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Artículo de Investigación

Measuring Fulfillment and Breach in the Organizational Psychological Contract: The Development and Validation of a Brief Scale

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ABSTRACT

This study reports the development and psychometric validation of the Organizational Psychological Contract Fulfillment/Breach Scale (PCFBS), a brief instrument designed to assess employees' perceptions of psychological contract fulfillment and breach as two related but distinct constructs. A sample of 384 employees from public and private organizations in Puerto Rico participated in the study. The internal structure of the scale was examined using confirmatory factor analysis (CFA) and exploratory structural equation modeling (ESEM) with the WLSMV estimator. Results consistently supported a two-factor structure distinguishing fulfillment and breach over a unidimensional alternative, with robust primary loadings and minimal cross-loadings in the ESEM solution. Evidence of convergent and discriminant validity was obtained through variance-based criteria (AVE, ASV, MSV) and through theoretically consistent associations with external variables, including work engagement, job satisfaction, affective commitment, burnout dimensions, turnover intention, and social desirability. Multigroup CFA supported configural, metric, and scalar measurement invariance across gender, age, education level, job position, employment type, and organizational sector. Both subscales demonstrated strong internal consistency and score precision. Overall, the findings indicate that the PCFBS is a reliable, valid, and invariant measure suitable for assessing psychological contract fulfillment and breach in Spanish-speaking organizational contexts.

Midiendo el Cumplimiento y el Incumplimiento del Contrato Psicológico Organizacional: El Desarrollo y Validación de una Escala Breve

Palabras Clave:

Contrato Psicológico, Cumplimiento, Incumplimiento, Estructura Interna, Invarianza de Medición

RESUMEN

Este estudio presenta el desarrollo y la validación psicométrica de la Escala de Cumplimiento/Incumplimiento del Contrato Psicológico Organizacional (PCFBS), un instrumento breve diseñado para evaluar el cumplimiento y el incumplimiento del contrato psicológico como constructos relacionados pero conceptualmente distintos. Participaron 384 empleados de organizaciones públicas y privadas en Puerto Rico. La estructura interna de la escala se examinó mediante análisis factorial confirmatorio (CFA) y modelamiento exploratorio de ecuaciones estructurales (ESEM) utilizando el estimador WLSMV. Los resultados apoyaron de forma consistente una estructura de dos factores frente a un modelo unidimensional, con cargas factoriales robustas y cargas cruzadas mínimas en la solución ESEM. La validez convergente y discriminante se evidenció mediante criterios basados en varianza (AVE, ASV y MSV) y a través de asociaciones teóricamente coherentes con variables externas, tales como engagement con el trabajo, satisfacción laboral, compromiso afectivo, dimensiones del burnout, intención de renunciar al empleo y deseabilidad social. Los análisis de invarianza de medición apoyaron la invarianza configural, métrica y escalar a través de género, edad, nivel educativo, puesto, tipo de empleo y tipo de organización. Ambas subescalas mostraron adecuada consistencia interna y precisión de las puntuaciones. En conjunto, los hallazgos indican que la PCFBS es una medida válida, confiable e invariante para evaluar el cumplimiento y el incumplimiento del contrato psicológico en contextos organizacionales hispanohablantes.

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Introduction

The organizational psychological contract, defined as an individual's beliefs regarding the terms of a reciprocal exchange agreement between the employee and the organization (Rousseau, 1989), is a foundational construct in the study of workplace relationships. These beliefs encompass implicit expectations about working conditions, organizational support, career development, and other non-formalized obligations. The perceived fulfillment or breach of these expectations has significant implications for key organizational outcomes, such as job satisfaction, organizational commitment, performance, and turnover intentions (Bal et al., 2008; Zhao et al., 2007).

Within the literature, two core dimensions of the psychological contract have been consistently distinguished: fulfillment, referring to the perception that the organization has honored its promises, and breach, reflecting the perception that the organization has failed to deliver on its obligations (Conway & Briner, 2005). Although related, these dimensions represent distinct constructs and should be assessed independently to better understand their unique effects on employee attitudes and behaviors.

Despite the growing interest in psychological contract research, there remains a need for psychometrically sound instruments that assess both fulfillment and breach, especially in Spanish-speaking organizational contexts. In response to this gap, the present study aims to develop and validate the Organizational Psychological Contract Fulfillment-Breach Scale (PCFBS), which consists of two subscales with four items each: Psychological Contract Fulfillment and Psychological Contract Breach. The scale development was guided by a thorough review of the literature and current psychometric standards, resulting in a concise and contextually relevant tool for applied organizational research. This article outlines the scale construction process, confirmatory factor analysis results, and evidence of the scale's reliability and validity.

Comparative Analysis of Psychological Contract Measurement Approaches

The PCFBS focuses on two core dimensions: Psychological Contract Fulfillment and Psychological Contract Breach. This concise approach emphasizes employees' subjective perceptions of whether organizational promises have been honored or violated, aligning with Rousseau's (1989) definition of the psychological contract as individual beliefs regarding mutual obligations. By concentrating on fulfillment and breach, the scale directly assesses the emotional and behavioral consequences associated with perceived contract adherence or violation, such as job satisfaction, organizational commitment, and turnover intentions.

In contrast, the PSYCONES questionnaire developed by García-Selva et al. (2025) offers a more comprehensive assessment by encompassing four dimensions: (1) fulfillment of employer promises, (2) fulfillment of employee promises, (3) psychological contract violation (emotional responses to fulfillment or breach), and (4) perceived justice and trust within the employment relationship. This broader framework captures the bidirectional nature of psychological contracts and incorporates evaluative aspects like fairness and trust, providing a multifaceted understanding of the employer-employee dynamic. However, its length and complexity may pose challenges for practical application in time-constrained organizational settings. Similarly, Rousseau's Psychological Contract Inventory (PCI) categorizes psychological contracts into transactional, relational, balanced, and transitional types, assessing both employer and employee obligations (Rousseau, 2000). While the PCI offers a detailed typology of contract contents and expectations, its extensive nature may limit its utility for organizations seeking quick assessments of psychological contract status.

Meanwhile, the Organizational Psychological Contract Scale developed by Rosario-Hernández and Rovira-Millán (2008) provides a culturally adapted instrument tailored for Spanish-speaking contexts. This scale not only assesses employees' perceptions of employer obligations (e.g., promotions, good salary) but also requires respondents to indicate whether those obligations have been fulfilled. This dual assessment adds complexity to the instrument, as it necessitates evaluating both the perceived obligations and their fulfillment status. In contrast, the PCFBS focuses directly on employees' perceptions of fulfillment and breach, providing a more streamlined approach. By concentrating solely on the outcomes, whether promises are perceived as kept or broken, it simplifies the assessment process, making it more practical for organizations seeking efficient evaluations of psychological contract status.

Therefore, while the scale developed by Rosario-Hernández and Rovira-Millán (2008) offers a comprehensive view by capturing both expectations and fulfillment, its complexity may pose challenges in certain contexts. The PCFBS, with its concise focus, might serves as a practical alternative for

organizations aiming to monitor psychological contract perceptions effectively.

Method

Participants

A total of 384 employees participated in this instrumental research design study (Ato et al., 2013). Table 1 provides the sociodemographic and occupational characteristics of the sample. Regarding gender, 56.3% of participants identified as female, while 43.5% identified as male. In terms of age, the majority were between 31 and 50 years old (52.3%), representing individuals at the peak of their careers. Participants aged 21 to 30 years (early career stage) comprised 28.6% of the sample, while those aged 51 or older (past peak of career or near retirement) made up 19.0%. Concerning educational obtained, 46.4% reported having completed undergraduate studies, followed by 38.8% with graduate education, and 14.8% with a high school education or less. The majority of respondents (84.1%) held non-managerial positions, while only 13.8% were in managerial roles. Most participants (68.0%) had permanent employment, while 31.3% were in temporary positions. Finally, 58.1% were employed in private organizations, and 41.7% worked in the public sector. These figures suggest a relatively balanced distribution of demographic characteristics, with a workforce largely composed of mid-career, educated professionals in non-managerial roles and a slightly higher representation from the private sector. This distribution provides a meaningful basis for analyzing organizational perceptions across different employment and organizational contexts.

Table 1

Sociodemographic and occupational characteristics of the sample

Variable	Frequency	Percent
Gender		
Male	167	43.5
Female	216	56.3
Age		
21-30	111	28.9
31-50	201	52.3
≥ 51	72	18.8
Education		
≤ High School	57	14.8
Undergraduate Studies	178	46.4
Graduate Studies	149	38.8
Employment Type		
Tenure	261	68.0
Temporary	120	31.3
Organization Type		
Public	160	41.7
Private	223	58.1
Job Position		
Managerial	53	13.8
Non-Managerial	323	84.1

Note. n = 384.

Measures

Sociodemographic sheet. We developed a sociodemographic sheet to collect information about the sample characteristics, such as gender, age, education, job position, type of employment and organization.

PCFBS. The PCFBS is an 8-item instrument developed to assess employees' perceptions of the extent to which their employer has fulfilled or breached psychological contract obligations. The scale consists of two subscales: Psychological Contract Fulfillment (PCF; items 1, 4, 6 & 8) and Psychological Contract Breach (PCB; items 2, 3, 5 & 7), each comprising four items. Items from the PCF subscale reflects the perception that the organization has honored its promises (e.g., "My employer has fulfilled the commitments made to me"), whereas items from the PCB subscale reflect the perception that the organization has failed to meet its obligations (e.g., "I have not received the benefits promised by my organization"). Participants responded using a Likert-type scale ranging from 1 (Strongly disagree) to 6 (Strongly agree). Higher scores on each subscale indicate greater perceptions of fulfillment or breach, respectively. The two subscales are scored independently and are not combined into a total score, as they represent conceptually distinct constructs.

Burnout. We used the Maslach Burnout Inventory - General Scale (MBI-GS; Maslach et al., 1996) to measure burnout. The MBI uses a 7-point frequency scale (ranging from 0-never to 6-daily) to indicate the extent to which they experienced each item. The emotional exhaustion and cynicism have five items each and the professional efficacy six items. Psychometric properties of the MBI-GS have been examined in Latin America (e.g., Fernández Arata et al., 2015a, 2015b; Merino-Soto et al., 2023; Pando Moreno et al., 2015; Tomás et al., 2016) and in Puerto Rico with a sample of 2,808 employees, supporting the three-factor internal structure and obtained good reliability coefficients (Rosario-Hernández et al., 2022).

Job Satisfaction. We used the Job Satisfaction Brief Scale developed by Rosario-Hernández et al. (2022) to measure job satisfaction in general. The scale consists of four items that are answered in a Likert scale format that ranges from "Totally Disagree" to "Totally Agree" on a numerical continuum from '1' to '6.' An item example is: "I feel satisfied with my work." The authors indicated that the scale has a

unidimensional internal structure and reliability fluctuated between .77 and .78 via Cronbach's alpha and McDonald's omega.

Work Engagement. We used the Utreach Work Engagement (UWES; Schaufeli & Bakker, 2003; Schaufeli et al., 2002). The UWES is comprised of 17 items measured on a seven- point Likert scale anchored by the response options '0' =never and '6'=always. Six items comprised the vigor subscale (e.g., "At my work, I feel busting with energy'). Dedication subscale was measured with five items (e.g., "I find the work that I do full of meaning and purpose"). Finally, the remaining six items comprised the absorption subscale has been reported to fluctuate within .82 to .93 (Schaufeli & Bakker, 2003). Reliability, using Cronbach's alpha techniques, of the UWES and its subscales has been reported between .82 to .93 (Schaufeli & Bakker, 2003). Several studies carried out in Puerto Rico have used it with samples of employed people and its results support the internal structure and its reliability coefficients fluctuated between .81 to .95 using the Cronbach alpha and omega technique (e.g., Martínez-Avarado et al., 2017; Rodríguez Montalbán et al., 2011; Rosario-Hernández et al., 2021).

Turnover Intention. The Turnover Intention Scale is a brief, 4-item self-report measure developed by Rosario-Hernández et al. (2022) to assess an employee's cognitive and behavioral tendencies to voluntarily leave their current job. Items were constructed to reflect core components of turnover intention, including thoughts of quitting, willingness to leave for better opportunities, and job search behavior. Responses are rated on a 6-point Likert-type scale ranging from 1 (*Totally Disagree*) to 6 (*Totally Agree*), with higher scores indicating stronger turnover intentions. The scale demonstrated strong internal consistency (α = .858, ω = .859) and good psychometric properties, including high factor loadings ($\geq$ .70), excellent model fit indices, and full measurement invariance across gender, age, job position, organization type, and employment type. Average variance extracted (AVE) values across samples ranged from .632 to .785, indicating strong convergent validity. The scale is suitable for use in organizational research and practice as a reliable and efficient indicator of employees' intent to quit. An item example is: "If a good job opportunity appears, I would not hesitate to accept it."

Affective Commitment. Affective organizational commitment was measured using the Organizational Commitment Scale-Revised (ECO-R) developed by Rosario-Hernández (2002) and then revised by Rosario-Hernández and Rovira-Millán (2016), grounded in Meyer and Allen's (1991) three-component model of organizational commitment. The ECO-R comprises affective, normative, and continuance commitment dimensions; however, only the affective commitment subscale was used in the present study. This subscale comprises four Likert-type items that assess employees' emotional attachment to and identification with their organization, with higher scores reflecting stronger affective commitment. Previous research has reported strong internal consistency for this subscale (α = .89), and the items capture core aspects of employees' sense of belonging and emotional connection to their organization (e.g., "I feel a strong sense of belonging to my organization").

Social Desirability. We used the Social Desirability Scale (SDS) developed by Rosario-Hernández and Rovira-Millán (2002) and psychometric properties reviewed recently by Rosario-Hernández at al. (2025). The SDS is an 11-item self-report instrument used to assess the tendency to respond in a socially desirable manner rather than with complete sincerity. Items are written in a projective format (e.g., "Most people have spoken badly of others, even once"), and participants rate their agreement on a 6-point Likert scale ranging from 1 (Totally disagree) to 6 (Totally agree). It is often used to examine divergent validity in new psychological measures or to control for response bias in studies involving sensitive constructs. The SDS has demonstrated a unidimensional structure and excellent internal consistency (Cronbach's α = .86 in the original validation; α = .94 in the most recent study by Rosario-Hernández et al., 2025).

Procedure

First, authorization to carry out the research was requested to the Institutional Review Board of Ponce Health Sciences University. It was approved on February 6, 2019 with protocol number 1901004566. Participants were recruited using non-probability sampling across various public and private organizations in Puerto Rico. Organizations were contacted via email and telephone to request their collaboration with the study. Upon receiving institutional authorization, the researchers visited the participating organizations and administered the questionnaire in person during scheduled sessions approved by the respective administrations. Before completing the questionnaire, participants were provided with a printed informed consent form that

outlined the study's objectives, the voluntary nature of participation, potential risks and benefits, confidentiality of responses, and contact information for both the research team and the university's ethics committee. Only individuals who signed the consent form participated in the study. No monetary compensation was provided. Completing the questionnaire required approximately 10 to 15 minutes.

Data Analysis Strategy

Descriptive statistical analyses were conducted to examine the sociodemographic characteristics of the sample using *IBM SPSS Statistics* (Version 29). Item-level descriptive analyses were also performed, including means, standard deviations, skewness, and kurtosis. In addition, item analysis was conducted to estimate item discrimination indices, operationalized as corrected item–total correlations (also referred to as point-biserial correlations or r_{bis}).

The items of the Psychological Contract Fulfillment/Breach Scale (PCFBS) were subsequently examined using confirmatory factor analysis (CFA) and exploratory structural equation modeling (ESEM) within a structural equation modeling framework. These analyses were conducted in R using the *lavaan* and *esemComp* packages. Given the ordinal nature of the response scale, models were estimated using the weighted least squares mean- and variance-adjusted (WLSMV) estimator, which provides robust parameter estimates under conditions of non-normality and categorical indicators (Li, 2016a, 2016b).

For the ESEM analyses, an oblique target rotation was specified, allowing the latent factors to correlate while permitting the estimation of theoretically plausible cross-loadings. Target rotation facilitates the specification of an expected measurement pattern (target matrix) while estimating all factor loadings, rather than fixing cross-loadings to zero (Marsh et al., 2014). This approach is consistent with ESEM, which integrates the flexibility of exploratory factor analysis with the structural rigor of SEM and, with oblique rotation, allows correlated factors and cross-loadings to be estimated (Asparouhov & Muthén, 2009). Oblique rotations are generally recommended when theoretical expectations or empirical evidence suggest that latent factors are correlated, as they provide a more realistic representation of latent constructs (Brown, 2015).

Model fit was evaluated using a percentile-based approach to the interpretation of fit indices, as recommended by recent methodological developments (e.g., Howard et al., 2025). This approach moves beyond rigid dichotomous cutoff criteria by classifying model fit into percentile-based categories ranging from *Very Weak* to *Very Strong*, allowing for a more nuanced evaluation of model quality. Although the chi-square statistic (χ^2) was reported for completeness, it was not used as a primary indicator of model fit due to its well-documented sensitivity to sample size (Marsh et al., 1996). Consistent with established recommendations, model fit was primarily assessed using multiple complementary indices, including the Root Mean Square Error of Approximation (RMSEA), the Standardized Root Mean Square Residual (SRMR), the Comparative Fit Index (CFI), and the Tucker–Lewis Index (TLI) (Kline, 2016). These indices were compared against empirically derived percentile-based ranges to facilitate contextualized interpretation (see table 2):

Table 2

Guidelines for model fit interpretation using percentile ranges following Howard et al. (2025) recommendations

Interpretation	Fit Index			
(Percentile)	SRMR	RMSEA	CFI	TLI
Very Weak (<10)	> .100	> .100	< .900	< .900
Weak (10 - 33)	.081 - .100	.081 - .100	.900 - .920	.900 - .920
Moderate (34 - 66)	.061 - .080	.061 - .080	.921 - .950	.921 - .950
Strong (67 - 90)	.030 - .060	.030 - .060	.951 - .980	.951 - .980
Very Strong (>90)	< .030	< .030	> .980	> .980

Convergent and discriminant validity of the Psychological Contract Fulfillment/Breach Scale (PCF-BS) were examined using complementary structural and relational approaches. At the structural level, convergent and discriminant validity were assessed by computing the Average Variance Extracted (AVE), Maximum Shared Variance (MSV), and Average Shared Variance (ASV) for the two latent dimensions: Psychological Contract Fulfillment (PCF) and Psychological Contract Breach (PCB), following established recommendations for evaluating construct validity in structural equation modeling (Fornell & Larcker, 1981; Hair et al., 2019). At the relational level, additional evidence of convergent and divergent validity was examined by estimating correlations between observed scores on PCF and PCB and a set of theoretically related and unrelated external variables, consistent with contemporary validity frameworks emphasizing relations with other variables as a source of validity evidence (American Educational Research Association [AERA], American Psychological

Association [APA], & National Council on Measurement in Education [NCME], 2014)

We assessed measurement invariance of the PCFBS across gender, age, education, job position, organization type, and employment type. We tested configural invariance, metric invariance, and scalar invariance, as recommended in the literature (e.g., Byrne, 2016; Muthén & Muthén, 1998-2012; Wang & Wang, 2012). Hierarchical tests were conducted to evaluate invariance of measurement parameters. First, we examined the configural invariance model (i.e., pattern invariance), which imposes no equality constraints on model parameters and serves as the baseline for comparison. Second, we tested the weak (metric) invariance model, in which factor loadings are constrained to be equal across groups, ensuring that items are interpreted similarly. Lastly, we evaluated strong (scalar) invariance by constraining both factor loadings and item intercepts, thus allowing for valid latent mean comparisons.

Model fit at each step was evaluated using the SRMR, CFI), and TLI. The RMSEA was not used as an evaluative criterion due to its well-documented tendency to overestimate model misfit in models with small degrees of freedom, even when the specified model is correctly formulated (Kenny et al., 2015). Accordingly, greater interpretative weight was placed on CFI, TLI, and SRMR, which have been shown to be more stable and informative under such conditions (Howard et al., 2025; Hu & Bentler, 1999). Measurement invariance was assessed by examining changes (Δ) in these fit indices across nested models. Following established recommendations, invariance was supported when changes did not exceed ΔCFI and ΔTLI ≤ .010, along with ΔSRMR ≤ .030 for metric invariance and ≤ .015 for scalar invariance (Chen, 2007; Cheung & Rensvold, 2002). Although chi-square statistics (χ^2) were reported for completeness, they were not used as primary indicators of model fit given their high sensitivity to sample size (Rigdon, 1995).

Finally, we performed descriptive analysis for the PCFBS to estimate means, standard deviation, and range of scores. Also, we conducted reliability analysis using internal consistency via Cronbach's alpha and McDonald's omega, standard error of measurement and 95% confidence interval for the scale.

Results

Descriptive Statistics and Discrimination Index

Table 3 presents the descriptive statistics and item-total correlation coefficients (r_{bis}) for each item of the PCF-BS. The mean scores ranged from 2.55 (PC-7) to 3.14 (PC-6), suggesting moderate endorsement of the items overall. Standard deviations were relatively consistent across items (ranging from 1.44 to 1.63), indicating a reasonable spread of responses. Most items demonstrated acceptable levels of skewness and kurtosis, remaining within ±1.5 (e.g., George & Mallery, 2016; Kline, 2016; Tabachnick & Fidell, 2019), which supports the assumption of approximate normality. Meanwhile, all items showed acceptable item discrimination, with item-total correlation coefficients ranging from .54 (PC-7) to .73 (PC-4 and PC-6). These results suggest that the items were effective in distinguishing between respondents with higher and lower levels of perceived fulfillment or breach of psychological contract (e.g., DeVellis & Thorpe, 2022; Spector, 1992). Particularly, items PC-4 ("has delivered on everything it promised") and PC-6 ("all promises made at time of hiring have come true") demonstrated the highest discrimination power, further supporting their central role in measuring perceived contract fulfillment.

CFA and ESEM

To examine the internal structure of the Psychological Contract Fulfillment/Breach Scale, a series of competing measurement models were tested using CFA and ESEM. Specifically, a unidimensional model, a two-factor CFA model distinguishing fulfillment and breach, and a two-factor ESEM model allowing for theoretically plausible cross-loadings were estimated and compared. This approach enabled a rigorous evaluation of the dimensionality of the scale while accounting for the complex and potentially overlapping nature of psychological contract perceptions. The competing models are illustrated in Figure 1.

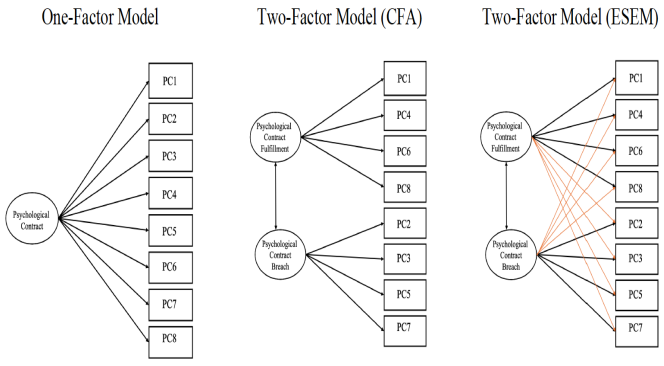

Figure 1. Competitive models of the Psychological Contract Fulfillment-Breach Scale.

Table 3

Descriptive statistics and discrimination index (r_{bis}) of the Organizational Psychological Contract Fulfillment/Breach Scale's items

#	Item	Mean	SD	Skew	Kur	r_{bis}
PC-1	Mi organización ha cumplido con la mayoría de las promesas que me hizo cuando me reclutó. *"My organization has kept most of the promises it made to me when it recruited me."*	2.61	1.44	0.623	-0.469	.72
PC-2	Mi organización ha fallado en cumplir con todas las promesas que me hizo al momento de contratarme. *"My organization has failed to deliver on all the promises it made to me when it hired me."*	2.65	1.52	0.583	-0.630	.68
PC-3	**No** he recibido todo lo que me prometieron al momento de contratarme en mi organización. *"I have not received everything that was promised to me when I was hired by my organization."*	2.75	1.59	0.455	-0.918	.67
PC-4	Hasta este momento, mi organización ha cumplido con todo lo que me prometió al contratarme. *"Up to this point, my organization has delivered on everything it promised to hire me."*	2.96	1.52	0.388	-0.755	.73
PC-5	Mi organización ha roto muchas de las promesas hechas al contratarme a pesar de yo cumplir con las mías. *"My organization has broken many of the promises made when hiring me despite my keeping mine."*	2.68	1.60	0.573	-0.763	.70
PC-6	Todas las promesas hechas por mi organización al momento de contratarme, las he visto cumplirse cada una de ellas. *"All the promises made by my organization at the time of hiring me, I have seen each one of them come true."*	3.14	1.63	0.173	-1.108	.73
PC-7	Los acuerdos a los cuales llegamos al momento de mi contratación **nunca** han sido cumplidos por mi organización. *"The agreements we reached at the time of my hiring have never been fulfilled by my organization."*	2.55	1.48	0.680	-0.417	.54
PC-8	Mi organización es una de palabra, ya que ha cumplido con todas sus promesas contractuales hechas al contratarme. *"My organization is one of its word, since it has fulfilled all its contractual promises made when hiring me."*	3.07	1.57	0.325	-0.903	.65

Note. n=384.

Table 4

Standardized Factor Loadings and Model Fit Indices for the One-Factor, Two-Factor CFA, and Two-Factor ESEM Models

Model/ Item (Subscale)	1-Factor	2-factor (CFA)		2-Factor (ESEM)	
		PCF	PCB	PCF	PCB
PC1 (PCF)	.820	**.857**		**.810**	-.046
PC4 (PCF)	.872	**.899**		**.928**	.041
PC6 (PCF)	.870	**.896**		**.964**	.087
PC8 (PCF)	.790	**.822**		**.907**	.104
PC2 (PCB)	-.796		**.859**	-.030	**.825**
PC3 (PCB)	-.791		**.851**	.072	**.918**
PC5 (PCB)	-.798		**.865**	-.035	**.827**
PC7 (PCB)	-.664		**.726**	.095	**.814**
Inter-factor Correlation		-.716		-.750	
Fit Index					
χ^2 (df)	601.019 (20)	103.765 (19)		111.068 (13)	
SRMR	.100	.026		.020	
RMSEA (CI)	.254 (.236 - .273)	.096 (.079 - .114)		.108 (.087 - .130)	
CFI	.790	.971		.975	
TLI	.706	.958		.947	

Note. n = 384; *df* = Degree of Freedom, PCF = Psychological Contract Fulfillment, PCB = Psychological Contract Breach.

Table 4 presents the standardized factor loadings and model fit indices for the one-factor, two-factor CFA, and two-factor ESEM models tested to evaluate the internal structure of the Psychological Contract Fulfillment/Breach Scale (PCFBS). As shown, both the CFA and ESEM two-factor models demonstrated superior fit compared to the unidimensional solution. Specifically, the two-factor CFA model yielded excellent fit indices (CFI = .971, TLI = .958, SRMR = .026), while the two-factor ESEM model showed similarly strong fit (CFI = .975, TLI = .947, SRMR = .020), with slightly improved CFI and SRMR values, supporting the distinctiveness of the PCF and PCB constructs. In contrast, the one-factor model showed poor fit (CFI = .790, TLI = .706, SRMR = .100), suggesting that fulfillment and breach should not be treated as a single dimension. Additionally, the inter-factor correlations in the two-factor CFA (r = -.716) and ESEM (r = -.750) models indicate a substantial but not redundant relationship between the two constructs. Loadings were strong and cleanly patterned, especially in the ESEM solution where all items loaded most strongly on their intended factor, reinforcing the discriminant validity of the two-factor structure.

Convergent/Discriminant Validity and Relation to Other Variables

Convergent and discriminant validity of the Psychological Contract Fulfillment/Breach Scale were first examined using variance-based criteria derived from the two-factor CFA model. For Psychological Contract Fulfillment (PCF), the Average Variance Extracted was .76, exceeding both the Maximum Shared Variance (MSV = .51) and the Average Shared Variance (ASV = .51). Similarly, for Psychological Contract Breach (PCB), the AVE value (.68) was greater than the corresponding MSV (.51) and ASV (.51). This pattern indicates that each latent construct accounted for a greater proportion of variance in its indicators than it shared with the other construct, providing evidence of adequate convergent and discriminant validity at the structural level.

Additional evidence of convergent and divergent validity was obtained by examining correlations between Psychological Contract Fulfillment (PCF), Psychological Contract Breach (PCB), and a set of theoretically related and unrelated external variables (see Table 5). As expected, the PCF and PCB subscales were strongly and negatively correlated (r = –.578, p < .01), supporting their conceptual distinction despite being inversely related. Psychological contract fulfillment (PCF) was positively and significantly associated with work engagement (r = .320), job satisfaction (r = .370), affective commitment (r = .342), and professional efficacy (r = .221), while negatively associated with emotional exhaustion (r = –.231), cynicism (r = –.309), and turnover intention (r = –.313), all at p < .01. These correlations are consistent with the theoretical expectation that fulfillment of psychological contracts contributes to positive work-related outcomes and reduces strain-related attitudes and intentions to quit.

Conversely, psychological contract breach (PCB) was negatively associated with work engagement (r =

–.310), job satisfaction (r = –.371), affective commitment (r = –.214), and professional efficacy (r = –.179), and positively related to emotional exhaustion (r = .244), cynicism (r = .338), and turnover intention (r = .328), all significant at p < .01. These results further support the construct validity of the PCB subscale, indicating that breach perceptions are linked to negative occupational outcomes. Importantly, neither PCF nor PCB was significantly correlated with social desirability, suggesting that response bias did not meaningfully influence participants' responses.

Table 5

Correlation of the Organizational Psychological Contract Fulfillment/Breach Scale with other variables

Scale/Subscale	PCF	PCB
Psychological Contract Fulfillment (PCF)	1	-.578**
Psychological Contract Breach (PCB)	-.578**	1
Work Engagement	.320**	-.310**
Job Satisfaction	.370**	-.371**
Affective Commitment	.342**	-.214**
Professional Efficacy	.221**	-.179**
Emotional Exhaustion	-.231**	.244**
Cynicism	-.309**	.338**
Turnover Intention	-.313**	.328**
Social Desirability	.026	-.038

Note. n = 384, *p < .05, **p < .01.

Measurement Invariance Across Groups

Table 6 presents the results of multigroup confirmatory factor analyses (MG-CFA) conducted to evaluate measurement invariance of the Psychological Contract Fulfillment/Breach Scale across gender, age, education level, occupational position, employment type, and organizational sector. A stepwise sequence of increasingly restrictive models was estimated, including tests of configural, metric, and scalar invariance. Across all grouping variables, configural invariance was supported, indicating a comparable factorial structure of the scale across groups. When equality constraints on factor loadings were imposed, some metric models showed temporary declines in incremental fit indices; however, these changes were not progressive across invariance levels. Importantly, the subsequent scalar models consistently demonstrated stable or improved fit relative to the metric models. Consistent with contemporary guidelines emphasizing the evaluation of overall patterns of model fit rather than rigid cutoff criteria (Cheung & Rensvold, 2002; Chen, 2007), the observed changes in incremental fit indices did not indicate substantive deterioration in model fit. Overall, the pattern of results supports configural, metric, and scalar invariance of the Psychological Contract Fulfillment/Breach Scale across all examined sociodemographic and occupational groups, indicating that factor loadings and item thresholds operate equivalently across groups and that comparisons of latent means are psychometrically justified.

Table 6

Measurement invariance of the Psychological Contract Fulfillment/Breach Scale by sociodemographic and occupational variables

Model	χ^2 (*df*)	SRMR	CFI	TLI	Ref. Model	$\Delta\chi^2$	ΔSRMR	Δ CFI	ΔTLI
Gender (Male/Female)									
1. Configural	150 (38)	.034	.958	.938	-----	-----	-----	-----	-----
2. Metric	167 (44)	.042	.932	.932	1	+17	+.008	-.026	-.006
3. Scalar	131 (74)	.034	.993	.993	2	-36	-.008	+.061	+.061
Age (21-30/31-50/≥51)									
1. Configural	201 (57)	.041	.936	.905	-----	-----	-----	-----	-----
2. Metric	282 (69)	.061	.911	.892	1	+81	+.020	-.025	-.013
3. Scalar	220 (129)	.041	.986	.991	2	-62	-.020	+.075	+.099
Education ($\leq HS/UGS/GS$)									
1. Configural	167 (57)	.035	.955	.933	-----	-----	-----	-----	-----
2. Metric	239 (69)	.053	.933	.919	1	+72	+.018	-.022	-.014
3. Scalar	223 (129)	.036	.985	.990	2	-16	-.017	+.052	+.071
Employment (Tenure/Temporary)									
1. Configural	151 (38)	.033	.957	.937	-----	-----	-----	-----	-----
2. Metric	147 (44)	.038	.952	.932	1	-4	+.005	-.005	-.005
3. Scalar	146 (74)	.034	.988	.991	2	-1	-.004	+.036	+.059
Organization Type (Public/ Private)									
1. Configural	137 (38)	.033	.958	.938	-----	-----	-----	-----	-----
2. Metric	163 (44)	.038	.944	.928	1	+26	+.005	-.014	-.010
3. Scalar	133 (74)	.033	.990	.992	2	-30	-.005	+.046	+.064
Position (Managerial/Non-Managerial)									
1. Configural	133 (38)	.036	.954	.932	-----	-----	-----	-----	-----
2. Metric	201 (44)	.047	.933	.915	1	+68	+.011	-.021	-.017
3. Scalar	168 (74)	.036	.986	.989	2	-33	-.011	+.053	+.074

Note. n = 384; *df* = Degree of Freedom, HS = High School, UGS = Undergraduate Studies, GS = Graduate Studies; RMSEA was not used as an evaluative criterion due to the small degrees of freedom of the tested models.

Reliability and Descriptive Statistics of the PCFBS

Table 7 presents descriptive statistics, reliability estimates, standard errors of measurement, and corresponding 95% confidence intervals for the Psychological Contract Fulfillment (PCF) and Psychological Contract Breach (PCB) subscales. Both subscales demonstrated adequate central tendency and variability, with mean scores of 16.22 (SD = 5.39) for PCF and 10.63 (SD = 5.17) for PCB, within the possible score range of 4 to 24. Internal consistency estimates were strong for both dimensions. Cronbach's alpha and McDonald's omega were identical for PCF (α = .898; ω = .898) and highly similar for PCB (α = .856; ω = .859), indicating reliable score precision across reliability indices. The standard error of measurement was relatively small for both subscales (SEM = 1.72 for PCF; SEM = 1.96 for PCB), corresponding to narrow 95% confidence intervals (±3 for PCF; ±4 for PCB). Together, these results indicate that the PCF and PCB subscales yield reliable and precise scores suitable for both research and applied settings.

Table 7

Reliability, descriptive statistics, possible range 95% confidence intervals of the Organizational Psychological Contract Fulfillment/Breach Scale

Statistic/Subscale	PCF	PCB
Number of Items	4	4
Mean	16.22	10.63
Standard Deviation	5.39	5.17
Possible Range	4 - 24	4 - 24
Reliability		
Cronbach' alpha	.898 (.871 - .921)	.856 (.818 - .884)
McDonald's omega	.898 (.871 - .921)	.859 (.823 - .890)
Standard Error of Measurement	1.72	1.96
95% Confidence Interval	±3	±4

Note. n=384.

Discussion

The present findings provide strong evidence supporting the internal structure of the Psychological Contract Fulfillment/Breach Scale. Results from confirmatory factor analysis consistently favored a two-factor model distinguishing psychological contract fulfillment and psychological contract breach over a unidimensional alternative, which demonstrated substantially poorer model fit. This pattern aligns with theoretical and empirical work conceptualizing fulfillment and breach as distinct yet closely related components of the psychological contract (Conway & Briner, 2005; Rousseau, 1989; Zhao et al., 2007). The two-factor CFA model yielded strong and well-defined factor loadings, supporting the discriminability of the two dimensions. Complementary analyses using exploratory structural equation modeling further reinforced this interpretation. Although the ESEM model allowed for cross-loadings, these were generally small and theoretically coherent, while primary loadings remained robust and clearly differentiated across factors. The convergence of CFA and ESEM findings is consistent with contemporary recommendations advocating the use of ESEM to evaluate the robustness of CFA solutions in the presence of potential item complexity, without undermining the substantive interpretation of the primary factor structure (Asparouhov & Muthén, 2009; Marsh et al., 2014). Collectively, these results indicate that the internal structure of the scale is best represented by two correlated latent dimensions rather than a single global construct.

Evidence for the convergent and discriminant validity of the Psychological Contract Fulfillment/Breach Scale was supported at both the structural and relational levels. At the structural level, the AVE values for both psychological contract fulfillment and breach exceeded conventional thresholds, indicating that a substantial proportion of item variance was explained by their respective latent constructs (Fornell & Larcker, 1981). Moreover, for each dimension, AVE values were greater than both the MSV and the ASV, providing clear evidence of discriminant validity and supporting the empirical distinctiveness of fulfillment and breach despite their strong negative association. These findings are consistent with contemporary psychometric recommendations emphasizing the joint evaluation of AVE, MSV, and ASV when assessing construct validity in latent variable models (Hair et al., 2019).

The pattern of associations between the Psychological Contract Fulfillment/Breach Scale (PCFBS) and external variables provides further evidence of its convergent and discriminant validity. As theorized, psychological contract fulfillment was positively related to adaptive work-related outcomes, including work engagement, job satisfaction, affective commitment, and professional efficacy, whereas psychological contract breach showed negative associations with these constructs. Conversely, breach was positively associated with maladaptive outcomes such as emotional exhaustion, cynicism, and turnover intention, while fulfillment exhibited inverse relationships with these indicators of strain and withdrawal. This differential pattern of correlations is fully consistent with psychological contract theory, which posits that fulfilled obligations foster positive reciprocal attitudes and motivation, whereas perceived breaches undermine trust and generate adverse emotional and attitudinal responses (Conway & Briner, 2005; Rousseau, 1989).

These findings align closely with prior empirical research and meta-analytic evidence demonstrating that psychological contract fulfillment is associated with higher job satisfaction, organizational commitment, and engagement, whereas breach is linked to burnout, cynicism, and increased intentions to leave the organization (Bal et al., 2008; Clinton & Guest, 2014; Lee et al., 2011; Zhao et al., 2007). More recent studies conducted in general working populations have similarly shown that fulfillment predicts adaptive motivational states and well-being, while breach is a robust predictor of emotional exhaustion and disengagement (Topa et al., 2022; Yu, 2022). The convergence between the present results and this broader body of literature reinforces the construct validity of the PCFBS and supports its use as a theoretically grounded measure of psychological

contract perceptions. Importantly, both fulfillment and breach demonstrated negligible associations with social desirability, suggesting that responses to the PCFBS are not substantially influenced by socially desirable responding. This finding provides additional evidence of discriminant validity and indicates that the observed relationships with work-related outcomes are unlikely to be attributable to response bias (King & Bruner, 2000). The lack of association with social desirability is particularly relevant given the evaluative nature of psychological contract perceptions and strengthens confidence in the interpretability of the scale scores (Paulhus, 2014; Podsakoff et al., 2003). Taken together, the present findings provide converging evidence that the PCFBS captures meaningful and distinct aspects of psychological contract fulfillment and breach that are systematically related to relevant organizational outcomes while remaining largely independent of socially desirable response tendencies.

The scale also demonstrated scalar measurement invariance across gender, age, educational level, job position, organizational type, and employment status. This finding supports the conclusion that the PCFBS functions equivalently across diverse groups, permitting valid comparisons of latent means and reinforcing its utility in organizational diversity research (Byrne, 2016; Chen, 2007). The absence of significant associations with social desirability also suggests that responses to the scale were not notably biased by response distortion.

Compared to existing instruments, the PCFBS offers several practical advantages. While comprehensive tools like the PSYCONES questionnaire (García-Selva et al., 2025) and Rousseau's PCI (2000) provide broad assessments of the psychological contract, their complexity and length may limit feasibility in applied contexts. In contrast, the PCF/BS provides a concise yet theoretically grounded alternative that isolates perceptions of fulfillment and breach in a clear, interpretable format. Moreover, unlike Rosario-Hernández and Rovira-Millán's (2008) scale, which simultaneously assesses perceived obligations and their fulfillment status, the PCF/BS focuses strictly on perceived outcomes. This approach streamlines assessment and reduces cognitive burden for respondents, increasing its applicability for organizational surveys and academic research.

Theoretical and Practical Implications

The findings of this study contribute to the theoretical refinement of psychological contract research by reinforcing the conceptual distinction between fulfillment and breach as separate yet interrelated constructs. The strong empirical support for the two-factor structure of the PCF-BS provides further evidence that these constructs should not be treated as opposite ends of a single continuum but rather as distinct psychological processes with unique antecedents and consequences. This distinction aligns with dual-process models of employee perception and appraisal, where positive and negative experiences exert independent effects on attitudes and behavior (e.g., Conway & Briner, 2005). By offering a parsimonious and psychometrically robust measure that isolates each construct, the PCFBS enables researchers to more precisely test models of psychological contract theory and to examine mechanisms through which fulfillment and breach influence organizational outcomes.

From a practical standpoint, the Psychological Contract Fulfillment–Breach Scale (PCFBS) offers organizations an efficient and psychometrically sound tool for monitoring employees' perceptions of psychological contract dynamics. Its brevity and ease of administration make it particularly suitable for incorporation into organizational climate surveys, performance evaluations, and employee engagement assessments (Naidoo et al., 2019). Notably, the scale's structure allows for the independent assessment of fulfillment and breach, which is essential for identifying specific organizational areas where expectations are being met or violated, an important distinction often overlooked in previous approaches (Conway & Briner, 2005; Topa et al., 2022). This diagnostic clarity can guide targeted interventions, such as enhancing onboarding processes, improving managerial communication, or implementing training focused on expectation management (Rousseau, 2001). Furthermore, the PCFBS has demonstrated measurement invariance across sociodemographic and occupational groups, enabling equitable application across diverse employee populations and supporting inclusive HR practices that rely on fair and unbiased tools (Putnick & Bornstein, 2016; Rocabado et al., 2020).

Strengths, Limitations, and Future Directions

This study contributes to the field by providing a psychometrically validated, efficient measure of psychological contract dynamics in Spanish-speaking organizational contexts. The use of multiple validity indicators, multigroup invariance testing, and a percentile-based approach to model fit interpretation enhances the methodological rigor of the findings (Howard et al., 2025). Furthermore, the inclusion of a diverse and occupationally heterogeneous sample

strengthens the generalizability of results within Puerto Rico and potentially across similar labor markets.

Nonetheless, some limitations warrant consideration. First, the cross-sectional nature of the data limits the ability to draw causal conclusions about the directionality of relationships between psychological contract perceptions and workplace outcomes (Maxwell & Cole, 2007; Spector, 2019). Longitudinal or experimental designs are needed to more robustly assess causal pathways. Second, although the sample included diverse occupational roles and sectors, the generalizability of findings across cultural and national contexts remains to be tested, as psychological contract content and interpretations may vary significantly across cultures (Schalk & Rousseau, 2001; Thomas et al., 2003). Third, the exclusive reliance on self-report measures raises the possibility of common method variance (CMV); although the low correlations with social desirability reduce this concern, CMV remains a potential limitation in psychological research using single-source data (Conway & Lance, 2010; Podsakoff et al., 2003).

Future research should explore the predictive validity of the PCFBS through longitudinal designs that track how psychological contract perceptions change over time and predict key outcomes such as engagement, turnover, or well-being (De Vos et al., 2003; Zhao et al., 2007). Examining the dynamics of fulfillment and breach in response to organizational events, such as leadership transitions, restructuring, or crises, may yield valuable insights into how employees update their psychological contracts in fluctuating environments (Robinson & Morrison, 2000; Conway & Briner, 2005). Moreover, integrating the PCFBS into broader theoretical models of employee engagement (Kahn, 1990) or psychological safety (Edmondson, 1999) could enhance understanding of how perceived contract fulfillment or violation shapes core elements of the employee experience in modern organizations.

Conclusion

In conclusion, the PCFBS is a valid, reliable, and invariant tool that effectively captures employees' perceptions of organizational promise-keeping and violation. By distinguishing between fulfillment and breach in a concise format, this instrument facilitates nuanced understanding of workplace experiences and their implications for employee outcomes. Its solid psychometric foundation makes it a valuable asset for both researchers and practitioners seeking to evaluate psychological contract dynamics across a variety of organizational settings.

References

American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (2014). *Standards for educational and psychological testing*. Washington, DC: American Educational Research Association.

Asparouho, T. & Muthén, B. (2009). Exploratory structural equation modeling. Structural Equation Modeling, 16(3), 397-438. https://doi.org/10.1080/10705510903008204

Ato, M., López, J. J. & Benavente, A. (2013). Un sistema de clasificación de los diseños de investigación en psicología. *Anales de Psicología, 29*(3), 1038-1059. https://doi.org/10.6018/analesps.29.3.178511

Bal, P. M., Chiaburu, D. S., & Jansen, P. G. W. (2010). Psychological contract breach and work performance: Is social exchange a buffer or an intensifier? *Journal of Managerial Psychology, 25*(3), 252-273. https://doi.org/10.1108/02683941011023730

Brown, T. A. (2015). *Confirmatory factor analysis for applied research* (2nd ed.). The Guilford Press.

Byrne, B. M. (2016). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. New York, NY: Routledge.

Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling, 14*, 464-504. https://psycnet.apa.org/doi/10.1080/10705510701301834

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal, 9*(2), 233-255. https://doi.org/10.1207/S15328007SEM0902_5

Clinton, M.E. & Guest, D.E. (2014). Psychological contract breach and voluntary turnover: Testing a multiple mediation model. *Journal of Occupatonal and Organizational Psychology, 87*(1), 200-2007. https://doi.org/10.1111/joop.12033

Conway, N., & Briner, R. B. (2005). *Understanding psychological contracts at work: A critical evaluation of theory and research*. Oxford University Press.

Conway, J. M., & Lance, C. E. (2010). What reviewers should expect from authors regarding common method bias in organizational research. *Journal of Business and Psychology, 25*(3), 325-334. https://doi.org/10.1007/s10869-010-9181-6

DeVellis, R.F. & Thorpe, C.T. (2022). *Scale development: Theory and application*. Los Angeles, CA: SAGE Publications.

De Vos, A., Buyens, D., & Schalk, R. (2003). Psychological contract development during organizational socialization: Adaptation to reality and the role of reciprocity. *Journal of Organizational Behavior, 24*(5), 537-559. https://doi.org/10.1002/job.205

Edmondson, A. (1999). Psychological Safety and Learning Behavior in Work Teams. *Administrative Science Quarterly*, *44*(2), 350-383. https://doi.org/10.2307/2666999

Fernández Arata, M., Merino Soto, C., & Guimet Castro, M. (2015a). Propiedades psicométricas del Maslach Burnout Inventory-General Survey en una muestra de docents de Lima (Perú). *Homenaje a Reynaldo Alarcón*, 371-391. Editorial Universal.

Fernández Arata, M., Juárez-García, A., & Merino Soto, C. (2015b). Análisis structural e invarianza de medición del MBI-GS en trabajadores peruanos. *Liberabit, 21*(1), 9-20.

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/10.2307/3151312

García-Selva, A., Martín-del-Río, B., & Ramos-López, J. (2025). Revisiting psychological contract measurement: Validation of the PSYCONES questionnaire. *Social Sciences, 14*(3), 181. https://doi.org/10.3390/socsci14030181

George, D., & Mallery, P. (2016). *IBM SPSS Statistics 23 Step by Step: A Simple Guide and Reference*. New York: Routledge.

Hair, J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2019). *Multivariate data analysis*. Hampshire, UK: Cengage.

Howard, M. C., Boudreaux, M., Cogswell, J., Manix, K. G., & Oglesby, M. T. (2025). A literature review of model fit and model comparisons with confirmatory factor analysis: Formalizing the informal in organizational science. *Applied Psychology, 74*(1), e12592. https://doi.org/10.1111/apps.12592

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1-55. https://doi.org/10.1080/10705519909540118

Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal, 33*(4), 692-724. https://doi.org/10.2307/256287

Kenny, D. A., Kaniskan, B., & McCoach, D. B. (2015). The performance of RMSEA in models with small degrees of freedom. *Sociological Methods & Research*, *44*(3), 486-507. https://doi.org/10.1177/0049124114543236

King, M. F., & Bruner, G. C. (2000). Social desirability bias: A neglected aspect of validity testing. *Psychology & Marketing*, 17(2), 79-103. https://doi.org/10.1002/(SICI)1520-6793(200002)17:2<79::AID-MAR2>3.0.CO;2-0

Kline, R.B. (2016). *Principles and practice of structural equation modeling*. New York, NY: The Guilford Press.

Lee, J., Liu, Y., Rousseau, D. M., Hui, C., & Chen, Z. X. (2011). Inducements, contributions, and fulfillment in new employee psychological contracts. *Human Resource Management, 50*(2), 201-226. https://doi.org/10.1002/hrm.20415

Li, C.H. (2016a). Confirmatory factor analysis with ordinal data: Comparing robust maximum likelihood and diagonally weighted least squares. *Behavioral Research Methods, 48*(3), 936-949. https://doi.org/10.3758/s13428-015-0619-7

Li, C.-H. (2016b). The performance of ML, DWLS, and ULS estimation with robust corrections in structural equation models with ordinal variables. *Psychological Methods, 21*(3), 369-387. https://doi.org/10.1037/met0000093

Marsh, H. W., Balla, J. R., & Hau, K. T. (1996). An Evaluation of Incremental Fit Indexes: A Clarification of Mathematical and Empirical Properties. In G. A. Marcoulides, & R. E. Schumacker (Eds.), *Advanced Structural Equation Modeling Techniques* (pp. 315-

353). Mahwah, NJ: Lawrence Erlbaum.
Marsh, H. W., Morin, A. J., Parker, P. D., & Kaur, G. (2014). Exploratory structural equation modeling: an integration of the best features of exploratory and confirmatory factor analysis. *Annual Review of Clinical Psychology*, *10*, 85-110. https://doi.org/10.1146/annurev-clinpsy-032813-153700
Martínez Alvarado, L.Y., Rosario-Hernández, E., & Rovira-Millán, L.V. (2017). La relación entre la inseguridad laboral y el bienestar psicológico en una muestra de asistentes de vuelo: El papel moderador del engagement en el trabajo. *Ciencias de la Conducta, 32*(1), 99-127.
Maslach, C., Jackson, S. E., and Leiter, M. P. (1996). Maslach Burnout Inventory manual. Palo Alto, CA: Consulting Psychologists Press.
Maxwell, S. E., & Cole, D. A. (2007). Bias in cross-sectional analyses of longitudinal mediation. *Psychological Methods, 12*(1), 23-44. https://doi.org/10.1037/1082-989X.12.1.23
Merino-Soto, C., Calderón-De la Cruz, G., & Fernández-Arata, M. (2023). Maslach Burnout Inventory-General Survey's abbreviated measurement: Validation in Peruvian teachers. Occupational Health Science, 7(3), 631-644. https://doi.org/10.1007/s41542-023-00149-9
Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review, 1*(1), 61-89. https://doi.org/10.1016/1053-4822(91)90011-Z
Muthén, L. K., and Muthén, B. O. (1998–2012). *Mplus User's Guide*. Los Angeles, CA: Muthén & Muthén.
Naidoo, V., Abarantyne, I., & Rugimbana, R. (2019). The impact of psychological contracts on employee engagement at a university of technology. *SA Journal of Human Resource Management, 17*, a1039. https://doi.org/10.4102/sajhrm.v17i0.1039
Pando Moreno, M., Aranda Beltrán, C., & López Palomar, M.R. (2015). Validez factorial del Maslach Burnout Inventory-General Survey en ocho paises latinoamericanos. *Ciencia y Trabajo, 17*(52), 28-31.
Paulhus, D. L. (2014). Toward a taxonomy of dark personalities. *Current Directions in Psychological Science, 23*(6), 421-426. https://doi.org/10.1177/0963721414547737
Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879-903. https://doi.org/10.1037/0021-9010.88.5.879
Putnick, D. L., & Bornstein, M. H. (2016). Measurement invariance conventions and reporting: The state of the art and future directions for psychological research. *Developmental Review, 41*, 71-90.
Rigdon, E. E. (1995). A necessary and sufficient identification rule for structural models estimated in practice. *Multivariate Behavioral Research, 30*(3), 359-383. https://doi.org/10.1207/s15327906mbr3003_4
Robinson, S. L., & Morrison, E. W. (2000). The development of psychological contract breach and violation: A longitudinal study. *Journal of Organizational Behavior, 21*(5), 525-546. https://doi.org/10.1002/1099-1379(200008)21:5<525::AID-JOB40>3.0.CO;2-T
Rocabado, G. A., Komperda, R., Lewis, J.E., & Barbera, J. (2020). Addressing diversity and inclusion through group comparisons: A primer on measurement invariance testing. *Chemistry Education Research and Practice, 21*(3), 969-988.
Rodwell, J., & Ellershaw, J. (2024). Suggesting Context Differences Influence the Impact of Nurses' Psychological Contracts. *Social Sciences*, *13*(1), 40. https://doi.org/10.3390/socsci13010040
Rodríguez Montalbán, R., Martínez Lugo, M.E., Andújar Rojas, C.A. (2011, marzo). *Análisis de las Propiedades de la Escala de Engagement en el Trabajo de Utrecht en un grupo de empleados/as en Puerto Rico*. Ponencia presentada en el Primer Congreso de PsicologíaIndustrial Organizacional de Puerto Rico: "Acciones Estratégicas para la Gestión del Capital Humano," Ponce, Puerto Rico.
Rosario-Hernández, E. (2002). Desarrollo y validación de la Escala de Compromiso Organizacional (ECO). *Revista Puertorriqueña de Psicología, 13*, 185-198.
Rosario-Hernández, E. & Rovira-Millán, L.V. (2002). Desarrollo y validación de una escala para medir actitudes hacia el retiro. *Revista Puertorriqueña de Psicología, 13*, 45-60.

Rosario-Hernández, E., & Rovira Millán, L. V. (2008). Desarrollo y validación de la Escala de Contrato Psicológico Organizacional. *Revista Caribeña de Psicología, 1*(1), 16-23.
Rosario-Hernández, E., Rovira Millán, L.V., & Blanco-Rovira, R.A. (2022). Development and validation of the Job Satisfaction Brief Scale. *Revista Caribeña de Psicología, 6*, e6191. https://doi.org/10.37226/rcp.v6i1.6191
Rosario-Hernández, E., Rovira Millán, L.V., & Blanco-Rovira, R.A. (2022). *Turnover intention: The development and validation of a brief scale*. Unpublished manuscript.
Rosario-Hernández, E., Rovira Millán, L.V., & Blanco-Rovira, R.A. (2025). *Review of the psychometric properties of the Social Desirability Scale and the development of a short-form*. *Revista Caribeña de Psicología, 9,* e13313. https://doi.org/10.37226/rcp.v9i1.13313
Rosario-Hernández, E., Rovira Millán, L.V., & Merino-Soto, C. (2021). Review of the Internal Structure, Psychometric Properties, and Measurement Invariance of the Work-Related Rumination Scale - Spanish Version. *Frontiers in Psychology, 12*. https://www.frontiersin.org/article/10.3389/fpsyg.2021.774472
Rosario-Hernández, E., Rovira-Millán, L. V., Merino-Soto, C., Fantauzzi, S., Estrada, N., & Cervoni, A. (2022). *Review of the internal structure, psychometric properties, and measurement invariance of the Maslach Burnout Inventory-General Survey (MBI-GS) in a sample of employees in Puerto Rico*. Paper presented at the 5th Congress of Industrial- Organizational Psychology of Puerto Rico, March 24-26, 2022, Pontifical Catholic University of Puerto Rico, Ponce, Puerto Rico.
Rousseau, D. M. (1989). Psychological and implied contracts in organizations. *Employee Responsibilities and Rights Journal, 2*(2), 121-139. https://doi.org/10.1007/BF01384942
Rousseau, D. M. (2000). *Psychological contract inventory technical report*. Carnegie Mellon University. https://www.andrew.cmu.edu/user/rousseau/0_reports/PCI3.pdf
Schalk, R., & Rousseau, D. M. (2001). Psychological contracts in employment. In N. Anderson, D. S. Ones, H. K. Sinangil, & C. Viswesvaran (Eds.), *Handbook of industrial, work & organizational psychology* (Vol. 2, pp. 133-142). Thousand Oaks, CA Sage Publications.
Schaufeli, W., & Bakker, A. (2003). *Utrecht work engagement scale: Preliminary manual*. Utrecht: Occupational Health Psychology Unit, Utrecht University.
Schaufeli, W.B., Salanova, M., González-Romá, V., Bakker, A.B. (2002). The measurement of engagement and burnout: A confirmative analytic approach. *Journal of Happiness Studies, 3*, 7-92. https://doi.org/10.1023/A:1015630930326
Spector, P. E. (1992). *Summated rating scale construction: An introduction*. Newbury Park, CA: SAGE Publications.
Tabachnick, B. G., & Fidell, L. S. (2019). *Using multivariate statistics*. New York, NY: Pearson.
Thomas, D. C., Au, K., & Ravlin, E. C. (2003). Cultural variation and the psychological contract. *Journal of Organizational Behavior, 24*(5), 451-471. https://doi.org/10.1002/job.209
Tomás, J.M., de los Santos, S., Alonso-Andrés, A., & Fernández, I. (2016). Validation of the Maslach Burnout Inventory-General Survey on a representative sample of Dominican teachers: Normative data. *The Spanish Journal of Psychology, 19*, e83, 1-9. https://doi.org/10.1017/sjp.2016.91
Topa, G., Aranda-Carmena, M., & De-Maria, B. (2022). Psychological Contract Breach and Outcomes: A Systematic Review of Reviews. *International journal of environmental research and public health*, *19*(23), 15527. https://doi.org/10.3390/ijerph192315527
Wang, J. & Wang, X. (2012). *Structural Equation Modeling Applications Using Mplus.* Chichester: John Wiley & Sons Ltd. http://dx.doi.org/10.1002/9781118356258
Yu J. (2022). Impacts of psychological contract fulfillment on work attitudes and behaviors during the COVID-19 pandemic: mediating role of perceived organizational support. *Current Psychology*, 1-10. https://doi.org/10.1007/s12144-022-03746-z
Zhao, H., Wayne, S. J., Glibkowski, B. C., & Bravo, J. (2007). The impact of psychological contract breach on work-related outcomes: A meta-analysis. *Personnel Psychology, 60*(3), 647-680. https://doi.org/10.1111/j.1744-6570.2007.00087.x

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