





Organizational social commitment and employee well-being: illustrating a construct mining approach in R

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Abstract

How employees react to an organization's ethical/social initiatives has little support in terms of empirical evidence. We examine employee perceptions about organizational social commitment (OSC) and its association with employee well-being (WB). The sample consists of 289 participants of a healthcare organization in Colombia. We use a comprehensive methodology for mining psychological/managerial constructs in R comprising six processes (observe, explore, confirm, explain, predict, and report). We provide information concerning the scales' plausibility, reliability, convergent/discriminant validity, and equity. We contrast the relationship between OSC and WB by using structural equation modelling with bootstrap approaches. We examine the capability of OSC to predict WB by using machine learning methods. We found a positive relationship between the constructs, which shows that OSC is a valuable strategy for contributing to employee objectives from a 'being well together' perspective. The paper stimulates/facilitates future research and teaching-learning initiatives in latent variable analysis using the R language.

Keywords: organizational social commitment; employee well-being; latent variables; structural equation modelling; mining of constructs.

Compromiso social organizacional y bienestar del empleado: ilustrando un enfoque de minería de constructos en R

Resumen

La forma en que los empleados reaccionan a las iniciativas éticas/sociales de una organización ha tenido poco soporte empírico. Este artículo examina las percepciones de los empleados sobre el compromiso social organizacional (OSC) y su asocio con el bienestar de los empleados (WB). La muestra consta de 289 participantes de una organización de salud en Colombia. Se emplea una metodología integral para minar constructos psicológicos/gerenciales en R, la cual comprende seis procesos (observar, explorar, confirmar, explicar, predecir e informar). Se provee evidencia sobre plausibilidad, fiabilidad, validez convergente/discriminante y equidad de las escalas. Se contrasta la relación entre OSC y WB con uso de modelos de ecuaciones estructurales con Bootstrap. Se examina la capacidad de OSC para predecir WB usando métodos de aprendizaje automático. Se halla una relación positiva entre los constructos, lo que sugiere que el OSC es una estrategia valiosa para contribuir al bienestar de los empleados desde una perspectiva de 'estar bien juntos'. El artículo estimula/facilita futuras iniciativas de investigación y enseñanza-aprendizaje en el análisis de variables latentes usando lenguaje R.

Palabras clave: compromiso social organizacional; bienestar del empleado; variables latentes; modelos de ecuaciones estructurales, minería de constructos.

1 Introduction

Today's organizations must face the challenge of maintaining a productive and (physically, psychologically, and socially) healthy workforce [1]. However, demonstrating

how organizations can satisfy objectives such as employee well-being is not an easy task. How to build environments that enable happy, productive workers is still debated [2-4].

Employee well-being is a prominent construct that is increasingly demanded by several organizations such as the

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United Nations [5] and the OECD [6]. Some works have aimed to understand the determinants of employee wellbeing. For example, Kim and Beehr [7] analysed the relationship between empowering leadership and a form of psychological well-being (emotional exhaustion and life satisfaction). They also state that other types of well-being could be explored, such as employees' physical health. Jena et al. [8] confirm that psychological well-being (e.g. selfacceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth) is affected by employee engagement.

Despite advances in the study of employee well-being determinants, it is still an immature field. Today it is known that certain individual beliefs about an organization's ethical/social aspects can affect individual results such as employee well-being; nevertheless, the nature of these associations is not precise [9,10].

A topic highly associated with ethical/social aspects in organizational contexts is organizational social commitment (OSC). According to stakeholder theory [11], this can be manifested through a company's efforts to satisfy/balance the several conflicting needs/interests of its stakeholders [12-13].

Although employees' roles and outputs affect other stakeholders' experiences and organizational performance [14], employees have seldom been considered in social responsibility research [15]. Wells et al. [16] state, investigating a hospitality context, that 'the role of employee behaviours is largely unknown, with only a few exceptions' (p. 64). Most research in this field has been focused on the impacts of social organizational efforts on (a) financial aspects [17-18] or (b) customer variables (e.g. satisfaction, loyalty, purchase intent, inversions, value creation, engagement, image) [13, 19]. Su and Swanson [14] have also noted this orientation towards financial/customer variables.

Other researchers suggest that future studies should consider potential outcomes of organizational social efforts [20-21], such as employee well-being [9,14]. Likewise, Mastroianni and Storberg-Walker [22] state that little is known regarding how employees perceive social interactions and their association with health factors. Based on qualitative evidence, they conclude that 'the social environment has a significant influence on employees' sense of well-being' (p. 815).

This paper aims to contribute to the gap regarding employee reactions to the ethical/social initiatives of organizations, which have received little attention from empirical research [15]. Thus, we examine the relationship between employee perceptions of OSC from a stakeholder perspective and its association with employee well-being in a healthcare scenario.

The scenario under study (healthcare) is relevant for investigating the stated aim because it attends to vital needs. Furthermore, the employee reactions to organizational initiatives (e.g. patient-centred care) are induced by the organization's beliefs about ethical/social concerns [9,15]. Therefore, social progress has become a critical need in healthcare organizations [21].

Additionally, the study case provides empirical evidence derived from six systematic processes that incorporate exploratory data analysis, SEM (structural equation modelling), and machine learning methods in R. Thus, this paper also uses essential analytics resources to stimulate and enable the teaching/learning and practice of mining psychological/managerial constructs in R. Likewise, we share the scales employed to stimulate future uses in other samples or contexts (see Appendix 1).

This paper is organized into five sections. After introducing the study, we set forth the case study (linking the constructs of interest). Next, we describe the methodology used to address the case study comprising six processes (observe, explore, confirm, explain, predict, apply, and report). We then provide the main findings for each process. Finally, we present the conclusions of the study (including suggestions for future work).

2 Linking the constructs of interest

Employee well-being, understood as the overall quality of employee experience and functioning at work [23-25], can be studied from two perspectives: hedonic and eudaemonic. The former represents a cognitive-affective evaluation of the employee's work life based on pleasure and satisfaction. The latter refers to human growth and harmonious functioning within the workplace [26-28]. Thus, job satisfaction is a recognized manifestation of hedonic well-being [29-31]. Likewise, social interactions and intrapersonal factors are facets of eudaemonic well-being [26].

On the other hand, in the present case study, OSC corresponds to the organization's efforts to satisfy the following stakeholders' needs: users (e.g. patients and their families), employees, suppliers, community, shareholders, and the environment. This interpretation is consistent with organizations' efforts to balance objectives related to profits, the planet, and people [14,32].

Empirical evidence supports that when an employee perceives that the organization strives for work-life balance, employment rights, and employee skill development, the employee will experience increased job satisfaction and mental/physical health [33-34]. Therefore, considering the hedonic wellness approach, employee well-being is increased. Additionally, when an employee also perceives organizational efforts oriented to satisfy other stakeholders in the healthcare context (e.g. patients and their families, suppliers, community, shareholders, and the environment), it is likely that he/she perceives organizational conformity with social norms [35]. Therefore, based on the social justice theory [36] and organizational justice theory [37-38], the employee will adopt proactive feelings, beliefs, and behaviours (e.g. transparency, trust, justice, security, inclusion) oriented to self-development and living a healthy lifestyle. Thus, considering employee identification with social norms, the employee will assume extra-role helping behaviours to favour the stakeholders, contributing to individual/organizational benefits, such as interpersonal harmony and social balance [39]. For example, Arco-Castro et al. [40] highlighted that organizational philanthropic actions favourably impact both the community and employees. Therefore, it is likely that OSC favours employee well-being from a eudemonic view.

It is worth noting that social/ethical organizational

initiatives do not always generate harmonious/balanced/healthy outputs [41]. In the present healthcare context, OSC could generate in the employee feelings of distrust or envy towards specific stakeholders and the experience of rejection/exclusion from other co-workers [41]. Thus, employee well-being would be reduced.

Nevertheless, most empirical evidence supports the link between employee well-being and organizational social efforts, considering ethical leadership in the hospitality industry [42], ethical climate in an office [43], and spiritual leadership perceived by workers of service/manufacturing firms [44]. Additionally, Atkinson et al. [45] argued in a theoretical paper that beliefs about community well-being (e.g. the needs or interests of patients, providers, environment, and employees' families) impact several facets of work life, such as employee subjective well-being. Moreover, they supported the well-being concept 'in terms of being well together.'

Based on the above discussion, the present case study aims to empirically examine the following relationship in a healthcare scenario (in Colombia):

 H_1 : Organizational social commitment perceived by employees is positively associated with employee well-being.

Considering Sirgy [46], H_1 assumes that employee wellbeing implies more than the sum of an individual's wellbeing. It is also potentiated by employees' beliefs/perceptions about the organizational efforts to attend to several stakeholder needs. Thus, based on Atkinson et al. [45], the common interest approach reflected by H_1 is valuable for contributing to the challenge of capturing subjective aspects of work life that are not merely individual (e.g. employee) but also reflect how people feel and are well together.

3 Methods

3.1 Participants

The participants were 289 employees (internal users; 37.6% of the employee population) of a healthcare organization (serving more than 65,000 different external users, i.e. patients and their families) in Colombia. We applied a structured questionnaire via email from March to April 2019. The following is the sociodemographic description of the respondents: gender (women, 75.1%); age in years (up to 39, 77.9%; 40 or more, 22.1%); socioeconomic stratum (1–3, 66.8%; 4–6, 33.2%); education (high school, technician/technologist, 42.6%; university graduate or postgraduate, 57.4%); role (administrative or managerial, 53.6%; medicine, therapeutic support, and nursing, 46.4%).

3.2 Measures

• Scale of employee well-being: Considering Khoreva and Wechtler's study [47], this construct comprises nine items about job satisfaction, social interactions, and physical health. The job satisfaction aspects (e.g. development opportunities, current job considering career goals) consisted of three items and were adapted from the scale of Bacharach and Bamberger [48]; the response categories ranged from 1 (very bad) to 5 (very good). Social interactions (e.g. 'The organization takes into account my expectations and values,' '...values my contribution to the achievement of strategic objectives') consisted of three items adapted from the scale of Eisenberger et al. [49]; responses ranged from 1 (strongly disagree) to 5 (strongly agree). The items of physical health (e.g. 'I feel energetic when executing daily activities') were based on the scales of Reker and Wong [50] and Li et al. [51], with response categories ranging from 1 (strongly disagree) to 5 (strongly agree).

• Scale of OSC: Taking as references Vázquez et al. [52] and Su and Swanson [14], nine items were formulated to elaborate the scale. The items were measured through five points (from 1 = never to 5 = always). Four items describe beneficial aspects for employees (e.g. 'Work-life balance for employees is promoted'), and the others cover aspects of users (e.g. patients), community, shareholders, and environment. For example, 'the development of activities for the benefit of the community is encouraged.'

Additionally, we controlled the following factors (binarized) to ensure more valid estimations: age (1, greater than or equal to 40), gender (1, female), socioeconomic stratum (1, high: better socioeconomic living conditions), and university education (1, undergraduate or graduate college).

3.3 Procedure

We used six of the seven processes of a framework for mining psychological/managerial constructs (MinerConstructo [53]). The six processes are summarized in Fig. 1.

Processes		Activities		
-	1. OBSERVE	Data recognition, statistical summary, correlations.		
	\$			
•	2. EXPLORE	Bartlett's test, KMO, Parallel Horn analysis, exploratory factorial structure, and Cronbach's Alpha.		
	1			
	3. CONFIRM	Composition of constructs, measurement model, goodness of fit, validity (convergent and discriminant), composite reliability,		
	1	estimations, and refining.		
•	4. EXPLAIN	Model specification, structural relationships, goodness of fit, refining, bootstrap confidence intervals.		
	1			
	5. PREDICT	Comparative design, predictive capability using k-fold, winning model summary, variable importance.		
	1			
	6. REPORT	Document structure, consolidate results/information, discuss/conclude based on theoretical and practical perspectives, and refine based on reviews.		

Figure 1. Summary of the processes used for mining psychological/managerial constructs

Source: Adapted from Pérez-Rave, 2021, considering six of the seven stages of its framework.

4 Results and discussion

4.1 Observing

This process aims to recognize the dataset considering structure, variables, statistical summary, and correlations implied. Table 1 shows, among other aspects, that there are 18 items under study and 289 observations.

The items described in Table 1 present mean values between 3.315 ('wb.psysic1') to 4.512 ('emp4'). Moreover, the absolute values of univariate skewness and kurtosis of the items are less than 2.0, discarding extreme deviations from the normal distribution. Useful packages in R to perform this statistical summary are 'base/utils' [54] and 'psych' [55].

Concerning the correlation analysis of the items, all correlations are positive (from 0.17 to 0.82), have a mean value of 0.42, and the first and third quartiles are 0.329 and 0.479, respectively. Moreover, based on Sloan and Angell [56], 2.6% of the correlations are high (greater than 0.7), and 81.7% are moderated (between 0.3 and 0.7). These infer possible underlying patterns to be discovered in the subsequent processes from a multivariate perspective. Useful packages for the present analysis are 'base/stats' [54] in R.

4.2 Exploring

This process focuses on examining the eventual underlying factorial structure in the data and Cronbach's alpha of its components. Bartlett's test provides a chi-square of 3043.7 with 153 degrees of freedom and a p-value less than 0.001. Likewise, the Kaiser–Meyer–Olkin (KMO) test to verify the measure of sampling adequacy (MSA) presents an overall MSA value of 0.92, and individual values range from 0.83 to 0.96. Both results are satisfactory for developing the exploratory factor analysis (EFA). Then, we perform Horn's parallel analysis for component retention [57], considering 1,000 iterations under the 95-centile estimate. The adjusted eigenvalues suggest retaining two factors (greater than 1; for factors 1 and 2, they are 7.701 and 1.660, respectively), consistent with the presupposed model (OSC and employee well-being). The exploratory factorial structure (minimum

Table 1.	
Statistical	

Items	Min	Max	Mean	SD	Kurtosis	Symmetry
empl	2	5	4.166	0.755	-0.527	-0.475
emp2	1	5	3.848	0.896	-0.578	-0.333
emp3	1	5	3.633	0.967	-0.617	-0.251
emp4	2	5	4.512	0.63	0.311	-1.001
suppl	2	5	4.149	0.713	-0.409	-0.394
users	2	5	4.163	0.785	-0.603	-0.507
comuni	2	5	4.017	0.827	-0.807	-0.326
shar.users	2	5	4.28	0.703	0.14	-0.688
environ	2	5	4.298	0.698	-0.053	-0.66
wb.psych1	1	5	4.17	0.689	0.94	-0.613
wb.psych2	3	5	4.18	0.647	-0.695	-0.189
wb.psych3	2	5	4.163	0.696	-0.239	-0.414
wb.soc1	2	5	3.948	0.76	-0.041	-0.435
wb.soc2	2	5	3.875	0.749	-0.311	-0.24
wb.soc3	1	5	3.834	0.905	0.031	-0.593
wb.physic1	1	5	3.315	1.097	-0.683	-0.171
wb.physic2	2	5	3.958	0.897	-0.164	-0.697
wb.physic3	1	5	4.135	0.833	0.628	-0.902

0.1

Source: The authors

Table 2.

Items	WB	OSC
empl		0.593
emp2		0.63
emp3		0.573
suppl		0.596
users		0.801
comuni		0.787
shar.users		0.607
environ		0.713
wb.psych1	0.743	
wb.psych2	0.738	
wb.psych3	0.776	
wb.soc1	0.728	
wb.soc2	0.714	
wb.soc3	0.64	
wb.physic1	0.529	
wb.physic2	0.542	
wb.physic3	0.676	
Explained variance	28 %	25 %
Cronbach's alpha	0.898	0.889

WB: Employee well-being; OSC: Organizational social commitment Source: The authors

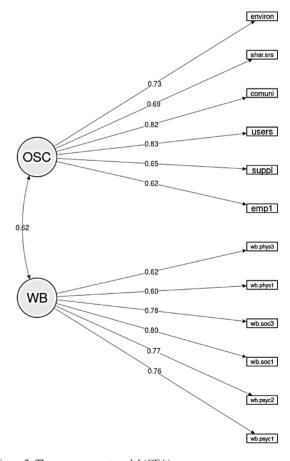


Figure 2. The measurement model (CFA) Source: The authors

acceptable factor loadings of 0.45, principal factor method) [58] is shown in Table 2. We excluded one item ('emp4,' by presenting loadings less than the threshold).

The two factors explain 53% of the data variability (Table 2). Moreover, the reliabilities are WB (employee well-being): 0.898 and OSC: 0.889, which considerably satisfy the criterion for acceptance (greater than 0.7). A useful package for this analysis is 'psych' [55] in R.

4.3 Confirming

This process aims to examine the psychometric properties (plausibility, convergent/discriminant validity, composite reliability) of the discovered patterns (exploratory factorial structure) and identify possible improved versions. We removed five items because these (wb.physic2, wb.soc2, wb.psych3, emp2, emp3) shared high correlation (non-theoretically argued) with other items (considering the modification indexes) and affected the model plausibility (chi sq/df: 4.288; RMSEA [Root Mean Square Error of Approximation]: 0.107; CFI [Comparative Fit Index]: 0.864; TLI [Tucker-Lewis Index]: 0.844). However, the data set still maintains items that represent the same facets of the removed items. The measurement model structure is presented in Fig. 2. Additionally, all loadings of the items are significant at the 0.01 level.

Fig. 2 shows that the final scale of OSC maintains the focus on the stakeholders: environment ('environ'), shareholders ('shar.srs'), community ('comuni'), patients and their families ('users'), suppliers ('suppl'), and employees ('emp'). Likewise, the final WB scale also retains the essential facets of the construct: physical ('wb.phys1' and 'wb.phys3'), social ('wb.soc1' and 'wb.soc3'), and psychological ('wb.psyc1' and 'wb.psyc2'). The refined scales are shared in Appendix 1 to promote their use in future works. This measurement model (Fig. 2) presents a good fit: chi sq: 106.46; df: 53; chi sq/df: 2.009; RMSEA: 0.059; SRMR: 0.044; CFI: 0.967; TLI: 0.959.

Additionally, Table 3 consolidates the evidence on convergent/discriminant validity and composite reliability.

The evidence also suggests convergent validity (average variance extracted, AVE > 0.5; see values with an asterisk in Table 3) and composite reliability (> 0.70). Furthermore, AVEs are greater than the square of interconstruct correlations (0.39), suggesting discriminant validity [59]. Additionally, we contrasted a single-factor model using confirmatory factor analysis (CFA). This shows a poor fit: chi sq: 407.524; df: 54; chi sq/df: 7.547; RMSEA: 0.151; SRMR [Standardized Root Mean Square Residual]: 0.094; CFI: 0.78; TLI: 0.731. Moreover, the AVE for this model is 0.424. Useful packages for this process ('Confirming') are 'lavaan' [60] and 'semPlot' [61] in R.

Table 3.

	OSC	WB
OSC	0.531*	0.39
WB	0.39	0.524*
Convergent validity	Yes	Yes
AVE/Max(Correl^2)	1.36	1.344
Discriminant validity	Yes	Yes
Composite reliability	0.87	0.867

Note: AVE(i,i); outside the diagonal: Correl(i, j)²

Source: The authors

4.4 Explaining

This process aims to contrast hypothesized structural relationships among the confirmed patterns based on SEM and bootstrapping. Fig. 3 provides the path diagram for the relationship under study, including the control factors.

The structural model (including control factors) shown in Fig. 3 presents a good fit: chi sq: 170.681; df: 97; chi sq/df: 1.76; RMSEA: 0.051; SRMR: 0.063; CFI: 0.955; TLI: 0.947. Moreover, the association between OSC and employee wellbeing is supported based on bootstrap with 5,000 replicas (confidence intervals for unstandardized load at 95%: 0.694–1.057). Concerning the control factors, gender (confidence interval: 0.085–0.717) is significant. Useful packages for this process ('Explaining') are 'lavaan' [60] and 'semPlot' [61] in R.

4.5 Predicting

This process examines the predictive capability of OSC on WB from a machine learning perspective. We aim to predict the response construct (F1: WB) by comparing four methods (OLS – ordinary least squares regression, regression tree, random forest, and boosting). Fig. 4 shows the scores of the response construct (F1: WB), the predictor (F2: OSC), and the control factors (gender, age, stratum, education).

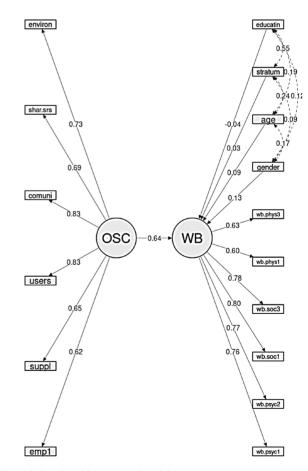


Figure 3. Results of the structural model Source: The authors

F1		F	2	gender	age
Min. :	-3.3533	Min.	:-3.00484	fem :217	< 40 :225
1st Qu.:	-0.5326	1st Qu.	:-0.75167	masc: 72	>= 40: 64
Median :	0.0489	Median	:-0.00434		
Mean :	0.0000	Mean	: 0.00000		
3rd Qu.:	0.6810	3rd Qu.	: 0.83271		
Max. :	1.7068	Max.	: 1.59088		
stratum	(educatio	n		
1_3:193	a.Up.te	chnol:12	3		
4_6: 96	b.Univ.	oosg :16	6		

Figure 4. Statistical summary of the variables/factors involved in the predictive analysis Source: The authors

Table 4. Predictive performance of OSC on WB

Methods	R-squared with control factors	R-squared without control factors
DLS: Linear regression	0.505	0.46
ree: Regression tree	0.452	0.429
F: Random forest	0.482	0.378
Boost: Boosting	0.537	0.46
Folds	R-squared	R-squared
1	0.477	0.5405
2	0.674	0.3861
3	0.484	0.4298
4	0.373	0.6249
5	0.459	0.5236
6	0.616	0.4886
7	0.632	0.3797
8	0.484	0.2677
9	0.651	0.5396

Source: The authors

In Fig. 4, the scores of the constructs are standardized (mean: 0; variance: 1). Likewise, the levels of the control factors have a reasonable number of observations for the predictive analysis (e.g. the minimum subsample size is 64 observations; see 'gender_male': 'masc,' in Fig. 4). The R-squared is the performance measure used to evaluate the predictive capability of the models. One of the risks in a predictive analysis is model overfitting. Hence, following [53], we use a 10-fold cross-validation strategy, which preserves 10 data points from each set of random samples (bootstrap). The performance measures (with and without control factors) of the models are provided in Table 4.

Table 4 provides the results of the aggregated R-squared (means of 10-fold results) concerning the four machine learning models. In addition, Fig. 5 shows the importance of the predictor variables from a non-parametric approach based on the 'varImp' function of the 'caret' package [62] in R.

Table 4 shows that the predictive capability out-ofsample of the models (R-squared) ranges from 45.2% (regression tree) to 53.7% (Boosting) in the scenario with control factors. Likewise, this ranges from 37.8% (random forest) to 46% (OLS regression or Boosting) in the scenario without control factors. Moreover, Fig. 5 also supports that F2 (scores of OSC) is the most relevant predictor of the response construct (employee well-being, WB). These results reinforce the external validity of the association under analysis under an out-of-sample strategy.

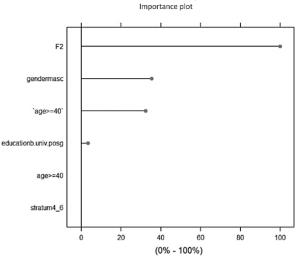


Figure 5. Importance of the predictors Source: The authors

Useful packages for this process ('Predicting') are 'stats' [54], 'caret' [62], 'randomforest' [63], and 'mboost' [64] in R.

5 Conclusions

The study of individual reactions motivated by organizational efforts usually assumes that a selfish interest governs such reactions (e.g. merely focused on employee benefits) [45]. This posture is consistent with the personal costs of abandonment (e.g. 'I sacrifice, or not, what I invested') from perspectives such as calculated commitment [65-66]. However, we examine OSC from a 'common interest' from employees' viewpoint, implying that the organization also should attend to other stakeholders' needs (patients and their families, environment, community, suppliers, and shareholders).

The positive relationship between OSC and employee wellbeing evidenced in this paper supports understanding individual well-being as 'being well together' [45]. The studied association can also be interpreted based on theoretical approaches about balanced behaviours/results. For example, the shared value approach replaces the traditional belief that maximizing individual benefit destroys social wealth; that is, shared value assumes that conflicts between stakeholders' interests can be solved [67]. Harmonious leadership also supports this balanced perspective by considering coordination capabilities to inspire social vitality, equity, and social governance [68]. The relationship between community wellbeing and individual well-being [45] also supports this perspective, considering how community aspects of work life (e.g. the needs/interests of patients, providers, communities, environment, and employee families) impact employees' subjective well-being.

Thus, the empirical evidence concerning OSC, in terms of organizational efforts to attend to stakeholders' needs from the employees' viewpoint, supports the idea that certain beliefs about the organization's ethical/social aspects affect subjective employee well-being [9, 69]. Based on the social exchange theory [70], the empirical findings suggest that employees develop feelings of being 'rewarded' through organizational efforts to satisfy both individual and altruistic needs (e.g. patients and their families, suppliers, community, shareholders, and the environment). Therefore, considering agency theory [71], healthcare organizations should prevent possible deviations between managers' objectives and those of other interest groups (e.g. doctors, nurses, patients and their families, providers, the community) in favour of a balanced perspective regarding OSC perceived by employees. In other words, cultivating environments where employees develop positive beliefs about OSC through actual organizational efforts to attend to stakeholders' needs may be a valuable strategy for facing the challenge of maintaining a healthy and productive workforce [1], using few resources.

Future work could examine employee decisions inside (e.g. support to quality initiatives, absenteeism) and outside organizations (e.g. family violence), considering potential losses or gains in individual well-being derived from organizational social actions. Additionally, future studies could use the shared/validated scales to examine the constructs under consideration (OSC and employee wellbeing) in other samples/contexts or structural models.

This paper addressed a case of the mining of constructs combining resources of organizational management, psychometry, statistics, and technologies for data processing/visualization in R. Future studies could use this paper as a guide or inspiration to practice or learn/teach the mining of psychological/managerial constructs.

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Appendix 1.

The measurement scales of the refined model (final version: 12 items)					
	Organizational social commitment				
How often in the organization (from $1 =$ never to $5 =$ always)					
empl	is the development of employee competencies stimulated?				
suppl	are the commitments agreed with suppliers and other lines of business fulfilled?				
users	is the development of promotion and prevention activities in favour of users (patients and their families) supported?				
comuni	is the development of activities for the benefit of the community encouraged?				
shar.users	are stances of transparency and veracity assumed in the information that is shared with users (patient and his/her family) and shareholders?				
environ	are behaviours that favour the protection of the environment assumed?				
	Employee well-being				
From 1 (ver	From 1 (very bad) to 5 (very good):				
wb.psych1	How you feel about the development opportunities your current job offers?				
wb.psych3	How you feel about your current job considering your career goals?				
From 1 (strongly disagree) to 5 (strongly agree):					
wb.physic1	My current job is less stressful than my previous one.				
wb.physic2	I feel in good physical condition.				
wb.soc1	The organization values my contribution to the achievement of strategic objectives.				
wb.soc3	The organization cares about my well-being.				

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