

Development and validation of the Occupational Hardiness Questionnaire

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Abstract

Background: One of the most traditional approaches to the positive study of personality has been the research on Hardiness or Hardy Personality. However, studies about this construct have systematically suffered from a lack of sufficient psychometric guarantees of the measures. **Method:** This paper presents the Occupational Hardiness Questionnaire (OHQ), the result of a research line on the subject and its measurement with a total sample of 1,647 participants. **Results:** Four studies show the results of exploratory factor analysis (EFA), confirmatory factor analysis (CFA), consistency, temporal reliability and construct validity. **Conclusions:** Results indicate that the OHQ has satisfactory psychometric characteristics and can be used in the study of Occupational Health and in the area of Positive Personality.

Keywords: Personality, hardiness, occupational health psychology, assessment, questionnaire.

Resumen

Desarrollo y validación del Cuestionario Ocupacional de Resistencia.

Antecedentes: uno de los enfoques más clásicos en el estudio positivo de la personalidad ha sido la investigación acerca de Hardiness o Personalidad Resistente. Sin embargo, los estudios con el constructo han adolecido sistemáticamente de falta de medidas con suficientes garantías psicométricas. **Método:** en este trabajo se presenta el Cuestionario de Resistencia Laboral (CRL), resultado de una línea de investigación sobre el tema y su medida con una muestra total de 1.647 participantes.

Resultados: se presentan los resultados en cuatro estudios en los que se indican los resultados del análisis factorial exploratorio (AFE), análisis factorial confirmatorio (AFC), consistencia, fiabilidad temporal y validez de constructo. **Conclusiones:** los resultados encontrados indican que el CRL tiene características psicométricas satisfactorias y que puede utilizarse tanto en el estudio de la salud laboral como en el enfoque de la personalidad positiva.

Palabras clave: personalidad, personalidad resistente, psicología de la salud ocupacional, evaluación, psicometría.

The concept of Hardiness or Hardy Personality was first proposed by Suzanne Kobasa (Kobasa, 1979) as a personal resource against the effects of negative or stressful events on health and, specifically, as a buffer of occupational stress (Kobasa, 1982; Kobasa, Maddi, & Kahn, 1982). Since then, the construct has aroused much interest and efforts to clarify its content, assessment and possible effects (Beehr & Bowling, 2005; Ford-Gilboe & Cohen, 2000; Funk, 1992; Maddi, 2006; Maddi & Martínez, 2008; Peñacoba & Moreno-Jiménez, 1998).

Its formulation is grounded in three conceptual bases: the model of individual differences in responses to stress (Selye, 1956), the model of Lazarus (1966) about mechanisms of stress appraisal, and contributions of authors such as Allport (1955) about benefits of some personality dispositions in the process of stress (Kobasa, 1979). Kobasa uses hardiness as a personality variable and the term hardy personality (Kobasa, 1979; Kobasa et al., 1982; Kobasa, Maddi, & Zola, 1983; Kobasa, Maddi, Puccetti, & Zola, 1985), underlining hardiness as a personality variable with all the corresponding features.

According to her proposal, hardiness is a composite variable with three components: Commitment, Control and Challenge. "Commitment is the ability to believe in the truth, importance and interest value of who one is and what one is doing; and thereby, the tendency to involve oneself fully in many situations of life [...]. Control refers to the tendency to believe and act as if one could influence the course of events [...]. Challenge is based on the belief that change, rather than stability, is the normative mode of life" (Kobasa, 1988, p. 101). As shown by the terms Kobasa uses, the three components are cognitive appraisal processes. Hardiness is a "multifaceted personality construct" (Carver, 1989; Hull, Lehn, & Tedlie, 1991), assuming a latent variable and synergism between the components, but each dimension has a different capacity to predict a criterion (Florian, Mikulincer, & Taubman, 1995; Hull, van Treuren, & Virnelli, 1987).

The Hardiness model expresses the concept that the stress response is not an automatic and linear outcome, but the result of the interaction of an individual with the sources of stress. According to Kobasa-Oullette and Di Placido (2001, p. 178), "Hardiness is said to lessen the negative effects of the stress". Two main mechanisms have been proposed to explain this effect, a different perception of events (Allred & Smith, 1989) and a more effective use of coping strategies (Ford-Gilboe & Cohen, 2000), that is, coping with problems more optimistically concerning the final outcomes. This kind of coping has been considered as "transformational coping",

characterized by a positive reinterpretation of events (Hystad, Eid, & Brevik, 2011).

There is broad consensus about the protective effects of hardiness on health (Beehr & Bowling, 2005; Brooks, 2008; Harris, 2004; Huang, 1995; Hystad et al., 2011). Vasquez (2003) presented a comprehensive review of such studies and results. Although hardiness is considered by most researchers to be a relevant construct for the study of health (Hystad, Eid, Johnsen, Laberg, & Bartone, 2010), the way it exerts influence has not been sufficiently established (Beehr & Bowling, 2005). Kobasa (1979) proposed that hardiness is mainly a buffer between stress and strain, but there are also two other ways of possible influence: a direct effect on stress and illness and an indirect effect via coping (Klag & Bradley, 2004). Debate on this issue is still ongoing. Although the hardiness construct was developed in the theoretical frame of its association with coping and consequences on stress, later studies have also showed clear relationships with variables such as well-being (Skomorovsky, Kerry, & Sudom, 2011), self-esteem (Foster & Dion, 2003) and work engagement (Moreno-Jiménez, Garrosa, Corso, Boada, & Rodríguez-Carvajal, 2012).

Whereas the theoretical model of hardiness has been well received and added to the general models of effects of personality on general processes of adaptation (Allport, 1955; Caprara & Cervone, 2000; Pervin & Oliver, 1997), especially in response to stress (Contrada & Guyll, 2001; Friedman, 1990; Holmes & Masuda, 1974; Lazarus, 1999; Vollrath, 2006; Williams, Smith, Gunn, & Uchino, 2011), the instruments to measure hardiness have been criticized due to lack of sufficient methodological rigour.

The proposed components of the hardiness construct were not the result of empirical studies, but of a theoretical model of the person as active actor who chooses his/her strategies and goals (Maddi & Kobasa, 1981). The first assessment instrument, based on a number of pre-existing scales (Kobasa, 1979), was not supported by psychometric results. However, interest in the construct has promoted diverse attempts to develop instruments to measure Hardiness (Funk, 1992; Maddi et al., 2006; Peñacoba & Moreno-Jiménez, 1998). In some cases, makeshift scales have been used (Kuo & Tsai, 1986), in others, discarded scales (Nakano, 1990), and although more advanced instruments are now being used, such as the Personal Views Survey III (Maddi et al., 2006) and the Dispositional Resilience Scale (Bartone, 2006), there are still some methodological problems, compounded by problems of access to free use of instruments. As some authors have found (Chan, 2000; Ghorbani, Watson, & Morris, 2000; Sinclair & Tetrick, 2000), research on hardiness has been heavily burdened with general problems of methodology, instruments and samples.

Under the assumption that hardiness is not just a general personality variable, but may take on specific forms in particular areas of behaviour, Hardiness scales have been developed for specific sectors such as health (Pollock, 1986), academic hardiness (Benishkek & López, 2001), cognitive hardiness (Nowack, 1990), military hardiness (Adler & Dolan, 2006), sport psychology (Godoy Izquierdo & Godoy, 2004), or even for specific languages, such as Norwegian (Hystad et al., 2010), in response to the need to consider cultural forms. However, there has been no specific development of a scale for the occupational area.

In Spain, a line of research focused on Hardiness at the workplace has been conducted for some years, with several investigations and publications (Garrosa, Moreno-Jiménez, Rodríguez-Muñoz, & Rodríguez-Carvajal, 2011; Garrosa, Rainho,

Moreno-Jimenez, & Monteiro, 2009; Ladstätter, Garrosa, Badaea, & Moreno-Jiménez, 2010; Moreno-Jiménez, Morett Natera, Rodríguez-Muñoz, & Morante Benadero, 2006; Moreno-Jiménez, Garrosa-Hernández, González-Gutiérrez, 2000; Moreno-Jiménez, Garrosa, Corso, Boada, & Rodríguez-Carvajal, 2012; Peñacoba & Moreno-Jiménez, 1998; Peñacoba & Moreno-Jiménez, 2000), from which the OHQ was developed. Most of these papers addressed the area of occupational health. The process of construction of the questionnaire was conducted following the international guidelines for developing scales (Hambleton, 1980; Martínez, Moreno, & Muñiz 2005; Morales, 2006).

As the result of this research line, the OHQ is presented through four studies that exhibit the psychometric characteristics of the instrument with the corresponding methodological requirements. This can facilitate research on Hardiness and its applications in the Spanish language, improving research and analysis of the construct, both in theoretical and applied aspects, and may lead to new formulations and applications.

STUDY 1

Study 1 focuses on the development of a hardiness questionnaire to measure resilience at work. Specifically, item generation is explained, and initial validation of the questionnaire, performed by exploratory factor analysis (EFA), is presented. Internal consistency was also explored.

Method

Participants

The total sample comprised 850 health workers from three hospitals. Mean age was 35.73 years ($SD = 7.76$), and mean experience in the profession was 11.25 years ($SD = 7.85$). Of the participants, 86.8% were women and 13.2% were men. For all participants, informed consent was obtained and anonymity was guaranteed.

Item generation

The scale was mainly based on the theory of hardiness of Kobasa (1979, 1982). A review of existing hardiness questionnaires was used to develop an initial item pool representing the classical dimensions of challenge, commitment, and control. As previous research has shown that complex response scales add construct-irrelevant variance (Harvey, Billings, & Nilan, 1985), we decided to use a simple response scale. Thus, items were rated from 1 (*completely disagree*) to 4 (*completely agree*). Furthermore, because negatively worded items in measures of hardiness have been shown to overlap with neuroticism (Sinclair & Tetrick, 2000), we worded items positively. We followed two processes of item refinement. Firstly, four experts from the area of personality established content validity (DeVellis, 2001) and reviewed the initial pool of 30 items. Four responses were used as follows: 1 = *not relevant*, 2 = *unable to assess relevance without item revision*, 3 = *relevant but needs minor revisions* and 4 = *very relevant and succinct*. The number of items rated between 3 and 4 by experts divided by the total number of items was calculated as the Content Validity Index (CVI) of scale. Twenty-two items remained for analysis. The CVI was .85 for the 22 items, higher

than the recommended cut-off of .80 (Waltz, Strickland, & Lenz, 1991). Secondly, with an exploratory sample of 200 participants, we selected for analysis only the items with a corrected item-total correlation higher than .40 (DeVellis, 1991). Five items were eliminated, so the initial version of the OHQ consisted of a total of 17 items.

Data analysis

In order to establish the factor structure of the OHQ, the 17 items were subjected to EFA, using principal component analysis with varimax rotation. Following the recommendations of Dziubna and Shirkey (1974), before the analysis, we explored the psychometric adequacy of the items. We used multiple criteria to determine the number of factors to retain (Ford, MacCallum, & Tait, 1986; Gorsuch, 1983; Stevens, 1992), the Kaiser criterion (Eigenvalue higher than 1) to extract the number of factors and, to assign items to factors, we considered factor loadings equal to or higher than .40 (Cliff & Hamburger, 1967).

Results

Exploratory factor analysis

The results showed that the Kaiser-Meyer-Olkin index was .87, exceeding the recommended value of .60 (Kaiser, 1970), whereas Bartlett's (1954) sphericity test was significant at a level of .000, which ensured that the data are sufficiently correlated have inherent sufficient correlations, and justified the use of EFA. Cattell's (1966) scree test or sedimentation test clearly showed a three-factor structure (F1, Eigenvalue = 5.52; F2 Eigenvalue = 2.1; F3 Eigenvalue = 1.4), which accounted for 53.1% of the total variance (F1 Variance = 19.62; F2 Variance = 17.12; F3 Variance = 16.36). Subsequent parallel analysis (O'Connor, 2000) supported the three-factor solution. Moreover, as can be seen in Table 1, all

items of the scale presented high factor loadings, exceeding the .50, the cut-off recommended by Comrey (1973).

Reliability

Cronbach's alpha values for the challenge, commitment, and control dimensions were .80, .74, and .76, respectively, and .86 for the total scale.

STUDY 2

Study 2 examined the factor structure of the 17 items, using confirmatory factor analysis (CFA). Internal consistency was also explored.

Method

Participants

The sample comprised 380 professional fire-fighters employed at nineteen different centres in the Community of Madrid (Spain). The fire-fighting profession is a male-dominated sector; men comprised 100% of the sample. Mean age was 38.7 years ($SD = 8.17$). The mean number of years of work experience was 10 (range 1-32 years). The vast majority, 93.2%, worked in 24-hour shifts, and 19 participants had a university degree. Participation was voluntary and all information received was confidential.

Data analysis

CFA of the items was carried out to ratify the model obtained in the exploratory analysis, using AMOS 7.0 (Arbuckle, 2006). Maximum likelihood estimation was employed for this analysis, using a covariance matrix. All variables had acceptable values of skewness (< 2.0) and kurtosis (< 7.0) for the use of this estimation (Curran, West, & Finch, 1996). Four analytic models were analyzed. Model 1 assumes that all items load on a general factor. Model 2 tested a structure of three independent factors. Model 3 tested a three-factor structure with a second-order latent factor called Hardiness. Model 4 was a reduced version of Model 3. According to recommendations of Kline (1998), we used multiple indices to evaluate the goodness of fit of each model. The competing models were compared by means of the χ^2 difference test. Besides this statistic, we additionally inspected the goodness-of-fit index (GFI), the comparative fit index (CFI), the root mean square error of approximation (RMSEA) and Akaike's information criterion (AIC). For the χ^2/df ratio, a ratio of 2 has often been used to indicate good fit, whereas levels of .90 or higher for CFI and GFI, and .08 or lower for RMSEA indicate a reasonable fit of the model to the data (Byrne, 2002). Concerning AIC, it is considered that a lower value indicates a better fit of the model (Akaike, 1987). The goodness-of-fit indexes of the empirically contrasted model are presented in Table 2.

Results

Confirmatory factor analysis

The initial estimation of the 17 items of the one-factor structure model and the model of three independent factors did not generate

Table 1
Factors, items, communalities and loadings for the Occupational Hardiness Questionnaire (N = 851)

Items	Communalities	Factors		
		Challenge	Commitment	Control
2	.69	.80	.21	.04
5	.64	.78	.04	.16
8	.57	.72	.24	.01
11	.58	.71	.20	.18
13	.38	.60	.08	.09
17	.34	.52	.34	.08
1	.60	.24	.73	.02
4	.58	.07	.70	.27
7	.49	.16	.56	.24
10	.52	.11	.64	.21
14	.48	.16	.59	.02
16	.49	.15	.66	.35
3	.61	.24	.08	.74
6	.58	.03	.20	.73
9	.56	.01	.17	.72
12	.47	.20	.04	.65
15	.37	.01	.19	.57

Note: Boldface indicates highest factor loadings

satisfactory results. The results showed that the proposed three-factor model with a second-order latent factor was significantly better compared with the other models, but it was still possible to improve the model. We decided to delete Item 17 from Factor 1 (Challenge) and Item 16 from Factor 2 (Commitment) because in the EFA they also cross-load substantially across factors ($< .30$). The results indicated an acceptable fit to the data. Relative chi-square (χ^2/df), RMSEA, CFI, GFI and RMSEA values revealed that the 15-item three-factor model with a second order latent factor was significantly better than the three previous models (Table 2). Also, the AIC for Model 4 was notably lower than for the other three models.

Reliability

In this sample, Cronbach's alpha values for the Challenge, Commitment, and Control dimensions were 0.78, 0.73, and 0.72, respectively, and 0.85 for the global scale. These findings suggest that the 15-item version of the OHQ is internally consistent.

STUDY 3

Study 3 examined the factor structure of the OHQ again using CFA. To determine construct validity, zero-order correlations analyses were performed. Descriptive statistics, alpha coefficients, and correlations among OHQ dimensions for the total sample ($n = 1,641$) are provided (see Table 4).

Method

Participants

Data were collected from 416 female nursing staff at hospitals in Madrid (Spain). Mean age was 26.74 years ($SD = 10.16$). Most of participants (63%) had a regular partner, and the majority (59.7%)

spent more than 80% of their working time interacting with patients and attended an average of 15 patients daily.

Measures

To assess construct validity the following scales were used: the Tennessee Self-Concept Scale (Fitts, 1965), the Bradburn Affect Balance Scale (Bradburn, 1969), the Utrecht Work Engagement Scale (UWES; Schaufeli, Salanova, González-Romá, & Bakker, 2002), and the Inventory of Stress - Psychosomatic Symptoms (Benavides-Pereira, Moreno-Jiménez, Garrosa, & González, 2002).

Results

Confirmatory factor analysis

CFA was carried out to ratify the model obtained in the previous sample. CFA of Study 2 produced results similar to those of the present study. Results showed that the 15-item three-factor model with a second-order latent factor provided a better fit to the data than the other models. Fit indices for the estimated models are presented in Table 2. Moreover, in Figure 1, the factor loadings of the final three-factor model are presented. For this path diagram, samples of Study 2 and 3 were used.

Construct validity

To determine construct validity, we performed zero-order correlation analyses between the scale dimensions and other, theoretically related, constructs. As can be seen in Table 3, these analyses indicate that, as expected, the Hardiness dimensions and self-esteem are moderately correlated ($p < .001$, in all cases). OHQ dimensions show positive and statistically significant correlations with subjective well-being and work engagement. In addition, psychosomatic symptoms were negatively correlated with Hardiness dimensions. These correlations were in the expected direction and support the validity of the OHQ scales.

Descriptive statistics and internal reliability

Descriptive statistics, alpha coefficients and correlations among dimensions of OHQ are presented in Table 4 for the total sample ($n = 1,641$). Cronbach's alpha coefficient was high (.86) for the total score and good for the dimensions (.74-.81). As can be seen, all the values are higher than the recommended value of .70 (Nunnally & Bernstein, 1994). As, expected, OHQ dimensions were found to correlate positively with each other.

Table 2
Fit indexes for the estimated models

Models	χ^2	df	CFI	TLI	RMSEA
Study 2 (Fire-fighters: $n = 380$)					
One-factor model	503.13	117	0.81	0.77	0.09
Model with three independent factors	717.57	115	0.67	0.61	0.12
Model with three-factors + 2 nd -order factor	400.09	112	0.86	0.83	0.08
Reduced model: three-factors + 2 nd -order factor	174.59	87	0.94	0.92	0.05
Study 3 (Female nurses: $n = 416$)					
One-factor model	801.43	117	0.75	0.71	0.11
Model with three independent factors	817.20	115	0.75	0.70	0.12
Model with three-factors + 2 nd -order factor	556.87	112	0.84	0.81	0.09
Reduced model: three-factors + 2 nd -order factor	327.87	87	0.92	0.90	0.06
<i>Note.</i> <i>df</i> : Degrees of freedom. CFI: Comparative fit index. GFI: Goodness of fit index; RMSEA: Root mean square error of approximation. AIC: Akaike's information criterion					

Table 3
Correlations between OHQ Subscales and other Constructs ($N = 416$)

	Self-esteem	Subjective well-being	Engagement	Psychosomatic symptoms
Challenge	0.11	0.23	0.30	-0.23
Commitment	0.16	0.35	0.43	-0.30
Control	0.17	0.27	0.31	-0.26
<i>Note:</i> All correlations are significant at $p < .01$				

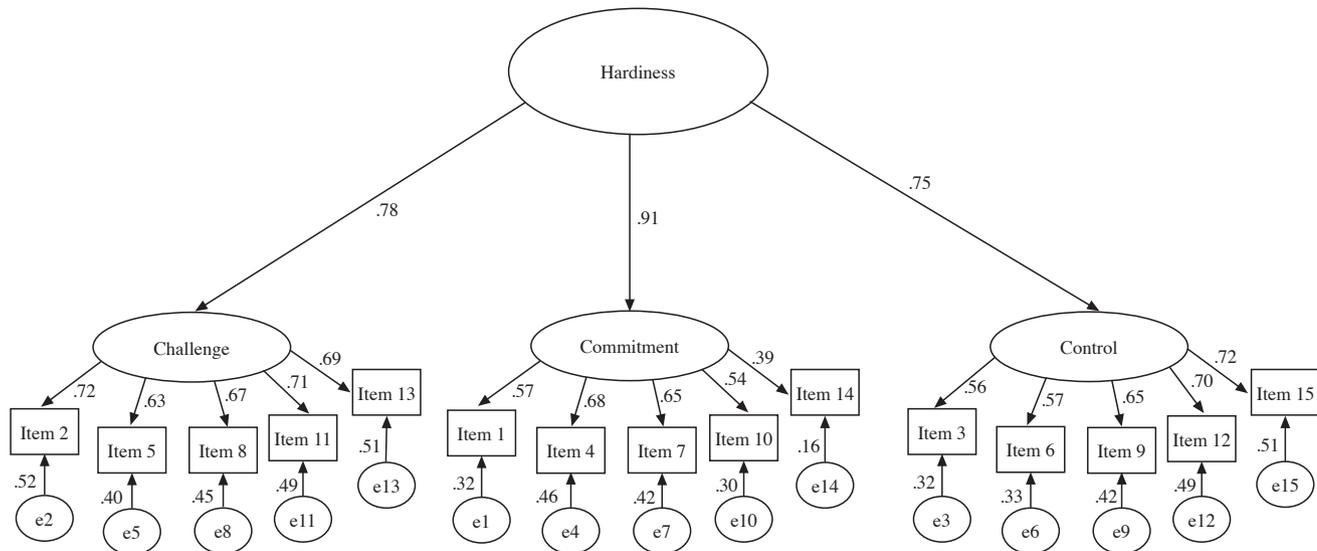


Figure 1. Path diagram of the final three-factor model

OHQ Factor	Mean	SD	α	2	3
1. Challenge	15.34	2.39	0.81	0.51	0.39
2. Commitment	14.87	2.49	0.74		0.53
3. Control	15.66	2.57	0.78		

Note: All correlations are significant at $p < .01$

Dimensions	Time 1		Time 2		Test/ retest
	Mean	SD	Mean	SD	r
Challenge	3.06	0.26	3.05	0.26	0.44
Commitment	2.90	0.31	2.90	0.26	0.43
Control	1.62	0.27	1.95	0.37	0.54

Note: All correlations are significant at $p < .01$

STUDY 4

Method

Participants

The sample is made up of 98 Portuguese nurses, 81.6% ($n = 80$) females and 18.4% ($n = 18$) males, mean age of 36.1 years ($SD = 6.0$). The translation to Portuguese was made by two bilingual psychologists under the supervision of the authors. Work tenure varied between 6 and 37 years, with a mean of 12.6 years ($SD = 5.9$). Of the participants, 61.2% work in hospitals an average of 35.1 hours per week ($SD = 3.1$), and 54.1% reported spending more than 80% of their shift time interacting with patients.

Results

Test-retest

Means, standard deviations, and correlations between the study variables for both times (time lag of one month) are presented in Table 5. The pattern of correlations was in the expected direction. Concerning the temporal stability of the variables, test-retest correlations ranged from .43 (for Commitment) to .54 (for Control), indicating that OHQ dimensions were relatively stable.

Discussion

On the basis of the theoretical and empirical studies presented, hardiness can be considered a personality variable that provides resilience and positive responses in the face of adversity. In this sense, it can be considered within the current stream of positive psychology (Maddi & Martínez, 2008). According to the first model proposed by Kobasa (1979) and more recently by Maddi (2006), psychological hardiness can be considered a process of cognitive appraisal, a positive outlook on life, and a multifaceted line of action. Kobasa-Oullette and Di Placido (2001) have considered it as a distinctive and active way of understanding one's relations with others, with one's goals, and with problems.

Research conducted in Spanish with the OHQ shows that hardiness can be presented as a three-component construct with good internal consistency from a psychometric perspective. The EFA presented in Study 1 shows a clear structure of three factors that can be considered Commitment, Control, and Challenge. Hardiness, as assessed by the OHQ, following Kobasa's theoretical proposals, may be regarded as a multidimensional and multifaceted construct, as proposed also by Carver (1989) and Hull et al., (1991), similar to other constructs such as type-A behaviour (Jenkins, Zyzanski, & Roseman, 1979), sense of coherence (Antonovsky, 1987) and, more recently, psychological capital (Luthans, Youssef, & Avolio, 2007).

In Studies 2 and 3, using CFA, it was found that the OHQ structure is best explained as a model of three related factors with a secondary latent factor, and this was confirmed in two samples with high levels of goodness of fit. This configuration seems to correspond to Hardiness as a personality variable with three interrelated components and common effects. It also confirms other studies applying CFA to the model of hardiness (Hystad et al., 2011; Maddi et al., 2006; Sinclair & Tetrick, 2000). As suggested by Hystad et al. (2010), this configuration satisfies a hierarchical model of personality in which the items are associated with each other at the first level, and the factors at the second level. As proposed by Sinclair and Tetrick (2000), hardiness, as assessed evaluated by the OHQ, can be conceptualized as a multidimensional and multilevel construct.

The nomological network of the theoretical model of Hardiness was tested by validating the construct, as assessed by the OHQ, with self-concept, engagement, well-being and psychosomatic symptoms, in all cases finding the expected theoretical correlations. These results confirm the proposal of Sinclair and Tetrick (2000) that the differential use of Hardiness dimensions increases its explanatory power, and both scores, total and dimensional, are useful, as also found by Florian, Mikulincer, and Taubman (1995). Other studies with different variables have found similar results (Maddi et al., 2006).

Study 3 confirms the internal consistency of the OHQ scales, a common problem of Hardiness measures, including the more recent ones (Maddi et al., 2006; Hystad et al., 2010). Additionally, Study 4 shows the temporal consistency of the OHQ, using the test-retest methodology with a 4-week interval, finding satisfactory temporal stability of the dimensions. However, it is important to underline that the time lag was one month, so future studies should examine temporal stability with longer periods.

The confirmation of the psychometric characteristics of the OHQ can facilitate more comprehensive and systematic research in Spanish of the effects of hardiness on occupational stress and on overall health and well-being (Beasley, Thompson, & Davidson, 2003; Otero-López, Santiago, & Castro, 2008; Rios Riquez, Godoy, Fernández, & Sánchez-Mecca, 2001) and provide a more specific research agenda. Current work on hardiness is included in two specific lines of research: the study of personal resilience and its adaptive effects on health (Reich, Zautra, & Hall, 2010) and the study of occupational positive psychology (Baker & Rodríguez-Muñoz, 2012; Cameron & Spreitzer, 2012; Moreno-Jiménez et al., 2012), each one with its own traditions. Research on hardiness can be incorporated into both programs. Research on hardiness has its own agenda, basically established by Funk (1992), to which new challenges have been added.

This study of the OHQ has some limitations. Although the sample is broad, proceeding from different occupational areas, it is not strictly random in a nationally representative population. Therefore, the main parameters were not sufficiently established and this limits the possibility of generalizing our results. Another limitation is that, although the OHQ was written directly in Spanish, there is not sufficient evidence that the version is also valid for Latin America, given the real cultural differences between countries, despite a common language. There are still many tasks to carry out within the hardiness research program, such as establishing the nomological network of the construct, especially with similar constructs, such as sense of coherence (Antonovsky, 1987) and psychological capital (Luthans, Youssef, & Avolio, 2007), to establish overlaps and differences.

Table 6
Items of the Occupational Hardiness Questionnaire (OHQ)

<p>1. Me implico seriamente en lo que hago, pues es la mejor manera para alcanzar mis propias metas [I involve myself seriously in what I do, because it is the best way to reach my own goals]</p> <p>2. Aún cuando suponga mayor esfuerzo, opto por los trabajos que suponen para mí una experiencia nueva [Even when it supposes greater effort, I choose jobs that suppose a new experience for me.]</p> <p>3. Hago todo lo que puedo para asegurarme el control de los resultados de mi trabajo [I do everything I can to make sure I control the results of my work.]</p> <p>4. Considero que el trabajo que realizo es de valor para la sociedad y no me importa dedicarle todos mis esfuerzos [I consider that the work that I do is of value for society and I do not mind putting all my efforts.]</p> <p>5. En mi trabajo me atraen preferentemente las innovaciones y novedades en los procedimientos. [In my job I feel attracted to innovations and developments in the proceedings.]</p> <p>6. Las cosas solo se consiguen a partir del esfuerzo personal. [Things are only obtained from personal effort.]</p> <p>7. Me preocupo y me identifico con mi trabajo. [I worry and I identify myself with my work.]</p> <p>8. En mi trabajo me atraen aquellas tareas y situaciones que implican un desafío personal. [In my job I feel attracted to tasks and situations involving a personal challenge.]</p> <p>9. El control de las situaciones es lo único que garantiza el éxito. [The control of situations is the only thing that ensures success.]</p> <p>10. Mi trabajo cotidiano me satisface y hace que me dedique totalmente a él. [My daily work satisfies me and makes me totally dedicated to it.]</p> <p>11. En la medida que puedo trato de tener nuevas experiencias en mi trabajo cotidiano. [To the extend I can, I try to have new experiences in my daily work.]</p> <p>12. Las cosas salen bien cuando las preparas a conciencia. [Things go well when you prepare them thoroughly]</p> <p>13. Dentro de lo posible busco situaciones nuevas y diferentes en mi ambiente de trabajo. [When possible I look for new and different situations in my work environment.]</p> <p>14. Mis propias ilusiones son las que hacen que siga adelante con la realización de mi actividad. [My own excitement is what makes me go ahead with the completion of my activity]</p> <p>15. Cuando se trabaja seriamente y a fondo se controlan los resultados. [- When one works seriously and thoroughly the results are controlled.]</p> <p>16. Si te lo propones puedes asegurar lo que va a pasar mañana controlando lo que ocurre hoy. [If you fully invest yourself you can ensure what will happen tomorrow by controlling what is happening today]</p> <p>17. Tengo una gran curiosidad por lo novedoso tanto a nivel personal como profesional [I have a great curiosity for novelty, both personally and professionally.]</p>
<p>Challenge: Items 2, 5, 8, 11, and 13. Control: Items 3, 6, 9, 12, and 15. Commitment: Items 1, 4, 7, 10, and 14. *Deleted items.</p>

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