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# **We Need a Hero! Toward a Validation of the Healthy and Resilient Organization (HERO) Model**

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## **Abstract**

Two studies were conducted to validate the so-called H<sup>E</sup>althy and Resilient Organization (HERO) Model. Results from Study 1 provided validity and psychometric support for a new measure designed to assess HEROs composed by semistructured interviews with the CEOs of 14 companies as well as questionnaires for their stakeholders (710 employees, 84 work-units, their immediate supervisors, and 860 customers). In Study 2, SEM (using data aggregated at the work-unit level, which consisted of 303 teams and their supervisors from 43 companies) showed that healthy employees fully mediated the positive relationship between healthy organizational resources and practices, and healthy organizational outcomes (assessed by supervisors). Moreover, regression analyses (at the organizational level, with 2,098 customers) showed that employees' excellent performance positively predicts customer loyalty and satisfaction with the company.

## **Keywords**

healthy and resilient organizations, healthy resources and practices, healthy employees and teams, healthy outcomes

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Modern organizations need healthy and motivated employees to survive and prosper during changing times. Employees and teams are an organization's most valuable asset and retaining them will become increasingly important in the future. Whether an employee chooses to remain in an organization or not is quite related to whether this employee perceives the organization as having a healthy environment. Healthy implies that (a) organizations are focused on caring about the health of both employees/teams and the organization as a whole, that is to say, its effectiveness, survival, and future development. It also implies that (b) it is possible to distinguish between healthy and unhealthy organizations, that is, certain ways of structuring and managing their work processes lead to healthier outcomes than others (DeJoy, Wilson, Vandenberg, McGrath-Higgins, & Griffin-Blake, 2010; Wilson, DeJoy, Vanderberg, Richardson, & McGrath, 2004).

The definition of Healthy Organization put forward by Cooper and Cartwright (1994) is still particularly interesting for our understanding; being as characterized by both financial success (profitability) and a physically and psychologically healthy workforce that is able to maintain a healthy and satisfying work environment and organizational culture, particularly during periods of turbulences and changes. From our point of view, it is in situations of turbulence, crisis, and abrupt changes where Healthy Organizations could become more *resilient* as well. In these scenarios, such organizations not only survive these critical periods but also learn and become even stronger by learning "lessons" from the crisis (Elliot & Macpherson, 2010).

The concept of HEalthy and Resilient Organizations (HERO) emerges in the current world context of economic crisis and financial turmoil referring to organizations that survive and adapt to the crisis and may even become stronger and more resilient than they were before undergoing these negative experiences. However, although this topic is attractive for management studies, most of them are based on the job stress tradition and concentrate on toxic (rather than healthy) organizations (Bell, Quick, & Cacyota, 2002). Moreover, research is conducted at the individual level of analysis without taking into consideration the relevance of focusing on a more collective level, such as the group and/or organizational levels (DeJoy et al., 2010; Wilson et al., 2004) and there are no heuristic or theoretical models that incorporate results on HEROs considering those multiple levels of analysis (individuals, groups, and organizations). Also, due to the great number of disciplines involved (i.e., human resources management, job stress, occupational safety and health, and organizational behavior), findings are fragmented and it is difficult to connect them to each other (Wilson et al., 2004). Finally, there is a lack of empirical

and practice-based evidence with which to measure HEROs both quantitatively and qualitatively.

So far, the main goal of this article is to extend knowledge about healthy organizations determining theoretical relationships among the main dimensions (higher order factors) of a HERO. After first providing theoretical support for developing and testing higher order factors, we present the psychometric properties of the designed measures and empirical tests of the hypotheses of the study. Besides, the study is developed on collective levels of analysis (group and organization) and on combining qualitative and quantitative methodologies.

### *The HERO Model*

In 2004 Wilson et al. already stressed that there was clearly a need for a direct and systematic test of a comprehensive model of healthy work organizations. They attempted to develop and test heuristic models of healthy organizations that included the employees' health as well as variables referring to the organizational context (e.g., work demands, social environment). Generally speaking, their results provided support for the healthy organization model that reformulated later ([DeJoy et al., 2010](#)), where work characteristics influence psychological work adjustment factors that ultimately affect employees' well-being, and performance. The 2004 study meant an important first systematic step toward understanding how organizational practices are related to employees' health. However, as the authors themselves stated, it had several limitations and, as far as we know, they are still present, namely, (a) data were collected from the same respondents using the same measure instruments, thus making common method variance a potential bias; and (b) constructs were tested at the individual level when the underlying conceptual premises of a healthy organization suggest the need to examine the model at the collective level of analysis. In the present study, we extend healthy organization research by using data collected from different respondents such as CEOs, supervisors, employees, and customers in the same study as well as by using qualitative and quantitative methodologies to collect the data (interviews and questionnaires). Finally, we conducted the analysis at the individual but also at the collective levels of analysis (group and organization) using internal (by employees, supervisors, and CEOs) as well external criteria (by customers).

During times of crisis and turmoil, these organizations develop a kind of strength that enables them to become resilient, being able to learn from adversity and emerge stronger. Resilience may be viewed not only as an

individual trait but also as a social factor (existing in teams or groups; [Bennett, Aden, Broome, Mitchell, & Rigdon, 2010](#)). We understand that in the study of healthy organizations, a more collective concept of resilience is needed. [Tillement, Cholez, and Reverdy \(2009, p. 231\)](#) defined organizational resilience as the ability to manage disturbances of the normal workflow and to recover a dynamically stable state that allows the organization's goals of production and safety to be achieved. More recently, [Gilbreath \(2012\)](#) studied what organizational and personal factors can modify the effects of the work environment, like a kind of actions that can be taken to create healthier work environments and healthier employees. According to [Lengnick-Hall, Beck, and Lengnick-Hall \(2011\)](#), an aggregated organizational resilience refers to the capacity of a team/organization to (a) maintain positive adjustment under challenging conditions, (b) bounce back from untoward events, and (c) maintain desirable functions and outcomes in the midst of strain.

We understand HEROs to be those organizations that make systematic, planned, and proactive efforts to improve employees' and organizational processes and outcomes ([Salanova, 2008, 2009](#); [Salanova, Cifre, Llorens, Martínez, & Lorente, 2011](#)). These efforts involve carrying out healthy organizational resources and practices aimed at improving the work environment at the levels of (a) the task (autonomy, feedback), (b) the interpersonal (social relationships, transformational leadership), and (c) the organization (HR practices), especially during turbulence and times of change. The so-called HERO Model is made up of three main interrelated components: (a) healthy organizational resources and practices—HORP, (b) healthy employees, and (c) healthy organizational outcomes. After reviewing the previous literature discussed earlier, we propose three basic interrelated components of a HERO, which are described in the following lines (see Figure 1). Accordingly, we expect:

*Hypothesis 1:* A HERO will be composed of three main positively intercorrelated dimensions (HORP, healthy employees, and healthy outcomes). Particularly, we expect the fit of a second-order factor model composed by three dimensions to be better compared to a model that assumes that all the scales refer to one underlying general, undifferentiated dimension.

### *Healthy Organizational Resources and Practices (HORP)*

Research on HR management and occupational health psychology provides much of the basis for identifying specific dimensions within *HORP* and how they are connected to healthy employees and healthy organizational outcomes.



**Figure 1.** HEarthy and Resilient Organizational (HERO) Model

For example, the CONservation of Resources theory (COR; Hobfoll, 2002, p. 307) understands *resources* as “. . . those entities that either are centrally valued in their own right or act as means to obtain centrally valued ends”. Along with attributes and skills, Lyubomirsk, King, and Diener (2005) propose that resources help people thrive and succeed at work, and they are “healthier” in social relationships and personal well-being. Furthermore, the Job Demands-Resources (JD-R) Model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Schaufeli & Bakker, 2004) assumes a motivational process in which work engagement (an indicator of employee well-being) is predicted by the combination of job demands and job resources. Specifically, job resources are necessary to deal with job demands and to get things done, but they are also important in their own right. These premises are consistent with more traditional motivational approaches such as Job Characteristics Theory (JCT; Hackman & Oldham, 1975) and Self-Determination Theory (SDT; Ryan & Deci, 2000).

Hence, it seems that employees try to acquire resources that they value, such as autonomy, interpersonal relationships that are functional in achieving work goals and may stimulate personal growth, learning and development, and increase other resources in terms of “resource caravans” (Hobfoll, 2002). Specifically, research has referenced job “resources” in two broad categories: task and interpersonal resources (Salanova et al., 2011). Task resources are

the closest to employees' work activity, as they are related to the characteristics of the tasks themselves (task clarity, autonomy, feedback), which encourage the employee in connection with the work done, and feelings of pride and enjoyment emerge. Interpersonal resources refer to the people who employees work with and for, such as coworkers, supervisors, and customers and increase the connections employees have with the people they work for and with. Moreover, companies promote these job resources through healthy organizational practices such as "planned human resource deployments and activities intended to enable an organization to achieve its goals" ([Wright & McMahan, 1992](#), p. 298). Organizations develop these specific practices from HRM to increase resources of their employees and of the organization as a whole. Examples are job (re-)design by empowerment; giving opportunities for job crafting, work training, and career development; creating open channels for communication, or work-life balance programs.

From the HERO Model, we propose that the perception of task and interpersonal resources could be shared by members of the same team (shared beliefs) and enhanced through different kinds of healthy organizational practices having the potential to promote healthy employees and teams by increasing their perceived and shared resources at the team or the organizational level.

### *Healthy Employees (and Teams)*

*Healthy employees and teams* have positive psychological resources with which to feel good and positive at work. Personal resources are positive self-evaluations that are linked to resilience and refer to individuals' sense of their ability to control and have an impact on the environment ([Hobfoll, Johnson, Ennis, & Jackson, 2003](#)). Research has shown their pivotal role in the prediction of employee well-being. For example, [Xanthopoulou, Bakker, Demerouti, and Schaufeli \(2009\)](#) found that psychological resources such as self-efficacy, mental and emotional competences, organizational-based self-esteem, and optimism are positively associated to well-being. Furthermore, the studies of positive psychological capital (PsyCap) by Luthans and colleagues show that PsyCap (i.e., positive resources of efficacy, hope, optimism, and resilience) is related with psychological well-being at work ([Avey, Luthans, Smith, & Palmer, 2010](#)), being connected to desirable outcomes such as performance over time ([Luthans, Avey, Avolio, & Peterson, 2010](#); [Peterson, Luthans, Avolio, Walumbwa, & Zheng, 2011](#)).

There is evidence in favor of the idea that some (task and interpersonal) job resources predict employee well-being such as work engagement and job satisfaction (i.e., healthy employees) and job performance (healthy organizational

outcomes; e.g., Bakker, Demerouti, & Brummelhuis, 2012; Gruman & Saks, 2012; Lyubomirsky, King, & Diener, 2005; Salanova, Agut, & Peiró, 2005). Recent meta-analytic studies showed the strength of the relationships between (task and interpersonal) job resources (i.e., job control, feedback, social support) and work engagement, on one hand, and work engagement and healthy organizational outcomes (i.e., organizational commitment and job performance) on the other (Christian, Garza, & Slaughter, 2011; Halbesleben, 2010).

More interestingly some studies have shown that the relation between job satisfaction (a classical measure of employee well-being) and job performance is stronger when both are studied at the collective level of analysis (i.e., groups and organizations). This shows the importance of studying both constructs at the collective level of analysis when research is focused on collective constructs (Whitman, Van Rooy, & Viswesvaran, 2010), which is the case of the current study. In that sense, also recently it was stressed the importance to conduct studies on PsyCap at the collective levels of analyses. So far, Walumbwa, Luthans, Avey, and Oke (2011), found a significant relationship between both their collective psychological capital and trust with their group-level performance and citizenship behavior. Luthans and colleagues stressed that future work on the PsyCap of teams and even at the organizational, community, regional, and country levels is needed.

Finally in the case of work engagement, for example, Salanova and her colleagues also showed that work engagement at the team level is positively related to group health (less group anxiety) and group performance (Salanova, Llorens, Cifre, Martínez, & Schaufeli, 2003; Torrente, Salanova, Llorens, & Schaufeli, 2012) and that organizational resources and work engagement (at the team level) predicted service climate, which in turn predicted employee performance and customer loyalty as assessed by customers (Salanova et al., 2005). As argued by Schaufeli (2012), although still scarce, research on collective engagement looks promising and should be considered in future agenda.

So far, in the current study we include both cognitive (perceived collective efficacy and resilience) and affective (team work engagement) resources (together with shared beliefs of task and interpersonal team resources). Finally, based on the premises of HERO, we try to understand how these perceived shared resources are related to healthy organizational outcomes such as team (in-role and extrarole) performance.

### *Healthy Organizational Outcomes*

Excellence is an important indicator of *Healthy Organizational Outcomes*. In fact, some meanings of healthy organizations have been based on this con-

cept, such as that of Corbett (2004, p. 125), who defined them as “organizations which adopt a strategic focus on *excellence*, attain great results and become healthy organizations, as their leaders understand the dynamic relationship and the balance that exists between employees, customers, and stakeholders”. However, these definitions neglect other key questions like social responsibility and customer satisfaction and loyalty, which we think are very important to understand the essence of a healthy organization, especially in an international market where the economic structure is changing from a product-based economy to a service-based economy. We understand that a HERO has positive relations as a whole with its extraorganizational environment, with the local community and with society in general, and also with their customers. This is achieved through cooperation among partners in the production chain and with the support of other companies and outside organizations (social responsibility).

On the other hand, there is a growing body of literature that shows that managerial variables, particularly in small and medium-sized enterprises (SMEs), may set the tone for customer satisfaction and financial performance (Schneider, Ehrhart, Mayer, Saltz, & Niles-Jolly, 2005) as indicators of healthy organizational outcomes in the HERO Model. For instance, a recent study showed that managers’ performance and satisfaction was positively related to customers’ satisfaction and the interaction of both variables affects employees’ performance and employees’ satisfaction (Netemeyer, Maxham, & Lichtenstein, 2010). In this sense, most of the studies suggest a relationship between employees’ well-being and service quality (He, Li, & Lai, 2012).

The literature has put forward the so-called “mirror of satisfaction” concept to describe the relation between job satisfaction of service employees and customer satisfaction, claiming that satisfied employees perform their work better and contribute to increasing levels of customer satisfaction. Vermeeren, Kuipers, and Steijn (2012) showed that when employees are more satisfied with their jobs, customers perceive more empathy in the employees. Also these authors show that customers are more satisfied with public service when they deal with organizations in which employees are more satisfied with their jobs. Also, Evanschitzky, Groening, Mittal, and Wunderlich (2011) show that improving employee satisfaction not only increases the average customer satisfaction score but also nearly doubles the impact of customer satisfaction on customer purchase intentions. Additionally, findings show that when boundary employee units self-perceive their units as highly competent (high reliability, high assurance, and high empathy), customers’ evaluations of levels of service quality are higher (Gracia, Cifre, & Grau, 2010). Furthermore, Gracia, Salanova, Grau, and Cifre (2012) showed that collective work



engagement predicted the service quality assessed by customers through relational service competence.

Therefore, at this point it can be concluded that research supports the relationship between various indicators of HORP, healthy employees, and healthy organizational outcomes, such as work engagement, job performance, organizational commitment, and excellent results (healthy organizational outcomes). In the current study we take a step forward in this research by considering the study of HEROs at the collective level of analysis, as proposed by [Whitman et al. \(2010\)](#). Thus, to test the next two hypotheses, we conducted the analysis at a collective level: the work-unit level of analysis (by employees' and supervisors' ratings) and at the organizational level (by customers). Based on the literature review, we expect that:

*Hypothesis 2:* HORP (assessed by employees by aggregating data at the work-unit level) will be significant and positively related to healthy organizational outcomes (as assessed by immediate supervisors) that are fully mediated by healthy employees. Specifically, we expect that (a) HORP will be significantly and positively related to healthy employees (Hypothesis 2a); (b) healthy employees will be significantly and positively related to healthy organizational outcomes (Hypothesis 2b); and (c) HORP will be significantly and positively related to healthy organizational outcomes through healthy employees (Hypothesis 2c).

*Hypothesis 3:* Customers' perception concerning employees' excellent job performance and empathy is a significant predictor of customer loyalty and customers' satisfaction. Specifically, we expect that (a) employees' excellent job performance will be significantly and positively related to customers' satisfaction and loyalty (Hypothesis 3a); and (b) employees' empathy will be significantly and positively related to customers' satisfaction and loyalty (Hypothesis 3b).

## Method

### *Samples and Procedures*

*Study 1* was the validation of the HERO Model (Hypothesis 1) using data at individual level. Fourteen—from initially 35—SMEs participated in the study: 72% service companies (education, commerce, scientific and technical activities, financial activities, tourism, entertainment activities, and nongovernmental organizations), 14% industry (manufacturing activities) and 14%

construction sector. Study included different samples: (a) 14 CEOs participated in the interviews; (b) 710 employees (52% men; 69% permanent contract; mean of 7 years working in the company,  $SD = 6.22$ ) distributed over the 84 work-units (mean of 8.7 team members,  $SD = 6.2$ ; range from 2 to 44 members), who answered the questionnaire thinking about each work-unit; (c) 75 supervisors (52% men; mean of 82% permanent work contracts, and 14 years working in the company,  $SD = 5.88$ ) answered the questionnaire thinking about each work-unit; and (d) 860 customers from these organizations.

In *Study 2*, the theoretical model was tested using data aggregated at the work-unit for employees and supervisors (Hypotheses 2) and organization levels for customers (Hypotheses 3). Forty-three (from initially 64) companies participated in the study: 73% service companies (health, prevention, education, cleaning, trade, hotels, recreational activities, and consultancy companies), 22% industry (manufacturing companies) and 5% construction sector. Different sources of information participated: (a) 1,484 employees (51% men, 86% permanent contract, mean of 6 years working in the company,  $SD = 4.90$ ) distributed over the 303 work units (mean of 8.5 team members,  $SD = 6.8$ ; range from 2 to 33 members); (b) 303 immediate supervisors (50% men, 91% permanent contracts, mean of 11 years working in the company,  $SD = 8.42$ ), who answered the questionnaire thinking about each supervised work-unit. Only one supervisor per work-unit (the more immediate) filled in the questionnaire; (c) 2,098 customers completed a questionnaire on organizational issues.

*Procedure for Study 1 and 2.* Companies were selected by convenience and participation was voluntary. The initial contact was through CEOs by phone or personally. After accepting the participation, two trained researchers conducted 14 (for Study 1; 2008-2009) and 43 (for Study 2; 2010-2011) voice-recorded interviews (only one interview by company). The interviews were approximately 45 min long ( $SD = 15$ ), ranging from 30 to 60 min. At the end of the interview the work-units with their main supervisors and customers were identified to administer the questionnaires.

Employees and their immediate supervisors completed the questionnaire with the work-unit and the organization as a whole as their main referents. The questionnaires (30 min to administer) were distributed and collected at the company by the researchers. Only employees with a tenure in the company of at least 4 months participated in the study to ensure they had time to settle into their job and the organization (Feldman, 1988). The customer (individuals and companies) responses were (a) randomly selected from a list provided by the companies, and (b) collected by the researcher in person (for services companies) or by phone (industry and construction). In all cases, confidentiality was guaranteed.

## Measures

**Interview Measures.** The semistructured interviews with CEOs covered topics related to (a) HORP and (b) healthy organizational outcomes by open-ended questions focused on the researchers' agenda. Interviews were analyzed by using a system of content analysis of different categories performed by two independent, trained coders<sup>1</sup> with the aim of creating a mutually exclusive system of categories that was both reliable and valid (Weick, 1985). HORP were categorized according to the EQUAL European Project (2004). Healthy organizational outcomes included both the number of cases of excellent quality on products and services (excellence) and the positive relationships with the organizational environment and community (community benefits), respectively. Coders scored both the amount of practices ( $n$  practices and outcomes per category) and its quality on a Likert-type scale from 0 (*low quality*) to 6 (*high quality*). Finally, coders made a global judgment and appraised the degree to which they considered that the company was carrying out important global healthy organizational practices from 0 (*unimportant healthy practices*) to 6 (*very important healthy practices*; see Table 1).

**Employee/Work-Unit scales.** Questionnaires included 26 validated scales/subscales referring to HORP (11 scales), healthy employees (10 scales), and healthy organizational outcomes (5 scales). We adapted and reworded them so that in all the cases the referent was the collective: the organization (i.e., "In this company") or the work-unit (i.e., "My work unit"). Respondents answered using a 7-point Likert-type scale from 0 (*never*) to 6 (*always*; see Table 2 for more details).

**Immediate Supervisor Scales.** In Study 2 (see Table 2) two scales for team performance were assessed by six items, adapted from Goodman and Svyantek's scales (1999). In-role performance (three items; e.g., "The team that I supervise achieves its work goals") and extrarole performance (three items; e.g., "In the team that I supervise employees help each other when somebody is overloaded"). The supervisors answered using a 7-point Likert-type scale ranging from 0 (*totally disagree*) to 6 (*totally agree*).

**Customer Scales.** Four aspects of healthy organizational outcomes were measured. Excellent job performance (four items), empathy (three items), and customer loyalty (two items) were scored on a 7-point Likert-type scale ranging from 0 (*never*) to 6 (*always*). Customer satisfaction was measured with an item using a 7-point face rating scale (Kunin, 1955), which allows the emotional dimension of satisfaction to be tested. Previous research suggested

**Table 1.** CEOs' Interview Variables and Example of an Answer ( $n = 14$ )

Variable	Example
Healthy organizational practices	
Traditional HR management practices	"Improvement in the salary conditions, training, selection process ..."
Equal opportunities for men and women	"Work-home balance, specific training for women, ..."
Health and safety promotion	"Implementation of a health and safety management program, communication programs related to it ..."
Environmental impact	"Reducing energy and water consumption, recycling programs, ..."
Nonsocial exclusion policy	"Direct contract workers over 45 years old, disabled people, ..."
Local community	"Agreements with local entities, offering professional training, sponsorship, increased local procurement, ..."
Interpersonal relationships promotion	"Weekly meetings, company meals, ..."
Open communication channels	"Good communication channels through bulletin boards, company magazine ..."
Trust promotion	"Informal climate of trust by avoiding difficult-to-fulfill promises"
Code of behavior	"Rules of dress and time of arrival-departure"
Healthy organizational outcomes	
Excellence outcomes	"Accessibility for customers, including weekends"
Community benefits	"Provide work for young people"

that a single-item measure can be an acceptable indicator of satisfaction (Wanous, Reichers, & Hudy, 1997; see Table 3).

## Results

To determine several requisite conditions for the HERO measures, we used the guidelines offered by Schwab (1980) and Pedhazier and Schmelkin (1991): (a) content validity such that each facet is represented equally in the overall HERO instruments; (b) sufficient HERO scale reliabilities; (c) HERO must have a

**Table 2.** Means (*M*), Standard Deviations (*SD*), Internal Consistencies (Cronbach's  $\alpha$ ), Level of Analyses, Number of Items, Sources and Examples of Item for Each Scale for Employees (*n* = 710) and Immediate Supervisors (*n* = 75)

Variable	<i>M</i>	<i>SD</i>	$\alpha$	Level	Items	Source Adapted from	Example of item
Healthy organizational resources and practices (HORP)							
1. Autonomy (task)	4.40	1.33	.72	Group	3	Jackson, Wall, Martin, and Davis (1993)	"In my work unit we decide when to begin, finish and the order in which we do the tasks"
2. Feedback (task)	3.72	1.38	.70	Group	3	Hackman and Oldham, (1975)	"The work we do gives us much information to know how well you are doing"
3. Supportive climate (interpersonal)	2.77	1.61	.76	Group	3	Van Muijen et al. (1999)	"In my work unit, we face interpersonal conflicts that occur between colleagues"
4. Team work (interpersonal)	4.55	1.28	.75	Group	3	Salanova et al. (2011)	"My work unit consists of people with appropriate and complementary expertise"
5. Coordination (interpersonal)	4.42	1.28	.77	Group	3	Salanova et al. (2011)	"In my work unit we are coordinated with each other"
6. Transformational leadership-vision (interpersonal)	4.21	1.36	.71	Group	3	Rafferty and Griffin (2004)	"Our immediate supervisor understands perfectly well what the objectives of the group are"
7. Transformational leadership-inspirational communication (interpersonal)	3.80	1.35	.88	Group	3	Rafferty and Griffin (2004)	"Our immediate supervisor says positive things about the department"
8. Transformational leadership-intellectual stimulation (interpersonal)	3.53	1.33	.84	Group	3	Rafferty and Griffin (2004)	"Our immediate supervisor has ideas that stimulate us to rethink questions that we had never thought about before"
9. Transformational leadership-support (interpersonal)	3.66	1.59	.93	Group	3	Rafferty and Griffin (2004)	"Our immediate supervisor thinks about our personal needs"

(continued)

Table 2. (continued)

Variable	M	SD	$\alpha$	Level	Items	Source Adapted from	Example of item
10. Transformational leadership-personal recognition (interpersonal)	3.60	1.72	.96	Group	3	Rafferty and Griffin (2004)	"Our immediate supervisor congratulates us personally when we do an excellent job"
11. Healthy organizational practices	3.16	1.38	.90	Org.	9	Self-constructed	"In this company there are practices to facilitate the workers' work-family balance"
12. Mental competence	4.87	.96	$r=.56$	Group	2	Van Veldhoven and Meijman (1994)	"My work unit can work with lots of written information and data"
13. Emotional competence	3.85	1.27	.71	Group	3	Van Veldhoven and Meijman (1994)	"My work unit can persuade and convince others"
14. Collective efficacy	4.66	1.23	.88	Group	3	Salanova et al. (2003)	"We can work well although we find lot of obstacles in our way"
15. Vertical trust	3.45	1.49	.89	Org.	4	Huff and Kelley (2003)	"In this company there is a high level of trust in management and in employees"
16. Horizontal trust	3.94	1.16	.75	Org.	4	McAllister (1995)	"In this company we can share our ideas, emotions and hopes"
17. Positive emotions	3.67	1.40	.92	Group	6	Warr (1990); Kunin (1955)	"We feel relaxed while working"
18. Work engagement (vigor)	4.31	.90	.83	Group	3	Salanova et al. (2003)	"My group could continue working for very long periods at a time"
19. Work engagement (dedication)	4.70	1.02	.86	Group	3	Salanova et al. (2003)	"My work unit is involved in the task at hand"
20. Work engagement (absorption)	3.98	.97	.82	Group	3	Salanova et al. (2003)	"Time flies when we are working"
21. Resilience	3.93	1.00	.83	Group	7	Self-constructed	"We adapt to emerging changes in a positive way, and also we feel 'stronger' when overcome"

(continued)

**Table 2. (continued)**

Variable	M	SD	$\alpha$	Level	Items	Source Adapted from	Example of item
Healthy organizational outcomes (by employees)							
22. In-role performance	4.76	.86	.83	Group	4	Goodman and Syantek (1999)	"My work unit performs all the functions and tasks demanded by the job"
23. Extrarole performance	4.52	1.14	.74	Group	4	Goodman and Syantek (1999)	"We perform roles that are not formally required but which improve the organizational reputation"
24. Organizational commitment	4.44	1.20	.82	Org.	3	Cook and Wall (1980)	"The problems of this company are 'our' problems"
25. Service quality	4.32	1.05	.92	Org.	7	Parasuraman, Zeithaml, and Berry (1988); Price, Arnould, and Tierney (1995)	"In this company we can share our ideas, emotions and hopes"
26. Excellence	4.49	1.07	$r = .66$	Org.	2	Self-constructed	"The company and its products have a social benefit"
Healthy organizational outcomes (by immediate supervisors)							
27. In-role performance	4.68	.82	.82	Group	4	Goodman and Syantek (1999)	"The team that I supervise performs all the functions and tasks demanded by the job"
28. Extrarole performance	4.55	.96	.72	Group	4	Goodman and Syantek (1999)	"In the team that I supervise employees perform roles that are not formally required but which improve the organizational reputation"

Note:  $r$  = Pearson's correlation is significant at  $p < .001$ . Level is the reference level of each scale. Both last are measured by supervisor ratings.

**Table 3.** Means (*M*), Standard Deviations (*SD*), Internal Consistencies (Cronbach's  $\alpha$ ), Correlations, Sources, and an Example of the Items for Customers (*n* = 860)

Variable	<i>M</i>	<i>SD</i>	$\alpha$	1	2	3	Source Adapted from	Example of item
1. Employee excellent job performance	3.96	1.34	.87	—			Price et al. (1995)	"In this company, employees do more than usual for customers"
2. Employee empathy	4.27	1.29	.90	.81**	—		Parasuraman et al. (1988)	"In this company, employees know the specific needs of each customer"
3. Customer loyalty	4.99	1.19	$r = .71^{**}$	.57**	.62**	—	Martínez-Tur, Ramos, Peiró, and Buades (2001)	"I will recommend this company to other people"
4. Customer satisfaction	4.74	1.10	—	.66**	.68**	.69**	Kunin (1955)	"Please indicate how satisfied you are with the service received in this company" (mono-item)

\*\* $p < .01$ .

multidimensional three-factor structure; (d) empirical validity with appropriate outcome constructs (e.g., in-role and extrarole performance at the team level); and, (e) prediction of variance at the team level in these outcomes (i.e., in-role and extrarole performance).

### Study 1: Validation

**Interview Validation.** We calculated the average-measure Intraclass Correlation Coefficients (ICC), which applies the Spearman-Brown correction (Wuensch, 2007), to test the reliability of the different coders of the interviews. Results show a high level of intercoder agreement (90%), considering the ICC indices. Five of the 10 healthy organizational practices exceed 3 points (the average point) on the 0 to 6 measurement scale. From the highest to the lowest quality, these practices are related to (a) traditional HR management, (b) health and safety, (c) job insertion, (d) environmental impact, and (e) internal communication programs. Results concerning healthy organizational outcomes show that both categories (excellence vs. community benefits) are quite similar in all the organizations, with scores below the mean of the scale, that is, the organizations do not clearly offer healthy outcomes. In conclusion, content analysis of the interview shows both intercoder reliability and validity (by means of triangulation with the theory) and confirms the categories proposed by the HERO Model (Stemler, 2001).



Moreover, a shared healthy organizational practices variable was obtained through a new variable that included both CEOs' interviews and employee perceptions. To do that, coders filled in the same questionnaire related to healthy organizational practices as employees did, taking into account their knowledge of the company developed through the analyses of the content of the interviews. The ICC shows the agreement between coders, which suggests the reliability of the different coders in healthy organizational practices. ANOVA analyses were performed to check for differences between the CEOs' perceptions about the healthy practices (mean of coders) and what employees showed in the questionnaires (data aggregated by SME at the organizational level). Results showed agreement between coders ( $ICC = .71$ ,  $p \leq .05$ ) and so a new variable (shared healthy organizational practices) was computed, which was the mean of both coders. Results showed no differences between the two sources of information (CEOs vs. employees),  $F(1, 26) = 2.22$ ,  $p = .15$ , which validates both instruments externally (CEO interviews and employee questionnaires) when assessing healthy organizational practices.

### *Questionnaire Validation*

**Descriptive Results.** Tables 2 and 3 show the descriptive analyses and internal consistencies (Cronbach's  $\alpha$ ) of the study variables at individual level of analyses with SPSS 19.0. As expected, the  $\alpha$  values for all the variables meet the criterion of .70 (Nunnally & Bernstein, 1994) and variables correlate with each other positively and significantly, ranging from  $r = .10$ ,  $p < .01$  to  $r = .79$ ,  $p < .001$  for employees,<sup>2</sup> and from  $r = .57$ ,  $p < .01$  to  $r = .81$ ,  $p < .01$  for customers. The results of Harman's single factor test (cf. Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) for employees and customers revealed that common method bias was not a problem because no single factor accounted for the majority of the variance (see Table 4).

**Confirmatory Factor Analysis<sup>3</sup>.** Table 5 shows the results of CFA<sup>4</sup> (Costello & Osborne, 2005; Pérez-Gil, Chacón, & Moreno, 2000) by AMOS 19.0, to determine the factorial structure of dimensions in employees and customers of 14 SMEs computed at the individual level of analyses. The second-order CFA on employees with three pairs of correlated errors indicates that, compared to the one-factor model,  $\Delta\chi^2(6) = 265.33$ ,  $p < .001$ , and the original three-factor model,  $\Delta\chi^2(3) = 122.62$ ,  $p < .001$ , the model which best fits the data is the revised three-factor model. This model is composed of three second-order latent and correlated factors: (a) HORP (i.e., task resources,

**Table 4.** Fit Indices of Harman's Single Factor Test in Employees ( $n = 710$ ) and Customers ( $n = 860$ )

Model	$\chi^2$	$df$	RMSEA	CFI	IFI	TLI	AIC
<b>Employees</b>							
1. Healthy organizational resources and practices (HORP)	7566.07	702	.12	.58	.58	.56	7722.07
2. Healthy employees	9588.37	1035	.11	.51	.51	.48	9774.37
3. Healthy organizational outcomes	2496.34	135	.15	.65	.65	.60	2568.34
<b>Customers</b>							
1. Healthy organizational outcomes	689.43	35	.15	.89	.89	.86	729.43

Note:  $\chi^2$  = chi-square;  $df$  = degrees of freedom; RMSEA = Root Mean Square Error of Approximation; CFI = Comparative Fit Index; IFI = Incremental Fit Index; TLI = Tucker-Lewis Index; AIC = Akaike Criterion.

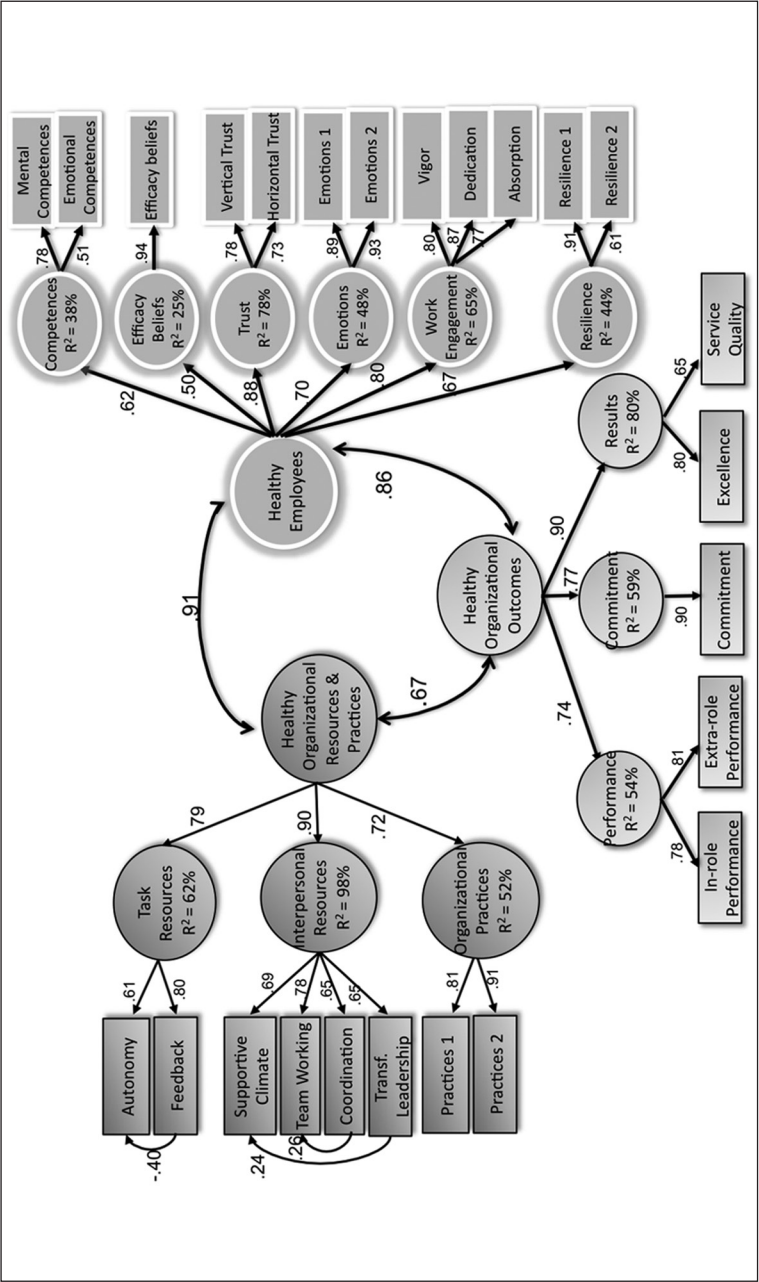
interpersonal resources, and organizational strategies by constraining three pair of errors<sup>5</sup>) with first- and second-factor weight values ranging from .61 to .91 and from .72 to .90, respectively; (b) healthy employees, distributed in competences, efficacy beliefs, trust, positive emotions, work engagement, and resilience with first- and second-factor weight values ranging from .51 to .94 and from .50 to .88, respectively; and (c) healthy organizational outcomes distributed in performance, organizational commitment, and results with significant first- and second-factor weight values ranging from .65 to .90, and from .74 to .90, respectively (see Figure 2).

The second-order CFA on customers with two pairs of correlated errors indicates that, compared to the one-factor model, Delta  $\chi^2(5) = 460.55$ ,  $p < .001$ , and the original four-factor model, Delta  $\chi^2(2) = 64.28$ ,  $p < .001$ , the model which best fits the data is the four-factor model revised. Results show (a) employee excellent job performance are distributed in four indicators by constraining one pair of errors (Excellence 1-Excellence 2)<sup>6</sup> with factor weights values range from .64 to .88; (b) customer empathy is distributed in three indicators by constraining one pair of errors (Empathy 1-Empathy 2)<sup>7</sup> with factor weight values range from .82 to .84; (c) customer loyalty is distributed in two indicators with factor weight of .82 and .83, and (d) satisfaction is composed by one indicator with factor weight of .95. Finally, second-factor weight values ranged from .91 to .96 (see Table 5).

**Table 5.** Fit Indices of the CFA of the Variables in Employees (N = 710) and in Customers (n = 860) From 14 SME by Individual Level

Model	$\chi^2$	df	RMSEA	CFI	IFI	TLI	AIC	$\chi^2$ diff	$\Delta$ RMSEA	$\Delta$ CFI	$\Delta$ IFI	$\Delta$ TLI	$\Delta$ AIC
<b>Employees</b>													
1. First-order: One-factor model	1439.19	266	.08	.86	.86	.84	1557.19						
2. Second-order: three-factor model	1296.48	263	.07	.88	.86	.85	1420.48						
Diff. M2 & M1								142.71***	.01	.02	.00	.01	136.71
3. Second-order: three-factor model (revised)	1173.86	260	.07	.90	.90	.89	1303.86						
Diff. M3 & M1								265.33***	.01	.04	.04	.05	253.33
Diff. M3 & M2								122.62***	.00	.02	.04	.04	116.62
<b>Customers</b>													
<b>Healthy Organizational Outcomes</b>													
1. First order: One-factor model	689.43	35	.15	.89	.89	.86	729.43						
2. Second-order: Four-factor model	293.16	32	.09	.96	.96	.94	339.17						
Diff. M2 & M1								396.27***	.07	.07	.07	.08	390.26
3. Second-order: Four-factor model (revised)	228.88	30	.08	.97	.97	.95	278.88						
Diff. M3 & M1								460.55***	.07	.08	.08	.09	450.55
Diff. M3 & M2								64.28***	.01	.01	.01	.01	60.29

Note:  $\chi^2$  = chi-square; df = degrees of freedom; RMSEA = Root Mean Square Error of Approximation; CFI = Comparative Fit Index; IFI = Incremental Fit Index; TLI = Tucker-Lewis Index; AIC = Akaike Criterion.  
\*\*\*p < .001.



**Figure 2.** Second-order CFA analyses concerning healthy organizational resources and practices, healthy employees, and healthy organizational outcomes ( $n = 710$ )

Note: Only the significant coefficients are displayed.

$^{*}p < .001$ .

Our data give evidence for reliability and convergent validity for latent variables since (a) Composite Reliability (CR) and Analyses of Variance Extracted (AVE) are higher than 0.7 and 0.5, respectively, for all second latent factors for employees (CR ranges from .846 to .852; AVE ranges from .500 to .651) and customers (CR ranges from .816 to 1.00; AVE ranges from .632 to .902). Furthermore, all factor loadings for employees and customers are highly significant since the regression weights are significantly different from zero at the .001 level (two-tailed). Results also show evidence for the discriminant validity in second latent factors for employees and for customers (100%). Thus the squared correlations of any pair of latent variables (ranged from .30 to .50 for employees and from .32 to .65 for customers) were lower than the AVEs (ranged from .55 to .71 for employees and from .57 to .81 for customers; [Fornell & Larcker, 1981](#)).

### *Study 2: Testing Hypotheses at the Team and Organizational Levels of Analysis*

To test the theoretical model, scales for employees and customers were aggregated at the work-unit ( $n = 303$ ) and at the organization ( $n = 43$ ) levels, respectively (e.g., [Bliese, 2000](#)). Results show a mean ICC<sub>1</sub> of .13 (ranging from .06 for collective efficacy to .24 for transformational leadership) for employees and of .10 (ranging from .06 for customer satisfaction to .08 for excellent job performance). Also, a one-way ANOVA supports the validity of aggregation: (a) HORP, and healthy employees, mean = 1.75, from 1.18 for team efficacy,  $p < .05$ , to 2.59 for transformation leadership,  $p < .001$ , among employees; and (b) healthy organizational outcomes, mean = 5.21, from 3.80 for customer loyalty to 5.96 for customer satisfaction and excellent job performance,  $p < .001$ , among customers. In conclusion, overall aggregation results indicated within-group/organization agreement and between-teams/organizations discrimination.

Table 6 shows the descriptive analyses for the scales in employees' aggregated data at work-unit level (HORP as well as healthy employees) and immediate supervisors' ratings (team in-role and extrarole performance). In accordance with previous CFA we computed transformational leadership and work engagement as composite scales (cf. [Schaufeli, Bakker, & Salanova, 2006](#)). Only the scales referring to the team (not to the organization) were considered in the SEM analyses. The patterns of correlations are as expected (see Table 6)

Table 7 shows the results of the SEM analyses<sup>8</sup> to test Hypothesis 2 using the within-work-unit level by the aggregated database from employees' and

**Table 6.** Means (*M*), Standard Deviations (*SD*) and Correlations for the Scales in Employees' Aggregated Data and Immediate Supervisors' Ratings (*n* = 303)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
Healthy organizational resources and practices (HORP)													
1. Team autonomy (task)	4.76	.75	—	.13*	.18*	.34***	.27***	.28***	.23***	.28***	.21***	.11*	.05
2. Team feedback (task)	4.09	.89	.28***	—	.67***	.61***	.55***	.55***	.28***	.38***	.39***	.16**	.08
3. Supportive team climate (interpersonal)	3.61	1.19	.22***	.59***	—	.66***	.54***	.69***	.31***	.40***	.39***	.31***	.19**
4. Team working (interpersonal)	4.70	.87	.35***	.51***	.55***	—	.75***	.63***	.42***	.50***	.49***	.23***	.11*
5. Team coordination (interpersonal)	4.57	.81	.30***	.47***	.44***	.66***	—	.50***	.46***	.49***	.51***	.16***	.07
6. Transformational leadership (interpersonal)	3.98	.89	.21***	.47***	.60***	.53***	.40***	—	.29***	.52***	.49***	.30***	.21***
Healthy employees													
7. Team efficacy	4.88	.64	.24***	.21***	.17***	.32***	.35***	.18***	—	.48***	.50***	.11*	.11*
8. Team work engagement	4.44	.55	.31***	.37***	.38***	.51***	.47***	.44***	.41***	—	.68***	.16***	.12*
9. Team resilience	4.39	.67	.23***	.37***	.35***	.47***	.44***	.48***	.36***	.66***	—	.14*	.08
10. Team in-role performance <sup>a</sup>	4.50	1.00	.03	.09**	.18***	.13***	.08**	.19***	.06*	.07**	.09**	—	.69***
11. Team extrarole performance <sup>a</sup>	4.56	.90	.01	.03	.12***	.07**	.02	.14***	.05*	.06*	.07**	.75***	—
12. Group size	8.5	6.8	-.11*	-.01	-.12*	-.08	-.09	-.14*	-.11	.15**	-.05	-.02	-.04

Note: Correlations are presented at the individual-level (below the diagonal) and at the team-level (above the diagonal).

<sup>a</sup>Reported by the supervisors.

\**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

**Table 7.** SEM Fit Indices of the HERO Model in the Aggregated Data in Employees' and Immediate Supervisors' Ratings (*n* = 303)

Model	$\chi^2$	df	p	RMSEA	CFI	IFI	TLI	AIC	$\chi^2$ diff	$\Delta$ RMSEA	$\Delta$ CFI	$\Delta$ IFI	$\Delta$ TLI	$\Delta$ AIC
1. Model 1 (M1)	182.69	51	.000	.09	.92	.92	.89	236.69						
2. Model 1 (M1 <sub>R</sub> )	117.52	49	.000	.07	.96	.96	.94	175.52						
Diff. M1 <sub>R</sub> & M1									65.17***	.02	.04	.04	.05	61.17
3. Model 2 (M2)	109.55	48	.000	.06	.96	.96	.95	169.55						
Diff. M2 & M1									73.14***	.03	.04	.04	.06	67.14
Diff. M2 & M1 <sub>R</sub>									7.97***	.01	.00	.00	.01	5.97
4. Model 3 (M3)	117.52	50	.000	.06	.96	.96	.94	173.52						
Diff. M3 & M1									65.17***	.03	.04	.04	.05	63.17
Diff. M3 & M1 <sub>R</sub>									0.00ns	.01	.00	.00	.00	2.00
Diff. M3 & M2									7.97***	.00	.00	.00	.01	3.97

Note:  $\chi^2$  = chi-square; df = degrees of freedom; RMSEA = Root Mean Square Error of Approximation; CFI = Comparative Fit Index; IFI = Incremental Fit Index; TLI = Tucker-Lewis Index; AIC = Akaike Criterion.  
\*\*\**p* < .001. ns = non-significant

immediate supervisors' ratings (*n* = 303). Two alternative models were compared: M1, the fully mediated model, in which HORP (as assessed by teams) are positively related to healthy organizational outcomes (team performance assessed by the immediate supervisor) through healthy employees (as assessed by teams); M2, the partial mediated model, in which a direct relationship was included from HORP to healthy organizational outcomes; and M3, an additional model for latent variables, in which the direct relationship between healthy employees and healthy organizational outcomes was set to the value presented by this parameter (unstandardized coefficient; see Salanova et al., 2005). In all models we control for team size by including an observable indicator that affects the three latent factors. Two absolute indices were used to evaluate the goodness of fit of the models: (a) the  $\chi^2$  Goodness-of-Fit Statistic, and (b) the Root Mean Square Error of Approximation (RMSEA). The use of relative goodness-of-fit measures is recommended because  $\chi^2$  is sensitive to sample size (Marsh, Balla, & Hau, 1996): (a) the Comparative Fit Index (CFI); (b) the Incremental Fit Index (IFI); and (c) the Non-Normed Fit Index or Tucker-Lewis Index (TLI). Values smaller than .07 for RMSEA and greater than .90 for the relative indices indicate an acceptable fit (values smaller than .07 for RMSEA and higher than .93 for the rest are indicative of good fit; Hoyle, 1995). Finally, we computed the Akaike Information Criterion (AIC; Akaike, 1987) to compare competing nonnested models.

In accordance with the four basic processes to establish mediation effects proposed Baron and Kenny (1986) and Judd and Kenny (1981), we fit our

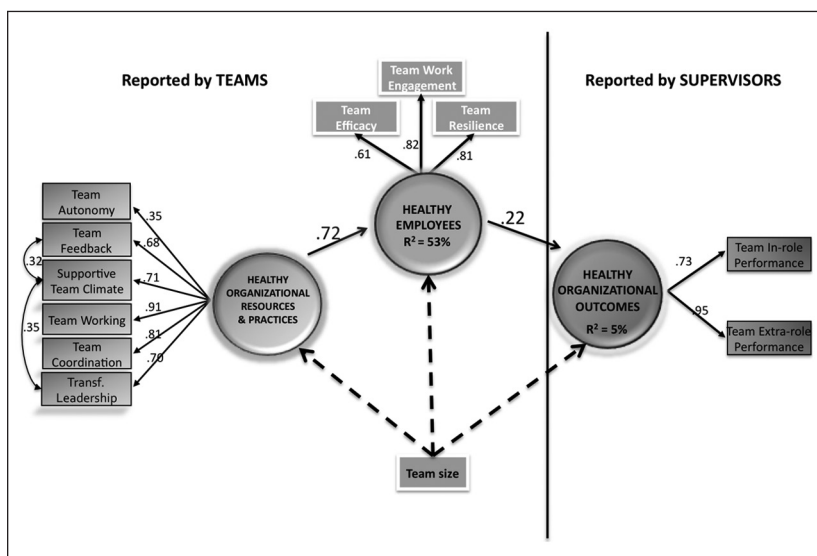
proposed fully mediated model (M1)<sup>9</sup> to the data by controlling for team size. Results indicate that our M1 fits the data reasonably well. A review of the modification indices reveals that this model could be improved by including two pair of correlated errors,<sup>10</sup> Delta  $\chi^2(2) = 65.17, p < .001$ , thus giving rise to the so-called M1 revised (M1<sub>R</sub>) model. Furthermore, chi-square difference tests between M1<sub>R</sub> and the M2 (the Partial Mediation Model)<sup>11</sup> also shows a significant difference between both models, Delta  $\chi^2(1) = 7.97, p < .001$ . Concerning the mediation process, the conditions by Baron and Kenny (1986) were met: (a) HORP are positive and significantly related to supervisor's team performance perception,  $\beta = .27, p < .001$ ; (b) healthy teams are positive and significantly related to supervisor's team performance,  $\beta = .18, p < .01$ ; but (c) the relationship between HORP and team performance became significant,  $\beta = .09, p < .01$  when it is controlled by the effect of healthy employees and (d) the relationship among healthy teams and healthy organizational outcomes became also nonsignificant when it is controlled by HORP,  $\beta = -.02, p = .82$ . So far, healthy teams fully mediate between HORP and team performance as assessed by the supervisors.

An additional model (M3) was fit to the data to get more support to consider the full mediation of healthy teams between HORP and team performance. For this, the resulting unstandardized coefficient for the relationship between healthy employees and healthy organizational outcomes in M1<sub>R</sub> was fixed to the value presented by this parameter (unstandardized coefficient) of the M1<sub>R</sub>. All fit indices met the criteria, and significant differences were obtained between M3 and M1, Delta  $\chi^2(1) = 65.17, p < .001$ , and M2, Delta  $\chi^2(2) = 7.97, p < .001$ , which give evidence that the influence of HORP on team in-role and extrarole performance was fully mediated by healthy teams.

Figure 3 shows a graphic representation of the results of this final model (M3). Different aspects could be remarked: (a) team size shows a negative but nonsignificant relationship with the latent variables in the model; (b) All the manifest variables loaded significantly on the intended latent factors, ranging from .35 to .95; (c) HORP have a positive significant relationship with healthy teams,  $\beta = .72, p < .001$ ; 53% of explained variance, which in turn also has a significant and positive relationship with healthy organizational outcomes,  $\beta = .22, p < .001$ ; 5% of explained variance by a full mediation effect using aggregated data at the work-unit level as well as the immediate supervisors' ratings.

Our data give evidence for reliability and convergent validity for latent scales for SEM in employees/supervisor since (a) Composite Reliability (CR) and Analyses of Variance Extracted (AVE) are higher than 0.7 and 0.5, respectively (CR ranges from .794 to .854; AVE ranges from .510 to .717). Furthermore, all factor loadings are highly significant since the regression





**Figure 3.** SEM analyses concerning healthy organizational resources and practices, healthy employees (assessed by aggregated data base in employees at work-unit level), and healthy organizational outcomes (assessed by immediate supervisors' ratings;  $n = 303$ )

Note: Only the significant coefficients are displayed.

\*\*\* $p < .001$ .

weights are significantly different from zero at the 0.001 level (two-tailed); with the exception of the relationship from group size to HOPR, Healthy Employees, and Healthy Organizational Outcomes which is nonsignificant, as expected;  $p > .05$ . Results also show evidence for the discriminant validity in second latent factors (100%). Thus the squared correlations of any pair of latent variables (ranged from .02 to .36) were lower than the AVEs (ranged from .16 to .60; Fornell & Larcker, 1981).

Finally, we computed hierarchical regression analyses at the organizational level on customers from the 43 companies. The criteria were customer satisfaction and customer loyalty, and the predictors were employee excellent job performance and employee empathy. Customer's group size was included as control variable. Regression analyses revealed that employee empathy did not account for a statistically significant increase in variance for predicting dependent variables (i.e., customer loyalty and satisfaction). On the other hand, employee excellent job performance was significantly and positively

related to customer loyalty,  $\beta = .61$ ,  $p < .05$ , and customer satisfaction,  $\beta = .50$ ,  $p < .05$ . In sum, results showed that employee excellent job performance is a good predictor of customer loyalty and customer satisfaction. Customer's group size had not significantly associated with either loyalty or customer satisfaction.

## Discussion

The current study contributes to our understanding of the systematic and interactive relationships among the three main dimensions of a HERO, that is, (a) HORP that influence the development of (b) healthy employees and (c) healthy organizational outcomes. To capture the essence of those organizations, and to overcome previous methodological limitations, a methodology to test HERO was proposed that took into account different points of view of each organization as different key sources of information, that is, CEOs, employees working in groups, immediate supervisors, and customers. To collect these data, different measures were used for qualitative and quantitative evaluations (interviews and questionnaires), which allowed the perceptions of CEOs, employees, immediate supervisors, and customers to be tested using data aggregated at the work-unit and organizational levels of analysis and the supervisors' ratings.

The current research offers evidence in favor of (a) the convergent and discriminant validity of the qualitative and quantitative measures developed to test the different scales included in the HERO Model by intercoder agreement on the CEOs' interviews and second-order CFA for scales on employees and customers, respectively (Hypothesis 1); (b) the specific relationship among the three components of the HERO Model, that is, HORP, healthy employees (teams), and healthy organizational outcomes computed by SEM in the data set about employees aggregated at the work-unit level and from immediate supervisors' ratings (Hypotheses 2a, 2b, 2c), and (c) the specific relationship among service quality perceptions by customers computed by regression analyses in the data set aggregated at the organizational level on customers (Hypotheses 3a, 3b).

### *About the Construct Validity and Psychometric Properties of the HERO Model's Scales*

Our study shows that healthy organizational practices have a good level of intercoder agreement (90%) and the best-scored practices had mainly to do with classical aspects of Organization Management, such as traditional HR

management strategies, health and safety, nonsocial exclusion, environmental impact, and good communication practices. However, some more innovative healthy organizational practices, such as equal opportunities or involvement in the local community, are still underdeveloped. These results are not unexpected, considering the sample in which the study was performed. Our organizations were mainly SMEs and such companies do not usually have a large number of organizational resources available to be allocated to the Human Resources Management area, so they devote them to the traditional aspects of Organization Management, most of them complying with a compulsory local or general law. Still on the subject of healthy organizational practices, it is interesting to note that both CEOs and employees agree on the existence of healthy organizational practices within each SME. This is one of the strong points about the validity of the two self-constructed tools. Finally, healthy organizational outcome variables show a high rate of intercoder agreement as regards the fact that CEOs consider that their organizations obtain a below-average score on healthy organizational outcomes (excellence and benefits to their community). It seems that more work is needed to make them aware of how important these healthy organizational outcomes are to their companies.

Focusing on the validation of the questionnaires on samples of employees and customers, the different second-order CFA on HORP, healthy employees, and healthy organizational outcomes confirm their psychometric properties in both samples. Specifically, Cronbach's  $\alpha$  coefficient supported the internal validity and the reliability of the instruments in employees and customers. Construct validity was also supported by the second-order CFA tested in employees and customers, respectively. Particularly in employees, second-order CFA showed evidence in favor of the expected structure of HEROs, which should be measured by three potentially core dimensions: (a) HORP, which involved the scales of task and interpersonal resources as well as organizational practices; (b) healthy employees, tested by measuring different scales which refer to team competences, team efficacy beliefs, team trust, team positive emotions, team work engagement, and team resilience, and (c) healthy organizational outcomes, measured by job performance, organizational commitment, and healthy results. Based on customers, CFA again showed that an important dimension of a HERO, that is, service quality, as assessed by their customers, is composed of four main dimensions: customers' perception of employee excellent job performance, and employee empathy, customer loyalty, and customer satisfaction. All in all, previous results support the value of the employees' and customers' questionnaires as an effective way to measure HEROs.

### *About the Structural Relationships of the HERO Model (at the Team Level)*

Regarding Hypothesis 2, results of SEM with data aggregated at the work-unit level of analysis on employees' and immediate supervisors' ratings revealed that, as expected, (a) the three elements which compose the HERO Model, that is, HORP, healthy employees/teams, and healthy organizational outcomes, were positively related (Hypotheses 2a and 2b), and (b) healthy organizational practices and resources were significantly and positively related to healthy organizational outcomes through healthy employees/teams, thereby giving evidence supporting Hypothesis 2c.

These results are in line with previous research, in which those relationships were confirmed in a fragmented and disconnected way (i.e., not considering all the "collective" variables together in the same model). More specifically, results extend previous research conducted at the individual level of analysis, in the sense that HORP are positively related to employee well-being and healthy organizational outcomes (e.g., job performance; Halbesleben, 2010; Lyubomirsky et al., 2005; Salanova et al., 2005; for example).

However, in the present study we go one step further, since the relationships among the variables in the HERO Model have all been tested together and at the team level and taking into account the immediate supervisors' ratings on team performance following the prescriptions of focusing on a more collective level of analysis (Wilson et al., 2004). It seems that shared beliefs about healthy employee/team variables (team efficacy, team work engagement, team resilience) and, consequently, healthy organizational outcomes (team in- and extrarole performance) are better only when groups share beliefs that companies offer task and interpersonal resources and are implementing healthy team practices. Organizations must invest in organizational resources in order that work-units feel better since this is positively related to a better team performance. Overall, results support our Hypotheses 2 (a, b, c) and we can say that one of the research questions of the present study has been achieved.

Regarding Hypothesis 3 findings showed that (a) employee excellent job performance significantly predicted customer loyalty and customer satisfaction; that is, the better excellent job performance among employees was, the more customer loyalty and customer satisfaction there was, thus giving evidence to support Hypothesis 3a; (b) employees' empathy was not significantly related to customer loyalty and to customer satisfaction, thereby not providing evidence in favor of Hypothesis 3b. These results are partially consistent with previous findings (Salanova et al., 2005). All in all, results among customers show evidence of the influence of customers' perceptions of employee

behaviors (excellent performance) on customer loyalty, which is crucial for companies seeking to remain competitive and obtain profits. On the other hand, customers' perceptions of employee behaviors (excellent performance) affect customers' satisfaction, which is considered to be a service quality indicator—something that is very relevant for companies to be able to survive and prosper in a context of continuing social and economic change. Results concerning customers at the organizational level of analysis are a step further in the study of HEROs since not only is the internal point of view (from CEOs and employees) taken into account to determine the healthiest and most resilient level in the organization but also the external view from customers' perceptions.

### *Theoretical and Practical Implications*

At the theoretical level, the present findings extend the body of knowledge about HEROs. First, the theoretical heuristic model of HERO has been tested empirically through a comprehensive model that includes different key methodologies of collecting data (i.e., interviews and questionnaires) and different key informants to study positive organizations based on different perception of work-units (i.e., employees), immediate supervisors' ratings on work-units, and the organization (from the customers' and CEOs' points of views) as a whole. This methodology has proved to be robust and valid using different analyses at different levels (i.e., work-unit and organizational measures), multiple informants, and assessing multiple areas of a HERO (i.e., healthy organizational practices and resources, healthy employees, and healthy organizational outcomes). Overall, the research gaps concerning healthy and resilient models highlighted by previous research ([Wilson et al., 2004](#)) have been filled in the present study since we have provided evidence in favor of a heuristic and theoretical model that integrates results on HEROs. Finally, this model is grounded not only on research about job stress but also on HRM, organizational behavior, and positive occupational health psychology at collective levels of analysis as well as on combining qualitative and quantitative measures of the components of HEROs.

From a practical perspective, our findings facilitate a robust and validated methodology not only for measuring HEROs but also for identifying them through validated indicators using different sources of information from the organization. Moreover, our findings also highlight the relevance of improving managerial practices and resources within SMEs since it is important not only to generate positive work environments but also to enhance healthy employees and teams as well as to understand better some healthy consequences for organizations, customers, and society in general.

It is also very important to note that not only researchers but also practitioners could base their practices on the use of these instruments to assess and promote HEROs. They could also use the Model as a valid reference for both assessment and intervention in organizations to increase and develop their levels of health and resilience among companies over time. The same methodology could be used in other settings such as other countries and occupational sectors to classify HEROs according to a more general reference, either by using different qualitative and quantitative instruments (interviews and questionnaires, respectively) or by asking different key informants to assess the company as a whole. In this sense, this multimethod approach allows organizations to be classified from the healthiest, most resilient organizations to the least healthy and resilient ones, according to different indicators/criteria (i.e., HORP, healthy employees, and healthy organizational outcomes) obtained from different key informants.

### *Limitations and Further Research*

Some limitations to our study should be noted and discussed. The first one is that some data were obtained by self-report measures without any external criteria to validate the measures. However, in the case of the interview, validity of the HORP and healthy organizational outcomes were obtained by triangulation with the theory (HERO Model). Moreover, in the case of the questionnaires, not only individual but also aggregated shared perceptions of teams and organizations (i.e., intersubjectivity) have been considered for agreement in different scales and measures. Furthermore, in-role and extrarole performance were assessed by considering the immediate supervisors' ratings on the work-unit. The use of these aggregated data at the team and organizational levels of analysis and the use of the immediate supervisors' ratings on the team could minimize the method common variance bias (which has been shown not to be a problem in our study).

The second limitation is its cross-sectional nature, which precludes any sound conclusion about the causality of the variables that were studied. However, as expected, an important relationship among the variables in the model has been obtained. It would be interesting to test the HERO Model using multiple organizations (not only SMEs) in longitudinal studies to explore the existence of positive gain spirals over time across HORP, healthy employees, and healthy outcomes over time.

The third limitation is that it was not possible to compute multilevel analyses. Further analyses conducted by testing an intercept-only model using multilevel methodology ([Hox, 2010](#)) reveal that there is no great influence of

interorganizational variability on supervisors' ratings for the dependent variables. However, our study has other strengths such as performing the data analyses at the collective level (work-unit and organizational levels) as well as taking into account the perception of immediate supervisors' rating on work-unit, as recommended recently by [Whitman et al. \(2010\)](#). Further analyses with a wider sample should be performed to confirm these findings using multilevel analyses to explore cross-level effects at the organization and team levels.

### **Final Note**

HEROs should be a strategic priority for management in modern groups and organizations, and even more so in periods of economic crisis and turmoil, as in the current times. We have provided reliable and valid empirical and practical-based evidence for the development and validation of a HEROs Model that might help applied researchers and managers to offer a better service to CEOs, employees and teams, immediate supervisors and customers, as well as citizens and society as a whole, from the innovation, improvement, and expansion of health at work.

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### **Notes**

1. Details about these procedures can be requested from the first author.
2. Due to the length of the correlation matrix for employees, it has not been included in the article, but available from the first author on request.
3. Our data for employees and customers reveal that the sample is accurate for computing CFA (MacCallum, Widaman, Zhang, & Hong, 1999; Preacher & MacCallum, 2002).
4. To avoid unidentified problems, the variance of feedback, efficacy beliefs and commitment for employees, and employees' satisfaction for customers were constrained using the formula  $(1-\alpha) * \text{variance}^2$  (Stephenson & Holbert, 2003).

5. Autonomy-feedback (too much feedback could be related to excessive task clarity and lack of perceived control); supportive climate-transformational leadership (both scales refer to supportive social atmosphere); team working-coordination (both are related to working together in teams).
6. Excellence 1-Excellence 2: both items refer to the feelings of customers about the employees' excellent performance makes feel like a special people.
7. Empathy1-Empathy 2: both items concern the employees' ability to perceive and understand the needs of customers.
8. Sample is accurate for computing SEM analyses. Results show that for a power of .80,  $df = 50$ , we need a sample of 214 observations to carry out the SEM (we have 303 observations/teams; MacCallum, Browne, & Sugawara, 1996). Further ICCs' (intercept-only model using multilevel methodology) conducted on supervisors for the dependent variables were 0.08 for in-role as well as for extrarole performance. It concludes that there were no extreme differences (variance) between organizations that could be biasing the results (Hox, 2010).
9. To avoid unidentified problems, the variance of extrarole performance was constrained using the formula  $(1-\alpha) * \text{variance}^2$  (Stephenson & Holbert, 2003).
10. Correlated errors among team climate support with team feedback and team transformational leadership (all scales refer to supportive social atmosphere).
11. To avoid unidentified problems, the variance of extrarole performance was constrained using the formula  $(1-\alpha) * \text{variance}^2$  (Stephenson & Holbert, 2003).

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