Article

Development and Validation of the Positive Organizational Culture Scale (POC-S)

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ABSTRACT

Background: The aim of this study is to develop, analyse and validate the factor structure of the Positive Organizational Culture Scale (POC-S) within the industrial sector in a Spanish automotive company. **Method:** The scale was developed and validated through exploratory and confirmatory factor analyses, involving blue- and white-collar workers. The POC-S consists of six factors: Open Communication and Support (OC&S), Strategic Knowledge (SK), Trust and Collaboration (T&C), Learning Orientation (LO), Recognition (REC), and Resilience (RES). **Results:** Results demonstrate high reliability and construct validity of the scale, with significant inter-scale correlations suggesting consistent relationships between its dimensions. **Conclusions:** This tool facilitates deeper understanding of the impact of organizational culture on workplace dynamics and employee well-being, providing a robust framework for organizational diagnostics and targeted interventions.

Desarrollo y Validación de la Escala de Cultura Organizacional Positiva (E-COPo)

RESUMEN

Antecedentes: El objetivo de este estudio es desarrollar, analizar y validar la estructura factorial de la Escala de Cultura Organizacional Positiva (E-COPo) en el sector industrial en una compañía automotriz española. **Método:** La escala fue desarrollada y validada a través de análisis factoriales exploratorios y confirmatorios, involucrando a empleados de cuello blanco y azul. La POC-S consta de seis factores: Comunicación Abierta y Apoyo, Conocimiento Estratégico, Confianza y Colaboración, Orientación al Aprendizaje, Reconocimiento y Resiliencia. **Resultados:** Los resultados demuestran una alta fiabilidad y validez de constructo de la escala, con correlaciones significativas entre las subescalas que sugieren relaciones coherentes entre sus dimensiones. **Conclusiones:** Esta herramienta facilita una comprensión más profunda del impacto de la cultura organizacional en la dinámica laboral y el bienestar de los empleados, proporcionando un marco robusto para diagnósticos organizacionales e intervenciones específicas.

In the dynamic business landscape of the 21st century, the concept of organizational culture is emerging as a fundamental element to address in order to determine organizational success and sustainability (Laniado, 2017; Omprasad, 2021). Among its multiple facets, organizational culture stands out as an essential construct, defining the work atmosphere, shaping interactions, policies, and business strategies (Abdullah et al., 2021; Ramezannia et al., 2022).

Promoting behaviors related to open communication, support, trust and recognition is fundamental to organizational success (Farmanesh & Zargar, 2021; Flores, 2022; Nielsen, 2022). When these behaviors are integrated in organizational practices and policies, they enrich the work environment and drive the development and well-being of individuals within the organization (Cooper et al., 2018). Nagibina et al. (2021), examined the impact of well-being management on communication and trust. These values foster a healthy, motivating work environment and correlate with increased productivity (Avey et al., 2011), innovation (King et al., 2001), and talent retention (Berson et al., 2014).

The focus on "positive organizational culture" (POC) is, therefore, a recognition that companies are not only economic entities, they are also human communities whose success significantly depends on the psychological and emotional well-being of their members (Murthy, 2014; Pelealu, 2022). By prioritizing a culture based on positive aspects, organizations can unlock the full potential of their employees, fostering a virtuous cycle of growth, satisfaction, and achievement (Choi & Baik, 2023; Fahreza et al., 2023).

Background of the Construct of Positive Organizational Culture

The term "Positive Organizational Culture" was introduced in academic literature to denote a culture that is particularly beneficial for aspects such as performance and employee satisfaction, as well as healthy human resource practices (Shim, 2010). Despite its growing recognition, the construct still lacks a clear operational definition detailing its specific components and characteristics.

Traditionally, the concept of culture in the organizational context has been defined as the way things are done within an organization, shaping the expectations, norms, and behaviors of employees (Cooke & Szumal, 1993; Verbeke et al., 1998). However, there are several theories and models that have attempted to theoretically shape the construct of POC. For example, Luthans (2002) proposal on positive organizational behavior is presented as "the study and application of positive psychological capabilities and human strengths that can be measured, developed, and effectively managed to improve performance in the workplace" (p. 59). This perspective could include positive culture, although it does not explicitly define it.

The HERO model, focused on the concept of HEalthy & Resilient Organization (Salanova et al., 2012, 2019), focuses on a range of well-being indicators such as healthy organizational practices and resources, healthy employees, and organizational outcomes. According to this model, HEROs are defined as "organizations that make systematic, planned, and proactive efforts to improve the health of employees using good practices" (Salanova et al., 2012). The HERO model could conceptualize different aspects of POC as a practice that promotes well-being and resilience between other variables related to psychosocial factors.

Finally, Cameron (2003) proposes that a positive organizational environment is one that fosters virtues such as optimism, forgiveness, trust, and compassion. This approach highlights specific practices that could define the behaviors of a positive culture, and it has been shown that these practices are related to greater effectiveness and productivity (Cameron et al., 2011; Redelinghuys et al., 2018).

Despite its increasing recognition, POC still lacks a clear operational definition that details its specific components and characteristics. This underscores the pressing need to develop a robust conceptual framework, aligned with Applied Positive Psychology. The creation of a specific questionnaire to measure this construct would be a crucial step towards standardization and practical application in the organizational field.

Measurement of Organizational Culture and the Need for New Instruments

The measurement of organizational culture has been a key focus in both academic and business contexts. Various methods and tools have been developed to capture its complexities and dynamics. Common approaches include surveys and questionnaires, such as the Organizational Culture Assessment Instrument (OCAI) by Cameron & Quinn (2006), which assesses four types of organizational cultures: Clan, Adhocracy, Market, and Hierarchy. Another example is the Denison Organizational Culture Survey (Denison, 1990), focusing on areas like Mission, Adaptability, Involvement, and Consistency, relating them to organizational effectiveness. Hofstede's cultural dimensions (Hofstede, 1980) and the Schneider Culture Model (Schneider, 1994) help companies understand cultural preferences, values, and impacts on the work environment. Qualitative methods like interviews and document analysis are also common, providing detailed insights into how values and norms manifest in daily practices (Munizu et al., 2023).

Existing instruments like the OCAI often focus on broad dimensions, which can lead to general interpretations of culture (Hidayat, 2023; Lumbantoruan et al., 2018). The Denison survey may not fully capture the dynamism of real-time culture and relies on perceptions rather than observed practices, suggesting the use of qualitative methods for a fuller picture (Strengers et al., 2022). Hofstede's dimensions and the Schneider Culture Model, while useful, may be too general and fail to capture individual or team differences, which are essential for understanding organizational culture at a granular level (Escandón-Barbosa et al., 2022). Additionally, Hofstede's model, based on data from 1970, may be outdated and less transferable to different contexts. Schneider's model focuses on perceptions, omitting specific behaviors necessary for practical changes (Schaubroeck et al., 1998; Schneider, 1987).

Traying to solve these limitations, the instrument that we propose, the Positive Organizational Culture Scale (POC-S), focusing on observable behaviors, represents a significant evolution in measuring organizational culture from the perspective of Positive Psychology. This instrument departs from traditional methods that rely only on subjective self-reports, choosing instead to assess observable behaviors in the workplace. To enhance objectivity and reliability, self-reports are complemented with insights from focus groups, providing qualitative data to ensure a comprehensive understanding of organizational culture.

By dividing culture into different distinct factors, the POC-S not only enables a more specific and targeted assessment of key areas of organizational culture but also underscores the importance of building and maintaining a work environment that promotes openness, support, strategic knowledge, trust, collaboration, learning, recognition, and resilience.

The need for a new instrument like the POC-S arises from the growing understanding that a POC is a critical component for sustainable success (Ahsan, 2024; Amayreh, 2023; Choiriah & Sudibyo, 2020). A tool that directly evaluates behaviors reflecting this positive culture allows for precise and evidence-based interventions in the science of positive organizational psychology. Therefore, the POC-S positions itself as an innovative tool for business leaders and researchers seeking to promote an organizational culture that is productive and enables employees to thrive and reach their full potential.

Based on that, this study aims to develop and validate the POC-S by identifying and defining its key dimensions and components, structuring the scale to incorporate these identified dimensions, and validating the scale using appropriate statistical methods to ensure its reliability and validity. Consequently, we propose the following hypothesis 1: The POC-S is expected to exhibit satisfactory psychometric properties, specifically in terms of validity and reliability (H1).

Method

Participants

The general study sample consisted of a total of 1208 workers from an automotive industry in Spain. Participants were divided into two samples. Sample 1 consisted of 418 employees hired in the Body and Stamping department of a Spanish automotive organization, out of which 878 employees (47.6%) were selected to participate in the evaluation process. Respondents' organizational tenure ranged from 0.6 to 38 years, with an average of 10.14 years (SD = 7.55). The participants' age ranged from 27 to 68 years, with the following distribution: 18–35 years (22.5%), 36–45 years (42.8%), 46–55 years (29.4%), and over 55 years (5.3%). The gender distribution was basically male (95%). Secondly, sample 2 consisted of 790 employees who were recruited from various departments (Body & Stamping, Material Planning & Logistics, Engines, Assembly, Quality, Paintshop, Launch, IT, Maintenance, Distribution, Human Resources and Finance) within the same Spanish automotive organization than sample 1. This organization had a total workforce of 6512 employees, representing approximately 12.13% of the total workforce. The size of the departments varied, ranging from 14 to 1928 employees, with an average of 394 employees (SD = 563.34). The participant's organizational tenure ranged from 0.6 to 35 years, with an average of 10.83 years (SD = 7.85). Regarding age distribution, participant's ages ranged from 21 to 61 years, falling within the following categories: 18-35 years (16.7%), 36-45 years (47.8%), 46-55 years (31.5%), and over 55 years (3.9%). In terms of gender, the sample consisted primarily of male (84.4%).

Instruments

Positive Organizational Culture Scale (POC-S): to create and develop this instrument, 48 initial items were established. These items were created based on the company's key values, which are: Put People First, Do the Right Thing, Be Curious, Create Tomorrow, Play to Win, Built Tough Organization, One Team & The Plan. From the definition of each of these values, manageable constructs from psychology were derived according to the literature, and with these constructs, the final items were constructed. For the first application of the questionnaire in Sample 1 only one initial dimension was expected, the one formed by the construct of POC itself.

To ensure the appropriateness of the items in reflecting the concept of POC and to establish content validity, a panel of external judges with expertise in the field of organizational psychology reviewed the 48 initial items, and an exploratory factor analysis was developed. Once the exploratory factor analysis provided a structure with the items evaluated by experts, these same experts assessed the adequacy of the items for each factor as well as their alignment with the conceptualization of the factors. After this process, only 24 items were selected and 6 new dimensions were proposed (Table 1) and evaluated with Sample 2: Open communication and support (OC&S) (9 items, α = .95), Strategic knowledge (SK) (3 items, α = .89), Trust and collaboration (T&C) (4 items, α = .86), Learning orientation (LO) (3 items, α = .88), Recognition (REC) (3 items, α = .89) and Resilience (RES) (6 items, α = .89).

Participants rate the behavioral/attitudinal statements using a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Healthy Employees were assessed by seven items included in the HERO-Check questionnaire, the short version of the HERO (HEalthy & Resilient Organizations) questionnaire (Salanova et al., 2012). Seven different variables were considered, with one item in each (α = .72): (1) efficacy beliefs, (2) work engagement, (3) resilience, (4) optimism, (5) burnout, (6) vertical trust and (7) horizontal trust. An example of item is "The degree to which you usually expect the best in difficult times, are optimistic about the future, and generally expect more good things to happen than bad". A 7-point Likert-type scale ranging from 0 (*never*) to 6 (*always*) was used.

Organizational Outcomes were assessed by two items included in the HERO (HEalthy & Resilient Organizations) questionnaire (Salanova et al., 2012). Two different dimensions were considered, with one item in each (r = .32; p < .001): (1) in-role performance, and (2) organizational commitment. An example of item is "The degree to which you feel committed to the organization and its outcomes, feel proud to belong to the organization, and have the desire to remain in it". A 7-point Likert-type scale ranging from 0 (*never*) to 6 (*always*) was used.

Procedure

This study was conducted within an organization, starting with a pilot at the Body plant to assess the project's feasibility and make necessary adjustments before full implementation. To obtain the sample in an industrial sector organization, a comprehensive plan was developed in collaboration with production-linked plants, facilitating the participation of line employees without disrupting the production flow.

Table 1
Final Version of Positive Organizational Culture Scale (POC-S)

Item	Open communication and support
1	At my work information is conveyed with sincerity and respect.
2	At my work worker's values align with those of the organization.
3	At my work critical thinking is valued.
4	At my work information flows freely among individuals regardless of their position.
5	At my work individuals are important to the company.
6	At my work trust is placed in employees.
7	At my work errors can be acknowledged without fear of judgment.
8	At my work errors do not generate discomfort or burden.
9	At my work concern and care for employees are present.
Item	**Strategic knowledge**
10	At my work the company's mission and vision are known.
11	At my work the company's goals are understood.
12	At my work the organization's priorities are known.
Item	**Trust and collaboration**
13	At my work there is enough trust with colleagues to share personal concerns.
14	At my work workers respect and take care of each other.
15	At my work positive work relationships are developed both inside and outside the company.
16	At my work teamwork is embraced whenever necessary.
Item	**Learning orientation**
17	At my work efforts are made to extract learnings from challenges and difficulties.
18	At my work questions are asked to learn more when aspects of the work generate doubts.
19	At my work the reasons and purpose behind activities are sought.
Item	**Recognition**
20	At my work well-done job is recognized.
21	At my work work is valued and acknowledged.
22	At my work achievements are celebrated.
Item	**Resilience (adaptability in work)**
23	At my work the ability to overcome obstacles on the go is present.
24	At my work adaptation to changing demands and realities is observed.

Item	
25	At my work different perspectives are adopted to solve the same problem until resolved.
26	At my work energy, confidence, and composure are maintained in stressful moments.
27	At my work a positive and optimistic perspective towards the future is maintained.
28	At my work awareness of the physical or mental burden of the work being performed exists.
Item	**Discarded**
29	At my work people put themselves in others' shoes.
30	At my work resources are provided to perform and improve tasks.
31	At my work there is an awareness of how the work performed impacts the client.
32	At my work help is offered selflessly.
33	At my work team members are encouraged to always act with integrity.
34	At my work inequalities or conflicts are resolved fairly.
35	At my work there are equal opportunities regardless of origin, culture, or gender.
36	At my work self-learning is encouraged and resources are provided for it.
37	At my work possible obstacles that might arise when establishing a work plan are anticipated.
38	At my work ideas or solutions are proposed when a point of improvement is detected.
39	At my work solutions centered on people are offered.
40	At my work innovation is promoted and facilitated.
41	At my work hope is maintained when difficulties arise.
42	At my work challenges are perceived as a source of motivation.
43	At my work commitments are fulfilled.
44	At my work it is known how the work impacts different areas or departments.
45	At my work it feels like a big family.
46	At my work there is enough trust with supervisors to share personal concerns.
47	At my work many areas are involved to carry out some actions.
48	At my work new ideas, initiatives, or methodologies are rewarded.

The main variable, POC-S, was derived through a thematic analysis of existing cultural contents (values, ethical code, history, context) following the criteria set by Braun & Clarke (2006). Additionally, a literature review relevant to Organizational Culture was conducted as recommended by McCoach et al. (2013). The steps included: (1) familiarization with the organizational context through focus groups, interviews, and organizational documentation; (2) an extensive literature review on Organizational Culture; (3) review of the organization's cultural content including mission statements and policies; (4) generation of codes to capture significant data units; (5) thematic search to identify recurring patterns and themes using a grounded theory approach; and (6) definition and assignment of appropriate names to the identified themes.

During the implementation process of the POC-S, the Qualtrics platform was utilized for survey administration. Prior approval from the company was obtained to conduct data collection within their organizational context. The study was conducted in accordance with GDPR regulations, with approval from the University's Ethics Committee.

Data Analyses

Initially, an exploratory factor analysis (EFA) was carried out with Sample 1 to ascertain the number of factors to be extracted, applying the maximum likelihood estimation method and parallel analysis. Finally, the factor structure of the POC-S was scrutinized through confirmatory factor analysis (CFA) with Sample 2, adopting the maximum likelihood estimation method as well. The goodness-of-fit for the proposed structures was determined by the chi-square (χ^2) test, normalized χ^2, Comparative Fit Index (CFI), Non-Normed Fit Index (NNFI), Tucker-Lewis Index (TLI), Incremental Fit Index (IFI), Root Mean Square Error of Approximation (RMSEA) with a 90% confidence interval, adhering to the fit criteria and thresholds set by the European Journal of Psychological Assessment (Schweizer, 2010). We used IBM SPSS Amos 26 (Arbuckle, 1997). Regarding the RMSEA, values below .05 are considered to denote excellent fit, around .08 are deemed as reflecting an acceptable fit, and values above .10 are grounds for model dismissal (Browne & Cudeck, 1993). For the relative fit indices, figures exceeding .90 are seen as

indicative of satisfactory model fit, following Hu and Bentler (1999). The evaluation also covered reliability, as well as discriminant and convergent validity assessments using Composite Reliability (CR) and Average Variance Extracted (AVE) across all proposed models. Moreover, Maximum Shared Variance (MSV) values were detailed for both sets of six-factor solutions. The analysis adhered to the established cutoff points outlined in Hair et al. (2010). In the confirmatory factor analysis, Pearson's correlation was initially used to construct the correlation matrix. To further assess the internal consistency and validity of each factor, polychoric correlations were also employed. Additionally, to explore the discriminative capacity of the scale, we conducted an Analysis of Variance (ANOVA) by gender and age, providing a comprehensive evaluation of the scale's performance across different demographic groups. Finally, concurrent validity was ensured through an analysis of correlations between the POC-S and the different variables of Healthy Employees and Organizational Outcomes, both factors belonging to the HERO-Check questionnaire.

Secondly, we reviewed descriptive statistics, which means, standard deviations, skewness, kurtosis, and Pearson correlation coefficients for all the study variables in the last version of the scale. Internal consistency was assessed by computing Cronbach's Alpha and McDonald's Omega for each subscale of the POC-S by using IBM SPSS 26 (IBM Corp, 2019).

Results

Table 2 presents the descriptive statistics and reliability tests for the final questionnaire items structure with six distinct factors obtained after exploratory factor analysis: OC&S, SK, T&C, LO, REC and RES. Following Field (2009), we computed Keyser-Meyer-Olkin test to measure for sampling adequacy (KMO= .973) and Bartlett's test of sphericity ($\chi^2 = 15050.052$, $df = 1128$, $p < .001$) and both tests proved the adequacy of the data for further analyses. Consistent with Streiner's (2003) criteria, the alpha (α) and omega (ω) coefficients for each subscale demonstrate excellent reliability, all registering values well above the .70 and below .95 threshold, indicating robust internal consistency. Notably, none of the subscale items exhibited a negative discrimination index, suggesting a positive association with their respective scales. Furthermore, the internal consistency of the

Table 2
Descriptive Information of the Scales and Reliability Test Results (n = 790)

		M	*SD*	*S*	*K*	Discr. index	α	α when item is dropped	ω when item is dropped	OC&S	SK	T&C	LO	REC	RES
															rs correlations
OC&S	Item1	2.61	1.20	-0.62	-0.49	.81		.94	.93	1	-.65 (< .001)***	.70 (< .001)***	.80 (< .001)***	.80 (< .001)***	.83 (< .001)***
	Item2	2.44	1.11	-0.48	-0.42	.75		.94	.94						
	Item3	2.31	1.21	-0.35	-0.77	.81		.94	.93						
	Item4	2.14	1.32	-0.21	-1.11	.77		.94	.94						
	Item5	2.41	1.33	-0.46	-0.96	.77	.95	.94	.94						
	Item6	2.63	1.19	-0.72	-0.33	.84		.94	.93						
	Item7	2.29	1.30	-0.34	-1.00	.80		.94	.93						
	Item8	2.03	1.23	-0.05	-0.94	.75		.94	.94						
	Item9	2.46	1.24	-0.53	-0.69	.81		.94	.93						
SK	Item1	2.73	1.09	-0.84	0.25	.86		.79			1	.50 (< .001)***	.65 (< .001)***	.59 (< .001)***	.63 (< .001)***
	Item2	2.78	1.08	-0.93	0.43	.84	.89	.81	.90						
	Item3	2.88	1.02	-0.90	0.51	.68		.94							
T&C	Item1	2.88	1.03	-0.91	0.44	.75		.81	.81			1	.63 (< .001)***	.59 (< .001)***	.66 (< .001)***
	Item2	2.74	1.06	-0.79	0.07	.75	.86	.81	.81						
	Item3	2.54	1.11	-0.62	-0.23	.67		.84	.85						
	Item4	3.13	0.95	-1.19	1.20	.67		.84	.84						
LO	Item1	2.76	1.06	-0.87	0.37	.77		.84					1	.72 (< .001)***	.76 (< .001)***
	Item2	2.82	1.04	-0.89	0.44	.79	.88	.81	.88						
	Item3	2.70	1.13	-0.74	-0.18	.76		.85							
REC	Item1	2.30	1.28	-0.38	-0.96	.86		.79						1	.73 (< .001)***
	Item2	2.23	1.30	-0.32	-1.08	.75	.89	.88	.90						
	Item3	2.18	1.23	-0.30	-0.85	.76		.87							
RES	Item1	3.10	0.85	-1.12	1.81	.69		.88	.88						1
	Item2	2.82	0.99	-0.77	0.31	.76		.87	.87						
	Item3	2.78	0.99	-0.75	0.34	.74	.89	.87	.89						
	Item4	2.62	1.15	-0.65	-0.39	.76		.87	.86						
	Item5	2.68	1.12	-0.79	-0.01	.69		.88	.88						
	Item6	2.20	1.31	-0.19	-1.14	.69		.88	.88						

Note. OC&S = Open Communication and Support; SK = Strategic Knowledge; T&C = Trust and Collaboration; LO = Learning Orientation; REC = Recognition; RES = Resilience (adaptability in work); Confidence intervals for reliability statistics were built on 95% of confidence; *** *p* < .001.

different factors, as measured by both alpha and omega coefficients, did not show any increase upon the hypothetical removal of any single item. This underlines the contribution of each item to the overall scale coherence. Additionally, inter-scale correlations are significant and strong ranging from .50 to .83, with all *p*-values being less than .001, reflecting the meaningful relationships among the different facets of POC. Only the correlations between OC&S and SK shows a negative relationship. Floor effects (percentage of individuals with the minimum score = 0) were less than 15% across all dimensions. Ceiling effects (percentage of subjects with the maximum score = 4) were notable in LO and REC dimensions, indicating limitations in the scale's ability to capture variability in these constructs. These same results also indicate that all categories obtained enough responses, showing an adequate distribution of frequencies.

Table 3 delineates the Confirmatory Factor Analysis (CFA) goodness-of-fit indices for two distinct models. The six-factor model (Model 2), representing the refined version of the POC-S, exhibited superior fit compared to the single-factor Model (Model 1) as evidenced by the Comparative Fit Index (CFI) and Incremental Fit Index (IFI), with values surpassing the .90 benchmark suggestive of an excellent model fit. The high TLI and NNFI values in Model 2 indicate a strong model. The RMSEA pointed to a more favorable fit for Model 2 compared to Model 1, with a notable decrease in the RMSEA value. Adhering to the guidelines set forth by Cheung and Rensvold (2002), a cutoff value of .01 for changes in TLI and CFI is generally accepted as a decisive criterion for model selection. As such, the enhanced relative fit indices and the parsimonious nature of Model 2 dictated its selection as the definitive version of the scale, particularly given that the single-factor model (Model 1) did not approach acceptable fit indices.

Figure 1 shows the final factor structure of the POC-S and the factor loadings of each item in Model 2. All items demonstrated significant factor loadings, indicating that each contributes meaningfully to the variability of the latent factor. All absolute standardized loadings in this model exceed the value of .40, which

Figure 1
Factor Model and CFA Results for Model 2
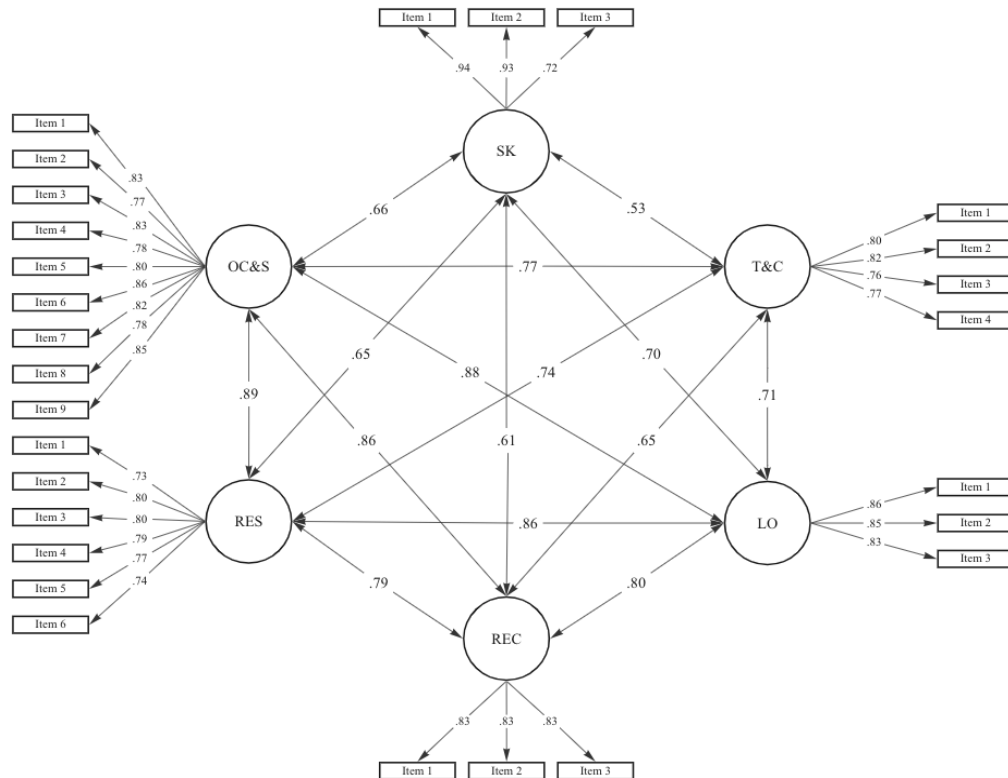
Note. All data are significant.

Table 3
Model Statistics and Comparisons (n = 790)

	χ2	df	p	CFI	NNFI	TLI	IFI	RMSEA	Δχ2	Δdf	ΔP > χ2	ΔCFI	ΔNNFI	ΔTLI	ΔIFI	ΔRMSEA
Model 1	3681.30	350	< .001	.807	.806	.807	.821	.110								
Model 2	1466.36	335	< .001	.939	.923	.931	.939	.065								
Diff. 1 - 2									2214.94	15	<.001	-.132	-.117	-.124	-.118	-.045

Note. Model 1 = 1-factor model; Model 2 = 6-factor model. χ2 = Chi-square; *w* = degree of freedom; CFI = Comparative Fit Index; NNFI = Non-Normed Fit Index; TLI = Tucker-Lewis Index; IFI = Incremental Fit Index; RMSEA = Root Mean Square Error of Approximation; Diff. and Δ = differences.

is commonly considered the threshold for assessing the contribution of each item to the variability of the latent factor (Guadagnoli & Velicer, 1988).

Additionally, the polychoric correlations among the items of each factor, applied as a complementary measure, reinforce these findings, demonstrating strong interrelationships and internal consistency within the factors (OC&S presents values from .65 to .79; SK presents values from .73 to .92; TC presents values from .67 to .81; LO presents values from .76 to .79; REC presents values from .71 to .84; and RES presents values from .58 to .76).

The ANOVA results for gender and age revealed no significant differences ($p > .05$) in the scale scores across these demographic groups. This lack of significant variation suggests that the scale operates with a high level of consistency and neutrality with respect to these sociodemographic factors. These findings support the scale's applicability and validity across a diverse population, affirming its utility in settings where gender and age diversity are present.

Lastly, results from Table 4 highlight the Composite Reliability (CR) for all constructs in Model 2, with scores exceeding .87, which suggests a strong internal consistency across the factors. Average Variance Extracted (AVE) values ranged from .62 to .75, indicating that most constructs meet the threshold for acceptable convergent validity. However, a closer look at the constructs of OC&S, T&C, and RES reveals a nuanced picture. While their respective CR values suggest robust reliability, their AVEs compared to the Maximum Shared Variance (MSV) (.66 vs. .8, .62 vs. .59, and .67 vs. .8, respectively) present an interesting pattern. This pattern implies that, although the constructs exhibit a good degree of shared variance, indicating relatedness, there may be an overlap that warrants further consideration to ensure conceptual clarity. The overlapping variances do not necessarily detract from the validity of the constructs but do suggest the possibility of a more intricate relationship among these constructs than initially posited.

Finally, the concurrent validity shows that the six factors of the POC-S are positively and significantly related to different indicators of well-being and organizational results. Concretely, for the second sample ($n = 790$) POC ($\alpha = .97$) were positively and significantly related to different indicators of healthy employees ($\alpha = .87$) (i.e. mental competence: $r = .19$, $p < .001$; emotional competence: $r = .26$, $p < .001$; optimism: $r = .48$, $p < .001$; resilience: $r = .63$, $p < .001$; engagement: $r = .53$, $p < .001$; vertical trust: $r = .60$, $p < .001$; horizontal trust: $r = .47$, $p < .001$; and burnout prevention: $r = .39$,

$p < .001$) and organizational results (i.e. commitment: $r = .54$, $p < .001$; and in-rol performance: $r = .21$, $p < .001$).

Discussion

The main objective of this study was to develop and validate a multifactor scale that measures the different components of POC. This instrument was designed to provide information on the cultural profile of an organization based on observable behaviors, rather than solely on subjective perceptions. Using exploratory factor analysis, we were able to delineate the number of factors that make up POC and, with the use of confirmatory factor analysis, we confirmed the proposed structure, demonstrated its consistency, and its reliability.

The results obtained show that each of the factors that make up a POC (OC&S, SK, T&C, LO, REC, and RES) exhibit high levels of internal consistency, with alpha and omega coefficients exceeding the recommended thresholds. These findings indicate a strong coherence within each scale, affirming that all items contribute significantly to their respective constructs. No item showed a negative discrimination index. This implies that each item has a positive correlation with its corresponding factor. Additionally, the inter-scale correlations were significant and strong, highlighting both the autonomy of each subscale and its ability to coherently relate to other dimensions within the general model. The unexpected negative correlation between SK and OC&S underscores the need for a deeper examination of the interactions between these constructs across varying organizational contexts. This finding suggests the potential for suppressor effects or unexamined third variables that could influence organizational culture dynamics. Notably, during the assessment period, the organization was undergoing a change in general management and values, which may also have impacted these relationships. All in all, we can conclude that the POC-S can be used reliably and validly in organizational settings, having obtained empirical evidence that supports Hypothesis 1 of this study: "The POC-S (Positive Organizational Culture Scale) is expected to exhibit satisfactory psychometric properties, specifically in terms of validity and reliability".

The methodology of this study aligns with the latest research for test validation and item analysis, as detailed in recent publications. Ferrando et al., (2022) provide a comprehensive framework for the factorial analysis of test items, which has been fundamental in reviewing our analytical approach. Similarly, Sireci & Benítez (2023) discuss various pieces of evidence necessary for the validation of measurement instruments, offering guidelines that we have followed to ensure the robustness of our scale. These studies have also been helpful in identifying critical limitations that we have addressed.

This study contributes to the field of Organizational Psychology by providing an empirically validated tool for the assessment and improvement of Organizational Culture. The POC-S offers human resources professionals and organizational psychologists an instrument to measure multiple facets of POC, which is essential for the design and implementation of evidence-based psychological interventions. The ability to intervene precisely enhances the effectiveness of these initiatives and maximizes resource allocation, ensuring that improvement efforts are directed towards areas that truly need attention. Additionally, this scale's ability to provide measurements related to Organizational Culture facilitates the

Table 4
CR, AVE and MSV (n = 790)

	Model 2		
	CR	**AVE**	**MSV**
OC&S	.94	.66	.8
SK	.90	.75	.48
T&C	.87	.62	.59
LO	.88	.72	.77
REC	.89	.74	.75
RES	.90	.67	.8

Note. OC&S = Open Communication and Support; SK = Strategic Knowledge; T&C = Trust and Collaboration; LO = Learning Orientation; REC = Recognition; RES = Resilience (adaptability in work); CR = Composite Reliability; AVE = Average Variance Extracted; MSV = Maximum Shared Variance.

monitoring of the impact of organizational interventions over time, allowing for data-based adjustments to continuously optimize cultural management strategies.

This instrument moves beyond reductionist views of organizational culture to provide insight into where organizations stand in developing a POC that enhances human capital, well-being, and psychological resources. It complements organizational diagnostics by identifying strengths and needs not evident without a specific tool. The POC-S deepens understanding of how cultural practices impact outcomes and employee well-being.

Finally, this study contributes to organizational theory by confirming the multifactor structure of organizational culture and its impact on the work environment. This theoretical advancement allows for greater precision in future research and professional practice, helping to clarify the relationships between the various facets of organizational culture and their tangible effects on organizational effectiveness.

Several limitations have been identified following Ferrando et al., (2022) and Sireci & Benítez (2023) that must be considered when interpreting the results. The main limitation lies in the generalization of the findings, as the sample used for the validation of the scale consisted exclusively of employees from a single large organization. This may raise questions about the applicability of the scale to organizations of different sizes, sectors, and organizational cultures.

Another limitation of this study was the initial use of Pearson correlation to perform the correlation matrix for the POC model, which is composed of polytomous Likert-type items. Although the AMOS software used does not support polychoric correlations, these correlations were additionally performed for each factor using the Jamovi program to try to address this limitation.

Although an ideal approach for confirming the stability and reliability of the scale would have included a test-retest procedure, the application of this questionnaire in an industrial setting, involving line operators as well as office staff, precluded the possibility of conducting a second assessment shortly after the initial data collection.

Given these limitations, it is recommended that future research explore the applicability and validity of the scale in other a wider variety of organizational and cultural contexts. Future studies could include samples from multiple organizations that vary in size, industry sector, and corporate culture to examine the consistency of the measurements and the universality of the scale's factor structure. Replicating this study in different contexts will allow for an assessment of the scale's robustness and its generalized applicability.

In conclusion, this study effectively validates the Positive Organizational Culture Scale (POC-S) as a reliable tool for measuring and enhancing organizational culture. By addressing methodological and contextual limitations, it highlights the need for further research to broaden its applicability and deepen our understanding of how cultural practices impact both organizational outcomes and employee well-being.

Author Contributions

Antonio Ortiz-Vázquez**:** Conceptualization, Formal Analysis, Investigation, Writing – Original Draft, Visualization. **Susana Llorens:** Data curation, Methodology, Software, Writing – Review & Editing, Supervision. **Marisa Salanova:** Funding Acquisition, Project Administration, Resources, Supervision.

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Declaration of Interests

The authors declare that there is no conflict of interest.

Data Availability Statement

The research data related to this article are available in the research team's databases that conducted the study. Interested parties must contact the team to request access.

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