



BAR - Brazilian Administration Review

ISSN: 1807-7692

ANPAD - Associação Nacional de Pós-Graduação e Pesquisa em Administração

Oliveira, Lucia Barbosa de; Moreno, Valter de Assis; Gonçalves, Rodrigo Carneiro  
Individual and Situational Antecedents of Counterproductive Work Behaviors

BAR - Brazilian Administration Review, vol. 17, no. 3, 2020

ANPAD - Associação Nacional de Pós-Graduação e Pesquisa em Administração

DOI: 10.1590/1807-7692bar2020190126

Available in: <http://www.redalyc.org/articulo.oa?id=84165722002>

- How to cite
- Complete issue
- More information about this article
- Journal's webpage in redalyc.org

UABM  
redalyc.org

Scientific Information System Redalyc

Network of Scientific Journals from Latin America and the Caribbean, Spain and Portugal

Project academic non-profit, developed under the open access initiative

## Research Article

# Individual and Situational Antecedents of Counterproductive Work Behaviors


Lucia Barbosa de Oliveira<sup>1</sup>  
Valter de Assis Moreno Junior<sup>2</sup>  
Rodrigo Carneiro Gonçalves<sup>2,3</sup>

<sup>1</sup> Fundação Getulio Vargas, Rio de Janeiro, RJ, Brazil

<sup>2</sup> Instituto Brasileiro de Mercado de Capitais, Rio de Janeiro, RJ, Brazil

<sup>3</sup> Universidade Estadual do Rio de Janeiro, Rio de Janeiro, RJ, Brazil

Received 30 October 2019. This paper was with the authors for one revision. Accepted 9 July 2020.  
First published online 3 August 2020.

**Editor-in-chief:** Carlo Gabriel Porto Bellini  (Universidade Federal da Paraíba, João Pessoa, PB, Brazil)

**Associate editor:** Cláudia Andrade  (Escola Superior de Educação de Coimbra, Coimbra, Portugal)

**Reviewers:** Two anonymous reviewers

**Editorial assistants:** Kler Godoy and Simone Rafael (ANPAD, Maringá, PR, Brazil)

## ABSTRACT

Counterproductive work behaviors (CWB) are harmful to organizations and detrimental to individual and collective performance. Although CWB have been considerably explored in the last decades, few studies have tried to assess the relative influence of their predictors. In this paper, we develop and test a structural equations model to evaluate the combined effects of two personality traits (agreeableness and neuroticism) and two situational variables (perceived organizational justice and leader-member exchange quality) on CWB. The analysis of data collected from 527 employees of a large Brazilian organization shows that agreeableness, neuroticism, and leader-member exchange quality (LMX) have direct effects on CWB and that LMX fully mediates the influence of organizational justice on the latter. Our findings extend previous models that looked into the Justice-LMX-CWB relationships and highlight the critical role played by leaders in preventing deleterious behaviors. We discuss their implications for research, as well as for human resource management (HRM) practice.

**Keywords:** counterproductive work behaviors; leader-member exchange; organizational justice; personality traits; partial least squares

**JEL code:** M540

## INTRODUCTION

Considerable attention has been given in the management literature to counterproductive work behaviors (CWB), as they are harmful to organizations and detrimental to individual and collective performance. In the last decades, several studies have identified a variety of individual and situational antecedents of CWB. However, authors such as Cohen (2016) note that we still lack a proper understanding of counterproductive work behaviors, especially as far as the predictors of such behaviors are concerned.

Both individual traits and situational factors have been connected to CWB. For instance, evidence suggests that personality traits affect how people interpret and react to the situations they face, and thereby, can influence the display of deviant behaviors (Dalal, 2005; Douglas & Martinko, 2001; Mount, Ilies, & Johnson, 2006; Salgado, 2002). As far as situational variables are concerned, empirical studies have linked perceived organizational justice and leadership to CWB (Colquitt et al., 2013; El Akremi, Vandenberghe, & Camerman, 2010; Hershcovis et al., 2007; Holtz & Harold, 2013a, 2013b).

Despite the growing interest in counterproductive work behaviors, assessments of the joint effects of different types of antecedents are scarce (Hershcovis et al., 2007; Holtz & Harold, 2013a). As several of such factors have been shown to be correlated – including organizational justice, leadership, and personality traits (Chernyak-Hai & Tziner, 2014; Cohen-Charash & Spector, 2001; Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012) –, studies that take into consideration only a few of those variables may estimate effects on CWB that are inflated by the simultaneous influence of omitted antecedents on exogenous and endogenous variables. Thus, our understanding of how different individual and situational factors lead to counterproductive work behaviors cannot advance without empirically assessing their combined influence.

In this study, we address this issue by integrating two personality traits (agreeableness and neuroticism) and two situational variables (perceived organizational justice and leader-member exchange quality) in a causal model that explains CWB. The influence of these constructs on counterproductive work behaviors have been investigated in the literature, but not in tandem. Furthermore, drawing on social exchange theory and on the stream of the human resource management (HRM) literature that discusses the role of immediate superiors as gatekeepers of organizational policies, we elucidate the causal links that connect LMX, organizational justice, and CWB, arguing that LMX behaves as a mediator of the influence of organizational justice on CWB (Cropanzano & Rupp, 2008; Purcell & Hutchinson, 2007; Sikora & Ferris, 2014). The associated hypotheses were statistically tested with data collected from 527 employees of a large Brazilian organization, using partial least squares (PLS) structural equation modeling techniques.

The present study contributes to the literature on deviant behaviors by extending previous models that investigated the Justice-LMX-CWB relationship (Chernyak-Hai & Tziner, 2014; El Akremi et al., 2010). It also adds to the literature on leadership by addressing the role LMX plays in deviant behaviors, as well as the impact of organizational justice on LMX. From a practical

standpoint, the findings can help organizations develop better HRM policies and practices to mitigate counterproductive work behaviors in their ranks.

## THEORETICAL BACKGROUND AND HYPOTHESES

### Counterproductive work behaviors

Counterproductive work behaviors have been defined as deliberate employee acts that violate organizational norms, are socially reprovved, and harm organizations' legitimate interests, profitability, and reputation (Bennett & Robinson, 2000; Cohen, 2016; Ng, Lam, & Feldman, 2016).

There is no consensus in the literature regarding the structure of the CWB construct (Berry, Ones, & Sackett, 2007). Robinson and Bennett (1995) proposed a typology based on two dimensions (minor versus severe, interpersonal versus organizational), and, in a follow-up study, the authors developed a scale based only on the interpersonal versus organizational dichotomy (Bennett & Robinson, 2000).

Berry, Ones, and Sackett (2007) suggest that the availability of the scale may have helped popularize studies focused on this duality, although it has been questioned in the literature. Lee and Allen (2002), for example, could not find a distinction between the CWB-I and CWB-O factors. Berry et al. (2007) reported ID and OD to be highly correlated ( $\rho = .62$ ), while Dalal (2005) proposed that "the precise importance of the targets of behavior has not yet been conclusively established." (Dalal, 2005, p. 1242). More recently, researchers have called attention to other possible sub-dimensions of CWB (e.g., Bowling & Gruys, 2010). Given the lack of consensus, we chose to perform an exploratory factor analysis to evaluate the dimensionality and structure of the construct (Brown, 2015).

Over the past 30 years, several studies, including a handful of meta-analyses (Berry et al., 2007; Dalal, 2005; Hershcovis et al., 2007; Salgado, 2002) have examined the antecedents of CWB. Regarding situational variables, researchers have given considerable attention to organizational justice (Berry et al., 2007; Cohen-Charash & Spector, 2001; Colquitt et al., 2013; Holtz & Harold, 2013a; Mendonça & Tamayo, 2004; Skarlicki & Folger, 1997), as well as interpersonal conflict, situational constraints, and job dissatisfaction (Hershcovis et al., 2007). From an interpersonal perspective, Townsend, Phillips, and Elkins (2000) found that deviant behaviors were related to low-quality leader-member exchange relationships, although studies relating LMX and CWB are still scarce (Colquitt et al., 2013).

Concerning individual differences, personality traits, negative affectivity, and self-control have been found to be related to CWB (Berry et al., 2007; Hershcovis et al., 2007; Mount et al., 2006). Gender and CWB also seem to be correlated, with men being more likely to engage in deviant behaviors than women (Berry et al. 2007; Hershcovis et al., 2007; Ng et al., 2016).

Scholars have also investigated the joint effects of individual and situational variables. Henle (2005), for example, found interactive effects of interactional justice and two personality traits (socialization and impulsivity) in predicting workplace deviance. Hershcovis et al. (2007) showed the relevance of both individual and situational antecedents of CWB and called for more research examining both types of predictors. In the present study, we investigate how personality traits, organizational justice, and leader-member exchange may interact to affect CWB, as discussed next.

## Personality traits

Personality traits are defined as a relatively stable configuration of thoughts, feelings, and behaviors that lead the individual to respond in specific ways to particular circumstances (Roberts, 2009). The five-factor model (FFM or Big Five) has been generally accepted as a valid structure of personality traits and widely adopted by organizational researchers (Salgado, 2002; Spector, 2011). Agreeableness is related to cooperativeness, good-nature, and kindness; conscientiousness to achievement orientation, persistence, dependability, and orderliness; extraversion to a preference for social interactions and need for stimulation; neuroticism to anxiety, hostility, and a general inability to deal with negative emotions; and finally, openness to experience to exploratory behaviors, active imagination, autonomy, and nonconformity (Barrick & Mount, 1991; Mount et al., 2006; Salgado, 2002).

Regarding the influence of personality traits on CWB, Salgado (2002) found that agreeableness and conscientiousness were valid predictors of deviant behaviors, while Berry et al. (2007) showed that among the Big Five, only agreeableness, conscientiousness, and neuroticism were significantly related to CWB. Spector (2011) suggests that personality affects CWB through cognitive-emotional processes and, in line with the cognitive-motivational-relational theory (Lazarus, 1991a, 1991b), we propose that agreeableness and neuroticism are predictors of CWB. A person who is cooperative and kind is less likely to respond negatively to situations she/he encounters than an antagonist. Likewise, a person who is predominantly anxious and negative towards life in general tends to experience more negative emotions, leading her/him to be more prone to deviant behaviors.

Hypothesis 1a: Agreeableness has a negative direct effect on CWB.

Hypothesis 1b: Neuroticism has a positive direct effect on CWB.

## Organizational justice

Perceived organizational justice is defined as how employees evaluate whether they have been treated fairly, an assessment that tends to influence their attitudes and behaviors (Moorman, 1991). In this study, we adopt the four-dimensional structure of the organizational justice construct, including distributive, procedural, interpersonal, and informational components (Colquitt, 2001; Colquitt et al., 2013). Distributive justice reflects the perception of how fair is

the distribution of organizational resources, and procedural justice relates to the procedures followed in allocating such organizational resources. Interpersonal justice involves the degree to which the superior treats the employee respectfully and adequately, and informational justice refers to the degree to which the superior provides adequate and timely information about the allocation of organizational resources (Colquitt, 2001; Colquitt et al., 2013).

Researchers have found empirical evidence for a direct negative effect of organizational justice on CWB (e.g., Colquitt et al., 2013; El Akremi et al. 2010). If employees believe that the organization is fair, they will be more likely to present positive attitudes and behaviors towards the organization, their managers, and their work. On the other hand, decisions seen as unfair may lead employees to cause what they perceive as equivalent damage to restore justice. Social exchange theory (Cropanzano & Rupp, 2008) and the norm of reciprocity (Gouldner, 1960) provide the theoretical support for this reasoning, as they suggest that “negative reciprocation serves as a means to restore the balance and eliminates anger and frustration engendered by unfair treatment” (El Akremi et al., 2010, p. 1690). Therefore, we propose the following hypothesis:

Hypothesis 2: Perceived organizational justice has a negative direct effect on CWB.

As far as personality traits affect how an individual appraises situations, they may also influence perceived organizational justice. In a meta-analysis, Cohen-Charash and Spector (2001) found that negative affectivity is negatively related to distributive, procedural, and interactional justice, and that self-esteem is positively related to these justice dimensions. The authors also state that “other personality characteristics, such as agreeableness, may be good predictors of perceived justice” (Cohen-Charash & Spector, 2001, p. 303). Indeed, Shi, Lin, Wang, and Wang (2009) found evidence that agreeableness and neuroticism are related to organizational justice. We, therefore, propose the following hypotheses:

Hypothesis 3a: Agreeableness has a positive direct effect on perceived organizational justice.

Hypothesis 3b: Neuroticism has a negative direct effect on perceived organizational justice.

## Leader-member exchange

According to the LMX theory, a leader does not treat all subordinates in the same way, developing closer relationships with a relatively small group of followers (in-group) and relating more distantly with others (out-group). The quality of these exchanges is proposed to affect the leader's and the subordinates' attitudes and behaviors (Liden & Graen, 1980).

High-quality relationships have been found to be positively related to performance, retention, job satisfaction, organizational commitment, and organizational citizenship behaviors (Dulebohn et al., 2012; Gerstner & Day, 1997). On the other hand, research shows that low-quality relationships, low leadership consideration, and abusive supervision may lead to deviant behaviors (Holtz & Harold, 2013b).

Social learning theory (Bandura, 1977) provides the rationale for these results, as it suggests that employees tend to emulate the behavior of their superiors. In this sense, if an employee perceives that her/his manager is distant and thoughtless, she/he may exhibit the same lack of concern towards the organization and its members, which may lead to deviant behaviors (Holtz & Harold, 2013b). We, therefore, propose the following hypothesis:

Hypothesis 4: LMX has a negative direct effect on CWB.

Although the literature on the consequences of LMX has been fruitful, much less is known about its antecedents (Dulebohn et al., 2012; Sears & Hackett, 2011). A meta-analysis by Dulebohn, Bommer, Liden, Brouer, & Ferris (2012) showed that followers' agreeableness, conscientiousness, and extraversion were related to LMX, while Bernerth, Armenakis, Feild, Giles and Walker (2008) found that followers' neuroticism had a negative impact on LMX.

In this study, we propose that agreeable followers are more likely to develop high-quality relationships with their leaders since they tend to be kind, cooperative, and motivated to engage in fulfilling relationships. On the other hand, follower's neuroticism may have a negative effect on LMX, as these individuals tend to be anxious, negative, and hostile, which may hamper their relationships.

Hypothesis 5a: Agreeableness has a positive direct effect on LMX.

Hypothesis 5b: Neuroticism has a negative direct effect on LMX.

Based on the preceding reasoning and the associated empirical evidence, it is reasonable to assume that the influence of agreeableness and neuroticism on CWB is partly due to their effect on LMX. Individuals that have a higher level of agreeableness tend to develop high-quality relationships with their leaders, which reduces their propensity to engage in deleterious work behaviors. Similarly, employees that have higher levels of neuroticism are more likely to develop poor relationships with their leaders, which increases their propensity to engage in CWB. Moreover, as noted by González-Navarro, Zurriaga-Llorens, Olateju and Llinares-Insa (2018), when an employee with high levels of neuroticism develops a high-quality relationship with the leader, she/he may be motivated to manage these emotions, therefore reducing her/his propensity to harming behavior. Thus, we propose the following hypotheses:

Hypothesis 6a: LMX mediates the relationship between agreeableness and CWB.

Hypothesis 6b: LMX mediates the relationship between neuroticism and CWB.

The literature on human resource management (HRM) suggests that the immediate superior is frequently perceived as a 'gatekeeper,' responsible for putting into practice the HR policies of the organization (Purcell & Hutchinson, 2007; Sikora & Ferris, 2014). Thus, employees that perceive the organization to be unfair are prone to see their leaders' actions and decisions in the same light, which may lead to poor leader-subordinate relationships. The opposite would happen when



employees believe their organizations are fair. This reasoning is consistent with social exchange theory, which indicates that the dynamics of social exchange relationships may be better captured by intervening variables such as LMX (Colquitt et al., 2013; Cropanzano & Rupp, 2008).

Therefore, we propose the following hypothesis:

Hypothesis 7: Perceived organizational justice has a positive direct effect on LMX.

Colquitt, Scott, Rodell, Long, Zapata, Conlon and Wesson (2013) point to a lack of research on potential mediators of the justice-behavior relationship. One exception is El Akremi, Vandenberghe and Camerman's (2010) study, which found that LMX fully mediates the effect information and interpersonal justice on deviance. Likewise, we propose that general perceptions of unfairness within the organization may hurt the relationship with the leader – as long as she/he is seen as responsible for enacting organization's policies (Purcell & Hutchinson, 2007; Sikora & Ferris, 2014) –, driving the employee to behave inappropriately.

Hypothesis 8: LMX mediates the relationship between perceived organizational justice and CWB.

Figure 1 displays the research model and hypotheses.

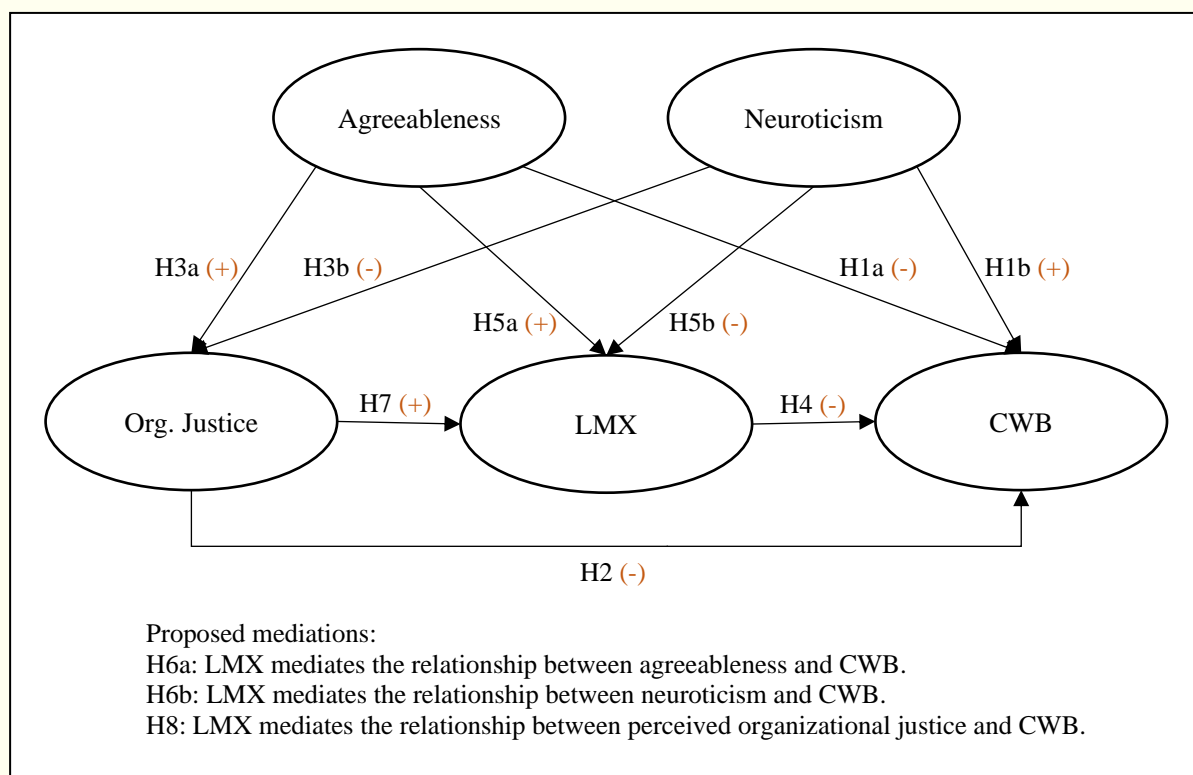


Figure 1. Research model

## METHOD

### Procedures

The research was conducted in the engineering division of a large Brazilian organization. This division encompasses a vast array of occupations, including engineers, administrators, and accountants, as well as different groups of technicians. It is also geographically dispersed, with operations in all regions of the country.

The electronic questionnaire was developed on the SurveyMonkey® platform. An invitation with a link to the questionnaire was sent by e-mail to all 3,173 employees of the division. The message informed that the survey was part of an academic study and that no information that could identify the participants would be collected. A total of 527 fully completed questionnaires were obtained, corresponding to a 16.6% response rate. In that regard, it is important to acknowledge a potential non-response bias, although the sample is representative of the population with relation to age, gender, occupation, and tenure.

We used structural equation modeling techniques to assess our hypotheses. The methods employed to prepare and analyze our data are described in detail in the results section.

### Measures

‘Counterproductive Work Behaviors’. Given the debate on the dimensionality of the CWB construct (Berry et al., 2007; Bowling & Gruys, 2010; Dalal, 2005), we chose to adapt and test a scale based on previous research (Bennett & Robinson, 2000; Gruys & Sackett, 2003; Mendonça, Flauzino, Tamayo, & Paz, 2004). Respondents were asked to inform how often in the last 12 months they engaged in 13 types of deleterious work behaviors, such as produce below own capacity and deny necessary information to a co-worker. A five-point scale, ranging from 1 (never) to 5 (always), was used.

‘Organizational Justice’. Perceived organizational justice was measured with the scale developed by Colquitt (2001). It consists of 20 questions concerning distributive, procedural, interpersonal, and informational justice. For instance, participants were asked to inform to what extent the rewards they receive reflect their contribution to the organization (distributive) and if the procedures have been free of bias (procedural). Participants were also asked to inform to what extent their supervisor treated them with respect (interpersonal) and explained the procedures thoroughly (informational). A five-point Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree), was used.

‘Leader-Member Exchange’. Leader-member exchange quality was measured with the LMX-7 scale (Graen & Uhl-Bien, 1995). It contains seven items, each one with a specific five-point scale, designed to assess the quality of the relationship between supervisors and subordinates. Items

examples include ‘how well does your leader recognize your potential?’ and ‘how well does your leader understand your job problems and needs?’

‘Personality traits’. Neuroticism and agreeableness were measured with the scales from the Big Five inventory (BFI) (John & Srivastava, 1999), using a five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). An example item for neuroticism is ‘I see myself as a person who worries a lot’ and for agreeableness is ‘I see myself as a person who is helpful and unselfish with others.’

‘Control variables’. Gender and age were entered as control variables, as they have been found to affect CWB (Berry et al., 2007; Ng et al., 2016).

## RESULTS

The sample was composed of 527 employees, of which 81% were male. The respondents’ age was between 23 and 81 years old (42.8 on average), the average tenure was 12.7 years, and 91% had at least a college degree, while the remaining 9% had only high school education. Regarding their occupations, 65.5% were in superior level positions (engineers, administrators, and accountants) and 34.5% were in technical positions.

Before evaluating the proposed model, the robust Mahalanobis distances, calculated within and across scales with the Stata 14 software, were used to identify potential outliers. The results did not reveal any atypical observations.

Exploratory factor analysis was used to assess CWB’s dimensionality. Results were obtained in SPSS version 22, using the principal component extraction method and oblimin rotation. An oblique rotation, such as oblimin, allows the latent factors to be correlated, while an orthogonal rotation, such as varimax, restricts the factors to be uncorrelated. Given that, in our analysis, the factors represented dimensions of the same construct; there was no theoretical reason to prevent them from being correlated.

The best solution included four factors, which accounted for 64.35% of the variance in the sample and covered 11 of the original indicator variables. They were labeled, as shown in Table 1. Based on the results of the EFA, we modeled CWB as a second-order, four-dimensional reflective construct when assessing the proposed hypotheses.

Table 1

**CWB — EFA factors and loadings**

Factor	Items	1	2	3	4	$h^2$
1. Withholding effort (WE)	8. Produce below own capacity.	.79				.62
	1. Stay idle instead of working.	.78				.63
	9. Pretend to be busy.	.67				.54
	3. Put little effort into your work.	.60				.66
2. Antisocial behavior (AB)	7. Deny necessary information to a co-worker.		.78			.61
	6. Influence co-workers negatively.		.76			.60
	5. Fail to collaborate with co-workers.		.66			.55
3. Poor attendance (PA)	4. Fail to go to work without reason.			.87		.75
	2. Arrive late to work on purpose.			.76		.69
4. Unethical behavior (UB)	12. Fail to comply with organizational norms.				.83	.76
	11. Use material resources of the organization for individual purposes.				.71	.68

**Note.**  $h^2$  is the commonality. The two excluded items were: 10. Be indifferent to the requests of the manager; and 13. Doing your work poorly on purpose.

A subsequent exploratory analysis of the dataset showed that the indicator variables did not meet the multivariate normality requirement of covariance-based structural equation modeling (SEM) techniques. Therefore, we opted to use partial least squares (PLS) to evaluate the proposed model. PLS is a structural equation modeling technique known for its robustness to departures from multivariate normality and ability to work efficiently with small sample sizes and complex structural and measurement models (Chin, 2010; Hair, Hult, Ringle, & Sarstedt, 2014). Model estimation and corresponding statistical tests were performed with SmartPLS version 2.0. Bootstrapping techniques (cases = 527; samples = 1,000) were employed to calculate the significance of the estimated effects.

We used the approach described by Wetzels, Odekerken-Schroder and van Oppen (2009) to evaluate the proposed model, as it included two reflective, hierarchical latent variables (organizational justice and CWB). First, to assess indicator reliability, internal consistency reliability, and convergent and discriminant validity of our measurement model, we conducted a confirmatory factor analysis (CFA) of the 11 latent variables and their 54 indicators (Tenenhaus & Hanafi, 2010). Although no cross-loading issues were detected, we had to remove ten indicators that presented low standardized loadings. The elimination process was iterative and took into consideration the trade-off between increments in reliability and convergent validity indexes, and the coverage of the domains of the constructs included in our model, as reflected by their original scales (Hair et al., 2014). The agreeableness measure was the one most affected. To obtain an average variance extracted (AVE) of at least 0.50 and have only standardized loadings close or above 0.70 (Chin, 2010; Hair, Ringle, & Sarstedt, 2013; Hair et al., 2014), seven indicators had to be removed. Nevertheless, as the two remaining indicators were both general measures of agreeableness, instead of specific facets of the domain of the construct, we decided

to maintain the corresponding latent variable in our subsequent analysis. The final results of the CFA are presented in Table 2.

Table 2

**CFA results**

First-order latent variables	Ind. (a)	Std. loadings (b)	CR	$\alpha_c$	1(c)	2	3	4	5	6	7	8	9	10	11
1. Agreeableness	2	.73-.83	.76	.37	.78										
2. CWB-PA	2	.89-.90	.84	.62	-.13	.85									
3. CWB-AB	3	.70-.80	.80	.62	-.24	.29	.75								
4. CWB-WE	4	.76-.81	.86	.78	-.15	.47	.41	.77							
5. CWB-UB	2	.82-.82	.80	.50	-.19	.27	.34	.43	.82						
6. Dist. Justice	4	.87-.91	.94	.92	.11	-.06	-.03	-.13	-.05	.90					
7. Inf. Justice	5	.75-.87	.92	.89	.20	-.10	-.14	-.19	-.06	.47	.83				
8. Int. Justice	3	.92-.94	.96	.93	.12	-.11	-.10	-.12	-.02	.38	.59	.94			
9. Proc. Justice	6	.65-.81	.87	.82	.14	-.08	-.07	-.15	-.05	.64	.63	.45	.73		
10. LMX	7	.79-.88	.94	.92	.15	-.18	-.15	-.30	-.13	.46	.71	.59	.55	.82	
11. Neuroticism	6	.67-.75	.85	.79	-.47	.17	.21	.17	.16	-.10	-.16	-.11	-.14	-.17	.70

**Note.** (a) Number of indicators. (b) Range of standardized loadings. (c) Latent variable correlations, with the square root of AVE in the diagonal.

All 44 loadings were statistically significant ( $p < 0.001$ ), with only six marginally below the 0.70 recommended threshold. Although some of the values of Cronbach's alpha were lower than 0.50, all values of composite reliability (CR) were close or above 0.80. As the latter is considered a closer approximation of internal consistency reliability under the assumption that the parameter estimates are accurate (Chin, 2010), the results suggest that our measures are reliable (Chin, 2010; Hair et al., 2013; Hair et al., 2014).

As shown in Table 2, the square root of AVE for a latent variable was greater than its correlations with the other variables. All cross-loadings values were much lower than the loadings of the indicators on their respective latent variables. These results confirm that the measurement model has acceptable discriminant validity (Chin, 2010; Fornell & Larcker, 1981; Hair et al., 2013; Hair et al., 2014). Besides, all AVE values are very close to or above the 0.50 threshold. When taken together with the values obtained for the standardized loadings, which were statistically significant and close to or above 0.70, these results indicate that our measures had acceptable convergent validity (Chin, 2010; Hair et al., 2013; Hair et al., 2014).

The analysis of the measurement model of the second-order reflective constructs (organizational justice and CWB) followed Wetzels et al.'s (2009) recommendations. The AVE and CR values were calculated considering the loadings of the first-order latent variables on the second-order latent variables. All loadings were statistically significant ( $p < 0.001$ ) and close to or above 0.70. Also, as seen in Table 3, AVE and CR values for both second-order variables were above the

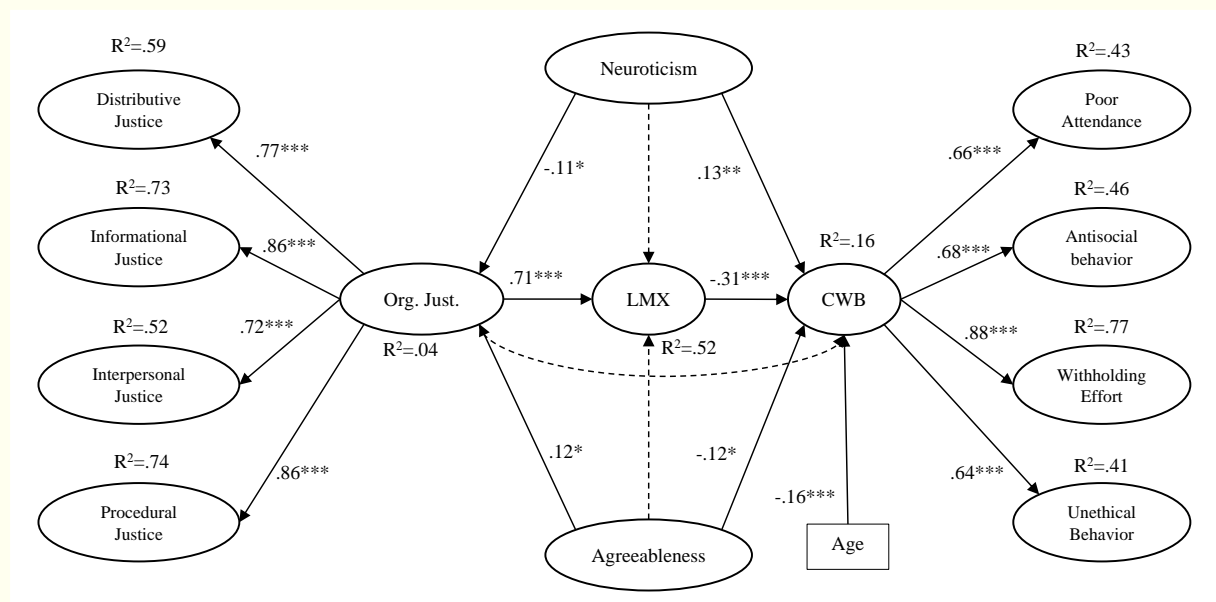
suggested limits (Chin, 2010; Hair et al., 2013; Hair et al., 2014). These results support the hierarchical reflective measurement model proposed for the organizational justice and the CWB constructs.

Table 3

**Hierarchical latent variables**

Second-order latent variables	Standardized loadings	AVE	CR
CWB	-	.52	.81
CWB-Poor attendance	.66	.72	.84
CWB-Antisocial behavior	.68	.57	.80
CWB-Withholding effort	.87	.60	.86
CWB-Unethical behavior	.64	.67	.80
Organizational justice	-	.65	.88
Distributive justice	.78	.81	.94
Informational justice	.85	.69	.92
Interpersonal justice	.71	.88	.96
Procedural justice	.86	.54	.87

Figure 2 shows the relevant standardized path coefficients and  $R^2$  values obtained for the structural model. The  $R^2$  values obtained for LMX and CWB indicate that the model explained a reasonable proportion of the variances of these two variables in our sample.

**Figure 2. Results for the structural model**

Note. N = 527; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ . The values represent completely standardized loadings.

Table 4 presents detailed information on the standardized direct effects among latent variables estimated with PLS. In line with our hypotheses, agreeableness and neuroticism had statistically significant direct effects on organizational justice and CWB (H1a and H1b, and H3a and H3b, respectively). Besides, the direct effect of LMX on CWB was statistically significant and negative, which provides empirical support for H4. Moreover, as proposed in H7, organizational justice had a strong, statistically significant direct positive effect on LMX. Our findings did not support hypotheses H2 (direct effect of organizational justice on CWB), H5a, and H5b (direct effects of agreeableness and neuroticism on LMX).

Table 4

**Direct effects**

Effects		Mean	Std. Dev.	t	p-value	95% Conf. Interval	
						Inf.	Sup.
Agreeableness → CWB	(H1a)	-.125	.055	2.25	.026	-.233	-.017
Neuroticism → CWB	(H1b)	.130	.049	2.60	.010	.034	.226
Just → CWB	(H2)	.100	.070	1.43	.153	-.037	.236
Agreeableness → Just	(H3a)	.122	.047	2.62	.009	.030	.214
Neuroticism → Just	(H3b)	-.119	.045	2.51	.013	-.206	-.032
LMX → CWB	(H4)	-.311	.060	5.18	.000	-.429	-.193
Agreeableness → LMX	(H5a)	-.009	.036	.287	.774	-.081	.062
Neuroticism → LMX	(H5b)	-.068	.035	1.94	.053	-.137	.000
Just → LMX	(H7)	.708	.027	26.0	.000	.654	.761

To assess the mediation hypotheses, we calculated the standardized indirect effects of personality and organizational justice on CWB, shown in Table 5. Contrary to what was expected, the mediating role of LMX in the effects of agreeableness and neuroticism on CWB (H6a and H6b) was not empirically supported. However, the indirect effect of organizational justice through LMX on CWB was statistically significant, supporting H8. Given that the direct effect of justice on CWB was non-significant, the relationship between these variables was completely mediated by LMX. Furthermore, both agreeableness and neuroticism had statistically significant indirect effects on CWB through organizational justice and LMX. These results suggest that part of the influence of these two personality traits on CWB is channeled by justice and LMX.

Table 5

**Indirect effects**

Indirect paths	Mean	Std. Dev.	t	p-value	95% Conf. Interval	
					Inf.	Sup.
Agr. → LMX → CWB	.003	.012	.27	.786	-.020	.026
Neur. → LMX → CWB	.021	.012	1.82	.069	-.002	.044
Just → LMX → CWB	-.220	.045	4.91	.000	-.309	-.132
Agr. → Just → LMX → CWB	-.027	.012	2.22	.027	-.051	-.003
Neur. → Just → LMX → CWB	.026	.011	2.30	.021	.004	.049

It is important to note that the estimated total effects of organizational justice, agreeableness, and neuroticism on CWB were all statistically significant and similar in intensity (-0.12, -0.14, and 0.16, respectively;  $p < 0.05$ ). However, they were much weaker than the effect of LMX (-0.31). This further underlines the prominent role of LMX as a predictor of counterproductive behaviors, even when the influence of personality and organizational justice is also taken into consideration.

Regarding the two control variables, only age had a statistically significant effect on a latent variable. As shown in Figure 1, age seems to negatively influence CWB, indicating that older employees are less likely to display deviant behaviors than their younger peers.

We employed Harman's *post hoc* single factor analysis to assess common method bias (Chang, Van Witteloostuijn, & Eden, 2010; Podsakoff & Organ, 1986). All indicators of the latent variables were entered in an explanatory factor analysis (EFA), generating 14 factors with eigenvalues above 1.0 that accounted for 62.25% of the total variance in our data. The factor with the highest eigenvalue explained only 20.86% of the variance, thus suggesting that common method variance is unlikely to have substantially biased our results.

## DISCUSSION AND CONCLUSION

The present study analyzed the combined effects of two personality traits – agreeableness and neuroticism –, organizational justice, and leader-member exchange on counterproductive work behaviors. Therefore, it gives an essential contribution to the literature on CWB, given the scarcity of research that addresses their individual and situational antecedents simultaneously (Herscovis et al., 2007).

The results indicate that agreeableness, neuroticism, and LMX have a direct impact on CWB, whereas the influence of organizational justice on the latter seems to be channeled entirely through LMX. Moreover, the effect of LMX on CWB appears to be much stronger than the total effects of the two personality traits and organizational justice, highlighting the crucial role of leaders in the psychological processes related to deviant behaviors in organizations. The quality of the relationship between leaders and subordinates was shown to be an essential causal



mechanism that connects employees' fairness perceptions to their propensity to engage in CWB. Moreover, LMX also works in tandem with organizational justice to convey the influence of agreeableness and neuroticism on CWB.

Regarding personality traits, the findings suggest that employees with high levels of agreeableness and low levels of neuroticism are more likely to exhibit CWB, corroborating previous evidence (Berry et al., 2007). These two personality traits also had significant direct effects on perceived organizational justice. In line with previous findings, the lower the employee's level of agreeableness and the higher her/his level of neuroticism, the more likely she/he is to perceive the organization as unfair (Shi, Lin, Wang, & Wang, 2009).

The lack of empirical support for a direct effect of organizational justice on CWB when LMX and personality are also taken into consideration resonates with previous research on individual and situational predictors of CWB. Holtz and Harold (2013a, p. 340) state that "perceived injustice does not always lead to deviant behavior," calling attention to the role of individual differences. Berry et al. (2007, p. 420) found that the effects of justice on CWB were low to moderate in intensity and argue that "the assertion that justice is more important in predicting deviance than personality appears to be false." (Berry et al., 2007, p. 420)

On the other hand, the findings indicate that organizational justice has a direct and positive influence on LMX. This result extends previous findings, which were restricted to interactional justice (El Akremi et al., 2010). Indeed, the HRM literature suggests that leaders are often perceived as responsible for enacting the organization's policies (Purcell & Hutchinson, 2007; Sikora & Ferris, 2014). Thus, employees who see their organization's policies as unfair may hold their leaders accountable, negatively affecting the quality of their relationship. Drawing on the literature on HRM, we provide an explanation for this phenomenon, thus contributing to the relatively scant research on the antecedents of LMX (Dulebohn et al., 2012; Sears & Hackett, 2011).

As for the role of leadership in CWB, we found only a few studies that have addressed this issue (e.g., Chernyak-Hai & Tziner, 2014; El Akremi et al., 2010). Hershcovis et al.'s (2007) meta-analysis showed a small number of studies focused on the relationship between poor leadership and workplace aggression, mostly dealing with aggressive behaviors towards the leader. Our results go further, suggesting that LMX predicts a broader range of counterproductive behaviors, not only aggression.

In line with El Akremi et al. (2010), our results also call attention to the pivotal mediation role played by LMX in processes that lead to deviant work behaviors. When employees perceive their organization to be unfair, they are likely to hold their leaders accountable – thus hurting their relationship, which in turn would stimulate them to engage in deviant behaviors. Furthermore, as both agreeableness and neuroticism influence one's perceptions of organizational justice, their effect on CWB is also partially channeled through LMX.

Regarding the debate over the dimensionality of CWB, our factor analysis provided empirical support for a four-dimensional structure. The construct's sub-dimensions are: (1) 'withholding

effort', which refers to the employee's choice to work below her/his capacity; (2) 'antisocial behavior', which pertains to her/his choice not to support her/his colleagues; (3) 'poor attendance', which involves deliberate tardiness or absenteeism; and (4) 'unethical behavior', which refers to her/his misuse of organization assets or intentional failure to comply with organizational norms. This result indicates that the organization/interpersonal dichotomy may be a simplification of a more complex phenomenon, as absenteeism, tardiness, or working below capacity may hurt both the organization as a whole and co-workers, who may become overloaded. As also proposed in the literature (e.g., Dalal, 2005), future studies should revisit the theoretical categorization of CWB and empirically verify the dimensionality of the construct.

In summary, our study provides an important contribution to the literature on CWB, given that the combined effects of individual and situational antecedents of deviant behaviors have been relatively overlooked (Hershcovis et al., 2007). We were also able to extend previous models that addressed the Justice-LMX-CWB relationships (Chernyak-Hai & Tziner, 2014; El Akremi et al., 2010). Regarding the literature on leadership, our study makes two important contributions. First, we found evidence of the influence of organizational justice on LMX and provided an explanation for this phenomenon, based on the HRM literature. Additionally, the results show that leaders may play a key role in the processes that lead to deviant behaviors in organizations.

Regarding the practical implications of our findings, they suggest that to minimize the likelihood of CWB, organizations may need to focus on selecting, training, and rewarding managers who dedicate time and effort in establishing quality relationships with their subordinates. It may also be essential to develop career management systems that favor those who are motivated to become leaders and have a genuine concern for the ones they lead. On the other hand, it may be necessary to create alternative career paths that recognize the individual contributions of employees who perform well but may not have the abilities or the motivation to manage teams.

This study has some limitations. First, our model considered only two of the Big Five personality traits – agreeableness and neuroticism –, as they were found to influence all three constructs of our model. In that regard, future studies may take into account other individual differences. Second, our relatively low response rate might have created a non-response bias. Finally, although the results of Harman's single-factor test suggest that common method variance did not significantly affect our analysis, the test itself tends to become less conservative as the number of variables increases (Podsakoff & Organ, 1986). Thus, the use of self-reports from a single source can be a limitation. Data was also collected in only one organization – although very large, diverse, and geographically dispersed –, raising concerns about the generalizability of the results. Different research designs should be devised in the future to mitigate these issues.

## REFERENCES

- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44(1), 1–26. <https://doi.org/10.1111/j.1744-6570.1991.tb00688.x>

- Bennett, R. J., & Robinson, S. L. (2000). Development of a measure of workplace deviance. *Journal of Applied Psychology*, 85(3), 349–360. <https://doi.org/10.1037/0021-9010.85.3.349>
- Bernerth, J. B., Armenakis, A. A., Feild, H. S., Giles, W. F., & Walker, H. J. (2008). The influence of personality differences between subordinates and supervisors on perceptions of LMX: An empirical investigation. *Group & Organization Management*, 33(2), 216–240. <https://doi.org/10.1177/1059601106293858>
- Berry, C. M., Ones, D. S., & Sackett, P. R. (2007). Interpersonal deviance, organizational deviance, and their common correlates: A review and meta-analysis. *Journal of Applied Psychology*, 92(2), 410–424. <https://doi.org/10.1037/0021-9010.92.2.410>
- Bowling, N. A., & Gruys, M. L. (2010). Overlooked issues in the conceptualization and measurement of counterproductive work behavior. *Human Resource Management Review*, 20(1), 54–61. <https://doi.org/10.1016/j.hrmr.2009.03.008>
- Brown, T. A. (2015). *Confirmatory Factor Analysis for Applied Research* (2<sup>nd</sup> ed). New York: Guilford Publications.
- Chang, S. J., Van Witteloostuijn, A., & Eden, L. (2010). From the editors: Common method variance in international business research. *Journal of International Business Studies*, 41(2), 178–184. <https://doi.org/10.1057/jibs.2009.88>
- Chernyak-Hai, L. & Tziner, A. (2014). Relationships between counterproductive work behavior, perceived justice and climate, occupational status, and leader-member exchange. *Journal of Work and Organizational Psychology*, 30(1), 1–12. <https://doi.org/10.5093/tr2014a1>
- Chin, W. W. (2010). How to write up and report PLS analyses. In V. E. Vinzi, W. W. Chin, J. Henseler, & H. Wang (Eds.), *Handbook of partial least squares: Concepts, methods and applications* (pp. 655–690). Berlin, Heidelberg: Springer-Verlag.
- Cohen, A. (2016). Are they among us? A conceptual framework of the relationship between the dark triad personality and counterproductive work behaviors (CWBs). *Human Resource Management Review*, 26(1), 69–85. <https://doi.org/10.1016/j.hrmr.2015.07.003>
- Cohen-Charash, Y., & Spector, P. E. (2001). The role of justice in organizations: A meta-analysis. *Organizational Behavior and Human Decision Processes*, 86(2), 278–321. <https://doi.org/10.1006/obhd.2001.2958>
- Colquitt, J. A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology*, 86(3), 386–400. <https://doi.org/10.1037/0021-9010.86.3.386>
- Colquitt, J. A., Scott, B. A., Rodell, J. B., Long, D. M., Zapata, C. P., Conlon, D. E., & Wesson, M. J. (2013). Justice at the millennium, a decade later: A meta-analytic test of social exchange and affect-based perspectives. *Journal of Applied Psychology*, 98(2), 199–236. <https://doi.org/10.1037/a0031757>
- Cropanzano, R., & Rupp, D. E. (2008). Social exchange theory and organizational justice: Job performance, citizenship behaviors, multiple foci, and a historical integration of two literatures. In S. W. Gilliland, D. P. Skarlicki, & D. D. Steiner (Eds.), *Research in social issues in management: Justice, morality, and social responsibility* (pp. 63–99). Greenwich, CT: Information Age Publishing.
- Dalal, R. S. (2005). A meta-analysis of the relationship between organizational citizenship behavior and counterproductive work behavior. *Journal of Applied Psychology*, 90(6), 1241–1255. <https://doi.org/10.1037/0021-9010.90.6.1241>
- Douglas, S. C., & Martinko, M. J. (2001). Exploring the role of individual differences in the prediction of workplace aggression. *Journal of Applied Psychology*, 86(4), 547–559. <https://doi.org/10.1037/0021-9010.86.4.547>
- Dulebohn, J. H., Bommer, W. H., Liden, R. C., Brouer, R. L., & Ferris, G. R. (2012). A meta-analysis of antecedents and consequences of leader-member exchange: Integrating the past with an eye toward the future. *Journal of Management*, 38(6), 1715–1759. <https://doi.org/10.1177/0149206311415280>
- El Akremi, A., Vandenberghe, C., & Camerman, J. (2010). The role of justice and social exchange relationships in workplace deviance: Test of a mediated model. *Human Relations*, 63(11), 1687–1717. <https://doi.org/10.1177/0018726710364163>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.1177/002224378101800104>

- Gerstner, C. R., & Day, D. V. (1997). Meta-analytic review of leader-member exchange theory: Correlates and construct issues. *Journal of Applied Psychology*, 82(6), 827–844. <https://doi.org/10.1037/0021-9010.82.6.827>
- González-Navarro, P., Zurriaga-Llorens, R., Olateju, A. T., & Llinares-Insa, L. I. (2018). Envy and counterproductive work behavior: The moderation role of leadership in public and private organizations. *International Journal of Environmental Research and Public Health*, 15(7), 1–17. <https://doi.org/10.3390/ijerph15071455>
- Gouldner, A. W. (1960). The norm of reciprocity: A preliminary statement. *American Sociological Review*, 25(2), 161–178. Retrieved from <https://www.jstor.org/stable/2092623?seq=1>
- Graen, G., & Uhl-bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *Leadership Quarterly*, 6(2), 219–247. [https://doi.org/10.1016/1048-9843\(95\)90036-5](https://doi.org/10.1016/1048-9843(95)90036-5)
- Gruys, M. L., & Sackett, P. R. (2003). Investigating the dimensionality of counterproductive work behavior. *International Journal of Selection and Assessment*, 11(1), 30–42. <https://doi.org/10.1111/1468-2389.00224>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Thousand Oaks, CA: Sage Publications.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long Range Planning*, 46(1–2), 1–12. <https://doi.org/10.1016/j.lrp.2013.01.001>
- Henle, C. A. (2005). Predicting workplace deviance from the interaction between organizational justice and personality. *Journal of Managerial Issues*, 17(2), 247–263.
- Herscovis, M. S., Turner, N., Barling, J., Arnold, K. A., Dupré, K. E., Inness, M., LeBlanc, M. M., & Sivanathan, N. (2007). Predicting workplace aggression: A meta-analysis. *Journal of Applied Psychology*, 92(1), 228–238. <https://doi.org/10.1080/02678373.2012.660770>
- Holtz, B. C., & Harold, C. M. (2013a). Interpersonal justice and deviance: The moderating effects of interpersonal justice values and justice orientation. *Journal of Management*, 39(2), 339–365. <https://doi.org/10.1177/0149206310390049>
- Holtz, B. C., & Harold, C. M. (2013b). Effects of leadership consideration and structure on employee perceptions of justice and counterproductive work behavior. *Journal of Organizational Behavior*, 34(4), 492–519. <https://doi.org/10.1002/job.1825>
- John, O. P., & Srivastava, S. (1999). The Big-Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (Vol. 2, pp. 102–138). New York: Guilford Press.
- Lazarus, R. S. (1991a). Cognition and motivation in emotion. *American Psychologist*, 46(4), 352–367. <https://doi.org/10.1037/0003-066X.46.4.352>
- Lazarus, R. S. (1991b). Progress on a cognitive-motivational-relational theory of emotion. *American Psychologist*, 46(8), 819–834. <https://doi.org/10.1037/0003-066X.46.8.819>
- Lee, K., & Allen, N. J. (2002). Organizational citizenship behavior and workplace deviance: The role of affect and cognitions. *Journal of Applied Psychology*, 87(1), 131–142. <https://doi.org/10.1037/0021-9010.87.1.131>
- Liden, R. C., & Graen, G. (1980). Generalizability of the vertical dyad linkage model of leadership. *Academy of Management Journal*, 23(3), 451–465. <https://doi.org/10.5465/255511>
- Mendonça, H., Flauzino, D. P., Tamayo, A., & Paz, M. G. T. (2004). Percepção e julgamento da retaliação organizacional: Construção e validação fatorial de um instrumento. *Estudos de Psicologia*, 9(3), 543–551. <http://dx.doi.org/10.1590/S1413-294X2004000300017>
- Mendonça, H., & Tamayo, A. (2004). Percepção de justiça e reações retaliatórias nas organizações: Análise empírica de um modelo atitudinal. *Revista de Administração Contemporânea*, 8(2), 117–135. <http://dx.doi.org/10.1590/S1415-65552004000200007>

- Moorman, R. H. (1991). Relationship between organizational justice and organizational citizenship behaviors: Do fairness perceptions influence employee citizenship? *Journal of Applied Psychology*, 76(6), 845–855. <https://doi.org/10.1037/0021-9010.76.6.845>
- Mount, M., Ilies, R., & Johnson, E. (2006). Relationship of personality traits and counterproductive work behaviors: the mediating effects of job satisfaction. *Personnel Psychology*, 59(3), 591–622. <https://doi.org/10.1111/j.1744-6570.2006.00048.x>
- Ng, T. W. H., Lam, S. S. K., & Feldman, D. C. (2016). Organizational citizenship behavior and counterproductive work behavior: Do males and females differ? *Journal of Vocational Behavior*, 93, 11–32. <https://doi.org/10.1016/j.jvb.2015.12.005>
- Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, 12(4), 531–544. <https://doi.org/10.1177/014920638601200408>
- Purcell, J., & Hutchinson, S. (2007). Front-line managers as agents in the HRM-performance causal chain: theory, analysis and evidence. *Human Resource Management Journal*, 17(1), 3–20. <https://doi.org/10.1111/j.1748-8583.2007.00022.x>
- Roberts, B. W. (2009). Back to the future: Personality and assessment and personality development. *Journal of Research in Personality*, 43(2), 137–145. <https://doi.org/10.1016/j.jrp.2008.12.015>
- Robinson, S. L., & Bennett, R. J. (1995). A typology of deviant workplace behaviors: a multidimensional scaling study. *Academy of Management Journal*, 38(2), 555–572. <https://doi.org/10.5465/256693>
- Salgado, J. F. (2002). The big five personality dimensions and counterproductive behaviors. *International Journal of Selection and Assessment*, 10(1-2), 117–125. <https://doi.org/10.1111/1468-2389.00198>
- Sears, G. J., & Hackett, R. D. (2011). The influence of role definition and affect in LMX: A process perspective on the personality-LMX relationship. *Journal of Occupational and Organizational Psychology*, 84(3), 544–564. <https://doi.org/10.1348/096317910X492081>
- Shi, J., Lin, H., Wang, L., & Wang, M. (2009). Linking the big five personality constructs to organizational justice. *Social Behavior and Personality*, 37(2), 209–222. <https://doi.org/10.2224/sbp.2009.37.2.209>
- Sikora, D. M., & Ferris, G. R. (2014). Strategic human resource practice implementation: The critical role of line management. *Human Resource Management Review*, 24(3), 271–281. <https://doi.org/10.1016/j.hrmr.2014.03.008>
- Skarlicki, D. P., & Folger, R. (1997). Retaliation in the workplace: The roles of distributive, procedural, and interactional justice. *Journal of Applied Psychology*, 82(3), 434–443. <https://doi.org/10.1037/0021-9010.82.3.434>
- Spector, P. E. (2011). The relationship of personality to counterproductive work behavior (CWB): An integration of perspectives. *Human Resource Management Review*, 21(4), 342–352. <https://doi.org/10.1016/j.hrmr.2010.10.002>
- Tenenhaus, M., & Hanafi, M. (2010). A bridge between PLS path modeling and multi-block data analysis. In Esposito Vinzi, V., Chin, W.W., Henseler, J., Wang, H. (Eds.), *Handbook of Partial Least Squares* (pp. 99–123). Springer-Verlag.
- Townsend, J., Phillips, J. S., & Elkins, T. J. (2000). Employee retaliation: The neglected consequence of poor leader-member exchange relations. *Journal of Occupational Health Psychology*, 5(4), 457–463. <https://doi.org/10.1037/1076-8998.5.4.457>
- Wetzels, M., Odekerken-Schröder, G., & van Oppen, C. (2009). Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration. *MIS Quarterly*, 33(1), 177–195. <https://doi.org/10.2307/20650284>

## Author contributions

1<sup>st</sup> author: conceptualization (supporting), data curation (supporting), project administration (lead), writing-original draft (lead), writing-review & editing (lead).

2<sup>nd</sup> author: formal analysis (lead), methodology (lead), writing-original draft (supporting).


3<sup>rd</sup> author: conceptualization (lead), data curation (lead), writing-original draft (supporting).



## Authors


### Lucia Barbosa de Oliveira \*

Fundação Getulio Vargas, Escola Brasileira de Administração Pública e de Empresas  
Rua Jornalista Orlando Dantas, 30, Botafogo, 22231-010, Rio de Janeiro, RJ, Brazil  
lucia.oliveira@fgv.br

 <https://orcid.org/0000-0001-7792-5552>


### Valter de Assis Moreno Junior

Instituto Brasileiro de Mercado de Capitais, Business Administration  
Av. Pres. Wilson, 118, Centro, 20030-020, Rio de Janeiro, RJ, Brazil  
valter.moreno@gmail.com

 <https://orcid.org/0000-0002-1782-2401>

### Rodrigo Carneiro Gonçalves

Instituto Brasileiro de Mercado de Capitais, Business Administration  
Av. Pres. Wilson, 118, Centro, 20030-020, Rio de Janeiro, RJ, Brazil  
Universidade Estadual do Rio de Janeiro, Departamento de Engenharia Industrial  
Rua S. Francisco Xavier, 524, Maracanã, 20550-900, Rio de Janeiro, RJ, Brazil  
rcg.goncalves@gmail.com

 <https://orcid.org/0000-0002-8075-3437>

\* Corresponding author

Peer review is responsible for acknowledging an article's potential contribution to the frontiers of scholarly knowledge on business or public administration. The authors are the ultimate responsible for the consistency of the theoretical references, the accurate report of empirical data, the personal perspectives, and the use of copyrighted material.

This content was evaluated using the double-blind peer review process. The disclosure of the reviewers' information on the first page is made only after concluding the evaluation process, and with the voluntary consent of the respective reviewers.