

# Work Self-Efficacy Scale and Search for Work Self-Efficacy Scale: A Validation Study in Spanish and Italian Cultural Contexts

## Escala de Autoeficacia en el Trabajo y Escala de Autoeficacia para la Búsqueda de Empleo: Estudio de Validez en Contextos Culturales Español e Italiano

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**Abstract.** The aim of the current article was to investigate the psychometric properties of two self-efficacy scales – the *Work Self-Efficacy Scale (WSES)* and *Search for Work Self-Efficacy Scale (SWSES)* – and their measurement invariance (configural, metric, and residual) across two different cultural contexts: Spanish and Italian. The WSES was measured by 10 items assessing perceived work capability, while the SWSES was measured by 12 items assessing perceived capability to manage and cope with different situations in the search for a job. The sample included 658 young adults from Italy and Spain (20-26 years of age). Multi-group confirmatory factor analysis reveal that both configural and metric invariance can be assumed, suggesting that meaningful comparisons of the relations between latent factors and external variables can be made across Spain and Italy.

**Keywords:** measurement invariance, multigroup analyses, self-efficacy, cross-cultural.

**Resumen.** El objetivo de este artículo fue analizar la estructura factorial y la comprobación de la invarianza (configuración, métrica y residual) en dos contextos sociales diferentes: español e italiano. WSES está compuesta por 10 ítems que evalúan las creencias de eficacia sobre las actividades laborales; SWSES está compuesta por 12 ítems que evalúan las creencias de eficacia para hacer frente a situaciones diferentes en la búsqueda de trabajo. La muestra incluye 658 jóvenes de Italia y de España (20-26 edad). Los resultados fueron examinados a través de un análisis factorial confirmatorio multigrupo revelando que puede asumirse invarianza factorial en la configuración y la métrica, al tiempo que sugiere que pueden hacerse las comparaciones de las relaciones entre los factores latentes y las variables externas para España e Italia.

**Palabras clave:** invarianza de la medida, análisis multigrupo, autoeficacia, trabajo, cross-cultural.

### *Self-efficacy: A construct between beliefs and action*

A vast body of literature attests to the pervasive influence of self-beliefs in several theories of human behavior and on the diverse domains of human functioning. In social cognitive theory (Bandura, 1997), efficacy beliefs are conceived as the foundations of human agency. This theory adopts an agentic perspective in which individuals are self-organizing, proactive, self-reflecting and self-regulating. These various functions, governing human adaptation and change, operate through a set of agentic mechanisms. Among the mechanisms of human agency, none is more focal or pervading than beliefs or personal efficacy.

Self-efficacy beliefs are knowledge structures that reflect the degree of control people exert over the events that affect their lives. They attest to the propensity of persons to reflect on themselves and regulate

their conduct in accordance with their personal goals and standards. Perceptions regarding the capacity to master tasks and situations, are at the root of efficacious behavior and successful adaptation: people who perceive themselves as more efficacious expend more efforts to reach desired goals and persevere longer when they encounter challenges. Moreover, people who are more efficacious tend to express positive rather negative judgments (outcome expectancies) about consequences of their behaviors (Bandura, 1997). Both self-efficacy and outcome expectancy influence people's intentions to perform a behavior, and intentions are accurate predictors of behavior (Bandura, 1998; Fishbein & Ajzen, 1975).

People, however, do not live their lives in individual autonomy. Many of the outcomes they seek are achievable only through the interdependent efforts of others (Bandura, 2000). Thus, self-efficacy is a highly contextualized construct: it may be defined as the degree of confidence people has in their ability to achieve a specified level of achievement in a particular context. In addition, social cognitive theory extends the con-

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ception of human agency to collective efficacy. Individuals' shared beliefs in their collective power to produce desired results are a key ingredient of collective agency in social cognitive theory (Bandura, 2001). A strong sense of personal efficacy to manage one's life circumstances and to have a hand in effecting societal changes, contribute substantially to perceived collective efficacy (Fernández-Ballesteros et al., 2002).

Efficacy beliefs influence people's thoughts and behaviors, and impact other determinants such as the goals and aspirations individuals choose to pursue, their resilience to adversity, commitment to goals, effort, outcomes and perseverance. This trend can be seen in organizational settings as well. People spend a lot of time in the workplace, expending much energy, emotions and hopes. Work typically represents the principal source of income, but not only: it strengthens personal identity and influences individual well-being and life satisfaction (Argyle, 1999). Self-efficacy is intimately involved with work, since people derive from it a great portion of their self-efficacy. Accordingly, job-loss may determine a decreasing sense of efficacy, generating a vicious cycle: *"the more prolonged the unemployment, the greater the erosion for self-efficacy, thus, less effort is invested in job search, and the chances of finding a job decline"* (Eden & Aviram, 1993, p. 353).

Different studies have demonstrated the relationship between efficacy beliefs and work success (Bandura, 2001). In particular, efficacy beliefs act as a self-motivating mechanism through which people perceive how high their own level of competence is, and consequently set their goals and become motivated to spend considerable effort and persistence in overcoming obstacles (Bandura, 2001; Garrido, 2000). Individuals who believe they will be able to carry out their job assignments, perform better (Wood & Bandura, 1989), persevere in the face of adversities (Lent, Brown & Hackett, 1994), and are better able to manage changes (Hill, Smith & Mann, 1987). Efficacy beliefs, moreover, have an effect on the following dependent variables in work settings: job satisfaction (Judge et al., 2007; Latham, Locke & Fassina, 2002; Garrido, 2000; Martinez, Marques-Pinto, Salanova & Lopez da Silva, 2002; Salanova et al., 2003); organizational commitment (Bandura, 2001; Gist & Mitchell, 1992; Parker, 1998; Stajkovic & Luthans, 1998; Wood & Bandura, 1989); and individual and group performance (Bandura, 1997; Lent et al., 1994; Cranny, Smith & Stone, 1992; Judge et al., 2007; Stajkovic & Luthans, 1998).

Various studies have examined self-efficacy as a moderator between stressors (overload, conflict and role ambiguity, etc.) or job demands and coping behavior. In stressful jobs, individuals with high self-efficacy behave in a more proactive way using problem-centred coping, than people with low self-efficacy (Bandura, 1997; Jex & Bliese, 1999; Leiter, 1991; Lent

et al., 1994; Salanova, Grau & Martinez, 2005). These results highlight the role of self-efficacy as a protective factor in individual and collective well-being. Efficacy beliefs also have an impact on organizational outcomes such as turnover and absenteeism (Cranny et al., 1992; Spector, 1985). Furthermore, several studies have shown that self-efficacy covaries with job satisfaction and productivity (Hongyun, Lei & Quingmao, 2005). Finally, a review of the literature reveals how self-efficacy is related to wide organizational processes such as work socialization (Bauer et al., 2007; Saks, 1995), and human resources management (Cisneros, Medina, Munduate & Dorado, 2000; Salanova & Martinez, 2006).

In sum, various studies have emphasized the utility of self-efficacy in attaining individual achievement, as well as their generalizability across cultures. Some authors, according to Bandura, have suggested that self-efficacy functions in a similar fashion across diverse cultures – since it plays a significant role in facilitating desirable behaviors and overcoming adversities and thus – helps individuals of any culture to achieve their personal goals (Bandura, 2000; Scholz, Dona, Sud & Schwarzer, 2002).

Although research often does not explicitly differentiate between general (Schwarzer, 1998) and specific efficacy beliefs, previous research supports the use of specific measures of efficacy beliefs in specific domains, given that they produce more robust results (e.g. Grau, Salanova & Peiró, 2000; Salanova, Peiró & Schaufeli, 2002). In the work setting, many measures of efficacy beliefs have been found. For example, Cherniss (1993) introduced the concept of professional efficacy, understood as the belief in the ability to correctly fulfill one's professional role, and operationalized it using the corresponding scale of the *Maslach Burnout Inventory-General Survey (MBI-GS)* (Schaufeli, Leiter, Maslach & Jackson, 1996). Moreover, other measures of work-related efficacy have emerged in the literature. In particular, Bandura's measure concerns the beliefs people hold about their capabilities to manage difficulties related to their work activities (*Perceived self-efficacy*, Bandura, 1997; Borgogni & Petitta, 2003). Other measures concerns the capabilities to manage and build a new enterprise (*ESE-Entrepreneurial Self-Efficacy Scale*, Moriano, Palacì & Morales, 2006), the beliefs people hold about their capabilities to carry out work assignments (*Occupational Self-Efficacy Scale*, Betz & Hackett, 1981), or the beliefs people hold about their capabilities to relate to specific tasks (*TSOSS-Task-Specific Occupational Self-Efficacy Scale*, Osipow & Temple, 1996).

Literature on job search (activities than enhances the probability of employment) reveal that both general (e.g. locus of control, general self-efficacy) and specific (self-efficacy domains) variables may be considered antecedents of search behaviours (see the meta-analytic review of Kanfer, Wanberg & Kantrowitz,

2001). However, since self-efficacy is focused on specific performances and varies from task to task, particularized measures of job search self-efficacy are preferable. These efficacy beliefs play a critical role in the decisions regarding future work, due to the uncertainties of the work world and accessibility in the job market, which vary from one cultural context to the next. Moreover, young adults' hope of finding a job depends on how they perceive abilities they have not usually experienced in real terms.

Some studies have measured job search self-efficacy indirectly. For instance, utilizing measures of career choice (Anderson & Betz., 2001; Bandura, 1997; Betz & Hackett, 1981; Blustein, 1989; Jackson, Potere & Brobst, 2006) and vocational interests (Bieschke, Bishop & Garcia, 1996; Lapan, Shaughnessy & Boggs, 1996; Lenox & Subich, 1994; Lent et al., 1994; Nauta, 2004; Silvia, 2003). Other use close constructs, such as task-specific self-esteem in the job search context (Ellis & Taylor, 1983). Only few research uses specific measurement, relieving the perception of one's capability to accomplish specific job search activities and obtaining employment (Stumpf, Colarelli & Hartman, 1983; Kanfer & Hulin, 1985; Caplan, Vinokur, Price & van Ryn, 1989; van Ryn, Vinokur, 1992; Wanberg, Kanfer & Rotundo, 1999). Items are usually centered on behavioral competencies (e.g. ask individuals how good they feel in completing a good job application or contacting potential employers) and not on cognitive or social skills.

The use of self-efficacy scales and constructs, however, should take into account the recent changes which occurred over the past fifteen years in the labour market. A issue of rising importance in the Western world involve the increasing number of skills required to enter into the labour market and to address its complexity (Bayon, 2003; De Nanteuil, 2002; Medgyeski, 1999). These differentiate into generalized skills, like cognitive abilities (e.g. ability to find solutions and make decisions), relational abilities (e.g. knowing how to interact with others) and emotional abilities (e.g. managing their own emotions) (Luciano, 1999; Reyneri, 2005), and other, more specialized and technical skills. A further important change involves the unemployment rates, which has reached levels never seen before in Europe. In accordance with the requirements dictated by the labour market of many European countries, we used two relatively new self-efficacy measurement scales. Although there are many measures of work self-efficacy, they are mostly unidimensional. We focused on a new scale of work-self efficacy since it provides a multidimensional structure, tapping the key capacities needed to be successful in work, in light of the current complexities of the European market labour. Moreover, we used a new instrument, designed to assess the beliefs people hold about the use of effective strategies in finding a job in the current labour market.

### *Aim of the study*

The aim of the current study is to examine the factor structure of two measures of work-related efficacy beliefs in Spain and Italy, two countries which, because of their geographical proximity, share similar lifestyles, religious values and cultural heritages. Although Spain and Italy may be similar with regard to these characteristics, recent political changes have introduced significant social changes that make these countries importantly different. A number of previous studies have examined the issues of comparability of construct and measures across Italian and Spanish contexts in different domains, among which self efficacy beliefs, values and other psychological constructs (e.g. Arciniega et al., 2009; Pepe, Sobral, Gómez-Fraguela & Villar-Torres, 2008). The current study examined the measurement invariance across countries of two self-efficacy measures, namely the *Work Self-Efficacy Scale* (WSES, Avallone, Pepe & Porcelli, 2007) and the *Search for Work Self-Efficacy Scale* (SWSES, Avallone et al., 2007). In this regard, we hypothesize that measurement equivalence of the instruments will be established, as Italian and Spanish cultural contexts are substantially similar in terms of market labour.

### **Method**

#### *Participants*

A total of 658 young adults from Italy and Spain ranging in age from 20 to 26 years participated at the study. Participants were recruited by psychology majors as part of a course assignment in Organizational Psychology at the Universities of Rome and Madrid, over the course of the 2006-2007 academic year. The instruments were administered using a face-to-face questionnaire. Each student, acting as a research assistant, was briefed on the general aims of the research, instructed in how to administer the questionnaire, and asked to collect data from other people, equally distributed by gender and age. Students received course credits for their participation. Samples from both countries had similar socio-demographic features. Participants were students, workers and unemployed individuals currently in search of a job. All educational levels were represented. The Italian sample included 455 participants (45.6% men), with a mean age of 22.48 (SD=2.03); 70.5% students, 28.9% workers and the remainder (0.6%) looking for a job. Educational levels were: junior high school 9.8%; high school 80.4%; college 9.8%. The Spanish sample included 203 participants (45.6% men), with a mean age of 21.45 (SD=2.39); 48.8% students, 43.9% workers and the rest of the sample (2.3%) looking for a job. Educational levels were: junior high school 3.0%, high school 86.2%, and college 10.8%.

## Measures

*WSES – Work Self-Efficacy Scale (Avallone et al., 2007)*

The Work Self-Efficacy Scale (WSES) includes 10 items assessing perceptions regarding specific work domains such as the capability to manage interpersonal relationships (colleagues and direct superiors), to work with colleagues with different characteristics and experiences, to behave efficaciously in the work context, to learn new working methods, to respect schedules and work deadlines, and to achieve assigned goals. For each item, participants were asked to evaluate how capable they felt in carrying out the described action or behavior on a Likert scale, from 1 (Not well at all) to 5 (Very well). The factor structure which emerged in the Italian study (20-60 years of age,  $n = 3,879$ ) revealed two factors: *Relational willingness* and *Commitment* (Avallone et al., 2007). The first factor refers to a predisposition towards or attention to relationships with colleagues and superiors (e.g. "... have good relationships with direct superiors"). The second factor refers to perceptions of being capable of attaining fixed objectives and significantly committing oneself to their work (e.g. "... learn new working methods"). The Cronbach's Alpha coefficients were .85 for the first factor and .82 for the second factor.

*SWSES – Search for Work Self-Efficacy Scale (Avallone et al., 2007)*

The Search for Work Self-Efficacy Scale (SWSES) is composed of 12 items. The various items concern one's perception of their capability to select among job offers, to build strategies for the attainment of a goal, to respect other people's competences, and to work with new members, to manage time difficulties and stressful situations typical of job searches, to consider a failure a challenge rather than a problem. Participants were asked to evaluate how capable they felt in carrying out the described action or behavior on a Likert scale, from 1 (Not well at all) to 5 (Very well). The factor structure which emerged in the Italian study (20-60 years of age,  $n=3,879$ ) revealed four dimensions: *Frustration coping*, that is the subject's perception of being capable of managing difficult moments while searching for a job (e.g. "...consider a failure a challenge, rather than a problem"); *Enterprising exploration*, that is the perception of being capable of actively committing oneself to searching for a job (e.g. "... understand the found information"); *Proactive Career Planning*, that is the perception of one's own capability to actively plan their professional future (e.g. "...build strategies for the attainment of goals"); *Relational integration*, that

is the perception of feeling capable of acquiring and maintaining functional relationships in work settings (e.g. "... work with new team members"). The Cronbach's Alpha coefficients for the four factors were .84, .62, .74 and .55, respectively (Avallone et al., 2007).

The Appendix presents the English version as well as the Spanish translation of the scales.

## Statistical Analysis

To assess whether the factor structure of the scales replicates across Italian and Spanish contexts, a multi-group confirmatory factor analysis (MGCFA) was conducted, using Maximum Likelihood (ML) as estimation method. Analyses were based on the examination of the covariance structures among the items of the respective scales, through the EQS software (Bentler, 2003). The two dimensions of the WSES included five indicators, while the four dimensions of the SWSES included three indicators, in accordance with the measurement model of the respective scales (Avallone et al., 2007). Goodness of fit was evaluated using the Chi-square, the Root Mean Square Error of Approximation (RMSEA), the Standardized Root Mean Square Residual (SRMR), the Comparative Fit Index (CFI), the Normed Fit Index (NFI), and Akaike's Informational Criterion (AIC).

Before testing measurement invariance, a baseline model has been estimated for each group separately. Then, configural invariance has been examined fitting the baseline model to the data in each group simultaneously, without imposing between-group constraints (*Model A*). Configural invariance is a minimum condition for factorial invariance. It holds when the overall structure of the scale is the same across groups (i.e. the same number of factors and the same pattern of factor loadings). Metric invariance was tested imposing equality constraints on factor loadings across groups (*Model B*). This level of invariance requires the size of the factor loadings be the same between countries. When it holds, the scale has a similar metric across groups, allowing meaningful comparison of the relations between latent factors and external variables. Finally, invariance of the uniqueness has been examined by further constraining the error terms of the items across groups (*Model C*). This is a more stringent condition which additionally requires that the items have similar amounts of uniqueness in each country. When invariance at this level is established, the factors could have equal reliabilities across groups. Vandenberg and Lance (2000), argued this occurs when the factor variances also are invariant. The chi-square difference test was used to examine the tenability of the constraints imposed on models B and C.

Table 1. Measurement invariance of the Work Self-Efficacy Scale (WSES): Goodness of fit indices

	$\chi^2$	df	RMSEA (90% CI)	SRMR	NNFI	CFI	AIC
Italy	228.169	34	.078 (.068, .088)	.042	.93	.95	160.16
Spain	90.308	34	.091 (.068, .114)	.056	.90	.92	22.308
Configural invariance (Model A)	318.48	68	.057 (.051, .063)	.050	.93	.94	182.47
Metric invariance (Model B)	340.49	76	.055 (.049, .061)	.070	.93	.94	188.49
Partial Metric invariance (Model B1)	326.943	74	.055 (.049, .061)	.061	.94	.94	178.94
Invariance of the error terms (Model C)	370.184	81	.056 (.050, .062)	.070	.93	.93	208.18

## Results

### The WSES–Work Self-Efficacy Scale

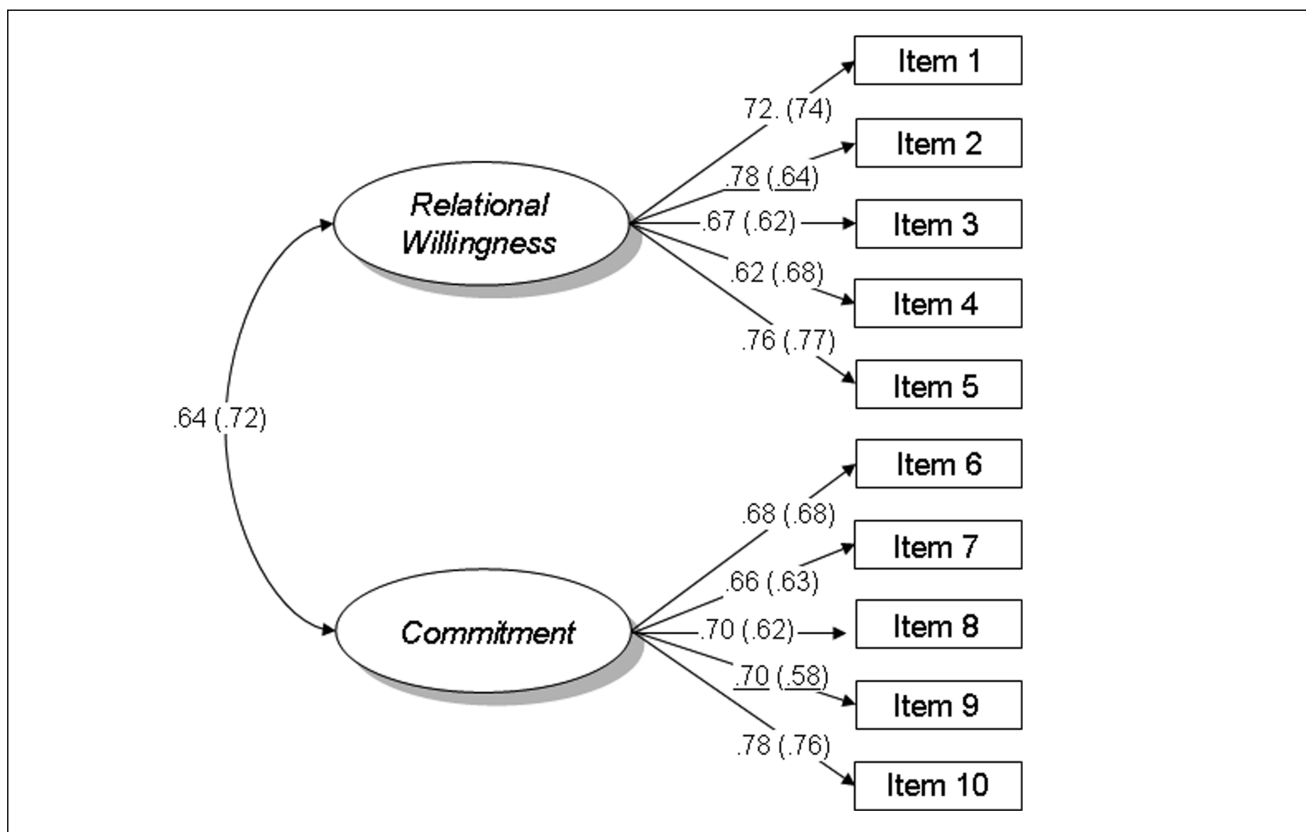
**Baseline models.** The hypothesized two-factor structure was tested for each country separately. Table 1 shows multiple goodness of fit indices for the baseline model in Italy and Spain. All items showed a loading higher than .60, ranging from .61 to .82 in the Italian sample, and from .61 to .76 in the Spanish sample. In sum, the 10-item baseline model showed an acceptable fit in both countries.

**Configural invariance (Model A).** In this model, parameters were estimated simultaneously across the groups, allowing factor loadings and error variances to

differ across groups. As shown in Table 1, the fit of the configural model attests to the invariance of the factor structure across groups.

**Metric invariance (Model B).** In this model, all factor loadings were constrained to be equal across groups. The chi-square difference test between this model and the previous one, where all of the respective parameters were unconstrained across groups (Model A), is statistically significant. In other words, the equality constraints on item factor loadings produced a significant increase of the chi-square,  $\Delta\chi^2(8)=22.01$ ,  $p<.001$ . Thus, full metric invariance cannot be retained. We examined the modification indices to locate the source of this non-equivalence, relaxing the constraints of the parameters with the two highest val-

Figure 1 WSES. The measurement models for the two groups (Model C1)



Note. All parameters are standardized. Coefficients outside parenthesis are from Italian sample. Coefficients in parenthesis are from Spanish sample. Underlined coefficients are significantly different across countries.

ues. We then compared this partially invariant model (Model B1) with the configural model (Model A). The chi square difference test was not significant,  $\Delta\chi^2(6)=8.46$ ;  $p=.20$ , providing evidence of partial metric invariance (Byrne, Shavelson & Muthén, 1989).

*Invariance of error variances (Model C).* The last step was to examine the equality of the uniqueness of each item. This implies equal factor loadings and error variances across countries, with the exception of the two items for which metric invariance was not tenable. Goodness of fit indices for this model are presented in Table 1. The chi square difference test between model C and model B1 was highly significant,  $\Delta\chi^2(7) = 43.24$ ;  $p<.001$ ). Most of the constraints ended in a significant increase of the chi square, as suggested by the high values of the modification indices. Thus, we concluded that error variances are not equivalent across groups.

In sum, we have found partial metric invariance of the WSES–Work Self-Efficacy Scale across Spain and Italy, whereas the invariance of the error terms was not supported. Parameter estimates of the best fitting model (Model B1) are presented in Figure 1.

### *The SWSES – Search for Work Self-Efficacy Scale*

The same analyses were performed on the *Search for Work Self-Efficacy Scale*. Table 2 presents goodness of fit indices of the examined models. The hypothesized four-factor structure showed an acceptable fit in both countries. Loadings were all higher than .60, ranging from .63 to .87 in the Italian sample, and from .63 to .90 in the Spanish sample. The configural model (Model A) obtained a good fit to the data, revealing that the same factor structure holds across Italy and Spain. The chi square difference test between Model B and Model A was not statistically significant,  $\Delta\chi^2(8)=43.24$ ;  $p=.14$ . This finding suggests that all specified equality constraints are tenable, thereby indicating that factor loadings were invariant across groups. In contrast, equality constraints on item uniqueness across the groups (Model C) ended in a high a significant increase of the chi-square,  $\Delta\chi^2(14)=60.64$ ;  $p<.001$ . This suggests that the error terms of the items are not equivalent across groups.

In sum, the *Search for Work Self-Efficacy Scale* was found to have full metric invariance across Spain and Italy. The invariance of the error terms, instead, was not supported. Parameter estimates of the best fitting model (Model B) are presented in Figure 2.

## Discussion

The current study aimed to contribute to the validation of the WSES–Work Self-Efficacy Scale and the SWSES–Search for Work Self-Efficacy Scale, by inves-

tigating the factor structure of the instruments and their measurement invariance across Spanish and Italian cultural contexts. Our findings revealed that both scales have good psychometric properties. Confirmatory factor analyses supported the dimensionality of the two instruments: the WSES measures two dimensions related to the capability to behave in an efficacious way in the work context, namely the abilities to manage interpersonal relationships and to achieve assigned goals. The SWSES measures four dimensions related to the capability to select among job offers, to build efficacious strategies, to respect other people's competences, to work with new members, and to manage stressful situations during job searches.

In addition, we used multigroup confirmatory factor analysis to assess the measurement invariance of the scales across countries. Measurement invariance represents a prerequisite for valid cross-cultural or cross-national comparisons, which require that the scale of the latent variable be the same across countries. Results confirmed that the factor structure of the scales replicates between cultural contexts. The properties of the scales, in terms of the measurement of the underlying constructs, remain stable across Italian and Spanish contexts. In particular, results demonstrated full metric invariance for the SWSES and partial metric invariance for the WSES. Statistically, full metric invariance exists when the strength of the relationship between each item and its underlying construct is the same across the groups. However, such a requirement may be too strict and unrealistic. Moreover, it represents a sufficient but not necessary condition for group comparisons (Horn, 1991). Consequently, Byrne et al. (1989) introduced the concept of partial invariance, in which only a subset of loadings must be invariant, while others are allowed to vary between groups. As partial metric invariance is a necessary condition for group comparison, meaningful comparisons of the relations between latent factors of the SWSES and external variables can be made across Spain and Italy.

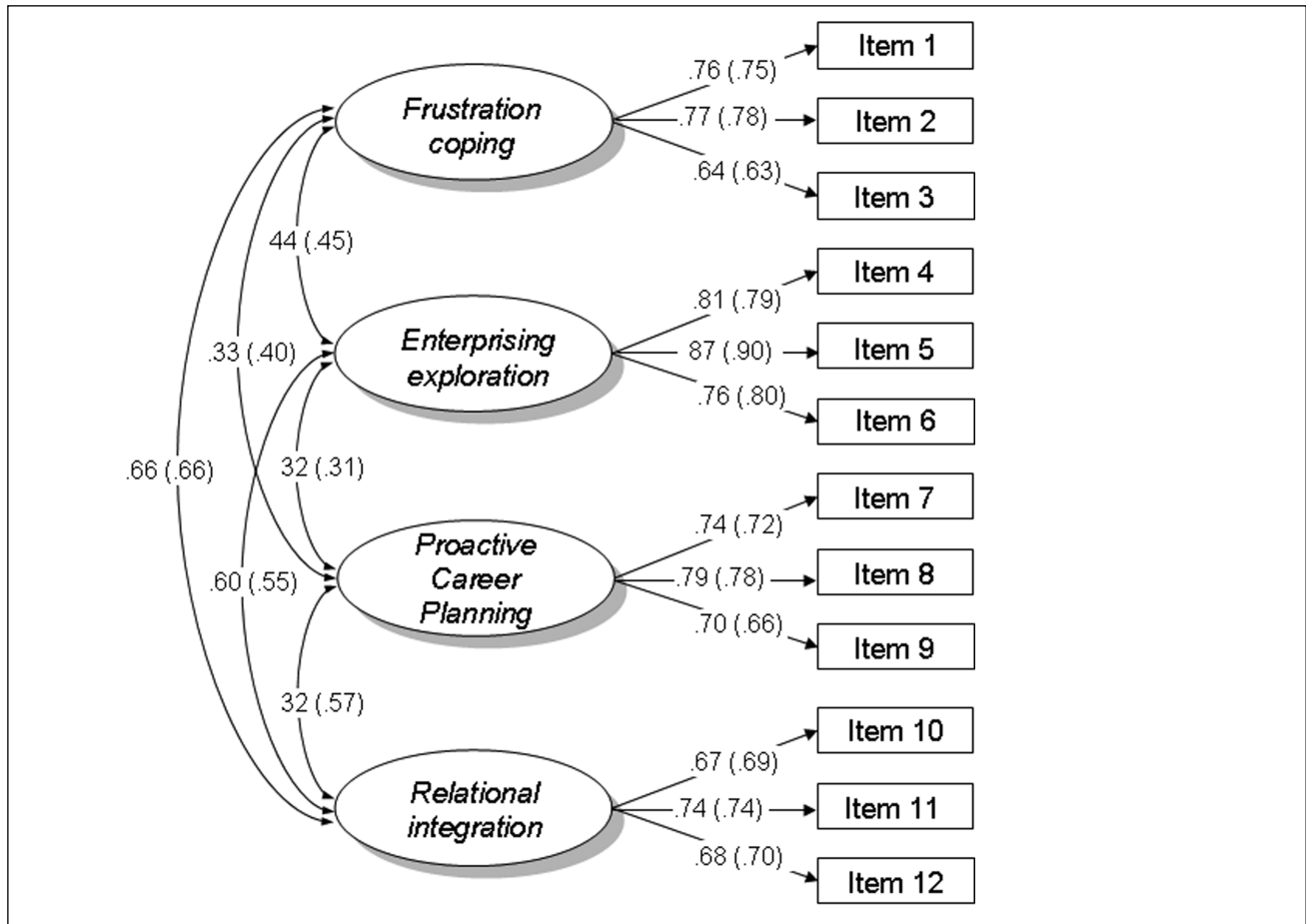
At uniqueness level some differences were found. However, a lack of uniqueness invariance does not have substantial implications on instrument validity; it indicates that some items may display different reliability across groups. As sustained by Steenkamp and Baumgartner (1998), differences in measurement error may be easily taken into account within the framework of structural equation modelling. Ultimately, as argued by Horn (1991), measurement invariance can be considered an ideal condition which is not expected to be fully realized.

To conclude, the *Work Self-Efficacy Scale* and the *Search for Work Self-Efficacy Scale* can be applied in Spanish and Italian contexts, in the field of research as well as for intervention programs related to employment search and career choice. In this regard, it is likely that employment status and self-efficacy have recip-

Table 2. Measurement invariance of the Search for Work Self-Efficacy Scale (SWSES): Goodness of fit Indices

	$\chi^2$	df	RMSEA (90% CI)	SRMR	NNFI	CFI	AIC
Italy	108.365	48	.037 (.028, .046)	.030	.98	.98	12.364
Spain	98.743	48	.073 (.052, .093)	.064	.94	.94	27.432
Configural invariance (Model A)	207.11	96	.032 (.026, .038)	.050	.98	.98	15.111
Metric invariance (Model B)	219.30	104	.032 (.026, .037)	.050	.96	.97	11.306
Invariance of the error terms (Model C)	279.94	118	.035 (.030, .040)	.067	.96	.96	43.935

Figure 2. SWSES. The measurement models for Italy and Spain (Model B)



Note. All parameters are standardized. Coefficients outside parenthesis are from Italian sample. Coefficients in parenthesis are from Spanish sample.

rocal influences: on the one hand, work can contribute to promote individuals' domain-specific sense of efficacy (Eden & Aviram, 1993); on the other hand, efficacy beliefs can contribute to effective job search and maintenance (Wanberg et al., 1999). That's why orientation, support and training programs for unemployed persons (that have to enter into labor market or that have lost their job) should consider perceptions of self-efficacy in specific domains, boosting their motivation and persistence in job search, and preparing them to cope with cognitive and relational complex environments.

Future studies should address the concurrent and predictive validity of the scales, as well as their incremental validity with regard to different outcomes.

Moreover, the generalizability of findings across western and non western cultural contexts should be examined.

## References

- Anderson, S.L. & Betz, N.E. (2001). Sources of social self-efficacy expectations: Their measurement and relation to career development. *Journal of Vocational Behavior*, 58, 98-117.
- Arciniega, L.M., González, L., Soares, V., Ciulli, S. & Gianini, M. (2009). Cross-cultural validation of the work values scale evat using multi-group confirmatory factor

- analysis and confirmatory multidimensional scaling. *The Spanish Journal of Psychology*, 12, 767-773.
- Argyle, M. (1999). Causes and correlates of happiness. In D. Kahneman, E. Diener e N. Schwarz (eds), *Well-being: The foundation of hedonic psychology* (pp. 353-373). New York: Russel Sage Foundation,.
- Avallone, F., Pepe, S. & Porcelli, R. (2007). Autoefficacia percipita nella ricerca del lavoro: scale di misura. In Isfol, *Bisogni, valori e autoefficacia nella scelta del lavoro*. Roma: ISFOL, 133-142.
- Bandura, A. (1997). *Self-efficacy: the exercise of control*. New York: Freeman.
- Bandura, A. (1998). Health promotion from the perspective of social cognitive theory. *Psychology and Health*, 13, 623-649.
- Bandura, A. (2000). Exercise of human agency through collective efficacy. *Current Directions in Psychological Science*, 9, 75-78.
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52, 1-26.
- Bauer, T.N., Bodner, T., Erdogan, B., Truxillo, D.M. & Tucker, J.S. (2007). Newcomer adjustment during organizational socialization: A Meta- Analytic review of antecedents, outcomes, and methods. *Journal of Applied Psychology*, 92, 707-721.
- Bayon, M.C. (2003). The erosion of previous certainties: Meaning, perceptions and impacts of unemployment in the Argentine experience. *Perfiles Latino americanos*, 10, 51-77.
- Bentler, P.M. (2003). *EQS 6 Structural Equations Program Manual*. CA: Encino, Multivariate Software.
- Betz, N.E. & Hackett, G. (1981). The relationship of career-related self-efficacy expectations to perceived career options in college women and men. *Journal of Counseling Psychology*, 28, 399-410.
- Bieschke, K.J., Bishop, R.M. & Garcia, V.L. (1996). The utility of the research self-efficacy scale. *Journal of Career Assessment*, 4, 59-75.
- Blustein, D.L. (1989). The role of goal instability and career self-efficacy in the career exploration process. *Journal of Vocational Behaviour*, 35, 194-203.
- Borgogni, L. & Petitta, L. (2003). *Lo sviluppo delle persone nelle organizzazioni*. Roma: Carocci.
- Byrne, B.M., Shavelson, R.J. & Muthén, B. (1989). Testing for the equivalence of factor covariance and mean structures: The issue of partial measurement invariance. *Psychological Bulletin*, 105, 456-466.
- Caplan, R.D., Vinokur, A.D., Price, R.H. & van Ryn, M. (1989). Job seeking, reemployment, and mental health: A randomized field experiment in coping with job loss. *Journal of Applied Psychology*, 74, 759-769.
- Cherniss, C. (1993). Role of professional self-efficacy in the etiology and amelioration of burnout. In W. Schaufeli & C. Maslach (Eds.): *Professional burnout: Recent developments in theory and research*. Washington, DC: Taylor & Francis.
- Cisneros, I., Medina, F., Munduate, L. & Dorado, M.A. (2000). Consecuencias emocionales de la autoeficacia en situaciones de negociación. *Apuntes de Psicología*, 18, 97-121.
- Cranny, C.J., Smith, P.C. & Stone, E.F. (1992). *Job satisfaction: How people feel about their jobs and how it affects their performance*. New York: Lexington Books.
- De Nanteuil, M. (2002). Toward new forms of social vulnerability? Thoughts on the relationship between flexibility and insecurity. *Travail et Emploi*, 89, 65-80.
- Eden, D. & Eviram, A. (1993). Self-efficacy training to speed reemployment: Helping people to help themselves. *Journal of Applied Psychology*, 78, 352-360.
- Fernández-Ballesteros, R., Díez-Nicolás, J., Caprara, G. V., Barbaranelli, C. & Bandura, A. (2002). Determinants and structural relation of personal efficacy to collective efficacy. *Applied Psychology: An International Review*, 51, 107-125.
- Fishbein, M. & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.
- Garrido, E. (2000). Autoeficacia en el mundo laboral. *Apuntes de Psicología*, 18, 9-28.
- Gist, M.E. & Mitchell, T.R. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. *Academy of Management Review*, 17, 183-211.
- Grau, R., Salanova, & M., Peiró, J.M. (2000) Efectos moduladores de autoeficacia en el estrès laboral. *Apuntes de Psicología*, 18, 57-75.
- Hill, T., Smith N.D. & Mann, M.F. (1987). Role of efficacy expectations in predicting the decision to use advanced technologies. *Journal of Applied Psychology*, 72, 307-314.
- Hongyun, L., Lei, C. & Quingmao, M. (2005). Teacher collective efficacy and it's moderating effect on the function of teachers' self-efficacy. *Acta Psychologica Sinica*, 37, 79-86.
- Horn, J. (1991). Comments on issues in factorial invariance. In L. M. Collins & J. L. Horn (Eds.) *Best methods for the analysis. of change*. Washington: American Psychological Association, 114-25.
- Jackson, M.A., Potere, J.C. & Brobst, K.A. (2006). Are success learning experiences and self-efficacy beliefs associated with occupational interests and aspirations of at-risk urban both? *Journal of career assessment*, 14, 333-353.
- Jex, S.M., & Bliese, P.D. (1999). Efficacy beliefs as a moderator of the impact of work-related stressors: A multilevel study. *Journal of applied psychology*, 84, 349-361.
- Judge, T.A., Jackson, C.L., Shaw, J.C., Scott, B.A. & Rich, B.L. (2007). Self-efficacy and work-related performance: The integral role of individual differences. *Journal of Applied Psychology*, 92, 107-127.
- Kanfer, R. & Hulin, C.L. (1985). Individual differences in successful job searches following lay-off. *Personnel Psychology*, 38, 835-847.
- Kanfer, R., Wanberg, C.R. & Kantrowitz, T.M. (2001). Job Search and employment: A personality-motivational analysis and meta-analytic review. *Journal of Applied Psychology*, 86, 837-855.
- Lapan, R.T., Shaughnessy, P. & Boggs, K. (1996). Efficacy expectations and vocational interests as mediators between sex and choice of math/science college majors: A longitudinal study. *Journal of Vocational Behavior*, 49, 277-291.



- Latham, G.P., Locke, E.A. & Fassinà, N.E. (2002). The high performance cycle: Standing the test of time. In S. Sonnentag (Ed.), *The psychological management of individual performance. A handbook in the psychology of management in organizations*. Chichester: Wiley.
- Leiter, M.P. (1991). Coping patterns as predictors of burnout: The function of control and escapist coping patterns. *Journal of Organizational Behavior, 12*, 123-144.
- Lenox, R.A. & Subich, L.M. (1994). The relationship between self-efficacy beliefs and inventoried interests. *Career Development Quarterly, 42*, 302-313.
- Lent, R.W., Brown, S.D. & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behaviour, 45*, 79-122.
- Luciano, A. (1999). *Imparare lavorando. La nuova scuola dell'obbligo e il lavoro*. Utet: Torino.
- Martinez, I., Marques-Pinto, A., Salanova, M. & Lopez da Silva, A. (2002). Bournout en estudiantes universitarios de España y Portugal. *Ansiedad y Estrés, 8*, 13-23.
- Medgyeski, M. (1999) Job security and satisfaction at work: Changes between 1989 and 1997. *Szociologiai Szemle, 2*, 3-27.
- Moriano, J.A., Palací, F.J. & Morales, J.F. (2006). Adaptación y validación en España de la escala de Autoeficacia Emprendedora. *Revista de Psicología Social, 21*, 51-64.
- Nauta, M.M. (2004). Self-efficacy as a mediator of the relationships between personality factors and career interests. *Journal of Career Assessment, 12*, 381-394.
- Osipow, S.H. & Temple, R.D. (1996). Development and use of the task-specific occupational self-efficacy scale. *Journal of Career Assessment, 4*, 445-446.
- Parker, S.K. (1998). Enhancing role breadth self-efficacy: The role of job enrichment and other organizational interventions. *Journal of Applied Psychology, 83*, 835-852.
- Pepe, S., Sobral, J.; Gómez-Fraguela, J. A. & Villar-Torres, P. (2008). Spanish adaptation of the adolescents' perceived collective family efficacy scale. *Psicothema, 20*, 148-154.
- Reyneri, E. (2005). *Sociologia del mercato del lavoro*. Il Mulino: Bologna.
- Saks, A.M. (1995). Longitudinal field investigation of the moderating and mediating effects of self-efficacy on the relationship between training and newcomer adjustment. *Journal of Applied Psychology, 80*, 211-225.
- Salanova, M. & Martinez, I. (2006). Autoeficacia en el trabajo: el poder de creer que tú puedes. *Revista de trabajo y seguridad social, 279*, 175-202.
- Salanova, M., Grau, R. & Martinez, I. (2005). Demandas laborales y conducta de afrontamiento: El rol modulador de la autoeficacia profesional. *Psicothema, 17*, 390-395.
- Salanova, M., Llorens, S., Cifre, E., Martinez, I.M. & Schaufeli, W.B. (2003). Perceived collective efficacy, subjective well-being and task performance among electronic work group: An experimental study. *Small Group Research, 34*, 43-73.
- Salanova, M., Peiró, J.M. & Schaufeli, W.B. (2002). Self-efficacy specificity and bournout among information technology workers: an extension of the job demands-control model. *European Journal on Work and Organizational Psychology, 11*, 1-25.
- Schaufeli, W., Leiter, M.P., Maslach, C. & Jackson, S.E. (1996). Maslach Burnout Inventory-General Survey. In M.P. Leiter, C. Maslach, S.E. Jackson. *Maslach Burnout Inventory (3 ed.)*. Test Manual. Palo Alto, C.A: Consulting Psychologists Press.
- Scholz, U., Dona, B.G., Sud S. & Schwarzer, R. (2002). Is general self-efficacy a universal construct? Psychometric findings from 25 countries. *European Journal of Psychological Assessment, 18*, 242-251.
- Schwarzer, R. (1998). *General Perceived Self-Efficacy in 14 Cultures* ([http://www.fu-berlin.de/gesund/skalen/Language\\_Selection/Turkish/General\\_Perceived\\_Self-Efficacy/hauptteil\\_general\\_perceived\\_self-efficac.htm](http://www.fu-berlin.de/gesund/skalen/Language_Selection/Turkish/General_Perceived_Self-Efficacy/hauptteil_general_perceived_self-efficac.htm)).
- Silvia, P.J. (2003). Self-efficacy and interest: Experimental studies of optimal incompetence. *Journal of Vocational Behaviour, 62*, 237-249.
- Spector, P.E. (1985). Measurement of human service staff satisfaction: Development of the Job Satisfaction Survey. *American Journal of Community Psychology, 13*, 693-713.
- Stajkovic, A.D. & Luthans, F. (1998). Self-efficacy and work related performance: A meta-analysis. *Psychological Bulletin, 123*, 1-20.
- Steenkamp, J.B.E.M. & Baumgartner, H. (1998). Assessing measurement invariance in cross-national consumer research. *Journal of Consumer Research, 25*, 78-90.
- Stumpf, S.A., Colarelli, S.M. & Hartman, K. (1983). Development of the career exploration survey (CES). *Journal of Vocational Behavior, 22*, 191-226.
- van Ryn, M. & Vinokur, A.D. (1992). How did it work? An examination of the mechanism through which an intervention for the unemployed promoted job search behaviour. *American Journal of Community Psychology, 20*, 577-597.
- Vandenberg, R.J. & Lance, C.E. (2000). A review and synthesis of the measurement invariance literature: Suggestions, practices, and recommendations for organizational research. *Organizational Research Methods, 3*, 4-69.
- Wanberg, C.R., Kanfer, R. & Rotundo, M. (1999). Unemployed individuals: Motives, job-search competencies, and job-search constraints as predictors of job seeking and reemployment. *Journal of Applied Psychology, 84*, 897-910.
- Wood, R. & Bandura, A. (1989). Social cognitive theory of organizational management. *Academy of Management Review, 14*, 361-384.

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## Appendix

**Work Self-Efficacy Scale (WSES, Avallone et al. 2007)***Thinking of future work, how well can you...:**Pensando en un futuro trabajo, considero ser capaz de:*

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. ... achieve goals that will be assigned</li> <li>2. ... respect schedules and working deadlines</li> <li>3. ... learn new working methods</li> <li>4. ... concentrate all energy on work</li> <li>5. ... finish assigned work</li> <li>6. ... collaborate with other colleagues</li> <li>7. ... work with people of diverse experiences and ages</li> <li>8. ... have good relationships with direct superiors</li> <li>9. ... to behave in an efficacious way with clients</li> <li>10. ... to work in a team</li> </ol> | <ol style="list-style-type: none"> <li>1. ... lograr los objetivos que se me asignarán</li> <li>2. ... respetar los horarios y los tiempos de trabajo</li> <li>3. ... aprender nuevos métodos de trabajo</li> <li>4. ... concentrar todas mis energías en el trabajo</li> <li>5. ... terminar el trabajo asignado</li> <li>6. ... colaborar con los otros compañeros</li> <li>7. ... trabajar con personas de edad y experiencias diferentes a las mías</li> <li>8. ... tener buenas relaciones con los jefes</li> <li>9. ... relacionarme de manera eficaz con los clientes</li> <li>10. ... trabajar en equipo</li> </ol> |
|---|---|

**Search for Work Self-Efficacy Scale (SWSES, Avallone et al 2007)***Thinking about the different activities that can be done when looking for a job, how well can you...:**Pensando en las distintas actividades que se pueden desempeñar para buscar trabajo, me siento capaz de...:*

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. ... look for information that you will need</li> <li>2. ... understand the found information</li> <li>3. ... select the most appropriate employment offers with respect to your competences</li> <li>4. ... consider a failure a challenge rather than a problem</li> <li>5. ... confront failures</li> <li>6. ... request advice from those with more experience</li> <li>7. ... respect the competences of others</li> <li>8. ... work with new team members</li> <li>9. ... plan your own professional projects</li> <li>10. ... take new opportunities in the job market</li> <li>11. ... overcome encountered difficulties</li> <li>10. ... build strategies for the attainment of goals</li> </ol> | <ol style="list-style-type: none"> <li>1. ... buscar las informaciones que necesito</li> <li>2. ... entender la información encontrada</li> <li>3. ... seleccionar las ofertas de empleo más adecuadas a mis competencias</li> <li>4. ... considerar un fracaso como un reto, en vez de como una amenaza</li> <li>5. ... hacer frente a los fracasos</li> <li>6. ... pedir consejo a quien tiene más experiencia que yo</li> <li>7. ... respetar las competencias de los demás.</li> <li>8. ... trabajar con personas nuevas</li> <li>9. ... planificar mi proyecto profesional</li> <li>10. ... aprovechar nuevas oportunidades en el mercado laboral</li> <li>11. ... superar las dificultades encontradas</li> <li>12. ... elaborar estrategias orientadas a conseguir mis objetivos</li> </ol> |
|--|--|