

POSITIVE PERSONAL RESOURCES AND ORGANIZATIONAL WELL-BEING: RESILIENCE, HOPE, OPTIMISM, AND SELF-EFFICACY IN AN ITALIAN HEALTH CARE SETTING

ANNAMARIA DI SIPIO
ALESSANDRA FALCO
LUCA KRAVINA
NICOLA A. DE CARLO
UNIVERSITY OF PADOVA

The present study fits within the Positive Psychology approach, according to which a positive outlook is a valuable “natural defence” to contrast the possible negative effects of stress. In line with the Psychological Capital (PsyCap) model, the study aims to assess the metric properties of four scales geared to measure the positive personal resources considered by such model — resilience, hope, optimism, and self-efficacy — as well as to ascertain the presence of a higher-order factor representing these four personal resources. The fit of the models to the data (χ^2 , CFI, and SRMR) are satisfactory. The scales factor structures and the higher-order factor are therefore confirmed. Such scales thus appear to be appropriate to assess the influence of some individual work characteristics in the work-related stress process.

Key words: Positive Psychology; PsyCap; Resilience; Hope; Optimism; Self-efficacy.

Correspondence concerning this article should be addressed to Annamaria Di Sipio, Università di Padova, Dipartimento FISPPA — Sezione di Psicologia Applicata, Via Venezia 8, 35131 PADOVA (PD), Italy. Email: annamaria.disipio@unipd.it

INTRODUCTION

The present research strives to address the latest concerns about organizational well-being and psychosocial risks in Europe; and points out, in particular, the relevance given to work-related stress risk (European Agency for Safety and Health at Work, 2007). A growing interest is being shown about the consequences of work-related stress (Bakker, Demerouti, & Schaufeli, 2003; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Karasek, 1979; Karasek & Theorell, 1990; Siegrist, 1996; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007), in terms of both the individual’s health and safety, and organizational and national productivity in Europe (Commission of the European Communities, 2007; De Lange, Taris, Kompier, Houtman, & Bongers, 2003; Demerouti et al., 2001; Gustafsson, Persson, Eriksson, Norberg, & Strandberg, 2009; Tsutsumi & Kawakami, 2004; Van Vegchel, de Jonge, Bosma, & Schaufeli, 2005). The ever-expanding tertiary sector decreases physical demands, but increases the demand for cognitive and

emotional efforts (Jackson, Wall, Martin, & Davids, 1993; Mullarkey, Jackson, & Parker, 1995; Norman, 2005; Wall, Jackson, & Mullarkey, 1995) because of the centrality of the relationship between individuals (De Carlo, 2009; Siegrist et al., 2004).

The present contribution lies within the Positive Psychology approach.

Positive Psychology is an emerging movement endeavoring to shift the focus from the previous interest in disease, suffering, and pathology, to characteristics and predictors of good psychological functioning, as well as the building of positive abilities, in a philosophy of prevention and development of potentialities and well-being. It chooses to consider the individual analysis level, relating to positive individual traits (Lopez & Gallagher, 2009; Seligman & Csikszentmihalyi, 2000; Seligman, Steen, Park, & Peterson, 2005). The development of this discipline is oriented to implement evaluation methods, among which self-report instruments (Diener, 2009).

The Positive Organizational Behavior (POB; Luthans, 2002a), which adheres to the Positive Psychology movement, is particularly interested in the improvement of work performance and some personality constructs (Luthans, 2002b). It is founded on theory, research — of both theoretical and practical aspects — and on valid measuring; it is especially concerned with “state-like” characteristics and variables rather than dispositional and more stable “trait-like” ones (Luthans & Avolio, 2009).

Psychological Capital (PsyCap) is a recent multidimensional construct, made up of four basic components: resilience, hope, optimism, and self-efficacy (Luthans & Youssef, 2004; Luthans, Youssef, & Avolio, 2007a). Such dimensions correspond to individual characteristics meeting POB main criteria: being measurable, having potentialities for development, and being related to performance. PsyCap is a higher-order “core construct,” unique and measurable, a more effective predictor of both performance and work satisfaction than the individual variables composing it (Luthans, Avolio, Avey, & Norman, 2007). A significant negative relationship exists between the PsyCap construct and the perception of work-related stress symptoms; likewise, exists between PsyCap and intentions both to resign and to find a new job, which are turnover indicators that should be contrasted through enhancing and developing positive resources (Avey, Luthans, & Jensen, 2009). The literature suggests an increase in research on positive constructs to develop interventions for the improvement of psychological well-being in the organizational setting (Avey, Luthans, Smith, & Palmer, 2010).

The “PsyCap Questionnaire” (PCQ) comprises four 6-item dimensions (resilience, hope, optimism, and self-efficacy), rated on Likert-type scales drawn from several instruments present in the literature and adapted to the state condition (Luthans, Youssef, & Avolio, 2007b).

In the present study, we refer to a superordinate dispositional factor that could be particularly important for selection process (Avey et al., 2009; Campbell-Sills & Stein, 2007; Falvo, Hichy, Capozza, & De Carlo, 2002; Luthans et al., 2007, 2007a, 2007b; Scheier, Carver, & Bridges, 1994; Scheier & Carver, 1985; Seligman & Csikszentmihalyi, 2000; Snyder et al., 1991).

Resilience. Research on resilience in the clinical practice has been focused on the study of models of positive adaptation to adverse events. Applied to children’s and developmental psychopathology, two main approaches exist: variable-focused, studying both individual and environmental variables with the aim to understand the relevant factors allowing to reach positive results in difficult situations; and person-focused, aiming to identify resilient people so to understand their distinctive characteristics (Masten, Cutuli, Herbers, & Reed, 2009).

Resilience is not determined by rare and special qualities (Masten, 2001): it refers to the capacity to face negative events successfully and it changes with time (Stewart, Reid, & Mangham, 1997); it is also at work when foreseeing a positive change which requires great responsibility — an aspect emphasized by Positive Psychology (Luthans & Youssef, 2004). It is therefore known as the positive psychological capacity to rebound or “bounce back” from adversities (Luthans, 2002b).

Resilient people are distinguished by their firm acceptance of reality; by the deep belief that life has a meaning; by strong values; and, finally, by the capacity to improvise (Coutu, 2002). The resilience process is characterized by the transformation toward a more advantageous condition, is a dynamic process, relating to a positive adaptation to serious events, such as the exposure to severe threats and adversities throughout life, or violence and aggressions suffered during the age of development (Luthar, Cicchetti, & Becker, 2000; Magrin, 2008). Resilience does not simply refer to the capacity to bounce back and to the lack of psychopathology, but it implies the capacity to maintain stability and psychological equilibrium over time (Bonanno, 2004).

In particular, the interest toward this construct has allowed the examination of some of the main dimensions determining it. In the national and international literature, resilience is presented both as a multidimensional construct and as a single factor. According to the 25-item Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003), the multidimensional construct is determined, for example, by five factors: the concept of personal competence, such as maintaining high standards and tenacity; trust in one’s instinct; capacity of tolerance of negative events and strengthening by overcoming stressful situations; positive acceptance of change and secure relationships; control of one’s life; and, finally, influence of fate or superior and spiritual entities. Other variables involved, according to a new proposal inspired by the Resilience Scale of Adults (RSA; 45 items; Friborg, Hjemdal, Rosenvinge, & Martinussen, 2003), are: personal competence, social competence, personal structure, family coherence, social support. Resilience could be conceived as a three-factor construct — Tenacity, Strength, and Optimism (Yu & Zhang, 2007) — and unidimensional as well (Campbell-Sills & Stein, 2007; Siu et al., 2009; Smith et al., 2008).

The results obtained from the analysis of the scale (CD-RISC) by Connor and Davidson, after applying two exploratory factor analyses and one confirmatory factor analysis, led to the proposal of a reduced scale, including 10 items of the CD-RISC scale, with four of them slightly modified. The new scale measures resilience as a unidimensional construct (Campbell-Sills & Stein, 2007).

In the present study, Campbell-Sills and Stein’s (2007) scale was adapted to the Italian context so to make it more “sensitive” to organizational and work contexts and therefore able to detect “professional resilience.”

Hope. Research on hope has shown that Snyder’s “Hope Theory” represents a benchmark in the international literature. Hope is considered as a cognitive, dispositional, or state construct (Snyder et al., 1996), bidimensional, made up of agency and pathways dimensions; these two components are distinct, additive, interacting between them, reciprocal, and positively correlated. Agency is goal-directed, it refers to the perception of successful determination in meeting one’s goals in the past, present, and future; pathways refers to the specific ability to plan appropriate modes to meet one’s goals (Abdel-Khalek & Snyder, 2007; Snyder et al., 1991; Venning, Elliott, Kattler, & Wilson, 2009). Several research on the influence of hope on performance and well-

being have shown that higher levels of hope grant better results in academics, sports, and, in terms of both prevention and control, in physical and psychological health; moreover, it leads to deeper interpersonal relationships (Rand & Cheavens, 2009).

Within Hope Theory, two ways of measuring hope have been proposed: in terms of disposition, and in terms of state.

The Dispositional Hope Scale (DHS) is made up of 12 items: four for agency; four for pathways; and four distractors, with a 4-point response scale from *definitely false* to *definitely true* (Snyder et al., 1991).

The DHS was administered in Arabic, with the same response scale as the original; analyses confirmed the two agency and pathways factors (Abdel-Khalek & Snyder, 2007). It was linguistically adapted to the Australian population, and administered to teenagers (13-17 year-old) maintaining the 12 original items, varying the response scale from the original four to eight points, still ranging from *definitely false* to *definitely true*. Factor analysis confirmed the presence of two distinct factors (Venning et al., 2009). The German version was administered with an 8-point response scale and findings indicated only one factor, hope (Brouwer, Meijer, Weekers, & Baneke, 2008).

Agency refers to the cognitive aspect of considering oneself able to use the best pathways. Such perception implies a mental effort to support motivation to both take up the best strategy and persist in pursuing it (Snyder, 2002).

The State Hope Scale (SHS; Snyder et al., 1996) intends to measure hope as a state; it is alike made up of the two factors, agency and pathways.

The dispositional-type hope refers to different situations in time, while state-like hope refers to specific or close events. Within the debate on trait-like and state-like perspectives, Snyder maintained that they are both useful; people probably have both dispositional and state-like hope (Snyder et al., 1996). The author also stated that, in specific situations, more general thoughts and considerations emerge beside reaching one's goals (Snyder, 2002).

The SHS was drawn from the DHS (Snyder et al., 1996), omitting distractor items and changing phrasing and instructions to focus on the present time. On the basis of initial results, two items were removed: one for agency (A), and, consequently, a pathways item (P) for balance. The response scale has eight points, from *definitely false* to *definitely true* (Snyder et al., 1996).

In the present study we therefore adapted Snyder et al.'s scale (1991) to the Italian context so that it might be more "sensitive" to work and organizational contexts and therefore able to detect "professional hope."

Optimism. Optimism refers to the tendency to expect positive events in one's life. Optimists focus on future expectations, their behavior is aimed to attain what they desire, trusting in their ability to fulfil their goals. Optimists differ from pessimists in the way they face problems and adversities, they have a tendency to be more persevering (Carver, Scheier, Miller, & Fulford, 2009).

The literature presents two main trends in defining optimism, and explaining its influence on attitudes and behaviors: the Explanatory Style Model by Seligman and the Self-Regulatory Model by Carver and Scheier (Kluemper, Little, & DeGroot, 2009; Peterson, 2000).

The explanatory-style model highlights how people interpret event causes and refers to cognitive and emotional aspects; in particular, optimists attribute negative events to external causes, and positive events to personal characteristics.

The self-regulatory model explains how perceiving a discrepancy between the present situation and one's goals activates a self-regulatory process in which the motivational component is significant; specifically, if individuals believe their goals are feasible, in spite of the discrepancy, they will keep applying themselves in them, increasing their efforts (Kluemper et al., 2009; Peterson, 2000).

The Life Orientation Test (LOT) scale considers optimism in dispositional terms, focusing on the role of expectations, of both positive and negative outcomes, as predictors of behavior. The initial analyses revealed the presence of two main factors: the former comprising items worded in a negative direction, the latter including items worded in a positive direction. The scale final version has 12 items: four positive, four negative, and four distractors. The response scale presents five options from *strongly agree* to *strongly disagree*. The results of confirmatory factor analyses revealed that the indexes of the two-factor solution are better when the correlation between factors is considered, $r = .64$. The authors pointed out that the items tend to measure the construct without redundancy and that the scale is stable across time (Scheier & Carver, 1985). Further analyses found some problems relating to two positively-worded items, which were consequently removed; the scale was adapted by adding one positive item and removing one negative item to balance it. The Life Orientation Test (LOT-R) scale therefore contains six items, and the two-factor solution presents the best fit indexes (Scheier et al., 1994).

For measuring optimism, in the present study we therefore adapted the scale by Scheier et al. (1994), and Scheier and Carver (1985) to the Italian context, making it more "sensitive" to work and organizational contexts and therefore able to detect "professional optimism."

Self-efficacy. Self-efficacy has a considerable role in influencing human behavior (Bandura, 1977). The Self-efficacy theory by Bandura refers to "people's beliefs in their capabilities to produce desired effects by their actions" (Bandura, 1997, p. vii).

Self-efficacy refers to beliefs in one's capabilities to perform a behavior or a series of behaviors allowing to attain the desired goals in specific, different, and ever-changing conditions; it also refers to intentions and predictions of a behavior, and events causal attributions, implying the ability to manage and coordinate one's capabilities (Maddux, 2009).

Self-efficacy has aroused practical application interest, in the clinical and psychotherapeutic setting, with reference to developing personal abilities to solve personal problems, as well as learning and maintaining behaviors geared to improve the individual's physical and psychological well-being (Maddux, 2009). The attention paid to such construct was extended to other research fields as well, such as the educational (Sherer et al., 1982) and work-related (Pierro, 1997).

With reference to Positive Psychology, a high self-efficacy perception drives to pursue harder goals, supported by a motivation directed to personal effort and perseverance despite obstacles (Luthans et al., 2007a).

Self-efficacy can be assessed in general terms, but also specifically.

Sherer et al. (1982) first proposed a scale to measure general self-efficacy (Woodruff & Cashman, 1993). They believed that both success and failure experiences contribute to the development of a general set of expectations that can be used in other contexts as well (Sherer et al., 1982). The first version of the General Self-efficacy scale (36 items) included three main dimensions: will to initiate a behavior, resolve to carry it on in spite of the required efforts, and, finally, perseverance to reach one's goals in the face of misfortune. Factor analysis revealed the bidimensional structure of 23 items, while the others were discarded: 17 items were included in the Gen-

eral Self-efficacy subscale and six items in the Social Self-efficacy subscale. The General Self-efficacy subscale could be used in clinical settings to evaluate the effectiveness of both psychotherapeutic and behaviour-changing interventions. The final version of the General Self-efficacy scale presents a 5-point Likert scale, and is described as more useful than the Social Self-efficacy scale (Sherer et al., 1982; Sherer & Adams, 1983).

A re-evaluation of the General Self-efficacy scale allowed the detection of three main components that may be traced back to Bandura's socio-cognitive theory: "strength," referring to the ability to persevere and cope with obstacles; "magnitude," assessing perceived efficacy as regards levels of performance difficulty; and, finally, "generality," referring to a sense of global competence in facing problems (Pierro, 1997; Woodruff & Cashman, 1993). The scale translated for the Italian context is divided into three dimensions, but can also be used as monodimensional (Pierro, 1997). Pierro's Italian translation was subsequently adapted to the work context to assess professional self-efficacy; in particular, two dimensions were considered: efficacy as regards difficult levels of performance and efficacy in coping with obstacles (Falvo et al., 2002). In the present study this latter adaptation, already known in the Italian scenario, was considered.

OBJECTIVES

In line with the PsyCap model, the first objective of the present study is to evaluate the metric properties of four scales to measure specific positive personal resources; in particular, the following sub-objectives are proposed:

Ia = assessment of the one-factor structure of resilience;

Ib = assessment of the two-factor structure of hope;

Ic = assessment of the two-factor structure of optimism;

Id = confirmation of the two-factor structure of self-efficacy.

In particular, the scales of resilience, hope, and optimism constitute a possible adaptation, to the Italian work context, of more "general" scales drawn from the international literature. In the case of the self-efficacy scale, we exclusively aim to confirm the two-factor structure, before using it for the second objective.

The second objective is to ascertain the presence of a higher-order factor (HOF) as regards the four positive personal resources examined (Avey et al., 2009; Luthans et al., 2007, 2007a, 2007b).

METHOD

Participants

The scales were administered to all workers ($N = 1801$) in a public health care facility in the Veneto region, Italy, within a research-intervention project on work-related stress.

The instrument was administered collectively, in groups, in the organization during working hours. Participants were informed about the objectives of the study and of its anonymity.

Five reference samples were identified using the listwise-deletion strategy in order to analyze only the cases presenting values valid for all the variables examined. Four samples were employed to evaluate each scale: the first, for the resilience scale, consisted of 1470 respondents; the second, for the hope scale, was made up of 1496 respondents; the third, for the optimism scale, consisted of 1523 respondents; the fourth, for the self-efficacy scale, comprised 1520 respondents. For the second-order factor, the fifth sample, of 1130 individuals, was used. Participants' socio-demographic characteristics (gender, age, contract type, work schedule) are shown in Table 1. The samples are mostly made up of female workers, workers aged 40 or over, and workers on permanent contracts.

TABLE 1
Participants' characteristics (percentages)

	Samples				
	Resilience	Hope	Optimism	Self-efficacy	HOF
<i>Gender</i>					
F	69.9	69.2	69.1	68.6	69.5
M	27.3	28.3	28.4	28.7	28.4
Missing	2.8	2.5	2.5	2.7	2.1
<i>Age</i>					
< 40 years	21.2	20.9	21.1	20.9	22.0
≥ 40 years	76.5	76.7	76.6	76.6	76.2
Missing	2.4	2.4	2.3	2.5	1.8
<i>Contract type</i>					
Permanent	95.1	95.7	95.7	95.6	96.6
Fixed term	2.8	2.6	2.6	2.6	2.1
Missing	2.1	1.7	1.8	1.8	1.2
<i>Work schedule</i>					
Part-time	20.5	20.6	19.1	19.7	20.5
Full-time	75.6	75.5	77.0	76.6	76.3
Missing	3.9	3.9	3.9	3.7	3.2

Materials

The test for the assessment of work-related stress risk in the organizational well-being perspective, Q_u-Bo (De Carlo, Falco, & Capozza, 2008), was administered, with the addition of the four personal resources scales.

Scales have a 6-point Likert-type response format with an extra response option N standing for *cannot evaluate* (1 = *strongly disagree*, 2 = *somewhat disagree*, 3 = *slightly disagree*, 4 = *slightly agree*, 5 = *somewhat agree*, 6 = *strongly agree*, N = *cannot evaluate*).

The resilience scale (Campbell-Sills & Stein, 2007) is an unidimensional instrument (R; 10 items; Mean = 4.38; SD = 1.04; α = .89).

The hope scale includes two-factors (Snyder et al., 1991): the pathways factor refers to the planning process (H1; four items; Mean = 4.51; $SD = 0.96$; $\alpha = .82$); the agency factor refers to the determination to reach a goal (H2; three items; Mean = 4.64; $SD = 1.05$; $\alpha = .66$).

The optimism scale consists of two factors (Scheier & Carver, 1985; Scheier et al., 1994): the former with negative items (O1; three items; Mean = 4.04; $SD = 1.26$; $\alpha = .70$), the latter with positive items (O2; four items; Mean = 4.25; $SD = 1.08$; $\alpha = .77$).

The self-efficacy scale (Falvo et al., 2002) is made up of two factors: efficacy as regards difficult levels of work performance (S1; five items; Mean = 4.66; $SD = 1.27$; $\alpha = .86$) and efficacy in coping with obstacles (S2; four items; Mean = 4.58; $SD = 1.13$; $\alpha = .74$).

Statistical Analysis

In the analysis, the listwise-deletion strategy was used for the preliminary treatment of the missing data in each scale, then only the cases presenting values valid for all the variables examined were analyzed (Barbaranelli, 2007). Listwise deletion (LD) is one of the most widely used methods to manage incomplete information (Schafer & Graham, 2002).

The N *cannot evaluate* response was considered as a missing value and, where applicable, the scoring system was reversed before proceeding with analyses.

To verify the factor structure, confirmatory factor analysis (LISREL 8.8; Jöreskog & Sörbom, 2006) was applied; the relationships between observed and latent variables are known, such indications derive from theory, empirical research, or both, and the identified factor structure is then tested (Byrne, 1998; Corbetta, 1992).

χ^2 , CFI (Comparative Fit Index), and SRMR (Standardized RMR) (Hu & Bentler, 1999) were mainly used for the fit of the model to the data. A two-index presentation strategy, besides the χ^2 test, which is sensitive to sample size, is a criterion preferable to using only one index (Hu & Bentler, 1999; Schermelleh-Engel, Moosbrugger, & Müller, 2003). RMSEA (Root Mean Square Error of Approximation) and NNFI (Nonnormed Fit Index) (Schermelleh-Engel et al., 2003) were used as well. The cut-off criteria considered were: $< .08$ for SRMR and $\geq .95$ for CFI indicated a good fit (Hu & Bentler, 1999). Moreover, $0 \leq RMSEA \leq .05$ for a good fit, and $.05 < RMSEA \leq .08$ for an acceptable fit; $.97 \leq NNFI \leq 1.00$ for a good fit, and $.95 \leq NNFI < .97$ for an acceptable fit.

The Maximum Likelihood method (ML) was used in the analyses, a common estimation approach among those used for SEM, which is quite robust as regards the violation of the multivariate normality assumption (Schermelleh-Engel et al., 2003).

RESULTS

With reference to the first objective, the results of the analyses of the scale factorial structure were overall satisfactory.

The fit obtained for the resilience scale confirmed an unidimensional structure. The model fit indexes showed a good model-data fit: $\chi^2(35, N = 1470) = 624.28, p < .001$; SRMR =

.052; CFI = .96 (sub-objective Ia). The loadings of the 10 items are shown in Table 2: the λ_x loadings were significant and above .58.

TABLE 2
Resilience scale

Item	λ
1. I can stay focused even when under pressure	.58
2. I am able to adapt to any change required by the situation	.69
3. I can handle unpleasant feelings about work	.70
4. At work, I can deal with whatever comes	.72
5. I am not easily discouraged by work failure	.71
6. I can achieve work goals despite obstacles	.75
7. Even when facing work hardships, I try to see the humorous side of problems	.64
8. Coping with work hardships can strengthen me	.63
9. I tend to quickly bounce back after work hardships	.70
10. At work I think of myself as a strong person	.66

$\chi^2(35, N = 1470) = 624.28, p < .001$; SRMR = .052; CFI = .96; RMSEA = .12; NNFI = .96

The hope scale fit presented the two pathways and agency dimensions. The model fit indexes showed that the model fitted the data well: $\chi^2(13, N = 1496) = 181.61, p < .001$; SRMR = .034; CFI = .97 (sub-objective Ib). The seven-item scale loadings are presented in Table 3: the λ_x loadings were significant and above .49; the Φ correlation between factors was high and equal to .87.

TABLE 3
Hope scale

Item		λ
11. I can overcome a difficult work situation	H1	.76
12. I can think of many ways to solve a problem at work	H1	.80
13. I believe there are many ways to get the results that are most important to me	H1	.68
14. Even if others get discouraged, I am always able to solve problems	H1	.70
15. I'm grateful to my past experiences which have prepared me well to succeed in the face of challenges	H2	.76
16. I am pretty successful in my work life	H2	.65
17. At work, when a goal is set, energetically manage to pursue	H2	.49

$\chi^2(13, N = 1496) = 181.61, p < .001$; SRMR = .034; CFI = .97; RMSEA = .095; NNFI = .96

The two-factor model was then confronted with a monofactorial nested model, fixing the covariance between factors ξ at 1. The chi-square difference was significant: $\chi^2_D(1) = 62.01, p < .001$; the two-factor model had better fit indexes and a lower χ^2 .

The optimism scale, adapted to the Italian context, was made up of two factors: the former with negative items (O1) and the latter with positive items (O2). The model fit indexes sug-

gested that the model fitted the data well: $\chi^2(13, N = 1523) = 128.50, p < .001$; SRMR = .051; CFI = .97 (sub-objective Ic). The loadings of the seven items are displayed in Table 4: the λ_x loadings were significant and above .54; the Φ correlation between factors was not high, equal to .30.

TABLE 4
Optimism scale

Item		λ
18.	Even when facing work hardships, I expect things to turn out for the best	O2 .80
19.	In uncertain times at work, I expect positive results	O2 .73
20.	At work, I'm a believer in the idea that "every cloud has a silver lining"	O2 .60
21R.	Usually, I believe that if something can go wrong at work, it will	O1 .54
22R.	At work, things mostly don't work out the way I want them to	O1 .82
23R.	At work, things go hardly ever my way	O1 .65
24.	I'm always optimistic about the future of my work	O2 .61

$\chi^2(13, N = 1523) = 128.50, p < .001$; SRMR = .051; CFI = .97; RMSEA = .077; NNFI = .94

The two-factor model was confronted with a monofactorial nested model, applying the chi-square difference, which was significant: $\chi^2_D(1) = 778.27, p < .001$; the two-factor model had better fit indexes and a lower χ^2 .

The self-efficacy scale was made up of two factors: efficacy as regards difficult levels of work performance and efficacy in coping with obstacles. The model fit indexes showed that the model fitted the data well: $\chi^2(26, N = 1520) = 316.32, p < .001$; SRMR = .043; CFI = .96 (sub-objective Id). The 9-item scale loadings are given in Table 5: the λ_x loadings were significant and above .52; the Φ correlation between factors was not high, and equal to .47.

TABLE 5
Self-efficacy scale

Item		λ
25R.	At work, when I'm trying to learn something new, I give up on it quickly if I'm not successful	S1 .73
26R.	At work, if some objective looks too complicated, I will not even bother to try it	S1 .76
27.	At work, when I have a goal, I energetically pursue it	S2 .76
28.	At work, I stick to unpleasant activities until I finish	S2 .67
29R.	At work, if I don't reach my goals, I give up easily	S1 .76
30R.	At work, I avoid learning new things when I think they are too difficult for me	S1 .70
31.	If I can't do a job the first time, I keep trying until I can	S2 .64
32R.	At work, when difficulties occur, I avoid facing them	S1 .73
33.	At work, failure makes me try harder	S2 .52

$\chi^2(26, N = 1520) = 316.32, p < .001$; SRMR = .043; CFI = .96; RMSEA = .087; NNFI = .95

The two-factor model was confronted with a monofactorial nested model, applying the chi-square difference, which was significant: $\chi^2_{\text{D}}(1) = 880.72, p < .001$; the two-factor model had better fit indexes and a lower χ^2 .

With reference to the second objective, a model was tested in which we computed a single index for each factor as indicator of the four dimensions: resilience, hope, optimism, and self-efficacy. These four dimensions were in turn explained by a higher-order factor (HOF). Given that resilience is monofactorial, a correspondence between observed resilience and latent resilience was required; loading was therefore fixed at 1 and error at 0.

The results indicated that the fit indexes pointed to a model that was not far from adequacy criteria: $\chi^2(11, N = 1130) = 357.15, p < .001$; SRMR = .071 was good; but CFI = .94 was not satisfactory. Following theoretical considerations on item formulation (R and H1 present some overlap in their content, and O1 and S1 are both negatively worded), two parameters relative to error correlations were freed (Del Líbano, Llorens, Salanova, & Schaufeli, 2010) and the model showed good fit to the data: $\chi^2(9, N = 1130) = 86.64, p < .001$; SRMR = .027; CFI = .99; RMSEA = .089; NNFI = .97 (Figure 1).

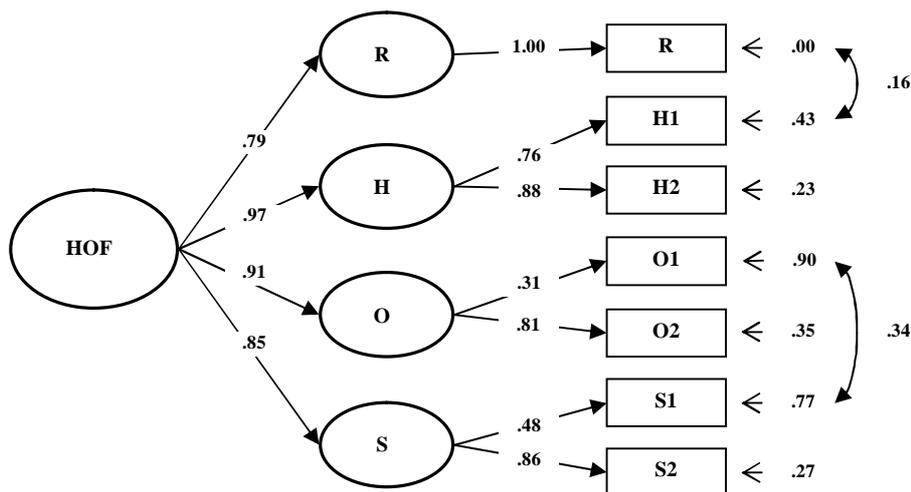


FIGURE 1
Higher-order factor.

DISCUSSION

The present research builds on the current concerns in the European context on organizational well-being and work-related stress risk. We tried to address the request for instruments, coming from social parties, such as entrepreneurs, unions, professional and scientific organizations. Such instruments would be reference points, for both employers and employees, to identify, prevent, or handle work-related stress problems, in order to attain higher efficiency and improved health and work safety conditions. Pursuing quality and productivity at work would be crucial to improve economic performance and competitiveness in general; besides, reducing

health and safety problems at work would cut down both economic costs and interventions by social safety systems and public expenditure (COM, 2007; Etuc-Unice-Ueapme-Ceep, 2004; Italian Ministry of Work and Social Policies, 2010).

The present study therefore welcomes such requests of instruments to assess stress sources with a particular reference to employees' personal resources. Our attention was mainly directed to adapting measuring scales to be administered in work and organizational contexts.

This research falls within Positive Psychology, sharing the recent interest toward a survey on characteristics and predictors of good psychological functioning, and on building persons' positive capacities, within a framework of prevention and development of potentialities and well-being. It does not contrast the preceding psychological research, chiefly geared to the understanding of disease, suffering, and pathology, but wishes to delve into the investigation of human experience (Seligman & Csikszentmihalyi, 2000; Seligman et al., 2005).

The first objective refers to presenting the factor structure of the scales relating to four personality variables — resilience, hope, optimism, and self-efficacy. The second objective involves ascertaining the presence of a superordinate factor as regards these four positive personal resources (Avey et al., 2009; Luthans et al., 2007, 2007a, 2007b).

In particular, the resilience, hope, and optimism scales are a proposal of adaptation to the Italian work context, of more general scales taken from the international literature.

The results of scale internal coherence analyses are overall satisfactory; the scales have a good internal coherence. The models fit to the data, according to χ^2 , CFI, and SRMR fit indexes (Hu & Bentler, 1999); the scale factor structures are therefore confirmed. With reference to the second objective, the higher-order factor is also confirmed.

Future developments may involve specific studies on the relationships between stress sources, positive personal resources (resilience, hope, optimism, self-efficacy) — both individually and as higher-order factor — and stress consequences. In particular, as regards the higher-order factor, such studies may aim to verify if the construct may be a more effective predictor than the single individual variables making it up.

Assessing personal resources in organizational contexts allows to plan training actions geared to strengthen them in order to develop employees' potential and improve organizational well-being. The subsequent measuring allows to notice the changes that have taken place and to monitor organizational well-being.

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