

## Assessing organizational climate: Psychometric properties of the CLIOR Scale

Elsa Peña-Suárez<sup>1</sup>, José Muñiz<sup>1</sup>, Ángela Campillo-Álvarez<sup>1</sup>, Eduardo Fonseca-Pedrero<sup>2</sup>  
and Eduardo García-Cueto<sup>1</sup>

<sup>1</sup> Universidad de Oviedo and <sup>2</sup> Universidad de La Rioja

### Abstract

**Background:** Organizational climate is the set of perceptions shared by workers who occupy the same workplace. The main goal of this study is to develop a new organizational climate scale and to determine its psychometric properties. **Method:** The sample consisted of 3,163 Health Service workers. A total of 88.7% of participants worked in hospitals, and 11.3% in primary care; 80% were women and 20% men, with a mean age of 51.9 years (SD= 6.28). **Results:** The proposed scale consists of 50 Likert-type items, with an alpha coefficient of 0.97, and an essentially one-dimensional structure. The discrimination indexes of the items are greater than 0.40, and the items show no differential item functioning in relation to participants' sex. A short version of the scale was developed, made up of 15 items, with discrimination indexes higher than 0.40, an alpha coefficient of 0.94, and its structure was clearly one-dimensional. **Conclusions:** These results indicate that the new scale has adequate psychometric properties, allowing a reliable and valid assessment of organizational climate.

**Keywords:** organizational climate, psychological scales, assessment, job satisfaction.

### Resumen

**Evaluación del clima organizacional: propiedades psicométricas de la Escala CLIOR. Antecedentes:** el clima organizacional es el conjunto de percepciones que comparten los trabajadores de un determinado ámbito laboral. El objetivo central de este trabajo es la construcción de una nueva escala para evaluar el clima organizacional y el estudio de sus propiedades psicométricas. **Método:** la muestra estaba formada por 3.163 trabajadores del ámbito sanitario, un 88,7% trabajaban en hospitales y un 11,3% en servicios de Atención Primaria. Un 80% eran mujeres y un 20% hombres, con una edad media de 51,9 años y una desviación típica de 6,28. **Resultados:** la escala construida está formada por 50 ítems tipo Likert, con un coeficiente alfa de 0,97 y una estructura esencialmente unidimensional. Los índices de discriminación de los ítems son todos superiores a 0,40, y ninguno de los ítems muestra un funcionamiento diferencial respecto al sexo. Se desarrolló una versión corta de la escala de 15 ítems, con índices de discriminación superiores a 0,40, coeficiente alfa de 0,94 y estructura unidimensional. **Conclusiones:** los resultados obtenidos indican que la nueva escala desarrollada tiene unas propiedades psicométricas adecuadas, permitiendo una evaluación fiable y válida del clima organizacional.

**Palabras clave:** clima organizacional, escalas psicológicas, evaluación, satisfacción laboral.

Organizational Climate (OC) is a fundamental construct in work and organizational settings, as it provides an appropriate context for studying organizational behavior, allowing the exploration of individual and group behaviors (Asif, 2011; Denison, 1996; Ostroff, Kinicki, & Tamkins, 2003). Fleishman (1953) found relationships between OC and variables related to behavior and attitudes and since then, a large number of empirical studies have linked this construct with diverse factors, such as job satisfaction (Schnake, 1983), commitment (deCotiis & Summers, 1987), psychological well-being (Cummings & deCotiis, 1973), absenteeism (Steel, Shane, & Kennedy, 1990), psychosocial risks (Cullbertson & Rodgers, 1997; Vartia, 2008), or violence at the

workplace (Cole, Grubb Sauter, Swanson, & Lawless, 1997). Relations have also been found between OC and various types of performance in organizations, including economic (profitability, productivity, etc.), technological (development of new products, etc.), commercial (market share, specific niches, etc.) and social (effects on consumers, supplies, and general public) (Bartram, Robertson, & Callinan, 2002).

The most common way of assessing OC is through self-reports covering of several subdimensions that make up the construct (Ekvall, 1996). However, there is no unanimous agreement on the dimensions comprising the OC construct (Ashforth, 1995; Bermejo, Hidalgo, Parra, Más, & Gomis, 2011; Boada-Grau, Diego-Vallejo, Llanos-Serra, & Vigil-Colet, 2011; Campbell, Dunnette, Lawler, & Weick, 1970; Kopelman, Brief, & Guzzo, 1990; Patterson et al., 2005; Thumin & Thumin, 2011). Koys and deCotiis (1991) identified eight key dimensions: autonomy, cohesion, trust, pressure, support, recognition, impartiality, and innovation. This varied range of proposals is reflected in the questionnaires created for the assessment of OC, among which are notable the

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Corresponding author: Elsa Peña-Suárez

Facultad de Psicología

Universidad de Oviedo

33003 Oviedo (Spain)

e-mail: penaelsa@uniovi.es

*Organizational Climate Questionnaire* (Litwin & Stringer, 1966), *Agency Climate Questionnaire* (Schneider & Bartlett, 1968, 1970), *Executive Climate Questionnaire* (Tagiuri, 1968), *Organizational Climate Description Questionnaire* (Halpin, 1966; Margulies, 1965), *Organizational Climate Index* (Stern, 1970), *Survey of Organizations* (Bowers & Taylor, 1972), *Organizational Climate Questionnaire* (Lawler, Hall, & Oldhman, 1974), *Perceived Organizational Climate* (Dieterly & Schneider, 1974), *Perceived Work Environment* (Newman, 1975, 1977), *Psychological Climate Questionnaire* (Jones & James, 1979), *Organizational Climate Measure* (Patterson et al., 2005), and the *Survey of Organizational Characteristics* (Thumin & Thumin, 2011). In the Spanish context, the FOCUS-93 questionnaire (González-Romá et al., 1996) was validated in a sample of 298 workers from various posts in the Public Administration. The *Work Environment Scale*, which forms part of the Social Climate Scales developed by Moos and Trickett (1974), was adapted to Spanish by Fernández-Ballesteros and Sierra (1984). It comprises 90 dichotomous items distributed in three dimensions: relations, self-realization, and stability/change. The questionnaire of Corral and Pereña (2010) follows Blake and Mouton's (1981, 1994) line of work, and consists of 93 dichotomous items. The items in this instrument are divided into eight scales, grouped into two broad areas: company and person. The company area involves the assessment of conditions, organization, innovation, and information, whereas the person area consists of dimensions such as involvement, self-realization, relations, and direction. Lastly, the scale developed by López-Fernández et al., (1988) evaluates OC in the health field. While initially designed to assess primary health-care teams, it was subsequently used in other health-care settings (Delgado et al., 2006). It consists of 40 Likert-type items and assesses the dimensions of cooperation, cohesion, teamwork, social life, and autonomy.

Within this framework, the objective of this research is to develop a new scale of organizational climate that allows the valid and reliable assessment of the construct. In its development, we shall follow the line of work proposed by Jones and James (1979), James et al., (2008), Lazarus (1982), Lazarus and Folkman (1984), and Corral and Pereña (2010), which allows for the possibility of obtaining a general factor of organizational climate that groups the various facets assessed. Ten aspects are assessed, which are grouped into the three dimensions proposed by Carr, Schmidt, Ford, & DeShon (2003) and Ostroff (1993). In the affective aspect are attachment to the job, cooperation, and relations with coworkers and bosses; in the cognitive dimension are innovation, autonomy, and participation; and in the instrumental dimension are found the organization, the reward system, physical conditions and schedules. The areas assessed with this new questionnaire represent the dimensions most frequently measured in the previous questionnaires (Fernández-Ballesteros & Sierra, 1984; Corral & Pereña, 2010; González-Romá et al., 1996; López-Fernández et al., 1988) and they include a new facet about rewards, which is not assessed in the cited questionnaires. The reward system forms a new facet that affects perceived work climate (Carr et al., 2003; Ostroff, 1993; Thumin & Thumin, 2011).

Why a new scale? Various characteristics are contemplated in the proposed scale that are not found in the previous ones: a) an exhaustive item bank was developed that includes the dimensions historically proposed by diverse authors who have investigated organizational climate, thus guaranteeing content validity of the scale; b) a broad and representative sample of 3,163 people was

used, which lends great robustness to the psychometric properties estimated; c) an empirically one-dimensional scale was developed, without discarding any of the facets that historically make up organizational climate; d) this one-dimensionality is the basis in order to generate a computerized adaptive test from the proposed scale, in accordance with the most recent psychometric advances, which would be impossible with the previous scales; e) a short version with only 15 items is proposed, which allows use as a screening instrument. Therefore, we consider that the proposed scale is a step forward in the clarification and technical updating of the field of assessment of organizational climate. Note that, to date, no computerized adaptive tests were developed in this sphere, and this is the greatest psychometric advance in the last few years (Bartram & Hambleton, 2006; Downing & Haladyna, 2006; Mills, Potenza, Fremer, & Ward, 2002; van der Linden & Glas, 2010; Wilson, 2005). With our one-dimensional scale, we expect to establish a first step forward that will allow the successive development of computerized adaptive assessment in the field of organizational climate. Having an organizational climate instrument with an essentially one-dimensional structure will facilitate its application, comprehension, and norms development, and will provide an accurate diagnosis of the working environment.

## Method

### Participants

The sample was made up of 3,163 workers in the Health Service of the Principality of Asturias, Spain. With some minimal exceptions due to random factors, the sample practically coincides with the entire population of workers in the healthcare field from the Principality of Asturias, except for physicians and nurses. In total, 88.7% of respondents worked in specialized care and 11.3% in primary care. Mean age was 51.90 years ( $SD= 6.28$ ). Eighty per cent of the sample were women, and 20% were men. Table 1 shows the professional groups and categories assessed.

### Instrument

In drawing up the initial version of the Organizational Climate Scale (CLIOR), a bank of 160 items was generated, taking into account the different facets that make up OC, as discussed in

Table 1  
Professional categories included in the sample

Type of care	Professional category	Sample size	%
Primary	Auxiliary nurse	53	15.5
	Administrator assistant	199	55.9
	Porter	62	17.3
	Laboratory technician	2	0.7
	X-Ray technician	2	0.7
	Others	39	11.0
Specialist	Auxiliary nurse	1,148	40.9
	Administrator assistant	480	17.1
	Porter	356	12.7
	Laboratory technician	87	3.1
	X-Ray technician	53	1.9
	Others	682	24.3

the introduction. The items of this new instrument are rated on a 5-point Likert-type scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). For the construction of the items we followed recent psychometric developments and guidelines (American Educational Research Association, American Psychological Association, & National Council on Measurements in Education, 1999; Downing & Haladyna, 2006; Haladyna, 2004; Haladyna, Downing, & Rodríguez, 2002; Moreno, Martínez, & Muñoz, 2004, 2006; Muñoz, García-Cueto, & Lozano, 2005; Muñoz & Fonseca-Pedrero, 2008). A qualitative and quantitative pilot study was carried out to explore respondents' comprehension of the items and the metric properties of the items.

After an exhaustive review of the literature previously mentioned, the item bank initially generated included the following facets or dimensions: Work organization (23 items), Autonomy (7 items), Participation (7 items), Cooperation (17 items), Rewards (23 items), Relations (19 items), Attachment to the job (30 items), Work-life balance (10 items), Innovation (7 items), and Physical conditions (17 items).

### Procedure

Employees were given the questionnaire in their name by the Personnel Department where they worked. They were informed of the confidentiality and anonymity of their responses. When they had filled out the questionnaire, they returned it in an unmarked envelope to the Personnel Department. The deadline for return of the instrument was set at three months from receipt, and its completion was a mandatory requirement by the organization. Data were collected in 2009.

### Data analyses

The descriptive statistics related to the mean, standard deviation, minimum and maximum scores, skewness, and kurtosis were calculated. We excluded the items whose values in skewness and kurtosis were outside the range -1 to 1. Of the various available strategies for assessing construct validity, we decided to apply factor analysis with the maximum likelihood method and oblique rotation, calculated from a Pearson correlation matrix. For this type of analysis, we used a cross-validation procedure, the first random sample consisting of 1,581 people; it was on this sample that we carried out exploratory factor analysis (EFA). The analysis was initially conducted without specifying a certain number of factors, and then extracting a single factor. As measures of sampling adequacy of the data for conducting factor analysis, we applied the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's sphericity test. We selected the items with a factor loading equal to or greater than .40.

Next, we carried out a confirmatory factor analysis (CFA) on the covariance matrix, using the maximum likelihood method. This analysis was again performed initially in the first sample to detect, through a canonical solution, the items showing factor loadings above .30 in a hypothetical second factor. In turn, this sample was used to specify the parameters of the model proposed by the modification indexes. The second sample corresponds to the second random half of the study ( $n = 1,582$ ), and is where we checked the fit of the specified model, by means of the following goodness-of-fit indexes: root mean square error of approximation (RMSEA) and its 90% confidence interval (CI), standardized root

mean square residual (SRMR), comparative fit index (CFI), and Tucker Lewis index (TLI). In order for there to be a good fit of the data to the hypothesized dimensional model, the values of CFI and TLI should be above .95, whereas RMSEA and SRMR values should be lower than .08 for a reasonable fit, and under .05 for a good fit (Hu & Bentler, 1999).

Lastly, we carried out an analysis of the items, calculating the discrimination indexes, we estimated reliability with Cronbach's (1951) alpha coefficient, and we analyzed the differential item functioning (DIF), in which the focus group was men and the reference group was women. The DIF analyses were performed using the Mantel-Haenszel test (MH) and the generalized MH test (Mantel & Haenszel, 1959). The items that showed DIF in both statistics and a standardized mean difference index with negative values were removed (Zwick, Donoghue, & Grima, 1993).

The analyses were carried out using the following computer programs: SPSS 15.0, FACTOR (Lorenzo-Seva & Ferrando, 2006), Mplus (Múthen & Múthen, 2006), GHDIF (Fidalgo, 2010) and EASY-DIF (González, Padilla, Hidalgo, Gómez-Benito, & Benítez, 2011).

## Results

### Item analysis

Table 2 shows the descriptive statistics of the test items; 27 of the 160 initial items were removed because they had values of skewness and kurtosis outside the established range. Discrimination indexes were calculated iteratively for each of the items, and those with lower values were removed. Table 2 also shows the discrimination indexes of the final items, all with values above .40, indicating high discriminatory power of the scale items.

### Evidences of internal structure

As mentioned, the factor analyses were carried out using cross-validation. The analyses applied in the first sample indicated adequacy of the data to perform factor analysis, as the KMO test yielded a value of .98 and the Bartlett sphericity test was significant,  $\chi^2(2,016, N = 1,581) = 53791.01, p < .001$ . The EFA confirmed that the items of the scale form a single dimension, because we obtained a dominant first factor that explains 34.29% of the total variance. In order to draw up the final scale, we repeated the factor analysis, extracting a single factor, and we removed 24 items with factor loadings of less than .40.

The CFA applied in the first sample yielded 7 items with factor loadings above .30 in the second factor, so they were removed. In addition, in this sample, we repeated the CFA with the 50 remaining items, working from a matrix of observed covariances, and we specified the correlations between items proposed by the modification indexes. The CFA carried out in the first sample had the following goodness-of-fit indexes: RMSEA = .056, CI [0.055, 0.057]; SRMR = .046; CFI = .86; and TLI = .85. The second sample served to confirm the one-dimensional model proposed. The goodness-of-fit indexes were: RMSEA = .056, CI [0.053, 0.057]; SRMR = .048; CFI = .85; and TLI = .84. The fit indexes had almost the same values as those obtained in the first sample. The results clearly indicate that the items have an essentially one-dimensional structure.

Table 2

Descriptive statistics of the Organizational Climate Questionnaire items

Items	M	SD	Skewness	Kurtosis	Discrimination index
12	2.94	1.03	-.12	-.52	.74
19	3.12	1.05	-.40	-.59	.74
28	2.72	1.09	.05	-.91	.72
14	2.87	1.11	-.19	-.86	.72
09	3.04	1.05	-.25	-.65	.72
16	3.10	1.13	-.37	-.81	.72
29	2.70	1.05	.13	-.76	.71
10	3.01	1.07	-.35	-.69	.71
18	3.35	1.09	-.70	-.25	.70
43	3.33	1.16	-.49	-.63	.69
08	3.11	1.06	-.33	-.64	.68
32	2.55	1.04	.23	-.65	.68
21	3.62	0.94	-.80	.69	.67
22	2.88	1.00	-.05	-.65	.65
02	3.68	0.95	-.73	.45	.65
49	3.26	1.03	-.33	-.53	.63
17	3.23	1.16	-.47	-.74	.63
46	3.36	1.03	-.51	-.37	.61
35	3.22	1.04	-.32	-.41	.60
03	3.06	1.07	-.13	-.64	.60
27	3.33	1.02	-.51	-.50	.58
07	2.31	1.02	.50	-.31	.57
37	3.75	1.12	-.85	.13	.57
26	2.75	1.00	.11	-.68	.56
47	2.72	1.19	.12	-.98	.55
15	3.15	1.08	-.19	-.65	.54
36	3.28	1.02	-.51	-.18	.53
31	3.04	1.06	-.30	-.80	.53
33	3.32	1.09	-.48	-.35	.52
11	2.61	1.11	.20	-.91	.52
04	2.70	1.05	.05	-.52	.52
30	3.18	0.95	-.35	-.25	.51
23	3.32	0.92	-.59	-.11	.51
40	3.36	1.11	-.47	-.65	.51
38	3.08	1.05	-.33	-.53	.50
50	3.20	1.11	-.46	-.69	.50
34	3.67	1.12	-.76	-.15	.50
24	2.83	1.05	.10	-.60	.49
41	2.70	1.02	.04	-.45	.49
25	3.44	1.11	-.65	-.46	.49
06	3.17	1.16	-.35	-.95	.48
42	3.16	1.08	-.38	-.72	.47
45	2.88	1.09	-.09	-.92	.47
48	2.96	1.06	-.10	-.73	.46
44	2.27	1.07	.55	-.54	.46
13	3.19	1.17	-.46	-.85	.46
20	2.69	1.10	.16	-.80	.45
39	3.46	0.95	-.49	-.15	.44
01	3.43	1.08	-.49	-.49	.43
05	3.60	1.13	-.79	-.12	.41

Note: The items are arranged according to their discrimination indexes

Table 3

Factor loadings of the Organizational Climate Scale items

Items	Factor loading
1. My workplace is pleasant	.44
2. The relationships with my bosses are good	.67
3. My bosses' responsibilities are well defined	.61
4. My superiors encourage a critical spirit	.53
5. My work hours fit my needs	.41
6. I have the means necessary for doing my work	.48
7. My efforts are adequately rewarded	.59
8. My superiors value the order and accuracy in my work	.70
9. My bosses value the ideas I put forward for improving the job	.75
10. My bosses encourage me when I have problems so that I can solve them	.73
11. My suggestions about the job are listened to	.54
12. You really feel supported by your bosses	.77
13. Opportunities for training are offered	.46
14. I have independence for organizing my own work	.75
15. If I need help because of a heavy workload, I am given the necessary means	.55
16. The bosses take an interest in my work problems	.74
17. The goals of my work are clearly defined	.65
18. The bosses are approachable	.72
19. The bosses are willing to listen to their employees	.76
20. Socially, my work has the prestige it deserves	.46
21. My bosses are kind to me	.69
22. In my job, innovative contributions are appreciated	.67
23. When I do something well, my superiors congratulate me	.51
24. The relation between the job description and the tasks I carry out is good	.52
25. The contribution of new ideas is encouraged	.49
26. My job is well defined	.58
27. It is easy to find help when needed	.59
28. The reasons for the decisions made are usually adequately explained	.74
29. My work is adequately valued	.73
30. Deadlines are adequately met	.52
31. The organization takes sufficient advantage of new technologies	.54
32. My efforts receive the recognition they deserve	.69
33. My bosses seem to me to be too authoritarian	.54
34. My superiors often pick on me about unimportant things	.51
35. My bosses watch me closely	.62
36. My superiors do not respond to demands	.54
37. I think I give more, emotionally, than I receive in my job	.59
38. My work is inadequately supervised	.51
39. My superiors behave in quite a despotic way	.44
40. I don't have much chance of showing my worth unless I change jobs	.51
41. The atmosphere is impersonal	.50
42. The bosses keep important information to themselves	.47
43. I feel as though I'm treated like a machine or a programmed object	.70
44. Everything is decided from above	.47
45. The long-term planning of the work defies explanation	.46
46. The job is organized along authoritarian lines	.62
47. Where I work, there are people with unfair privileges	.55
48. The goals and results obtained are concealed from the employees	.47
49. The orders received are contradictory	.64
50. The methods of working in my section are old-fashioned and obsolete	.50

Internal consistency

The value obtained for Cronbach’s alpha coefficient was .97. This is a high value, indicating that the Organizational Climate Scale is highly reliable.

Differential item functioning (DIF)

According to the results of the DIF analysis, 5 items showed clear differential functioning for men and women, so they were removed. These items were detected by means of the two methods employed, GMHDIF and EASY-DIF. The items in question presented statistically significant Mantel-Haenszel values and their standardization indexes had negative values of between -.1 and -.3.

Short version of the organizational climate scale

A short version of the scale, made up of the 15 items with the highest loading on the factor found, was also developed. The factor extracted explained 52.32% of the total variance, Cronbach’s alpha coefficient was .94, and all the item discrimination indexes were above .40. Table 4 shows the factor loadings and the discrimination indexes of the 15 items selected. The mean of the short scale was 46.27, and its standard deviation was 11.68. The correlation between the short version and the scale made up of 50 items was .95, and the correlation between the short scale and the scale made up of the 35 items excluded from the short version was .86.

Conclusions

The aim of our research was to construct this new Organizational Climate Scale, which would provide a reliable and valid general indicator of organizational climate. With this goal in mind, we started out from a definition of organizational climate as a molar construct that groups a series of facets described

in the literature, such as: physical conditions, work organization, relations, cooperation, rewards, work hours and work-life balance, autonomy, innovation, participation, and attachment to the job, which were assessed through employees’ perceptions. The

Table 5  
Spanish version of Organizational Climate Scale

1. Mi lugar de trabajo es agradable	12345
2. Las relaciones con mi jefes son buenas	12345
3. Las responsabilidades de mis jefes están bien definidas	12345
4. Mis superiores estimulan el espíritu crítico	12345
5. Mi horario de trabajo se adecúa a mis necesidades	12345
6. Dispongo de los medios necesarios para desarrollar mi trabajo	12345
7. Mis esfuerzos se premian adecuadamente	12345
8. Mis superiores valoran el orden y la precisión en mi trabajo	12345
9. Mis jefes valoran bien las ideas que aporta para mejorar el trabajo	12345
10. Mis jefes me animan cuando tengo problemas para que pueda solucionarlos	12345
11. Mis sugerencias sobre el trabajo están atendidas	12345
12. Se siente realmente apoyado por sus superiores	12345
13. Se dan oportunidades para la formación	12345
14. Tengo autonomía para organizar mi propio trabajo	12345
15. Si necesito ayuda por exceso de trabajo, se me dan medios necesarios	12345
16. Los jefes se interesan por mis problemas laborales	12345
17. Los objetivos de mi trabajo están claramente definidos	12345
18. Los jefes son asequibles	12345
19. Los jefes saben escuchar a sus subordinados	12345
20. Socialmente mi trabajo tiene el prestigio que se merece	12345
21. Mis jefes son amables conmigo	12345
22. En mi trabajo se valoran las aportaciones innovadoras	12345
23. Cuando hago bien algo, mis superiores me felicitan	12345
24. La relación entre el perfil del puesto y las tareas que realizo es buena	12345
25. Se estimula la aportación de ideas nuevas	12345
26. Tengo bien definido mi trabajo	12345
27. Es fácil encontrar ayuda cuando se necesita	12345
28. Se suelen explicar adecuadamente los motivos de las decisiones que se toman	12345
29. Mi trabajo se valora adecuadamente	12345
30. Se cumple adecuadamente con los plazos establecidos	12345
31. Se aprovechan de forma adecuada las nuevas tecnologías	12345
32. Los esfuerzos que realizo tienen el reconocimiento que se merecen	12345
33. Mis jefes me parecen demasiado autoritarios	12345
34. Mis superiores acostumbran a llamarme la atención por cosas sin importancia	12345
35. Mis jefes me vigilan estrechamente	12345
36. Mis superiores no atienden las demandas	12345
37. Pienso que emocionalmente doy más que lo que recibo en mi trabajo	12345
38. La supervisión a la que se somete mi trabajo es inadecuada	12345
39. El trato de mis superiores es bastante despótico	12345
40. Existen pocas posibilidades de demostrar mi valía mientras no cambie de trabajo	12345
41. El ambiente es impersonal	12345
42. Los jefes se guardan información importante	12345
43. Me siento tratado como una máquina o un objeto programado	12345
44. Todo se decide desde arriba	12345
45. La planificación del trabajo a largo plazo es inexplicable	12345
46. La organización del trabajo es autoritaria	12345
47. En mi entorno laboral hay quien tiene privilegios injustificados	12345
48. A los trabajadores se les oculta los objetivos y los resultados obtenidos	12345
49. Las órdenes que se reciben son contradictorias	12345
50. El método de trabajo en mi servicio se ha quedado anticuado y obsoleto	12345

Table 4  
Discrimination indexes and factor loadings of the items that make up the Short Organizational Climate Scale

Items	Discrimination index	Factor loading
1. The relationships with my bosses are good	.67	.70
2. My bosses encourage me when I have problems so that I can solve them	.71	.74
3. My suggestions about the work is listening	.76	.79
4. Opportunities for training are offered	.73	.75
5. If I need help because of a heavy workload, I am given the necessary means	.77	.80
6. The goal of my work are clearly defined	.74	.77
7. The bosses are willing to listen to their employees	.71	.74
8. Socially, my work has the prestige it deserves	.76	.79
9. In my job, innovate contributions are appreciated	.69	.71
10. When I do something well, my superiors congratulate me	.64	.66
11. My work is adequately defined	.70	.72
12. Deadlines are adequately met	.70	.72
13. My bosses watch me closely	.67	.68
14. My work is inadequately supervised	.60	.61
15. Everything is decided from above	.62	.64



instrument comprises 50 items, is essentially one-dimensional, and shows high internal consistency (.97) and high discriminatory power of its items, all with values above .40. The items do not show differential functioning for men and women. It can therefore be said that the new scale provides a reliable estimation of a general dimension of organizational climate, table 5 shows Spanish version of the instrument. A short version of the scale, made up of 15 items whose discrimination indexes are over .40, is included. The short scale presents an internal consistency similar to the longer test, with a Cronbach alpha of .94, and the only factor extracted explains 52.32% of the total variance. The short version correlated with the long version (.94) and with the scale made up of the 35 items excluded from the short version (.86).

This new instrument offers a means of conceiving and operationalizing OC as an essentially one-dimensional construct in line with James et al. (2008) and Lazarus and Folkman (1984), while guaranteeing content validity, by taking into account the diverse aspects of OC defined in the previous literature (Carr et al., 2003; Corral & Pereña, 2010; Fernández-Ballesteros & Sierra, 1984; González-Romá et al., 1996; James et al., 2008; Jones & James, 1979; López-Fernández et al., 1988; Ostroff, 1993; Patterson et al., 2005; Thumin & Thumin, 2011). The final instrument includes items for all the aspects used in its construction, with the exception of physical conditions, whose items did not show adequate psychometric properties. The explanation for this may reside in the fact that the physical conditions in health-related work contexts are of a sufficient level so as to not discriminate between employees, so that the discrimination indexes were very low. Thus, in the final 50 items, the following aspects of organizational climate are represented: autonomy, cooperation, rewards, work hours and work-life balance, work organization, participation, relations, innovation and attachment to the job. Although these aspects are also included in previous questionnaires, represented in diverse subscales (Corral & Pereña, 2010; Fernández-Ballesteros & Sierra, 1984; González-

Romá et al., 1996; López-Fernández et al., 1988; Patterson et al., 2005; Thumin & Thumin, 2011), our primary interest was to construct an instrument that generated a global indicator, which would provide a clear general score of organizational climate that could be standardized, rather than a profile made up of different subscales. In the short scale, a global indicator of organizational climate, made up of the indicators of cooperation, work organization, relations, innovation, participation, and attachment to the job, is also obtained. The short version of the scale allows a rapid screening of the work environment. The fact that the instrument is essentially one-dimensional is of vital importance for the second phase of the project, consisting of the generation of a computerized adaptive scale (Bartram & Hambleton, 2006; Brennan, 2006; Drasgow, Luecht, & Bennett, 2006; Mills et al., 2002; Wilson, 2005).

The results of this study should be interpreted in the light of some limitations. First, the sample used, although large, is from the health sector, so that in subsequent research, it would be important to confirm our results in other types of populations. This would allow both the analysis of the corresponding invariances and further assessment of differential item functioning. It is also important to increase the amount of evidence of validity, and to generate external evidences of validity. Looking to the future, we intend to follow two clear lines of work: on the one hand, to analyze the OC at the group level (Dawson, González-Romá, Davis, & West, 2008; González-Romá, 2011; Rafferty & Jimmieson, 2009) and, on the other, to develop a computerized adaptive version of the scale, which would facilitate its use in applied and online contexts.

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