006).

2.2 Personality, Big Five Model and OCB

Personality can be defined as the set of psychological characteristics that determine the patterns of thinking, feeling and acting, that is, the personal and social individuality of someone (e.g., Cattell, 1995). The Big Five model of personality (McCrae & Costa, 1989) is a model of personality recognized, valid and enforceable in Psychology due to solid infrastructure empirical providing a taxonomic structure for basic research on personality. Argues that personality consists of five relatively independent dimensions

which together provide a meaningful taxonomy for the study of individual differences. These five dimensions are openness to experience, conscientiousness, extroversion, neuroticism and agreeableness. Each of the five dimensions is such that a bucket contains a set of features which tend to occur together (e.g., Costa & McCrae, 1992). Thus, openness to experience denotes the trend of demand active and enjoys new experiences, relating strongly to the conservative nature / liberal ideas and attitudes expressed. It involves aspects such as fantasy or receptivity to the inner world and imagination, esthetics or art appreciation and beautiful, openness to feelings, openness to new experiences practices, intellectual curiosity and readiness to re-examine their own values and those of authority (McCrae & John, 1992). The conscientiousness involves a degree of personal organization, persistence, motivation and control objectives, belief in personal competence, the need for personal fulfilment, self-discipline and the ability of planning or deliberation, that is, the tendency to think things before they act or speak (Barrick & Mount, 1991). The extroversion refers to the quantity and intensity of energy towards the outside, i.e. into the social world (Costa & McCrae, 1992). It involves, in general, be warm / to have an interest in friendship, be gregarious and prefer the company of others, to have social ascendancy and power of expression among others, be active, seeking excitement or stimulation coming from the environment and the tendency to experience emotions positive (Barrick & Mount, 1991). In turn, agreeableness relates to the type or types of interactions preferred by students in relationship to others. Mainly involves feelings of trust in others, and the belief in the sincerity and good intentions of others, and also the trend towards openness and directness in verbal expression, altruism or concern for the welfare of others, indulgence or the tendency for conflict resolution, personal modesty and attitude of sympathy for others (Barrick & Mount, 1991). Finally, neuroticism refers to the experience of negative feelings face to life situations, such as anxiety or states of frustration and bitterness, depression, feelings of guilt, sadness, loneliness and depression, social anxiety and shyness, or also, the tendency for impulsiveness and difficulty postponing immediate gratification of their action (Barrick & Mount, 1991).

The literature in the area of personality and OCB is vast (e.g., Barrick & Mont, 1991; Organ, 1994; Okediji et al., 2009; Salvati et al., 2011; Robertson & Callinan, 1998; Ucho, 2012) and has shown that there is a strong relationship between the OCB and personality characteristics.

Several meta-analyses have provided evidence for the relations of the Big Five personality domains with OCB (e.g., Chiaburu et al., 2011; Hoffman et al., 2007; Ilies et al., 2009). The agreeableness, conscientiousness, extraversion and neuroticism have been suggested as predictors of OCB (King et al., 2005; Najari et al., 2011; Organ & Ryan, 1995). Recent evidence (Pletzer et al., 2021) suggests that extraversion exhibits the strongest relation with OCB, followed by conscientiousness, agreeableness, and openness to experience.

2.3 Work Motivation and OCB

The motivation at work has deserved a special mention by many scholars, who have tried over time to understand the behaviors and attitudes of employees in organizations in order to contribute to better their performance. In this sense, the motivation at work has been conceived as an attitudinal variable, involving feelings and thoughts (Fritzsche & Parrish, 2005). And usually manifested by the orientation of the worker to perform with speed and accuracy of their tasks and persists in its execution to achieve the expected result or expected. The study of motivation at work receives considerable interest in the literature due to

its close relationship with the individual and organizational productivity (Bergeron, 2007; O'Brien & Allen, 2008) and job satisfaction (Ng et al., 2021). Thus, many theories have been put forward to explain the work motivation. Initially, the explanations were simple, based on a single dimension and did not consider the dynamics between the worker and his work. Thus, the theory of scientific management Taylor (1960), for example, considered that the salary was the key motivator and it was enough to get the expected performance of the worker. Subsequently, many other theories were developed, characterized by their greater complexity and an approach increasingly psycho-cultural, referring to the identification of the factors triggering the personal motivation of people (Sylqa, 2020).

Ferreira et al. (2006), based on some theoretical models that allow understanding the dynamics associated with the factors of labor motivation, proposed the existence of four dimensions of work motivation namely: (i) motivation to work organization (ii) with achievement motivation and power, (iii) motivation and performance, (iv) motivation associated with involvement.

The motivation in the organization of work concerns the psychological states associated with the acquisition of knowledge, increased responsibilities and knowledge of the results, such as the variety of roles, identity and meaning of tasks, autonomy and feedback (Hackman & Oldham, 1980). The motivation to achievement and power is related to three needs of the employee: (i) the drive for achievement toward a set of standards, which falls in the desire to be great and to be successful in competitive situations, (ii) desire to influence and control the behavior of others, motivating more status, prestige and the desire to gain influence over others, and (iii) the desire and willingness to have friends and be accepted by others (McClelland, 1987). The motivation of performance, in turn, consists of establishing goals and setting a standard or goal for guiding action having a positive effect on self-efficacy and consequently self-assessment of workers (Locke & Latham, 1990). Finally, the motivation associated with involvement refers to the belief in the acceptance of the values and goals of the organization as well as the commitment involved in the actions of every individual in the organization because they believe it is right and moral develop them (Allen & Meyer, 1996).

Research has suggested that motivation at work is significantly related to the OCB (Allen & Rush, 1998; Finkelstein & Penner, 2004; Mahmoud et al., 2021; Rioux & Penner, 2001; Tang & Ibrahim, 1998). For example, workers with higher levels of intrinsic motivation tend to look pleasant working conditions and are more likely to help others, and to create a climate of job satisfaction (Lepine et al., 2002). By contrast, individuals with high levels of instrumental motivation typically perform tasks and demonstrate behaviors to earn tangible rewards, such as salary increases, promotions, and other fringe benefits (Barbuto et al., 2003). Thus, one can expect that intrinsic motivation has a positive relationship with the OCB and instrumental motivation is negatively related to OCB (Torlak & Koc, 2007).

2. The Conceptual Model

Based on the theoretical discussion and the constructs derived in the previous section, hypotheses were drawn from the model in Figure 1.

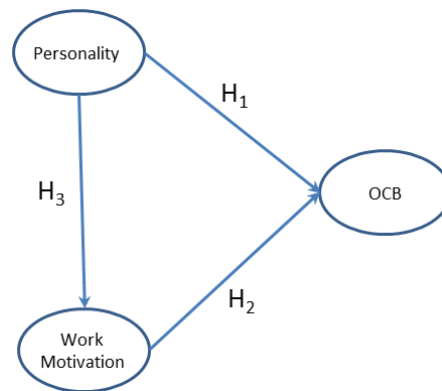


Figure 1: Research model

2.1 Hypotheses

H1: Personality is negatively associated with OCB.

H2: Working Motivation is positively associated with OCB.

H3: Personality is negatively associated with Working Motivation.

3. Method

3.1 Participants

The sample is constituted by a total of 129 workers of a public services company, of both sexes, mostly females, (72.1% men 27.9% males). It presents an age ranging from 23 to 65 years old (Mean_{age}=38.97; S.D._{age}=9.40). The workers are from two public institutions belonging to the Ministry of Science, Technology and Higher Education, located in the Greater Lisbon. In terms of educational and socio-professional, we categorized the participants, from the information and status of academic qualifications and professional.

3.2 Measures

In order to meet the objectives of this study, we opted for the use of three self-report questionnaires: (i) Instrument of Measure of Organizational Citizenship Behaviors (IMOCB. Organ & Konovsky, 1996, adapted by Rezende, 2009), (ii) Multi-Factorial Motivation at Work Scale (Multi-Moti. Ferreira et al., 2006) and (iii) Revised NEO Personality Inventory (NEO-PI-R. Costa & McCrae, 1992; adapted by Lima, 1997).

IMOCB: The Instrument for Measuring Organizational Citizenship Behaviors (Konovsky & Organ 1996, adapt. Rezende, 2009), is a self-report instrument, built with the aim of assessing citizenship behaviors in context and aid understanding of the importance these behaviors (Konovsky & Organ 1996). It consists of 32 items, with response Likert-type format with seven response categories, where 1 mean "strongly disagree" and 7 "strongly agree". Of the 32 items of the scale, some find the question posed in the negative, and therefore should be reversed. They find themselves in this situation the items 20, 21 and 22. The

instrument has good internal consistency (values between .63 and .85) and a factor analysis with 69.3% of variance explained, which revealed five factors emerging construct on citizenship: altruism, courtesy, sportsmanship, civic virtue and generalized compliance.

NEO.PI.R: The Personality Inventory - Revised (Costa & McCrae NEO.PI. R., 1992, version adapted by Lima, 1997) aims to assess the five dimensions of personality. In its adapted version consists of 60 items in Likert format (scale of five response categories ranging from strongly disagree to strongly agree), organized into five dimensions: neuroticism, extraversion, openness to experience, agreeableness and conscientiousness. Through description of the subject's position in the five dimensions, gives a comprehensive scheme, which summarizes your style emotional, interpersonal, experiential, attitudinal and motivational. Based in Lima (1997), the English version of the NEO-PI-R measures the same dimensions of personality that the American version, with good psychometric properties. Lima (1997) reported alphas of .86, .75, .76, .72 and .84 for the dimensions of neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness, respectively.

MULTI-MOTI: This is a questionnaire designed by Ferreira et al. (2006) that measures the motivation in workplace. The factor analysis indicates that the scale is composed by four dimensions related with motivation to: organization at workplace; work performance; power and achievement; and involvement. It contains 28 items rated in a 5 -point scale. The questionnaire evaluates the personal factors that compose the motivated behavior at work, based in the theories of internal and external motivation of McClelland (1997), Allen and Meyer (1996) or Lock and Lathan (1990) but also according to an extended line of investigations in the field of motivation at work and work processes. One high score in a certain sub-scale indicates that the worker is also highly motivated but a low score can be understood as an indication of low motivation at work. The questionnaire possesses good psychometric qualities, related to validity, reliability and internal consistency (Cronbach's $\alpha = .70$ for all four factors).

The distributional properties of the OCB, personality, and working motivation manifest variables were assessed. Our inspection of the measures of skewness and kurtosis shows only slight deviations from univariate normality in Personality and OCB. However, Mardia's (1970) test of multivariate kurtosis, of which Bentler (2005) has suggested that in practice, values above 5.00 are indicative of data that are nonnormally distributed, shows that Personality (normalized 64.006, $p < 0.001$) and OCB (normalized 24.368, $p < 0.001$) data are nonnormally distributed.

3.3 Procedure

Each participant completed the questionnaires anonymously during the administration of a small group, with the order of the questionnaires balanced across the entire sample. Participants were informed about the nature of the study and other information, such as the need to be genuine in the answers and ensuring the confidentiality of individual results. Although there was no submission to the ethics committee, as it is not a required standard in Portugal, the investigation is in accordance with the provisions of the Declaration of Helsinki.

3.4 Analyses and Results

To estimate the hierarchical construct model, we used PLS-SEM (Lohmöller, 1989). Among the reasons

of using PLS-SEM are its fewer demands on the underlying data distribution and sample size compared to covariance-based structural equation modeling (CB-SEM) which has constraints regarding the distributional properties (multivariate normality), measurement level, sample size, model complexity, identification, and factor indeterminacy (Hair et al., 2011).

The psychometric properties of OCB, personality, and working motivation were tested using confirmatory factor analysis (CFA). The software used was SmartPLS 2.0 M3.

In our case the second order hierarchical latent variable model used is a reflective/reflective type. We used the repeated indicator approach (Lohmöller, 1989) for the estimation of the hierarchical latent variable model, in which a higher order latent variable specifies a latent variable that represents all the manifest variables of the underlying lower-order latent variables. The mode of measurement for the higher-order repeated indicators was mode A since the constructs are of reflective type and the inner weighting scheme was the Path Weighting Scheme. The initial values for the outer model relationships was 1.0, the data was standardized with "Mean 0, Var 1", a maximum number of iterations of 300 and abort criterion 1.0E-5.

The PLS-SEM model evaluation rely on bootstrapping, a form of resampling procedure. The bootstrapping settings used were cases equal to the number of our sample (129), with 5000 replications and individual level changes.

For the outer model evaluation of the 1st order latent variables, we followed the recommendations stated in Hair et al. (2011) evaluating indicator reliability, internal consistency reliability (Bagozzi & Yi, 1988), convergent validity (Bagozzi & Yi, 1988) and discriminant validity using Fornell-Larcker criterion and cross-loadings (Chin, 1998).

This way it was possible for personality still show internal consistency reliability. Indicator reliability was examined by measuring the outer loadings on all items in the model. The absolute standardized outer loadings ranged from .539 to .903. We followed Henseler et al. (2009) and deleted indicators with outer standardized loadings smaller than .4 only discarding indicators when indicator's reliability is low and their elimination goes along with a substantial increase of composite reliability. AVE values ranged from .511 to 0.710 (> .50) so convergent validity was verified (Bagozzi & Yi, 1988). Likewise, Composite Reliability values ranged from .750 to .833 (>.70) assuring internal consistency reliability.

We followed the same recommendations for the 2nd order latent variables (work motivation, OCB and personality) used in the 1st order latent variables considering the path coefficients between 1st and 2nd order latent variables as indicators of the structural model 2nd order latent variables.

Convergent validity was assessed by measuring AVE (Bagozzi & Yi, 1988). All constructs showed AVE values greater than the .5 threshold, except for OCB. Its AVE was .408 which is lower than .5. However, the values of CR the square root of AVE, and the cross-loadings showed that OCB does measure the construct sufficiently. For this reason, we decided to retain OCB in the model.

For the discriminant validity of our 2nd order constructs we verify if each latent variable AVE is higher than its squared correlation with any other construct, in this case if the square root of AVE is higher than

its correlation with any other construct. The values of the square root of AVE for each construct are greater than the highest correlation between that construct and the other constructs (Bagozzi & Yi, 1988).

4. Results

PLS-SEM does not report any kind of fit indices like CFI or RMSEA used in CB-SEM. The evaluation of PLS model is based on prediction-oriented measures that are non-parametric (Chin, 1998). The PLS structural model is mainly evaluated by R² of endogenous latent variable Chin (1998), effect size *f*² (Cohen, 1988) and the Stone-Geisser Q² test for predictive relevance (Geisser, 1974).

The predictive power of the model was analyzed using R². Using the PLS Algorithm function in SmartPLS 2.0, we computed the R² statistics OCB endogenous latent variable in the model. The R² value of OCB was 0.129 (Table 1) all of which are greater than the acceptable threshold of .1.

The effect size (*f*²) complements R² and considers the relative impact of a particular exogenous latent variable on an endogenous latent variable by means of changes in the R² (Cohen, 1988), was measured using the formula $f^2 = (R^2_{included} - R^2_{excluded}) / (1 - R^2_{included})$. Cohen (2008) suggests *f*² values of .02, .15 and .35 for small, medium and large effect sizes of the predictive variables. In our study, we found small effect sizes of Personality (*f*²=.043) and Work motivation (*f*² .085) on OCB (See table 1).

Table 1: Effect sizes of the latent variables

2nd order Latent Variables	R ²	<i>f</i> ²	<i>f</i> ² effect size rating
OCB	.129	-	-
Personality		.043	Small
Work motivation		.085	Small

We assessed the predictive relevance of the OCB endogenous latent variable using Stone-Geisser's Q² statistic (Geisser, 1974). By following the blindfolding re-sampling approach (omission distance = 7), the predictive power of the model was examined by means of Stone-Geisser's Q², cross-validated index. The Q² value of OCB was greater than zero (Q²=.0299), suggesting the predictive relevance of the model (Chin, 1998).

4.1 Hypothesis Testing

Hypotheses were tested examining the significance of the path coefficient estimates on the three paths in the inner model. In order to produce more reasonable standard error estimates, we used a bootstrap technique. Following Hair et al. (2011), we set 5000 re-sampling with replacement from the number of bootstrap cases equal to the original number of 129 observations to generate standard errors and obtain t-statistics.

The path coefficient from personality to OCB is -0.204 (t=2.117, p<.05) and from working motivation to OCB is 0.280 (t=2.327, p<.05) so H1 and H2 are supported. We may notice that personality has a negative relationship with OCB and working motivation has a positive relationship with OCB. H3 is not supported

because the path coefficient from personality to working motivation is not significant ($t=1.097$, $p>.05$). Figures 2 and 3 illustrate the assessed structural model and Table 2 summarizes the results of the hypothesis tests.

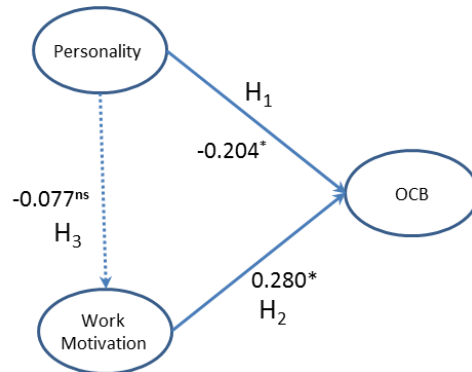


Figure 2: Assessment of the structural model

Notes. *** - $p<.001$; * $.010\leq p<.050$ (5% significance); ^{ns} $p>.050$ (no significance)

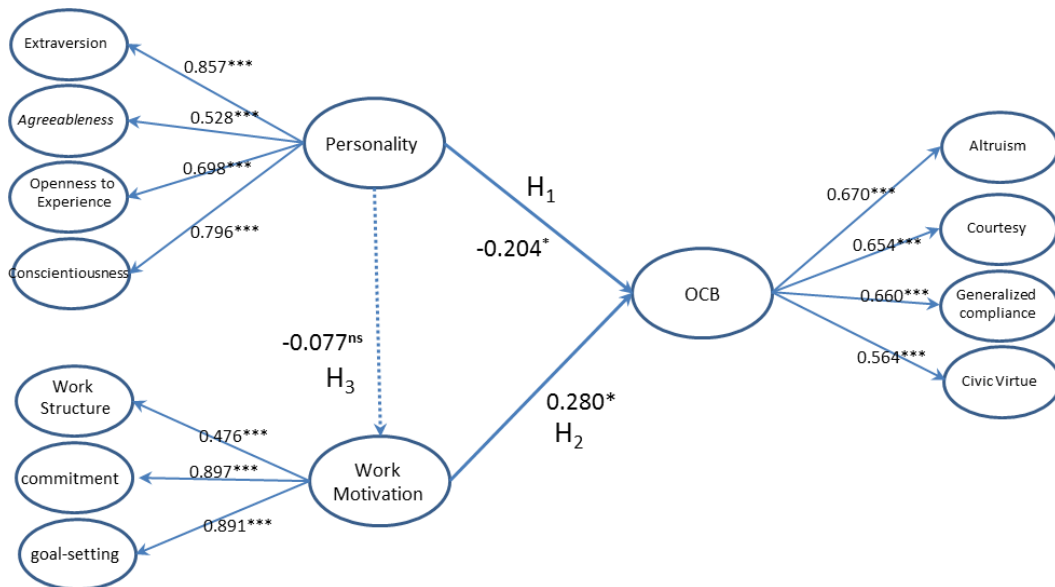


Figure 3: Assessment of the structural model

Notes. *** - $p<.001$; * $.010\leq p<.050$ (5% significance); ^{ns} $p>.050$ (no significance) italic – 1st order LV with reversed items

Table 2: Assessment of path analysis

Paths	Standardized coefficients	t-statistics	Supported hypothesis
H1: personality → OCB	-.204*	2.117	Yes
H2: work motivation → OCB	.280*	2.327	Yes
H3: personality → work motivation	-.077 ^{ns}	1.097	No

Note. * 5% significance - $t > 1.96$; ^{ns} no significance - $t < 1.96$

5. Discussion

The primary purpose of the present study was to examine relationship between personality, work motivation and OCB in public organizations in Portugal. Our results indicate that personality is negatively associated with OCB and Working Motivation is positively associated with OCB. However, personality seems to have no significant effect on work motivation. Moreover, according to the results of model No. 3, the data suggest that only four dimensions of personality (extroversion, agreeableness, openness experience, conscientious) and three dimensions of work motivation (work structure motivation, commitment motivation and, goal-setting motivation) have a significant effect on the organizational citizenship behavior. This result also corroborates that of Organ (1990, 1994), Organ and Lingl, (1995) and Podsakoff et al., (2000) who reported that personality factors significantly predict organizational citizenship behavior (Pletzer et al., 2021; Ucho, 2012), and Barbuto et al. (2003), Finkelstein and Penner (2004), who reported that work motivation significantly predict organizational citizenship behavior.

However, unlike other studies (e.g., Barrick & Mount, 1991; Robertson & Callinan, 1998; Tett et al., 1991) which states that there is a strong relationship between OCB and personality characteristics, our study points to a small relationship. Also, unlike other studies (Najari et al., 2011; Ocampo et al., 2018; Organ & Ryan, 1995) showing that neuroticism is a strong predictor of OCB in our study, this feature does not seem to have any relationship with OCB.

Thus, it appears that the psychological states associated with the acquisition of knowledge, increased responsibilities and knowledge of results, beliefs acceptance of the values and goals of the organization (Allen & Meyer, 1996), and the establishment of goals and fiction of a standard or goal for guiding action (Locke & Latham, 1990), have a positive effect on OCB. In this sense, considering the outcomes of the research it is recommended that the public organization try to know the personality traits and motivation of its employees and pay enough attention to this important matter that is the organizational citizenship behavior. This study may contribute, also, to guidelines for the intervention in the labor give more focus and / or consider personality traits and work motivation, because these variables are related to OCB and consequently with the organization's effectiveness.

This research is limited mainly at the level of the sample. Future research should attempt to replicate these results with a wider variety of organizations and jobs, as well as with the inclusion of other demographic and psychological variables.

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