TOWARD A FOUR-DIMENSIONAL MODEL OF BURNOUT A MULTIGROUP FACTOR-ANALYTIC STUDY INCLUDING DEPERSONALIZATION AND CYNICISM

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This article investigated whether cynicism and depersonalization are two different dimensions of burnout or whether they may be collapsed into one construct of mental distance. Using confirmatory factor analyses in two samples of teachers ($n = 483$) and blue-collar workers ($n = 474$), a superior fit was found for the four-factor model that contained cynicism, depersonalization, exhaustion, and professional efficacy as dimensions of burnout. In particular, cynicism and depersonalization emerged as unique burnout dimensions. Moreover, it appeared from multigroup analyses that this four-dimensional structure of burnout is partially invariant across both samples. Cynicism and depersonalization seemed to play a different role in both samples, particularly as far as their relationship with professional efficacy is concerned. It is recommended that future research on burnout should include the cynicism and depersonalization constructs.

Keywords: *cynicism; depersonalization; burnout; mental distanc*

Originally, burnout was defined as a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that occurs exclusively among professionals who deal directly with recipients such as

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students, pupils, clients, patients, or delinquents (Maslach, 1982, 1993). Emotional exhaustion refers to the depletion or draining of emotional resources caused by interpersonal demands. Depersonalization refers to an impersonal and dehumanized perception of recipients, characterized by a callous, negative, and detached attitude. Finally, lack of personal accomplishment is the tendency to evaluate one's work with recipients negatively. These three components represent the energetic (e.g., feeling used up), attitudinal (e.g., being excessively detached), and self-evaluative (e.g., doubting one's competence) nature of burnout, respectively (Maslach, Schaufeli, & Leiter, 2001).

Emotional exhaustion is regarded as the basic individual stress component of the syndrome that comes close to an orthodox job strain variable (Maslach, 1993), whereas personal accomplishment is akin to the concept of efficacy beliefs (Bandura, 1999). This leaves depersonalization as the most innovative component of burnout. However, from the outset, the validity of depersonalization has been questioned, for instance, by Garden (1987), who argued that this dimension of burnout gauges several distinct attitudes, including distancing, hostility, rejection, and unconcern. This might also be the reason why the internal consistency of the depersonalization scale of the Maslach Burnout Inventory (MBI; Maslach, Jackson, & Leiter, 1996)—the most popular instrument to assess burnout—is often found to be relatively low when compared to both other scales that measure emotional exhaustion and personal accomplishment (Lee & Ashforth, 1996).

Although initially burnout was restricted to the helping professions, it was later broadened and defined as a crisis in one's relationship with work in general and not necessarily as a crisis in one's relationship with people at work (Maslach et al., 2001). The three original burnout dimensions were redefined, and an alternative version of the MBI—the MBI–General Survey (MBI-GS)—was developed that can also be used outside human services occupations (Schaufeli, Leiter, Maslach, & Jackson, 1996). That is, exhaustion as operationalized in the MBI-GS refers to severe fatigue irrespective of its cause, cynicism reflects an indifferent or distant attitude toward one's work instead of other people, and lack of professional efficacy encompasses both social and nonsocial aspects of occupational accomplishment.

However, in contrast to exhaustion and personal accomplishment, the broadening of the burnout concept changed the meaning of depersonalization in a rather fundamental way. The reason is that, by definition, depersonalization involves other people so that its meaning cannot be broadened beyond the social relationships in which it occurs. This problem was solved in the case of the MBI-GS by considering depersonalization as a special case of "mental distancing." That is, where depersonalized human services professionals exhibit a psychological distance toward their recipients, cynical non–human services employees show a similar psychological distance regarding their work in a more general sense. In other words, the target of the

mental distancing differs. In the case of human services employees, the targets are their recipients, whereas for employees who work with things or with information, the target is the job itself. This agrees with Dean, Brandes, and Dharwadkar (1988), who argued that organizational cynicism has four different targets: the work organization at large, organizational change, the work environment, and the persons at the job (i.e., other employees and recipients). These last two types of cynicism correspond with MBI depersonalization and MBI cynicism, respectively. Recently, in a study among customer services representatives, Abraham (2000) discriminated empirically among these four types of organizational cynicism and showed that each was related in a slightly different way to several outcomes such as job satisfaction, organizational commitment, and organizational citizenship behavior. In conclusion, it seems that depersonalization and cynicism, as measured with the MBI, are distinct constructs, yet they can be considered manifestations of the broader concept of organizational cynicism. To date, there has been no empirical test of the distinctiveness of MBI depersonalization and MBI cynicism in relation to both other burnout dimensions.

The purpose of this article, therefore, is to examine whether MBI depersonalization and MBI cynicism can be considered two different components of burnout or whether they merge together into one component of mental distancing. In other words, can two different targets of mental distancing be distinguished (i.e., people and work) within the broader concept of burnout? We sought to answer this question by studying two different samples consisting of human services professionals (secondary school teachers) and non–human services employees (blue-collar workers). Similar results across both samples would support the robustness of our findings. We used the MBI-GS to assess burnout (Schaufeli et al., 1996) as well as the depersonalization subscale of the original MBI (Maslach et al., 1996). Using confirmatory factor analysis, the three-factor structure of the original MBI (e.g., Byrne, 1993; Gold, Bachelor, & Michael, 1989; Gorter, Albrecht, Hoogstraten, & Eijkman, 1999; Lee & Ashforth, 1990; Schaufeli & Van Dierendonck, 2000) as well as the MBI-GS (e.g., Bakker, Demerouti, & Schaufeli, 2002; Leiter & Schaufeli, 1996; Schutte, Toppinen, Kalimo, & Schaufeli, 2000; Taris, Schreurs, & Schaufeli, 1999) has been convincingly demonstrated.

Method

Participants and Procedure

The total sample consisted of 957 Spanish employees (499 woman, 52.1%, and 453 men, 47.3%). About half of the sample ($n = 483$, 49%) were secondary school teachers (Sample 1), and the other half ($n = 474$, 51%) were blue-collar workers from the tile industry (Sample 2). The mean age of the

total sample was 36 years, 8 months ($SD = 9.0$), and ages ranged from 18 to 62 years. The teachers worked in 34 schools, most of which were public (83%), whereas the tile workers were employed in three private companies. In Sample 1 (43.6% men, 56.4% women), ages ranged from 23 to 60 years ($M = 40.2$, $SD = 8$ years, 2 months). In Sample 2 (51.7% men, 48.3% woman), ages ranged from 18 to 62 years ($M = 33.2$, $SD = 8$ years, 4 months). Statistically, teachers were significantly older than blue-collar workers, $t(928) = -12.73$, $p < .001$, with a large effect ($d = .84$; Cohen, 1988).

Participants were asked to fill out the MBI-GS as part of an occupational health and safety audit. Human resources officers and school managers distributed the questionnaires in the tile companies and the secondary schools, respectively. A covering letter explained the purpose of the study, explained that the participation was voluntary, and guaranteed confidentiality. Respondents were asked to return the completed questionnaires in a sealed envelope, either to the person who had distributed them or directly to the research team.

Instruments

Exhaustion (EX), cynicism (CY), and professional efficacy (PE) were assessed with the Spanish version (Salanova & Schaufeli, 2000) of the MBI-GS (Schaufeli et al., 1996). Depersonalization (DP) was measured with the corresponding scale of the original MBI-HSS (Maslach et al., 1996). In the case of the blue-collar workers, *recipients* was replaced by *coworkers* in the items tapping depersonalization. Exhaustion was measured with 5 items (e.g., "I feel emotionally drained by my work"), cynicism was measured with 4 items (e.g., "I have become more cynical about whether my work contributes anything"), depersonalization was measured by 5 items (e.g., "I deal with people with whom I work like objects"), and professional efficacy was measured with 6 items (e.g., "In my opinion, I am good at my job"). High scores on EX, DP, and CY and low scores on PE are indicative of burnout. All items were scored on a 7-point frequency scale, ranging from 0 (*never*) to 6 (*every day*). As shown in Table 1, except for DP in the teacher's sample, internal consistencies (Cronbach's α) of scores on all scales satisfied the criterion of .70 (Nunnally & Bernstein, 1994), and in at least in the teachers sample, most also satisfied the more stringent criterion of .80 (Henson, 2001). As was noted in the introduction, for DP, slightly lower α values have been found more often.

Data Analyses

Confirmatory factor analyses (CFA), as implemented by AMOS (Arbuckle, 1997), was used to test the fit of various models to the data of both samples. First, the fit of the four-factor burnout model (EX, CY, DP, PE) was

Table 1
Means, Standard Deviations, Internal Consistencies (Cronbach's α), and Intercorrelations

	Teachers (n = 483)			Blue-Collar Workers (n = 474)			Intercorrelation			
	M	*SD*	α	*M*	*SD*	α	EX	CY	DP	PE
EX	2.03	1.08	.88	2.03	1.19	.86	1.00	.55**	.33**	−.10*
CY	1.71	1.20	.84	1.24	1.22	.83	.54**	1.00	.48**	−.19**
DP	1.05	.83	.68	.90	.96	.71	.37**	.45**	1.00	−.07
PE	4.27	.80	.81	4.41	.93	.78	−.34**	−.45**	−.29**	1.00

Note. EX = exhaustion; CY = cynicism; DP = depersonalization; PE = professional efficacy. Teachers are be low the diagonal, and blue-collar workers are above the diagonal.
*p < .05. **p < .001.

compared in each sample with that of the three-factor model (EX, CY + DP, PE) and with the one-factor model that assumes that all items weight on one single underlying dimension (i.e., burnout). Next, using the so-called multiple-group method, the factorial invariance of the best-fitting model was examined across both samples simultaneously (Byrne, 2001).

The goodness of fit of the models was evaluated using absolute and relative indices. The four absolute goodness-of-fit indices calculated were (cf. Jöreskog & Sörbom, 1986) (a) the χ^2 goodness-of-fit statistic, (b) the goodness-of-fit index (GFI), (c) the adjusted goodness-of-fit index (AGFI), and (d) the root mean square error of approximation (RMSEA). Following the recommendations of Marsh, Balla, and Hau (1996), we also computed three relative indices: (a) Tucker-Lewis index (TLI), (b) comparative fit index (CFI), and (c) the incremental fit index (IFI). Because the distributions of the GFI and the AGFI are unknown, no statistical test or critical value is available (Jöreskog & Sörbom, 1986). Values smaller than .06 for the RMSEA are indicative of an acceptable fit (Hu & Bentler, 1999), whereas a cutoff value close to .90 for the IFI is suggested for a good fit (Hoyle, 1995). For the remaining fit indices (TLI, CFI), as a rule of thumb, values greater than .95 are considered as indicating an adequate model fit (Hu & Bentler, 1999).

Results

Descriptive Analyses

Table 1 shows the means, standard deviations, internal consistencies, and intercorrelations of the four burnout dimensions in both samples. As expected, EX, DP, and CY are significantly and positively related, whereas PE is negatively related with the other burnout dimensions. However, the

negative correlation between PE and DP was not statistically significant in the blue-collar sample.

Four analysis of variance tests were carried out to assess differences in burnout levels among both samples (Huberty & Morris, 1989). Results showed that compared to blue-collar workers, teachers felt more cynical, $F(1, 956) = 34.26, p < .001$, and depersonalized, $F(1, 956) = 7.06, p < .01$, and they experienced less professional efficacy, $F(1, 956) = 6.93, p < .01$. However, a statistically nonsignificant difference was obtained for exhaustion between the samples, $F(1, 956) = .004$, *n.s.* In terms of effect sizes, the differences between both samples were "medium" for cynicism ($d = .38$) and "small" for depersonalization and personal efficacy (both ds = .16; cf. Cohen, 1988).

Model Testing

Next, three alternative models were tested for each sample separately using CFA: a one-factor model (M1) that assumes one latent factor, a three-factor model (M2) that assumes three latent and correlated factors (EX, CY + DP, PE), and a four-factor model (M3) that assumes four latent and correlated factors (EX, CY, DP, PE).

M1 and M2 fit very poorly to the data of the teachers (see Table 2), with none of the fit indices meeting its criterion. The fit of M3 was somewhat better and superior to that of M2 and M1 as indicated by the statistically significant values of $\Delta\chi^2$ (see Table 2). The so-called modification indices indicated that the fit of M3 could be further improved by allowing three pairs of errors (ex1-ex2, cy3-cy4, and pe4-pe5) to correlate (see the Discussion section for a rationale). Indeed, a subsequent test of the revised model (M4) that included these three correlated error terms revealed a statistically significant improvement over M3, $\Delta\chi^2(3) = 206.13, p < .001$, with most fit indices meeting or approaching their critical values.

As is shown in Table 3, a similar pattern of results was obtained in the blue-collar sample. Again, neither M1 nor M2 fit well to the data, and the fit of M3 was superior to that of M1 and M2. Like the teacher sample, the fit of M3 could be further improved (M4) by including the same correlated errors (ex1-ex2, cy3-cy4, and pe4-pe5; see the Discussion section for a rationale.

Next, the best-fitting model (M4) was simultaneously fit to both samples using multigroup analyses to test the invariance of the factor loadings, correlated errors, and correlations between factors across both samples. As expected, M4 provided reasonable fit to the data across both samples, with most fit indices meeting their corresponding critical values or at least approaching them (see Table 4). However, the fit deteriorated somewhat when all factor loadings and correlations (between factors and between errors) were constrained to be equal in both samples ($M4_c$). This means that

Table 2
Confirmatory Factor Analyses for Teachers (n = *483*)

Model	χ^2	*df*	GFI	AGFI	RMSEA	TLI	CFI	IFI	$\Delta\chi^2$	*df*
M1	1906.93	170	.67	.59	.14	.52	.57	.58		
M2	1033.44	167	.81	.76	.10	.76	.78	.79	M2-M1 = 873.49***	3
M3	755.89	164	.86	.83	.08	.83	.86	.86	M3-M2 = 277.55***	3
M4	549.76	161	.90	.87	.06	.90	.90	.90	M4-M3 = 206.13***	3

Note. GFI = goodness-of-fit index; AGFI = adjusted goodness-of-fit index; RMSEA = root mean square error of approximation; TLI = Tucker-Lewis index; CFI = comparative fit index; IFI = incremental fit index. All the χ^2 differences between the models were statistically significant at ***$p < .001$. M1 = one-factor model; M2 = three-factor model; M3 = four-factor model; M4 = revised four-factor model.

Table 3
Confirmatory Factor Analyses for Blue-Collar Workers (n = *474*)

Model	$\chi 2$	*df*	GFI	AGFI	RMSEA	TLI	CFI	IFI	$\Delta\chi^2$	*df*
M1	2049.85	170	.62	.53	.15	.47	.53	.53		
M2	895.57	167	.81	.76	.09	.79	.81	.82	M2-M1 = 1154.28***	3
M3	631.29	164	.87	.84	.07	.86	.88	.88	M3-M2 = 264.28***	3
M4	475.16	161	.90	.88	.06	.91	.92	.92	M4-M3 = 156.13***	3

Note. GFI = goodness-of-fit index; AGFI = adjusted goodness-of-fit index; RMSEA = root mean square error of approximation; TLI = Tucker-Lewis index; CFI = comparative fit index; IFI = incremental fit index. All the χ^2 differences between the models were statistically significant at ***$p < .001$. M1 = one-factor model; M2 = three-factor model; M3 = four-factor model; M4 = revised four-factor model.

Table 4
Multigroup Confirmatory Factor Analyses for Teachers (n = 483) and Blue-Collar Workers (n = 474)

Model	χ^2	*df*	GFI	AGFI	RMSEA	TLI	CFI	IFI	$\Delta\chi^2$	
M4	1024.92	322	.90	.87	.05	.90	.91	.91		
$M4_c$	1135.53	347	.89	.87	.05	.89	.90	.90	M4- $M4_c$ = 110.61***	25
$M4_{co}$	1066.42	328	.90	.87	.05	.89	.91	.91	M4- $M4_{co}$ = 41.50***	6
$M4_{fa}$	1077.83	338	.90	.87	.05	.90	.91	.91	M4- $M4_{fa}$ = 52.91***	16
$M4_{er}$	1051.59	325	.90	.87	.05	.89	.91	.91	M4- $M4_{er}$ = 26.67***	3
$M4_{fi}$	1044.22	335	.90	.87	.04	.90	.91	.91	M4- $M4_{fi}$ = 19.3 *ns*	13

Note. GFI = goodness-of-fit index; AGFI = adjusted goodness-of-fit index; RMSEA = root mean square error of approximation; TLI = Tucker-Lewis index; CFI = comparative fit index; IFI = incremental fit index. All the χ^2 differences between the models were statistically significant at ***$p < .001$. M4 = revised four-factor model (freely estimated); $M4_c$ = full constrained revised four-factor model; $M4_{co}$ = four-factor model with correlations between factors constrained; $M4_{fa}$ = four-factor model with factor loadings constrained; $M4_{er}$ = four-factor model with error correlations constrained; $M4_{fi}$ = four-factor invariance model resulting from the iterative procedure.

although the underlying factor structure is apparently similar in both samples, the size of the factor coefficients and interfactor correlations may differ somewhat.

To assess invariance in greater detail, three additional models were tested to the data: (a) a model that assumes only the correlations between factors to be invariant ($M4_{co}$), (b) a model that assumes only the factor loadings to be invariant ($M4_{fa}$), and (c) a model that assumes only the correlations between the error terms to be invariant ($M4_{er}$). As can be seen from Table 4, the fit of all three models was slightly inferior compared to that of M4. This suggests that neither the correlations between factors, nor the factor coefficients, nor the correlations between error terms are completely invariant across both samples.

In the final step, an iterative process was used as recommended by Byrne (2001) to assess the invariance of each estimate separately. That is, the invariance of each factor loading, correlated error term, and correlation between factors was assessed individually by comparing the fit of the model in which a particular estimate was constrained to be equal across both samples with that of the previous model in which this was not the case. When the fit did not deteriorate, this constrained element was included in the next model in which another constrained estimate was added, and so on. The final model ($M4_{fi}$) showed that the correlation between EX and DP, and between CY and DP, as well as the correlations between the two errors (ex1-ex2, cy3-cy4) are invariant across both samples. In addition, the factor coefficients, of all EX items, 3 of 4 CY items (cy1, cy2, cy3), as well as 2 of 5 DP items (dep1, dep4) and 3 of 6 PE items (pe1, pe2, pe6), turned out to be invariant across both samples as well. Thus, it appeared that EX has the highest proportion of invariant items (100%), followed by CY (75%), PE (50%), and DP (40%), respectively.

Discussion

The aim of this article was to investigate whether cynicism and depersonalization may be considered two different dimensions of burnout or whether they can be collapsed into one construct of mental distance. We studied two samples: teachers who work with other people (i.e., students) and blue-collar workers from a tile factory who work with objects and who process data using advanced computerized machinery. According to the traditional view, burnout occurs only in human services professionals such as teachers, but recently, it has been acknowledged that burnout also might occur in other occupational groups such as blue-collar workers (Maslach et al., 2001). In the former case, it is assumed that depersonalization is an essential dimension of burnout, whereas in the latter case, depersonalization is substituted by cynicism. Conceptually speaking, both cynicism and depersonalization are manifestations of mental distancing. For depersonalization, this distancing is

directed toward the people with whom one is working (i.e., students in teaching and colleagues in blue-collar work), whereas with cynicism, the distancing is directed toward the broader context of the job itself.

Our results show that instead of one mental distance construct, burnout can be characterized in both samples by separate depersonalization and cynicism dimensions, which along with exhaustion and reduced professional efficacy, constitute the burnout syndrome. That is, in both samples, the four-factor model with separate depersonalization and cynicism dimensions fit better to the data than the three-factor model with depersonalization and cynicism collapsed into one factor. However, to increase the fit of the four-factor model, we had to allow three pairs of error terms to correlate. Although this might increase the risk of chance capitalization (Curdeck & Brown, 1993), this procedure is thought to be justified because similar correlated error terms were observed previously in other samples: ex1-ex2 among South African police officers (Storm & Rothmann, 2003); cy3-cy4 among students from Portugal, Spain, and the Netherlands (Schaufeli, Martínez, Marques-Pinto, Salanova, & Bakker, 2002) and blue- and white-collar workers from Sweden, Finland, and the Netherlands (Schutte et al., 2000); and pe4-pe5 among Spanish information and communication technology users (Salanova, Schaufeli, Llorens, Peiró, & Grau, 2000) and white-collar workers (Schutte et al., 2000). Hence, it seems that instead of being sample specific, the correlated errors reflect common variance between items that is independent from country and occupation. For instance, the items "I feel emotionally drained from my work" (ex1) and "I feel used up at the end of the workday" (ex2) share some unique variance, probably because both refer to extreme tiredness after work, whereas the other EX items refer to tiredness in the morning or less often to intensive fatigue.

Although the four-factor model (including these three correlated errors) fit well to the data in both samples, it was not entirely invariant across both samples. However, an interesting pattern emerged from an iterative procedure that was followed to assess invariance in greater detail. It appeared that all EX items, three of four CY items, and the correlations between these two scales—and the included error terms—were invariant across both samples. This means that the core of burnout—namely, EX and CY (Maslach et al., 2001)—was invariant across both samples. Different factor coefficients and correlations were obtained for DP and PE, though. This can be explained by the fact that depersonalization has a quite different meaning in both samples. For teachers, relationships with students are critical for their job performance and hence for their feelings of professional efficacy, whereas for blue-collar workers, colleagues do not play such an essential role in this respect. This is exemplified by the negative statistically significant correlation between DP and PE in the teacher sample as compared to the statistically nonsignificant

corresponding correlation in the blue-collar sample (see Table 1). In other words, teachers who depersonalize their students feel inefficacious because students are, after all, the "essence" of their work (i.e., teaching), whereas blue-collar workers who depersonalize their coworkers do not feel inefficacious necessarily. For teachers, good relationships with students are essential for being successful, but blue-collar workers can do their work well even when relationships with colleagues are poor.

In conclusion, our study suggests that cynicism and depersonalization each contribute in a distinct way to the burnout syndrome. However, we focused only on the relationships among burnout dimensions. Future research should establish whether cynicism and depersonalization are differently related to particular job characteristics (i.e., job demands and resources) and outcome variables (i.e., workers performance, absenteeism). Hence, we recommend including cynicism in addition to the three traditional MBI burnout dimensions when studying human services and to include depersonalization in addition to the three MBI-GS dimensions when studying non–human services occupations.

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