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Development and Cross-national Validation of the *Emotional Effort Scale (EEF)*

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ABSTRACT.

Background: Researchers define Emotional Labour (EL) as the effort associated with meeting the emotional requirements of the job, yet nobody has ever directly tested this effort. Building on classic stress and ego depletion theory, this study develops the Emotional Effort scale (EEF).

Methods: In Study 1, exploratory (N=197) and confirmatory factor analysis (N=182) were conducted with a British sample. In Study 2, the instrument was adapted to Spanish and measurement invariance was tested (N=304). In Study 3, (N=185), we tested convergent and divergent validity with the EL strategies (i.e. surface acting and deep acting) and the relationship between EEF and emotional exhaustion.

Results: The final scale is a two-dimensional measure (explicit and implicit emotional effort) with good reliability levels in all samples (N=818). Additionally, it shows adequate convergent, divergent and nomological validity.

Conclusions: The Emotional Effort construct adds unique value to the literature. Thus, explicit effort seems to be the mechanism that explains the association between EL and exhaustion. Additionally, this study adapts and translates the measure to two of the most used languages in the world, enabling the emergence of cross-national studies in the field of emotions at work.

KEYWORDS: Emotional labour; surface acting; emotional effort; emotional exhaustion; instrumental study

Desarrollo y Validación trasnacional de la *escala de Esfuerzo Emocional (EEF)*

RESUMEN.

Antecedentes: La literatura define el Trabajo Emocional como el esfuerzo asociado al cumplimiento de las reglas de expresión emocional del puesto; sin embargo, este esfuerzo no ha sido medido aún. Desde la teoría transaccional de estrés y la *ego depletion theory* desarrollamos la escala del Esfuerzo Emocional (EEF).

Método: En el Estudio 1, se condujeron análisis factoriales exploratorios (N=197) y confirmatorios (N=182) en muestras Británicas. En el Estudio 2, la escala se adaptó al Español y se realizaron análisis de invarianza (N=304). En el Estudio 3 (N=185), se examinó la validez convergente y divergente de la escala con las estrategias de trabajo emocional (i.e. actuación superficial y profunda), y se estudió la relación entre el esfuerzo y el cansancio emocional.

Resultados: La escala final tiene dos factores (explícito e implícito) y buenos niveles de fiabilidad en todas las muestras (N=818). Además, presenta adecuada validez convergente, divergente y nomológica.

Conclusiones: El constructo del esfuerzo emocional contribuye de manera notable a la literatura, y parece ser el mecanismo que explica la relación entre el trabajo y el cansancio emocional. Además, el instrumento se ha validado en dos de las lenguas más usadas en el mundo, permitiendo el desarrollo de futuros estudios trasnacionales.

KEYWORDS. Trabajo emocional, actuación superficial, esfuerzo emocional, cansancio emocional, estudio instrumental

Customer service employees are required to show a range of different emotions in order to achieve successful interactions with customers (e.g. Kiffin-Peterson, Jordan, & Soutar, 2011). According to Hochschild (1983), showing the emotions required by the role is an effortful process, which she labelled: “Emotional Labour” (EL). Similarly, Morris and Feldman defined EL as the “effort, planning and control required to display organizationally desired emotions during interpersonal transactions” (1996: p.987). In spite of the emphasis on effort, EL has been extensively measured in terms of the strategies individuals use to manage their emotions: Deep Acting (DA) and Surface Acting (SA) (e.g. Brotheridge & Lee, 2003). DA describes the process whereby employees change their own feelings to match the emotions they have to display (e.g. Grandey, 2000). In contrast, SA refers to faking the emotional displays.

Quantitative studies measuring the impact of DA and SA have confirmed a strong link between EL and burnout. Overall, SA is regarded as the most harmful strategy based on the consistent associations with emotional exhaustion and cynicism (e.g. Grandey, Fisk, & Steiner, 2005; Hülshagera, Langa and Maie, 2010; Martínez-Iñigo, Totterdell, Alcover, & Holman, 2007). Nevertheless, the predictive ability of SA has been questioned, as some studies show that SA did not add any explanatory value beyond negative affectivity (e.g. Brotheridge & Grandey, 2002; Zammuner & Galli, 2005). According to Goodwin (2011), these inconsistencies can be due to the lack of attention to the “effort” component of EL, which should be assessed separately from the strategies.

In line with the main definitions of EL a sensible operationalization of the construct should incorporate the key element: “effort”. In this study, we aim to develop the Emotional Effort Scale (EEF) (Study 1). Secondly, we aim to adapt the EEF to

Spanish and demonstrate Measurement Invariance of the scale in the two national groups of study (UK and Spain) (Study 2). Finally, we aim to demonstrate significant relationships between emotional effort and theoretically related outcomes (i.e. surface acting, deep acting and emotional exhaustion) (Study 3).

Conceptual definition of the Emotional Effort construct

Based on the consistent relationships between EL and strain; we build on two stress-related frameworks to conceptualize the emotional effort construct: transactional theory and ego depletion theory. Transactional theory defines stress as "a particular relationship between the person and the environment that is appraised by the person as taxing [...] and endangering well-being" (Lazarus & Folkman, 1984, p.19). In line with the emphasis on individual appraisals; emotional effort could be conceptualized as the perception of resources invested when meeting emotional requirements of the job (i.e. display rules). Further, transactional stress theory states that the cognitive appraisal mediates the relationship between external demands and stress reactions. Thus, it could be that the perceived effort associated with meeting emotional requirements of the job, explains the resource depletion commonly attributed to emotional labour. In short, we define emotional effort as the explicit perception of resources invested when managing emotions to meet display rules.

On the other hand, the effort associated with emotional requirements of the job, could operate at a less conscious level. In line with this, ego depletion theory suggests that we know that an activity involves high self-controlled effort, when the energy remaining for subsequent activities is diminished (Baumeister, Bratslavsky, Muraven, & Tice1998). Thus, it was found that the experimental condition of suppressing emotions whilst watching a film could involve effort; based on the higher number of mistakes

made in subsequent cognitive tasks (Baumeister et al. (1998). In view of this, implicit emotional effort is conceptualized as a less conscious resources investment process, that can be inferred from the degree of interference with the execution of other tasks (Martinez-Iñigo et al., 2007). In short, we conceptualize Emotional Effort as a two-dimensional construct with an explicit dimension (i.e. perceptions of resource investment) and an implicit dimension (i.e. effort inferred from the degree of interference with other tasks).

Cross-national adaptation and evidence of external validity

Most studies on the EL literature have focused on Anglo-Saxon samples. However, evidence suggests that the “service with a smile” model has been exported to countries where free regulation of emotion is encouraged. Thus, a cross-cultural study found that customer service staff from a country in the Latin-European cluster (i.e. France), actively engaged in SA. However, their levels of SA were significantly lower than American employees (Grandey et al., 2005). Prior to this, the authors had demonstrated measurement invariance of the instruments in order to ensure that differences were not due to instrument bias (Byrne, 2008). In this study, we aim to cross-nationally validate the EEF in two different representatives of the aforementioned clusters: Spain and UK. We expect that this scale is metrically and conceptually equivalent in both countries, allowing future comparisons on variable levels.

The stronger link between SA and work related stress is commonly interpreted as an index of the higher effort involved in this strategy (Austin, Dore, & Donovan, 2008; Grandey, 2000). Thus, suppressing emotions changes the outward display, but the internal activation remains, depleting resources over time (Grandey, 2000). On the other hand, some argue that the active modification of emotions (i.e. DA), requires higher

effort (Zapf, 2002). Similarly, Liu, Prati, Perrewe, and Ferris (2008) argue that; unlike with DA, individuals perform SA under resource-loss circumstances, in an effort to conserve their energy. Although both strategies are expected to be associated with effort, there is not enough evidence to hypothesise either strategy to involve higher effort than the other.

In line with the stress models where emotional effort is conceptualised, EEF is expected to be strongly associated with emotional exhaustion. Similarly, to the extent to which meeting emotional requirements of the role interfere with other tasks, emotional exhaustion is also likely to arise (Baumeister et al., 1998). Further, evidence from qualitative studies suggests that conscious “effort” could be a potential intervening variable in the relationship between the EL strategies and exhaustion (Wong and Wang, 2009). Hence, we expect that the relationship between SA and emotional exhaustion is explained by the emotional effort associated with meeting display rules. This will allow us to include EEF into a comprehensive EL model with greater criterion potential.

STUDY 1

Method

Participants and procedure

A total of 379 customer service employees from the South of England participated in this study. Recruitment consultants and letting agencies comprised 45% of the sample; 26% retail; 16% bars and restaurants; 7% travel agents, and 6% bank clerks and insurers. Ages ranged from 17 years old to 61, with an average of 33 and 9.3 SD; 60% were female and 40% were male. Once ethical approval was obtained, different workplaces, where employees have to deal with customers on a regular basis, were approached. We asked employees to voluntarily take part in a doctoral study by

completing a 12 minute survey on their lunch break. Anonymity and confidentiality were guaranteed. The first author collected the questionnaires after lunch on the same day. All questionnaires were collected and participation was estimated at 89%.

Instruments

Item construction and qualitative assessment: evidence of content validity.

Carretero-Dios and Pérez's (2007) recommendations on instrument development were followed. Two frameworks guided the item development: Ego Depletion Theory (Baumeister et al., 1998), and Classic Stress Theory (Lazarus & Folkman, 1984). First, the authors wrote instructions of the scale inspired by the various EL definitions (e.g. Morris and Feldman, 1996). Instructions were: "MEETING EMOTIONAL DISPLAY RULES refers to the process whereby you show the emotions required by your job (smiling when first meeting a customer, hiding anger when dealing with an unpleasant customer etc.). In the last month, HOW OFTEN have you felt that...". Respondents were asked to rate their answers on a 5-point Likert Scale (1 never to 5 very often). In line with Ego Depletion theory, we worded items related to Implicit Effort so that they reflect the effort by interference with other tasks (please see Table 1). We also incorporated the two existing items of psychological effort developed by Martínez-Iñigo et al. (2007). Then, following Lazarus and Folkman's (1984) transactional theory, we developed items referring to individuals' explicit perception of emotional effort: e.g. "How often have you felt that this activity involves a great amount of effort?".

The item specification table with the semantic definition of the construct and its components was given to a panel of four experts. First, we asked them to rate how well the items reflected the construct, and whether the items were understandable. They gave their responses on a scale 0 (disagree) to 4 (agree). Those items scoring lower than 3

were re-worded. We also conducted a small pilot with 20 customer-service workers and simplified the instructions based on their suggestions. Finally, we obtained a 13 item scale with 6 and 7 items that a priori seemed to tap into the theoretical dimensions Explicit and Implicit Emotional Effort respectively.

Data analysis: We randomly split the British sample (N= 379) since this is an accepted procedure when sample sizes are of a relevant magnitude and communalities are high (.60 or greater) (MacCallum, Widaman, Preacher, & Hong, 2001). We then conducted descriptive analysis for the items, Exploratory Factor Analysis (EFA) and item reduction with one of the subsamples (N=197) using SPSS 20. Then, we conducted Confirmatory Factor Analysis (CFA) with the other sub-sample (N=182) using AMOS 20. Missing cases were 3% (i.e. below the 5% threshold where listwise deletion is not recommended). The “exclude cases pairwise” option was selected in SPSS and deletion of missing cases in AMOS.

Results

Internal structure of the scale

Firstly, we analysed the psychometric properties of the scale. Following Nunnally and Bernstein’s (1994) recommendations, four items with a correlation item-total below .300 were deleted (items 4, 5, 11, 13). EFA was conducted with the remaining nine items. Prior to this, we found that Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .77 and Bartlett’s Test of Sphericity achieved statistical significance ($\chi^2 = 350.3$, $p < .000$); supporting the adequacy of factor analysis. Then, we selected Principal Axis Factoring and Oblimin rotation. Kaiser’s criterion supported the two dimension solution to retain factors (those with eigenvalues > 1). We also used Monte Carlo’s Principal Component Analysis for parallel analysis. This also indicated

to retain two factors. Finally, we checked that each item loaded above .40 on its factor and below .30 on the other one (Nunnally & Bernstein, 1994) and 2 items that did not meet this criterion were removed. The analyses were repeated for the 7 remaining items and two factors.

Psychometric properties of the items can be appreciated in Table 1. The four items loading onto the first factor corresponded to that which we expected for the implicit effort dimension (items 4, 5, 6, and 7). Consequently, we labelled this dimension “Implicit Emotional Effort”. The three items which loaded onto the second factor grouped items corresponded to appraisal of effort; as a result, we labelled that dimension “Explicit Emotional Effort” (items 1, 2 and 3). Cronbach’s alpha were .73 for explicit effort and .76 for implicit effort.

[Insert Table 1]

Confirmatory Factor Analysis

In order to test the fit of the two factor solution we ran CFA with the second British subsample (N=182), using AMOS 20 and Maximum Likelihood. The Incremental Fit Index (IFI), the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI) all must be over .90. Additionally, the Standardized Root Mean Square Residual (SRMR) and the Root Mean Squared Error of Approximation (RMSEA) must be below .08 and χ^2/df value lower than 3.0. Our results met all the requirements to conclude that the two dimension theoretical model exhibits a good fit (IFI=.963, CFI=.962, TLI=.933, SRMR=.054, RMSEA=.080 and $\chi^2/df=2.14$). Cronbach’s alphas were .69 for explicit effort and .79 for implicit effort.

[Insert Figure 1a]

We compared the fit of the two factor model to that of a single factor model for the same data. Differences between models were significant ($\Delta\chi^2=41.91$; $p<.001$). Thus, we rejected the most parsimonious model and supported the two factor solution. Factor loadings for items corresponding to each dimension of effort were high and loaded in their corresponding factors.

STUDY 2

Method

Participants and procedure

A total of 304 customer service employees from Asturias (Spain) participated in this study: 68.8% retail; 11.7 % travel agencies and hotels; 7.5% bars and restaurants; 6.8% lettings and insurance agencies; and 5.2 % hairdressing. Their ages ranged from 18 to 65 with an average age of 34.4; of the sample, 79% were female and 21% were male. Same procedure as in Study 1 was followed.

Instruments

Emotional Effort Scale Adaptation.We followed the main steps for the adaptation of assessment instruments recommended in the literature (e.g. Muñiz & Hambleton, 1996). Once we confirmed with experts that this construct was potentially present in the Spanish population, we started with the back translation procedure. First, the native Spanish bilingual author translated the items from English to Spanish. The rest of the author-team confirmed that the meaning held. Then, a bilingual native English speaker translated the items back to English. Finally, we reviewed the items to determine whether the cross-translations held their original meaning. Minor changes were made to the adapted version. Sixty-five individuals with customer service experience participated in the pilot. They were asked to comment on the instructions

and understanding of the items. Then, the instrument was administered to the final sample. Measurement Invariance (MI) tests were conducted with Multigroup Confirmatory Factor Analysis (MCFAs); to ensure that the emotional effort was invariant across the two national groups.

Results

First, multivariate analysis of covariance was performed with country as independent variable, the EEF items as dependent variables, and the demographic variables that were significantly different across samples as covariates (e.g. gender, type of job). The model was significant only for country of origin Wilk's $\lambda=7.07$; $p<.001$. Then, measurement invariance tests were performed. These involve various hierarchical model testing steps with the two samples simultaneously (Byrne, 2008). Prior to that, the model must have a good fit for each sample independently. Thus, we fit the same model of Study 1 to the Spanish sample. Again, we found good fit (IFI=.983, CFI=.983, TLI=.972, SRMR=.036, RMSEA=.050 and $\chi^2/df=1.73$) and support for a better fit of the two factor model ($\Delta\chi^2=127.33$; $p<.001$). Cronbach's alpha coefficients were .77 for explicit effort and .74 for implicit effort. Factor loadings can be appreciated in Figure 1b.

[Insert Figure 1b]

Next, the first level of MI or the "configural invariance model" was confirmed by fitting the model across the two groups simultaneously and finding a good fit (Model 1: Table 2). The next model testing stage represents a stronger case for invariance: "metric invariance model". Here we compared the fit of a model with no constraints across groups, to one where constraint of equal factor loadings across samples was imposed. Since the increment in chi-square was not significant, metric invariance was

supported. These steps are sufficient to justify that the item content and metric properties are equivalent across countries. In order to test whether the meaning and structure of the construct were also invariant, we also tested the “strong invariance” step. Thus, we added the constraint of equal intercepts (Models 3 and 4, Table 2) and equal latent variables (Model 5). Full scalar invariance was not supported due to two intercepts ($p < .004$). According to Byrne, Shavelson, and Muthén (1998), as long as there are two items or more that remain invariant, latent means can be meaningfully compared. Hence, the two intercepts were freed up and the fit of the model was estimated resulting in non-significant chi square differences, which supports (partial) scalar invariance. Finally, the latent means were constrained (Model 5) and the model did not have a significantly worse fit. Hence, equality of structural means is also supported.

[Insert Table 2]

STUDY 3

Method

Participants and procedure

A total of 185 customer service employees from Madrid (Spain) participated in this study. Participants were employed as follows: 54.1% ride operators; 25.4% bars and restaurants; 15.7% retail; 4.8% customer service staff. Their ages ranged from 17 to 61 with an average age of 29.5 and 9.7 SD. Of these, 47% were female and 53% were male. Same procedure as in Study 1 and 2 was followed.

Instruments

Emotional Labour: Brotheridge and Lee’s (2003) scale was used. Respondents are asked to rate statements in a scale from *1=never* and *5=always*. A sample item for

SA: “Fingir emociones que no siento realmente”. A sample item for DA: “Tratar de sentir realmente las emociones que debo mostrar.” Cronbach’s alpha were .86 for SA and .80 for DA.

Emotional exhaustion: We measured this with the Spanish adaptation of the Maslach Burnout Inventory-GS (Moreno-Jiménez, Rodríguez-Carvajal, & Escobar-Redonda, 2001). We asked respondents to rate the extent to which they experience each of the statements on a scale from *1=never* to *5=always*. The reliability for this scale was .92.

Emotional effort: Cronbach’s alpha were .75 for explicit effort and .79 for implicit effort.

Negative affect: Sandín, Chorot, Lostao, Joiner, Santed, & Valiente’s (1999) scale was used. Alpha coefficient was .84.

Results

In order to demonstrate that emotional effort and the EL strategies did not converge to the extent of being redundant constructs; we run CFA with the EL strategies and emotional effort (Ferris, Brown, Berry, and Lian’s, 2008). The model achieved a good fit (CFI=.92, IFI=.92, SRMR=.06) and all items loaded significantly into the expected latent variables. Further, for each of the EL strategies and the emotional effort dimensions, a two-factor model yielded a significantly better fit than the one factor model (e.g. explicit effort and SA: 1, $\Delta\chi^2=54.76$; $p<.001$). These results provide support for the convergent and divergent validity of EEF.

[Insert Figure 2]

Then, we explored the nomological net of emotional effort with correlation analysis. As expected, emotional effort was significantly associated with SA. In

contrast, DA was only significantly associated with the explicit effort dimension. Finally, we found that emotional exhaustion was positively associated with explicit and implicit effort.

[Insert Table 3a]

Next, using Baron and Kenny's (1986) mediation test, we found that explicit effort fully mediated the association between SA and exhaustion. Thus, when explicit effort was entered in the last step ($\beta = -.427$; $p < .001$), surface acting lost its significance ($\beta = -.121$; $p = .096$). The Sobel test supported this mediation ($z = 3.11$; $p < .001$)

[Insert Table 3b]

Discussion

The aim of this study was to develop and cross-nationally validate the Emotional Effort Scale. Evidence gathered in three studies supports that the EEF scale is a two-factor construct with good reliability levels across all samples. We also confirm that the instrument meets the requirements to be used as a reliable tool for cross-national hypothesis testing in Spain and UK (Byrne et al., 1989). Thus, future studies may include this instrument for meaningful comparison across the aforementioned countries. Finally, we also found evidence of convergent, divergent and nomological validity. Thus, emotional effort is related, yet a different construct from DA and SA. Further, explicit emotional effort seems to be the mechanism that explained the impact of the EL strategy SA on emotional exhaustion.

The development of this emotional effort operationalization fills a gap in the literature regarding the definition of EL as "effort", and the lack of an instrument to assess such a construct independently from the EL strategies (Goodwin, 2011). In line with the experimental evidence, which the studies testing ego-depletion theory provided

(e.g. Martínez-Íñigo et al., 2007); implicit effort was associated with emotional exhaustion. However, explicit effort was the strongest and only significant predictor when we analysed it simultaneously with the implicit effort dimension. This provides strong support for the relevance of transactional stress theory to understand the impact of EL on employee's exhaustion.

This manuscript also clarifies the debate around what EL strategy seems to involve higher effort (e.g. Liu et al., 2008). Thus, we found a stronger association between emotional effort and SA than with DA; this supports the emotion regulation approach (Grandey, 2000). Thus, suppressing felt emotions (SA) involves a high level of effort, because one has to regulate these after the emotional responses have been triggered. In contrast, DA could operate at a lower level of conscious effort as the regulation comes before the emotion is fully underway. Nevertheless, future research with diary study methodology is encouraged to clarify this further. This will also allow differentiating the perceived effort of the strategies when one implements them; and, the immediate impact on stress rather than the aggregate effect.

Regarding practical applications, we believe that there is room for the use of the EEF scale in the recruitment and selection processes. The instrument could be used to assess the potential vulnerability of stress for employees in constant interaction with customers. However, we need more studies that examine the relationships between effort and other desired traits of prospective employees. Thus, even though it was related to negative outcomes in our study, it could be that individuals who score high in effort, are also more likely to engage with their work; thereby becoming assets for their organization.

Finally, research is needed on the area of emotion regulation training for customer service employees. The latter should reduce the cognitive and emotional burden placed on employees that are required to perform EL on a regular basis, freeing these resources to focus on other aspects of their role. Further, research is encouraged to study the moderator role of potentially relevant psychological constructs (e.g. empathy) in the relationship between emotional effort and well-being. Thus, it could be that effort is less significantly related to negative outcomes when individuals have a tendency to be highly empathetic with other's emotions.

Among the limitations of this study, the risk of the common method bias must be cited. Nevertheless, we followed Conway and Lang's (2010) steps to minimize this bias (e.g. demonstrating the lack of overlap of the items with related constructs). Additionally, respondent's answers to these self-report measures could have been biased due to social desirability. Finally, the cross-sectional design does not allow demonstrating causal association between the variables. However, this is an appropriate design for the development and validation of a new instrument.

In conclusion, the development and validation study of the Emotional Effort Scale (EEF) provides strong evidence for the internal structure and validity of the relationship with theoretically related variables (SA, DA and emotional exhaustion). We expect that this construct will contribute to explain the intervening mechanisms on the association between EL and employees' well-being in future studies.

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Table 1. Factors of the EEF scale, Item Description, Item Descriptives, Cronbach Alpha and Item Loadings estimated with Principal Axis Factoring and *Oblimin* rotation (Study 1: UK subsample N=197).

Factors	Item description	M	SD	DI	α_b	α	Factor loading	Eigenvalue	Variance explained
Factor 1: <i>Explicit Emotional Effort</i>							.73	3.35	40.93%
1	... this activity involves a great amount of effort?	2.88	1.20	.56	.65		.69		
2	... the effort you spend in meeting emotional display rules is greater than the actual task you have to carry out?	2.67	1.10	.65	.54		.86		
3	... this activity is the main reason why you feel emotionally drained after work?	2.65	1.25	.47	.74		.50		
Factor 2: <i>Implicit Emotional Effort</i>							.76	1.04	49.42%
4	... you could deal with a complaint more efficiently if you did not have to focus on meeting emotional display rules? (e.g. remaining calm when dealing with unpleasant customers)	2.74	1.13	.51	.74		.57		
5	... you would be doing a better job if you didn't have to meet certain emotional display rules (e.g expressing feelings of sympathy when you don't feel like that)?	2.40	1.13	.66	.65		.88		
6	...meeting emotional display rules impairs your performance on other tasks?	2.14	.93	.62	.68		.68		
7	...you make more mistakes in other areas due to this activity?	2.04	.91	.49	.75		.49		

Note: Items have been re-numbered for clarity purposes. α_b Cronbach alpha if the item was deleted. Loadings <.3 are left blank

Table 2. Fit Indices of Four Nested Models from Multigroup Confirmatory Factor Analysis-Measurement Invariance of the Emotional Effort scale (N_{UK}=182; N_{Spain}=304)

Model Specification	M1: Configural Invariance	M2: Full Metric Invariance	M3: Full Scalar Invariance	M4: Partial Scalar Invariance*	M5: Latent Means
χ^2 (df, p)	43.15(24, .010)	55.54 (31, .004)	81.35 (38, .000)	58.12 (34, .006)	61.75 (36,.005)
χ^2/df	1.80	1.79	2.14	1.71	1.72
IFI	.980	.974	.953	.972	.972
CFI	.979	.973	.953	.972	.972
SRMR	.040	.040	.049	.039	.038
RMSEA	.041	.041	.041	.039	.039
$\Delta\chi^2$	-----	12.38	25.81	18.60	3.63
Δ df	-----	7	7	12	2
Statistical significance	-----	<i>ns</i>	p<.001	<i>ns</i>	<i>ns</i>
Δ CFI		.004	.000	.026	.002

Note: Df_Degrees of freedom; χ^2 difference_Chi square differences; IFI_Incremental fit Index; GFI_Goodness-of-Fit Index; SRMR_Standardized Root mean Square Residual; RMSEA_Root Mean Square Error of Approximation. Partial Scalar Invariance*: non-invariant intercepts items 6 and 10 are set free.

Table 3a. Bivariate Correlations of the variables of study in the validation of the Emotional Effort scale in Study 3 (N=185)

	M	SD	1	2	3	4	5
1. Negative affect	1.37	0.46					
2. Explicit Effort	2.47	0.99	.500**				
3. Implicit Effort	1.45	0.29	.399**	.686**			
4. Surface acting	2.73	0.76	.320**	.458**	.383**		
5. Deep acting	2.89	0.79	.143	.151*	.129	.465**	
6. Emotional exhaustion	2.10	1.02	.607**	.648**	.456**	.448**	.129

Note: **p<.010, *p<.05

Table 3b. Results of Hierarchical Multiple Regression and Mediation Analysis in Study 3 (N=185)

Model Summary	Dependent vbs.		
<i>Standardized coefficients</i>	Emotional exhaustion	Explicit effort	Emotional exhaustion
Step 1. Control variables (ΔR^2)	(.398***)	(.253***)	(.398***)
Age	.538***	.080	.385***
Gender	-.016	-.020	-.050
Negative affect	.156**	.387***	.164**
Step 2. EL strategies (ΔR^2)	(.071***)	(.108***)	(.071***)
Surface Acting	.279***	.399***	.121
Deep Acting	-.076	-.088	-.040
Step 3 Emotional Effort (ΔR^2)			(.104***)
Explicit Effort			.427***
Implicit Effort			-.040
Adjusted R ²		.339	.555

Note: ***p<.001, **p<.010, *p<.05

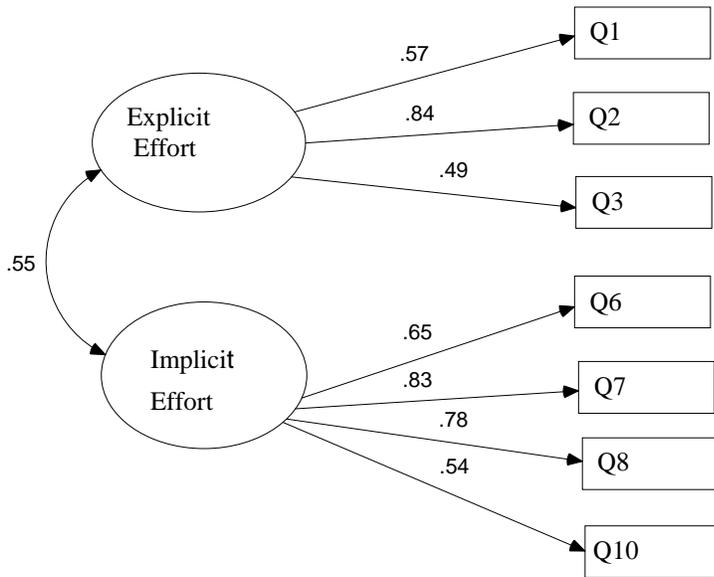


Figure 1a. Emotional Effort Two-Dimension Model Standardized Estimates for the UK sub-sample (N=185)

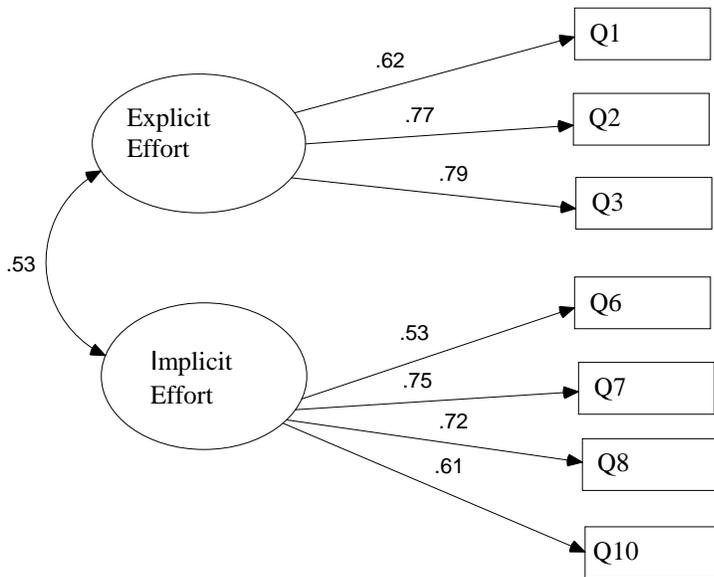
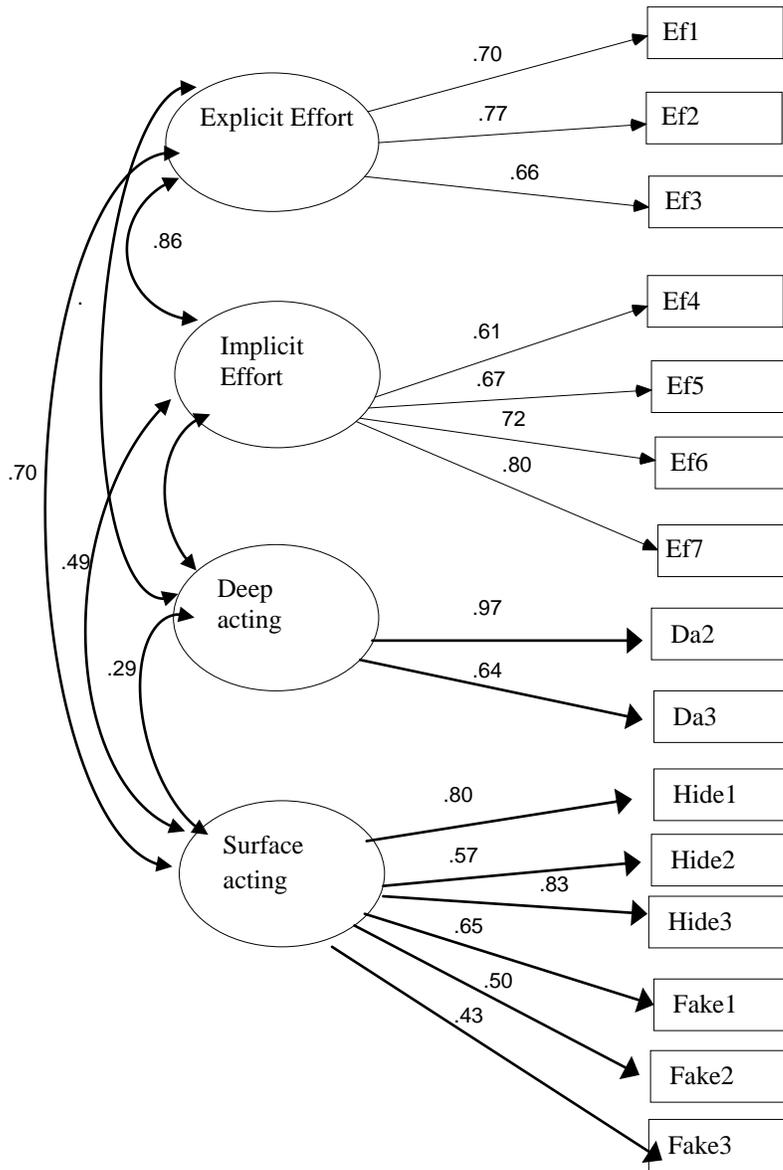


Figure 1b. Emotional Effort Two Dimension Model Standardized Estimates for the Spanish Sample (N=304)



Note: Only significant covariate values have been included

Figure 2. Confirmatory Factory Analyses with EL and Emotional Effort in Study 3 (Spain N=185)