Contaduría y administración
ISSN: 0186-1042
Facultad de Contaduría y Administración, UNAM

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Contaduría y administración, vol. 63, no. 2, 2018, April-June, p. 00
Facultad de Contaduría y Administración, UNAM

DOI: https://doi.org/10.22201/fca.24488410e.2018.1120

Available in: https://www.redalyc.org/articulo.oa?id=39557346008

www.cya.unam.mx/index.php/cya

Contaduría y Administración 63 (2), 2018, 1-13

Contaduría y Administración
Accounting & Management

Spanish burnout inventory: A meta-analysis based approach

Cuestionario para la evaluación del síndrome de quemarse por el trabajo: una aproximación desde el meta-análisis

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Received 14 june 2016; accepted 09 february 2017
Available online 19 march 2018

Abstract

This study provides a systematic review of some of the psychometric properties of the Spanish Burnout Inventory (SBI). A systematic review of the literature yielded 37 original studies, from which 12 articles that met the required statistical and analysis parameters were selected and reviewed. The analysis considered a test of 95% estimated reliability on each of the principal statistical components: mean, standard deviation, item and factor skewness, and Cronbach's alpha for each dimension when the item is deleted. The main recommendation for future studies is to evaluate the skewness levels in each item of the SBI to select the best estimation method for the Confirmatory Factor Analysis (CFA). We conclude that the fundamental structures presented in the theoretical sections were validated, and overall, the results indicate that the SBI possesses adequate psychometric properties for the study of Burnout.

JEL Classification: I15; I31
Keywords: Spanish Burnout Inventory, Meta-analysis, Burnout syndrome.

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Peer Review under the responsibility of Universidad Nacional Autónoma de México.

http://dx.doi.org/10.22201/fca.24488410e.2018.1120

Resumen

Este estudio provee una revisión sistemática de algunas de las propiedades psicométricas del Cuestionario para la Evaluación del Síndrome de Quemarse por el Trabajo –CESQT. La revisión sistemática arrojó un total de 37 estudios originales de los cuales se eligieron 12 artículos que fueron revisados y examinados, dado que cumplían con todos los parámetros estadísticos y de análisis requeridos para el presente estudio. Para llevar a cabo el análisis se estimó un nivel de confianza del 95% para cada uno de los principales indicadores estadísticos: media, desviación estándar y asimetría para cada uno de los ítems y las dimensiones, asimismo alfa de Cronbach si se elimina el elemento para cada uno de los ítems y el alfa de Cronbach para cada dimensión. Como principales recomendaciones del estudio, se identificó la necesidad de evaluar niveles de asimetría en cada uno de los ítems que componen el CESQT en futuros estudios, esto con el fin de seleccionar el método de estimación más adecuado para el Análisis Factorial Confirmatorio –AFC. Se concluye que la estructura latente del modelo teórico ha sido validada y, de manera global, los resultados indican que el CESQT tiene propiedades psicométricas adecuadas para la evaluación del burnout.

Código JEL: I15; I31
Palabras clave: SBI, burnout, professional exhaustion, depersonalization, emotional exhaustion

Introduction

For the last forty years, the term Burnout has been of great interest to the academic community (Freudenberger, 1974). The Burnout construct research has been very active in Spanish speaking countries, where Burnout was barely known until the last two decades. The concept of Burnout originally described an occupational risk developed from work stress by human service employees that included emotional exhaustion. The ongoing discussion regarding Burnout and its constructs has shown that Burnout is the result of prolonged exposure to chronic stress in the workplace; a three-dimensional syndrome comprised of emotional exhaustion, low personal accomplishment, and depersonalization (Maslach & Jackson, 1981; Pines, Aronson & Kafry, 1981; Kristensen, Borritz, Villadsen & Christensen, 2005; Halbesleben & Demerouti, 2005).

Maslach and Jackson (1981) developed the Maslach Burnout Inventory (MBI), which has been the most used instrument to measure Burnout. Although this instrument has proven to possess suitable psychometric properties for its use in English-speaking countries, the MBI presents some content and psychometric problems, which worsen when translated into other languages (Gil-Monte, Carretero, Roldán & Núñez-Román, 2005).

Therefore, it is important to validate other instruments to measure job Burnout in Hispanic countries where the MBI has not had good results. There are other instruments that have been developed to measure the syndrome, such as the BM (Burnout Measure) which, according to its authors (Pines et al., 1981), was developed as a one-dimensional questionnaire. Nevertheless, it does not allow for the proper operationalization of the definition of Burnout. There are other tools available to measure Burnout levels: the Copenhagen Burnout Inventory (Kristensen *et al*, 2005), the Oldenburg Burnout Inventory (Halbesleben & Demerouti, 2005), and the SBI developed by Gil Monte in 2005. Of these, the most used is the Maslach Burnout Inventory (Maslach & Jackson, 1981) for the English and Spanish languages (Gil-Monte, 2005).

On the other hand, the SBI (Spanish Burnout Inventory) questionnaire developed by Gil Monte (2005; 2011) has been widely used by Spanish speaking countries, though some other countries have also used it in different languages. The SBI has four dimensions: a) Enthusiasm toward the job, b) Emotional exhaustion, c) Indolence, and d) Guilt (Nagar, 2012; Peng *et al.*, 2013; Shropshire & Kadlec, 2012).

Background

The concept of job Burnout may be defined as prolonged stress among human service workers. Maslach and Freudenberger were the first researchers that introduced this term in the mid-1970s. This description was developed from field observations, where researchers noticed that engaged human service workers gradually would get overwhelmed by emotional exhaustion, loss of energy, and would then withdraw from work (Freudenberger, 1974; Maslach, 1976).

After their initial work, there are more than 5500 studies and books published on Burnout since 1970 (Hallsten, Bellaagh, Gustavsson, & Utbranning, 2002; Schaufeli & Enzmann, 1998). Researchers are clear on one thing: Burnout is the result of prolonged occupational stress among human service professionals (Schaufeli & Enzmann, 1998).

Burnout has been classified into different stages. From the 1970s to the mid-1980s, it was believed to be caused by individual and personal reasons. Theories listed over-commitment, unrealistic job expectations, and interpersonal factors as the result of emotional labor to be what caused Burnout (Edelwich & Brodsky, 1980). Then the second research stage on Burnout started from the mid-1980s to late 1990s. It was in this period of time that more than 1000 studies were developed on Burnout. Most of these studies were cross-sectional in design. (Schaufeli & Enzmann, 1998).

Previous meta-analyses of these studies show that emotional work, mixed with organizational commitment were directly associated with high levels of Burnout (Hobfoll & Freedy, 1993; Zapf, 2002). During the third stage, which goes from the late 1990s to today, longitudinal studies were carried out focused mainly on the risk factors causing Burnout. The results from these studies show that high levels of emotional demands, high workloads, imbalance in job demands as well as in control and support were predictors of emotional exhaustion.

The measurement of Burnout

As previously stated, the most widely used questionnaire to measure Burnout is the Maslach Burnout Inventory (MBI) developed by Maslach and Jackson in 1981. This instrument was developed only for employees who work in service positions. The components they used were emotional exhaustion, depersonalization, and low personal accomplishment (Maslach, 1993). Later, Maslach *et al.* created a new instrument called MBI-GS that included three additional components: exhaustion, cynicism, and personal efficacy. This subsequent instrument was designed for everyone in the workforce (Schaufeli, Leiter, Maslach, & Jackson, 1996). Then, Pines and Aronson (Pines, 1981) created the BM (Burnout Measure) that measures physical, emotional, and mental exhaustion.

This last instrument was designed for everyone in the workforce too. A different questionnaire created was the CBI (Copenhagen Burnout Inventory), which focused on exhaustion: general

exhaustion, general exhaustion attributed to work, and exhaustion attributed to work with clients. Gil-Monte is a Spanish author that created the SBI. As mentioned above, the SBI (Spanish Burnout Inventory) has four dimensions: a) Enthusiasm toward the job, b) Emotional exhaustion, c) Indolence, and d) Guilt. It has been widely used for Spanish and Portuguese speaking countries.

This study aims to assess the results of the Spanish Burnout Inventory (SBI), using an instrument comprised of 20 items distributed into four dimensions: Enthusiasm toward the job (5 items), which refers to an individual who has the ambition to accomplish professional goals because these are a source of personal accomplishment; Psychological exhaustion (4 items), which is the appearance of emotional and physical exhaustion linked to the work carried out by the professional; Indolence (6 items), which alludes to the appearance of negative attitudes of indifference and cynicism when dealing with the customers of the organization; and Guilt (5 items), which consists of the appearance of negative feelings, behaviors and attitudes in the workplace, especially with people who interact in labor relations (Gil-Monte & Manzano-García, 2015).

Methods

For the analysis, 37 studies were initially found to validate the SBI. This study only analyzed 12 research articles, since the descriptive indicators for each item and for each of the dimensions are set. Thus, the inclusion criterion for the studies being analyzed is to present the following indicators: mean, standard deviation, skewness, Cronbach's alpha, and alpha if the element is deleted. It is worth noting that for the meta-analysis, it was necessary to have homogeneous conditions in the measuring range and the instrument used, which was confirmed in each study. The measurement scale of the SBI in the analyzed studies was a five-point Likert scale ranging from 0 to 4, where 0 is "never" and 4 is "very frequently: every day".

The conducted studies were carried out in Portugal, Germany, Spain, Mexico, Chile, and Brazil in the professional contexts of teaching, police work, public administration, health, as well as in prisons. Samples from each of the studies for the meta-analysis yielded a population of 6043 people (Table 1).

Table 1. Studies object of the analysis

Authors	Study	Population	Sample
Carlotto, Gil-Monte & Figueiredo-Ferraz (2015)	Factor analysis of the Spanish Burnout Inventory among public administration employees	Public administration employees from the state of Rio Grande do Sul, southern Brazil	548 public administration employees. *Sample selection technique:* random selection process using registration number of active employees provided by the Department of Human Resource of the institutions
Figueiredo-Ferraz, Gil-Monte, Queirós & Passos (2014)	Factorial analysis of the Spanish Burnout Inventory in Portuguese police officers.	Police officers for public security serving on battalions of Lisbon.	245 police officers. *Sample selection technique:* selection criteria not exposed.

Authors	Study	Population	Sample
Figueiredo-Ferraz, Gil-Monte & Grau-Alberola (2013)	Psychometric properties of the "Spanish Burnout Inventory" (SBI): Adaptation and validation in a Portuguese-speaking sample	Middle school teachers from five different schools in Portugal and nurses from the Lisbon general hospital.	211 teachers and 133 nurses. *Sample selection technique*: non-probabilistic selection of educational institutions and teachers.
Gil-Monte & Figueiredo-Ferraz (2013)	Psychometric properties of the 'Spanish Burnout Inventory' among employees working with people with intellectual disabilities	Spanish employees working in services for people with intellectual disabilities in 78 centers of Valencia, Spain.	697 Spanish employees. *Sample selection technique*: workplaces selected randomly, upon acceptance of directors.
Gil-Monte, Figueiredo-Ferraz & Valdez (2013)	Factor analysis of the Spanish Burnout Inventory among Mexican prison employees	Prisoners from three prisons in Jalisco, México.	1131 prisoners. *Sample selection technique:* participants selected non-randomly.
Mercado & Gil-Monte (2012)	Psychometric properties of the Spanish Burnout Inventory in Mexican Teachers	Secondary school teachers working in 26 institutions in Aguascalientes, Mexico.	505 teachers. *Sample selection technique:* Data collected from 26 random schools.
Gil-Monte & Olivares (2011)	Psychometric properties of the "Spanish Burnout Inventory" in Chilean professionals working with physically disabled people.	Professionals working with physically disabled people in private organizations in Chile.	277 professionals. *Sample selection technique:* data collected non-randomly, upon acceptance of directors.
Gil-Monte & Noyola (2011)	Factorial structure of the SBI assessment in Mexican primary school teachers.	Primary school teachers from public schools of Aguascalientes, México.	659 teachers. *Sample selection technique:* 83 schools that hosted participating teachers.
Bosle & Gil-monte (2010)	Psychometric properties of the Spanish Burnout Inventory in German professionals: Preliminary results	Human service German professionals.	115 German professionals. *Sample selection technique:* data collected non-randomly using an online version of the questionnaire.
Gil-Monte & Zúñiga-Caballero (2010)	Factorial validity of the SBI in a sample of Mexican physicians.	Physicians of the Mexican social security institute with a wide range of specialties.	110 physicians. *Sample selection technique:* data gathered through non-random and voluntary selection of the participants.
Gil-Monte, Carlotto & Gonçalves, (2010)	Validation of the Brazilian version of the Spanish Burnout Inventory in teachers	Teachers from all educational levels from schools in Porto Alegre, Brazil.	714 teachers. *Sample selection technique:* participants selected non-randomly and voluntarily.
Gil-Monte, Unda & Sandoval (2009)	Factorial validity of the Spanish Burnout Inventory in a sample of Mexican teachers.	Primary school teachers from public schools in the area of Iztapalapa, México.	698 teachers. *Sample selection technique:* questionnaire applied in 51 schools, upon acceptance of directors.

The analysis of studies mentioned above were tested to see whether the descriptive indicators met the necessary conditions for the validation of the instrument, and considered a

http://dx.doi.org/10.22201/fca.24488410e.2018.1120

test of 95% estimated reliability for each of the principal statistical components: mean, standard deviation, item and factor skewness, and the Cronbach's alpha for each dimension when the item is deleted.

Results

As mentioned above, this research aimed to evaluate the validation process of the Spanish Burnout Inventory questionnaire in previous studies using the meta-analysis. For this purpose, the results of 12 studies were analyzed. It is important to note that the mean values of the attributes that make up the Enthusiasm toward the job dimension are high, showing a condition of incidence in the 12 studies conducted in different contexts and in different countries.

The items that comprise the subscale of Enthusiasm toward the job (work stimulation, accomplishment, positive experience, rewarding work, and enthusiasm) have been expressed in all the studies as a positive sentence, which leads to identify that valuations close to 4 show low occurrence levels of Burnout. On the other hand, the items in the dimensions of Psychological Exhaustion, Indolence, and Guilt have been expressed in a negative manner, thus, valuations close to 4 show high levels of Burnout. According to this, it is possible to identify, under a 95% confidence interval, that the high valuation of the items that comprise the subscale of Enthusiasm toward the job shows that the existence of positive experiences, a stimulating, enthusiastic, and rewarding work, greatly decreases the prevalence of Burnout to a great extent, since it has been a factor well evaluated in the analyzed studies (Table 2).

Table 2. Confidence intervals for the descriptive parameters of the items that comprise the SBI scale.

Item		Mean		Standard Deviation		Skewness		Alpha if the element is deleted	
		Lower Lim.	Upper Lim.	Lower Lim.	Upper Lim.	Lower Lim.	Upper Lim.	Lower Lim.	Upper Lim.
Enthusiasm toward the job									
Item 1	Stimulating work	2.76	3.36	.61	1.06	-1.24	-.39	.74	.85
Item 5	Accomplishment	2.75	3.43	.67	1.17	-1.88	-.47	.71	.84
Item 10	Positive experience	2.87	3.41	.66	1.09	-1.79	-.54	.73	.84
Item 15	Rewarding work	2.81	3.38	.67	1.16	-1.48	-.47	.70	.83
Item 19	Enthusiasm	2.54	3.12	.73	1.19	-1.00	.12	.72	.84
Psychological exhaustion									
Item 8	Overwhelmed	1.35	1.81	1.07	1.16	.24	.74	.74	.83
Item 12	Weighed down	1.24	1.78	1.04	1.12	.23	.83	.74	.81
Item 17	Physically tired	1.55	2.13	1.03	1.09	-.11	.40	.73	.81
Item 18	Exhausted	1.38	1.93	1.05	1.14	.21	.78	.75	.81
Indolence									
Item 2	Does not take care	.94	1.36	.95	1.05	.49	.94	.65	.73
Item 3	People are unbearable	.81	1.34	.93	1.06	.62	1.09	.59	.74
Item 6	Demanding	.76	1.18	.81	.95	.57	1.24	.66	.74
Item 7	Indifference	.56	.82	.76	.92	.83	1.51	.65	.73
Item 11	Sarcastic	.44	.98	.80	.99	.83	2.13	.67	.77
Item 14	Classify	.79	1.22	.92	1.16	.56	1.19	.68	.76
Guilt									
Item 4	Worry about treatment	.90	1.37	1.04	1.22	.72	1.01	.74	.80
Item 9	Guilty attitudes	.86	1.07	.88	1.00	.73	1.25	.67	.76
Item 13	Regrets	.60	.78	.76	0.89	.96	1.46	.68	.75
Item 16	Apologizes	.82	.95	.77	0.93	.74	1.09	.69	.77
Item 20	I feel bad	.76	.99	.75	.86	.66	1.12	.70	.77

Source: Own elaboration based on research findings.

On the other hand, when evaluating the general attributes of the remaining dimensions, low values are identified, but the attributes of the Psychological Exhaustion subscale present a higher level of negative valuation, and for this reason it could be thought that the subscale would be the first conditioner to generate prevalence of Burnout (Table 2). The Indolence and Guilt subscales have a low prevalence level with a confidence interval of 95%, the weighting of these attributes vary between .44 and 1.36 [0.44, 1.36], which allows recognizing that these are not determining factors for the syndrome in the study contexts (Table 2).

Faced with the high valuations of the results in the analyzed studies, it is possible to find some differences compared to what Mercado & Gil-Monte (2012) presented:

… the theoretical model that underlies the SBI considers that cognitive deterioration (low scores in Enthusiasm toward the job) and affective deterioration (high scores in Psychological exhaustion) appear at first as a response to the sources of chronic labor stress, and that later on the individuals will develop negative attitudes toward the people they help at work (high levels of Indolence). The appearance of guilty feelings follows these symptoms and do not occur in all individuals (p.264).

This leads to the fact that in the analyzed contexts there are no high Burnout ratings, since the Psychological exhaustion subscale does not present high ratings and the Enthusiasm toward the job subscale does not present low ratings. With regard to the skewness values, it is recognized under a 95% confidence interval that this possibly appears in the three-dimensional items, given that under this confidence interval the upper or lower limit exceed the absolute value of 1.0 ($A \geq |1.0|$). This prompts to argue that when using the SBI instrument, there may be a high possibility that the scales present non-normality (Table 3).

Faced with the existence of skewness, several authors such as Miles & Shevlin (2005) state that:

…We usually shy away from rules of thumb, but we cautiously suggest that if your skewness statistics are less than 1.0, there should be little problem. If the skewness is greater than 1.0, but less than 2.0, you should be aware that it might be having an effect on your parameter estimates, but that it is probably OK. Finally, if the skewness is greater than 2.0 you should begin to be concerned. Each of these values depend on your sample size—the larger your sample size, the less departures from normality there will be (p. 74).

Table 3. Confidence intervals and skewness mean of the items that comprise the SBI scale.

Dimension	Item		Lower limit	Mean	Upper limit
Enthusiasm toward the job			**-1.27**	**-.91**	**-.55**
	Item 1	Stimulating work	-1.24	-.82	-.39
	Item 5	Accomplishment	-1.88	-1.18	-.47
	Item 10	Positive experience	-1.79	-1.17	-.54
	Item 15	Rewarding work	-1.48	-.98	-.47
	Item 19	Enthusiasm	-1.00	-0.44	.12
Psychological exhaustion			**.25**	**.42**	**.59**
	Item 8	Overwhelmed	.24	.49	.74
	Item 12	Weighed down	.23	.53	.83
	Item 17	Physically tired	-.11	.15	.40
	Item 18	Exhausted	.21	.49	.78

Dimension	Item		Lower limit	Mean	Upper limit
Indolence			**.59**	**.80**	**1.00**
	Item 2	Does not take care	.49	.72	.94
	Item 3	People are unbearable	.62	.86	1.09
	Item 6	Demanding	.57	.90	1.24
	Item 7	Indifference	.83	1.17	1.51
	Item 11	Sarcastic	.83	1.48	2.13
	Item 14	Classify	.56	.88	1.19
Guilt			**.63**	**.79**	**.95**
	Item 4	Worry about treatment	.72	.86	1.01
	Item 9	Guilty attitudes	.73	.99	1.25
	Item 13	Regrets	.96	1.21	1.46
	Item 16	Apologizes	.74	.92	1.09
	Item 20	I feel bad	.66	.89	1.12

Source: Own elaboration based on research findings.

According to this, we believe that the non-evaluation of skewness could cause bias in the parameters, ostensibly affecting the expected results, being the case that a skewness greater than 2.0 ($A \geq 2.0$) generates bias, and in the case of skewness between 1.0 and 2.0 ($1.0 \geq A \geq 2.0$), it generates doubt of its existence, which would lead researchers to prove its nonexistence through a statistical test such as Mardia's test (Mardia, 1970), which for the case of the analyzed studies is not obvious.

Furthermore, when analyzing the indicators of the aggregated scales (Enthusiasm toward the job, Psychological exhaustion, Indolence, and Guilt), the analysis of the attributes made evident that the dimension that generated prevalence of Burnout was Psychological exhaustion, whereas it was not prevalent with the dimensions of Indolence and Guilt. One aspect of note at the aggregated level was the significant decrease in the levels of skewness, which was due to the fact that under the scale transformation process they tend toward a normal distribution, therefore, managing to correct the skewness problems in each attribute. Nevertheless, it is noteworthy that Enthusiasm toward the job, under a confidence interval of 95%, had a negative skewness of more than 1.0 ($A \geq 1.0$), leaving in doubt the nonexistence of asymmetry in this dimension (Table 4).

Table 4. Confidence intervals for the descriptive parameters of the dimensions that comprise the SBI scale for the analyzed studies.

Dimension	Mean		Standard Deviation		Skewness		Cronbach's Alpha	
	Lower Lim.	Upper Lim.	Lower Lim.	Upper Lim.	Lower Lim.	Upper Lim.	Lower Lim.	Upper Lim.
Enthusiasm toward the job	2.76	3.34	.63	.86	-1.27	-.55	.76	.87
Psychological exhaustion	1.40	1.86	.85	.92	.25	.59	.80	.86
Indolence	.76	1.12	.56	.67	.59	1.00	.71	.78
Guilt	.82	.99	.63	.69	.63	.95	.76	.82

Source: Own elaboration based on research findings.

According to the above, it was decided to analyze the estimation methods that allowed us to estimate the factors, recognizing that in ten of the studies the method of Maximum Likelihood Estimation (MLE) is used, whereas in the remaining two, the Weighted Least Squares (WLS) and Principal Component Analysis (PCA) are used. Furthermore, most of the studies perform Confirmatory Factor Analysis (CFA), which provides a better estimate to the tests performed; only the study by Figueiredo-Ferraz *et al.* (2014) performs Exploratory Factor Analysis (EFA), using PCA as the estimation method (Table 5).

It is worth mentioning that in the ten studies that performed CFA, goodness-of-fit conditions of the models such as GFI $\geq$ .90, RMSEA $\leq$. 08, and CFI $\geq$ .90 are present. However, in each of these we identified a significant X2 (p-value $\leq$ .05), which shows that each of these models allows a good estimate and conceptual understanding from the studied sample, but do not allow generalization. The Spanish Burnout Inventory (SBI) remains a nongeneralized conceptual model in the study contexts (Table 5) (Bagozzi & Yi, 1988; Bollen & Long, 1993). Nonetheless, both the chi-square test and the RMSEA are sensitive to the sample size.

Under these considerations, a suggestion would be to generate CFA models under more robust estimation methods such as the Weighted Least Squares (WLS), Asymptotic Distribution-Free (ADF) or Arbitrary Generalized Least Squares (AGLS), given that since the non-existence of skewness is not evident, in the case of being present in the data it can generate bias problems in the parameters (Hernández, San Luis & Guardia, 1995; Schermelleh-Engel, Moosbrugger & Müller, 2003).

Table 5. Description of the factorial analysis of the research object of the study.

Authors	**Factorial Analysis**
Carlotto *et. al.* (2015)	The results have been replicated by Confirmatory Factor Analysis (CFA), analyzing 4 factorial models, and verifying that the best model of analysis is that of four factors. *Estimation method:* Maximum Likelihood Estimation. Goodness of fit: X^2 = 514.358 (p <.001); RMSEA= .062; GFI= .910; CFI= .940; AIC=606.358; NFI= .915
Figueiredo-Ferraz *et. al.* (2013)	Results replicated by CFA, obtaining empirical support for the model structure and occupational groups: Mexican doctors, Mexican teachers, and Brazilian teachers. *Estimation Method:* Maximum Likelihood Estimation. *Goodness of fit:* X^2(164) = 305.60 (p <0.001); RMSEA= 0.05; GFI= 0.92; TLI= 0.93, CFI= 0.94; AIC=397.60
Figueiredo-Ferraz *et al.* (2014)	EFA (four factors with auto-value>1), which produced the distribution of items from the original version (Enthusiasm toward the job, Psychological exhaustion, Indolence, and Guilt). The SBI obtained adequate values of internal consistency, factorial validity, and concurrent validity with the MBI in different studies performed with CFA. *Estimation Method:* Principal Component Analysis.
Gil-Monte & Figueiredo-Ferraz (2013)	CFA, obtaining empirical support for the model structure of the four factors. *Estimation Method:* Maximum Likelihood Estimation. *Goodness of fit:* X^2 = 427.57 (p <0.001); RMSEA= 0.04; GFI= 0.94; CFI= 0.95; AIC=519.57; NFI= 0.92
Gil-Monte *et al.* (2013)	Factorial structure examined through CFA. Results replicated by CFA, obtaining empirical support for the model structure of the four factors from one country to another and for occupational groups. *Estimation Method:* Maximum Likelihood Estimation. *Goodness of fit:* X^2 = 479.47 (p <0.001); RMSEA= 0.04; GFI= 0.95; CFI= 0.93; AIC= 571.47; NFI= 0.90
Mercado & Gil-Monte (2012)	CFA. Estimation Method: Maximum Likelihood Estimation. *Goodness of fit:* X^2= 472.25 (p value $\leq$,001); AGFI = 0.96; RMSEA= 0.06; CFI= 0.97
Gil-Monte & Olivares (2011)	SBI psychometric properties examined through CFA. Estimation Method: Weighted Least Squares. *Goodness of fit:* X^2=285.32 (p<0.001); RMSEA (.042 – 0.062) = 0.05; GFI= 0.96; CFI= 0.94; NNFI= 0.93

Gil-Monte & Noyola (2011)	CFA (to study the factorial structure). Estimation Method: Maximum Likelihood Estimation. Goodness of fit: X^2=372.05, (p<0.000); AGFI= 0.93; RMSEA (0.039 – 0.050) = 0.04; NNFI= 0.94; CFI= 0.94.
Bosle & Gil-Monte (2010)	CFA. Estimation Method: Maximum Likelihood Estimation. *Goodness of fit:* X^2=272.47 (p =0 .000); RMSEA (0.051– 0.085) = 0.069; CFI= 0.91; NNFI= 0.90
Gil-Monte & Zúñiga-Caballero (2010)	CFA. Estimation Method: Maximum Likelihood Estimation. *Goodness of fit:* X^2/gl= 1.37; GFI=0.83; RMSEA= 0.061; NNFI= 0.90; CFI=0.92; PNFI= 0.65
Gil-Monte *et al.* (2010)	CFA, using a four-factor model similar to the original SBI. Estimation Method: Maximum Likelihood Estimation. *Goodness of fit:* X^2= 605.86, (p=0.000); gl= 164, x^2/gl= 3.69; GFI= 0.92; AGFI= 0.09; RMSEA= 0.062; NNFI= 0.91; CFI= 0.92; PNFI=0.77
Gil-Monte *et al.* (2009)	CFA. Estimation Method: Maximum Likelihood Estimation. *Goodness of fit:* X^2 =481.01 (p<0.001); AGFI=0.91; RMSEA= 0.055; NNFI= 0.91; CFI=0.92

Source: Own elaboration based on research findings.

Discussion

Our meta-analysis identified the psychometric properties of the instruments to measure Burnout in Spanish speaking countries. To summarize some of the findings, the results showed that Enthusiasm toward the job greatly reduces the probability of the prevalence of Burnout, as proven by previous research (Maslach & Jackson, 1981; Pines, Aronson & Kafry, 1981; Kristensen, Borritz, Villadsen & Christensen, 2005; Halbesleben & Demerouti, 2005). Not surprisingly, having positive experiences at work, and considering work to be stimulating, enthusiastic and rewarding, plays a central role in the prevalence of Burnout.

Specifically, Psychological exhaustion shows a higher level of negative assessment, which could be the first symptom of job Burnout. These results are attributed with a 95% level of confidence.

The meta-analysis shows important technical aspects that ought to be taken into consideration in the validation and structuring processes of the SBI questionnaire. First, it is under a 95% interval that the three-dimensional items could possibly display asymmetric distributions. On this confidence interval, the skewness upper or lower limit exceeded the value of 1.0 ($A \geq 1.0$), which according to the literature generates a scenario of doubt regarding the nonexistence of asymmetric distributions, whereas items with skewness values between 1.0 and 2.0 ($1.0 \geq A \geq 2.0$) ought to use Mardia's test to ensure the absence of skewness. In this study, the nonexistence of asymmetric distributions in the items that comprise the SBI questionnaire is shown in the fact that the CFA models under the Maximum Likelihood Estimation method—one of its criteria to demonstrate that the data has multivariate normal distribution, the estimation method—could be generated by over or underestimation parameters, which could lead to exposing biased parameters.

Although it is true that in the analyzed studies it is not possible to state that there are asymmetric distributions in the items that comprise the SBI questionnaire, it is also not possible to state the nonexistence of asymmetric distributions in these items, since the skewness value under a 95% confidence interval of the items for three of the four dimensions that comprise the questionnaire is in the range of 1.0 and 2.0 ($1.0 \geq A \geq 2.0$).

In order to strengthen the analysis and the purpose of Burnout studies, two conditions are

recommended: first, when using CFA under Maximum Likelihood Estimation methods, it is necessary to previously prove the absence of skewed distributions by using Mardia's test; second, it is possible to use estimation methods that are much more powerful and robust than the MLE for the constitution of CFA, such as the Weighted Least Squares (WLS) method, which improves the analysis with asymmetric distributions in their items. This could greatly improve the solution to the possible problems of overestimation or underestimation of the parameters, since it is necessary to assure the absence of skewed distributions.

As a second aspect, the results show that under the Confirmatory Factor Analysis (CFA), the latent structures presented in the theoretical sections were validated. Therefore, the theoretical model was validated in the studied samples; however, since there is no factorial invariance, the questionnaire should be validated continuously at the time of its application in order to be sure that the theoretical structure being raised is evident in the sample to be analyzed.

As a third aspect, it is important to highlight the estimation methods for the Confirmatory Factor Analysis. Most studies use the Maximum Likelihood Estimation method, but as mentioned above, this could present problems given that it is not possible to make evident the existence or not of asymmetric distributions, since under a 95% interval most of the items were within a range of 1.0 and 2.0 in skewness ($1.0 \geq A \geq 2.0$). Given that Miles & Shevlin (2005) indicate that if the skewness is greater than 1.0 but less than 2.0 it might have an effect on the parameter estimates, it is desirable, in order to solve this doubt, that future studies use estimation methods with more robust statistics that overcome the possible problems of asymmetric distributions, such as the Weighted Least Squares (WLS), Asymptotic Distribution-Free (ADF), or Arbitrary Generalized Least Squares (AGLS). Only one of the analyzed studies used this estimation method, which eliminates any doubt regarding a possible over or underestimation of the parameters.

As a fourth aspect, the presence of a suitable sample size to generate CFA is important; particularly, one that considers the need to favor estimation methods of regression weighs under estimation methods of robust statistics. In this case, the literature raises a number of observations suitable for this type of model, following estimation methods under the following premise: $k (k + 1) / 2$ where k is the number of parameters to be estimated, and where the resulting number should be at least the number of observations where the model will be tested.

On the other hand, we emphasize the importance of continuous evaluations of the Burnout syndrome, taking advantage of instruments that have been validated in Latin American contexts, such as the SBI, since presently and under current working conditions it is possible to find situations that may increase the prevalence of Burnout, for example, aspects related to psychological exhaustion. The 83.33% (n = 10) of the studies reviewed in this research met this sample condition.

Opportunities for future research

Burnout is a response to chronic stress in the workplace that occurs when the individual does not have coping strategies to face the difficulties of his work environment, occurring particularly among professionals who work helping people, or whose object of work are people. Therefore, in order to promote an understanding of Burnout, it is advisable to carry out studies that seek to identify levels of stress in the workplace and its incidence in the prevalence of Burnout, as well as studies that analyze coping strategies, stress levels, and their incidence in the prevalence of Burnout.

Overall, the results of our study indicate that the SBI possesses adequate psychometric properties for the study of Burnout.

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