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Research Article

The consequences of burnout syndrome among healthcare professionals in Spain and Spanish speaking Latin American countries

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ABSTRACT

Objectives: Identify the frequency and intensity of the perception of adverse professional consequences and their association with burnout syndrome and occupational variables.
Methods: Cross-sectional sample of 11,530 healthcare professionals resident in Spain and Latin America. The association of negative work-related consequences on burnout, as measured by the MBI and work-related variables was analysed by multiple logistic regression.
Results: The emotional exhaustion was the first variable associated with absenteeism, with intention of giving up profession, personal deterioration, and family deterioration. Depersonalization was most associated with the perception of having made mistakes.
Conclusions: The findings indicate a considerable prevalence of adverse work-related consequences.

1. Introduction

The concept of burnout, a term originating in the USA in the 1970s (Freudenberger, 1974; Maslach, 1976) has been defined – in what is the most well-known definition – by Maslach and Jackson (1981) as "a syndrome of emotional exhaustion, depersonalisation and reduced personal accomplishment that can occur among individuals who do 'people' work of some kind" due to excessively demanding and stressful working conditions that surpass the worker's coping capacity and frustrating their sometimes idealised and unrealistic expectations. Recent investigation has considered the syndrome to be the result of interaction between different personal and professional factors (Alarcón, Vaz, & Guisado, 2001; Lee, Seo, Hladkyj, Lovell, & Schwartzmann, 2013; Maslach, Schaufeli, & Leiter, 2001), but there is an ongoing debate as to the most appropriate model to explain the syndrome and its evolution (Alarcón et al., 2001; Brenninkmeijer & VanYperen, 2003; Maslach et al., 2001; Schaufeli, Leiter, & Maslach, 2009). It has been observed that emotional exhaustion represents the core burnout dimension and that certain individual and organisational-level correlates, such as work engagement, adaptive coping and the improvement of work processes and interpersonal relationships, are associated with reduced physician burnout, and that apart from cultural and economic factors, some regions make a much greater effort than others to find solutions to mitigate burnout (Lee et al., 2013). Although, the lack of clear diagnostic criteria for burnout makes it difficult to evaluate measurement instruments and assess the degree of agreement with the perception of burnout (Alarcón, Vaz, & Guisado, 2002; Grau et al., 2008; Grau-Martín & Suñer-Soler, 2011). There is, however, greater consensus with regards to the aetiology and consequences of burnout, and personal, organisational and environmental factors have been identified as possible predictive variables (Alarcón et al., 2001; Grau Martín, Flichtentrei, Suñer, Prats, & Braga, 2009; Maslach et al., 2001). As far as the consequences are concerned, burnout can affect health, giving rise to both physical and psychosomatic problems as well as depression, anxiety, low self-esteem, guilt feelings, and low tolerance of frustration (Honkonen et al., 2006; Maslach et al., 2001; Schulz et al., 2011). Work-related consequences can include dissatisfaction with the work (Shanafelt et al., 2009; Soler et al., 2008), reduction in the quality of care (Shanafelt, Bradley, Wipf, & Back, 2002), mistakes in the healthcare provided (West et al., 2006; Shanafelt et al., 2010), unjustified absenteeism (Borritz, Rugulies, Christensen, Villadsen,

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& Kristensen, 2006; Duijts, Kant, Swaen, van den Brandt, & Zeegers, 2007; Maslach et al., 2001; Soler et al., 2008), intention of giving up the job, and abandonment (Leiter & Maslach, 2009; Maslach et al., 2001; Soler et al., 2008). Finally, the impact on the environment of the workers includes family problems, work-home conflict, and reduction in the quality of life (Dyrbye et al., 2011; van der Heijden, Demerouti, Bakker, & N, 2008).

The aim of the present study was to identify the frequency and intensity of the perception of adverse professional consequences in a broad sample of Spanish speaking healthcare professionals and to establish their association with burnout syndrome as well as with Sociodemographic and occupational variables.

Considering the available evidence (Borritz et al., 2006; Duijts et al., 2007; Grau Martín et al., 2009; Maslach et al., 2001; Shanafelt et al., 2010; West et al., 2006), we hypothesised that: (i) burnout is associated with the perception of adverse work-related consequences, (ii) the adverse work-related consequences are especially related to the component of emotional exhaustion in the Maslach Burnout Inventory and (iii) the perception of high levels of optimism is associated with a lesser perception of adverse work-related consequences.

2. Methods

2.1. Study design and study population

A cross-sectional, observational and analytical study was performed of a convenience sample using a questionnaire of healthcare professionals from Spanish-speaking countries registered at the Intramed website (www.intramed.net), who were in possession of the passwords and agreed to participate. The Intramed website was used as this was an effective way to accede to a large sample of health workers across the Spanish-speaking world.

The questionnaires were answered online between December 2006 and September 2007. 32,877 professionals opened the survey (doctors 27,033, nursing staff 848, dentists 868, psychologists 849, nutritionists 589, others 2690). Of these, 11,530 responded to it (35.07%).

36.4% of doctors, 54.4% of nurses, 30.4% of dentists, 27.3% of psychologists, 25.8% of nutritionists, and 21.2% of other professionals who opened the questionnaire responded to it.

All participants received prior information regarding the objectives and the methodological characteristics of the study and gave their informed consent. The online survey methodology employed has been verified by comparing results from internet-based studies with identical studies conducted using traditional methods (Fleming & Bowden, 2009; Schleyer & Forrest, 2000).

2.2. Measures

Ad hoc questionnaire, recording Sociodemographic variables, working conditions and the hours dedicated to leisure each week. The perception of feeling valued in one's professional activity by patients, family members, professional colleagues, and superiors was evaluated on a scale from 0 to 4 points by the perception of feeling valued variable (Grau Martín et al., 2009). Participants were asked if they suffered from any chronic disease. Evaluation of the personal economy, job satisfaction and the level of optimism was performed using a scale from 1 to 10, with 1 being "not at all satisfactory" or "not at all optimistic" and 10 as "highly satisfactory" or "totally optimistic" (Grau Martín et al., 2009). The profession and nationality of the participants were automatically gathered from the Intramed register.

The potential consequences of the work situation were identified through questions and affirmations that made it possible to use a Likert-type answer scale. Regarding to the adverse consequences related to the work and organisational setting, the perception of the workers with regards to work absenteeism, mistakes in the care provided, and the intention of giving up the profession were studied with the questions: "Have you taken time off work without this being justified by physical illness?" (absenteeism), "Do you think that you have made mistakes in the care of your patients due to the conditions of work?", and "Have you considered changing professions?" (intention to abandon). The three questions could be answered as "Never", "Occasionally" and "Often". The consequences of the personal and family setting were studied by analysing the responses – expressed as "Not at all", "Little", "Quite a lot" and "A lot" – to the statements: "The working conditions have deteriorated my family situation" (family deterioration) and "The working conditions have deteriorated my personal situation" (personal deterioration).

The burnout syndrome was measured using the Spanish version of the Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1986). Authorisation was received from "CPP, Inc." – the licensing company – for the use of this questionnaire. The MBI consists of 22 items with answers on a 7-option Likert scale (a score from 0 to 6 is possible for each item) regarding the frequency with which certain work-related sensations are experienced. This questionnaire has three components: emotional exhaustion (9 items) reflects the sensation of being emotionally tired due to work and with a lesser capacity of commitment than other workers (reliability of MBI: Cronbach alpha = 0.89); depersonalisation (5 items) describes callous and insensitive behaviour towards patients (Cronbach alpha = 0.66).; and personal accomplishment (8 items) expresses feelings of competence and achievement (Cronbach alpha = 0.79). High values in the case of emotional exhaustion and depersonalisation, and low values in the case of personal accomplishment, are indicative of burnout syndrome (Gil-Monte & Peiró, 1999; Maslach & Jackson, 1986).

2.3. Statistical analysis

The description of the work-related consequences was obtained through their frequency and/or presence as a percentage in the global sample and in each one of the nations that made up more than 1% of the sample. The remaining nations, Venezuela, Bolivia, Panama, Chile, Honduras, Nicaragua, Costa Rica and others, were included in the group of "other countries".

The association of each of the negative work-related consequences with the components of the MBI and with sociodemographic and work-related variables was analysed by multiple logistic regression with the forward method (Wald). The dependent variable was the worst possible situation of each negative work-related consequence (often or a lot) compared with the other response options. The independent variables that could be chosen for inclusion in the model were: age, sex, having a partner, number of children, performing duties, years in the profession, having a chronic illness, weekly leisure time, job satisfaction, optimism, personal economy, perception of feeling valued, profession, emotional exhaustion of the MBI, depersonalisation of the MBI and personal accomplishment of the MBI.

All of the variables selected in the model are shown in the analysis of the global sample but in the analysis of each of the participating nations, only the three first variables that entered in the model are given. The analysis of the data was performed with the SPSS version 15.0 statistical package.

3. Results

The sample consisted of 11,530 Spanish-speaking healthcare professionals resident in Spain and Latin America (5882 (51%)

Table 1
Adverse working consequences related to the working environment. $n = 11530$.

	Never n (%)	Occasionally n (%)	Often n (%)
Have you stayed off work without a physical cause that would justify it?			
Argentina (*n*: 7503)	4033 (53.8)	3144 (41.9)	326 (4.3)
Mexico (*n*: 1125)	707 (62.8)	385 (34.2)	33 (3)
Ecuador (*n*: 593)	370 (62.4)	200 (33.7)	23 (3.9)
Peru (*n*: 494)	301 (60.9)	177 (35.9)	16 (3.2)
Uruguay (*n*: 305)	193 (63.2)	99 (32.5)	13 (4.3)
Colombia (*n*: 337)	226 (67)	106 (31.5)	5 (1.5)
Guatemala (*n*: 199)	125 (62.8)	65 (32.7)	9 (4.5)
Spain (*n*: 175)	129 (73.7)	42 (24)	4 (2.3)
El Salvador (*n*: 121)	77 (63.6)	43 (35.5)	1 (0.9)
Other[a] (*n*: 678)	372 (54.9)	287 (42.3)	19 (2.8)
Total (*n*: 11,530)	6533 (56.7)	4548 (39.4)	449 (3.9)
Do you think that you have committed errors in the treatment of your patients as a result of the working conditions?			
Argentina (*n*: 7503)	987 (13.2)	6081 (81.0)	435 (5.8)
Mexico (*n*: 1125)	297 (26.4)	804 (71.5)	24 (2.1)
Ecuador (*n*: 593)	104 (17.5)	481 (81.1)	8 (1.3)
Peru (*n*: 494)	64 (13.0)	415 (84.0)	15 (3.0)
Uruguay (*n*: 305)	39 (12.8)	253 (83.0)	13 (4.3)
Colombia (*n*: 337)	78 (23.1)	250 (74.2)	9 (2.7)
Guatemala (*n*: 199)	35 (17.6)	153 (76.9)	11 (5.5)
Spain (*n*: 175)	29 (16.6)	138 (78.9)	8 (4.6)
El Salvador (*n*: 121)	17 (14.0)	100 (82.6)	4 (3.3)
Other[a] (*n*: 678)	139 (20.5)	513 (75.7)	26 (3.8)
Total (*n*: 11,530)	1789 (15.5)	9188 (79.7)	553 (4.8)
Have you considered changing profession?			
Argentina (*n*: 7503)	2741 (36.5)	3463 (46.2)	1299 (17.3)
Mexico (*n*: 1125)	671 (59.6)	402 (35.7)	52 (4.6)
Ecuador (*n*: 593)	354 (59.7)	215 (36.3)	24 (4.0)
Peru (*n*: 494)	313 (63.4)	169 (34.2)	12 (2.4)
Uruguay (*n*: 305)	131 (43)	144 (47.2)	30 (9.8)
Colombia (*n*: 337)	141 (41.8)	141 (41.8)	55 (16.3)
Guatemala (*n*: 199)	102 (51.3)	82 (41.2)	15 (7.5)
Spain (*n*: 175)	76 (43.4)	73 (41.7)	26 (14.9)
El Salvador (*n*: 121)	82 (67.8)	37 (30.6)	2 (1.7)
Other[a] (*n*: 678)	360 (53.1)	268 (39.5)	50 (7.4)
Total (*n*: 11,530)	4971 (43.1)	4994 (43.3)	1565 (13.6)

[a] Countries with <1% of total sample such as Venezuela, Bolivia, Panama, Chile, Honduras, Nicaragua, Costa Rica and others.

male). The mean age of the participants was 41.7 years (SD 10.8); mean years in the profession, 15.6 years (SD 10.6); and mean years of service in the present workplace, 10.8 years (SD 9.6). 66.2% were married or had partners and the participants had an average of two children. 32.6% of the participants manifested that they suffered from a chronic disease.

The most-widely represented profession was medicine (85.4%) followed by nursing (4%), odontology (2.3%), psychology (2%) and nutrition (1.3%) whilst the remaining healthcare professionals, less than 100 participants, included biochemists, technicians, pharmacists, kinesiologists, and phonoaudiologists. The perception of feeling valued variable obtained an average score of 3, and there were significant differences between nations ($p < 0.001$): Ecuador and Peru had averages of 4 as compared to averages of 3 in the rest of the nations. In job satisfaction, the mean score was 7.5 (SD 1.5) with differences between nations ($p < 0.001$): higher scores were obtained in Mexico and Ecuador and lower scores in Spain, Uruguay and Argentina. The mean personal economy score was 5.9 (SD 2) also with differences between nations ($p < 0.001$): better scores were recorded in Mexico and Ecuador, and worse scores in Spain and Argentina. In optimism, a mean score of 7.7 was obtained (SD 1.8) with differences between nations ($p < 0.001$): the best scores corresponded to El Salvador, Ecuador and Mexico and the worse scores to Spain, Uruguay and Argentina.

With regards to the consequences associated with the working and organisational setting, Table 1 sets out the frequencies of unjustified absence amongst the nations represented in the sample. 6533 of the participating professionals (56.7%) had never taken time off work without a justified physical reason, 4548 (39.4%) had done so occasionally and 449 (3.9%) stated that they frequently did this. The countries that declared the highest rates of unjustified absenteeism were Guatemala, Argentina and Uruguay, and Spain is the country where the rates of unjustified absenteeism were lowest.

In the case of mistakes in the care provided, 1789 (15.5%) of the participants considered that they had not made mistakes attributable to the working conditions, 9188 (79.7%) admitted some mistakes, and 553 (4.8%) admitted to often having made mistakes. Argentina, Guatemala, Spain and Uruguay were the countries with the greater recognition of potential mistakes in the care provided as a result of the working conditions (Table 1).

With regards to considering giving up the profession, 4971 (43.1%) of the participants had never considered this possibility, 4994 (43.3%) had done so occasionally, and 1565 (13.6%) often considered this possibility. Considering giving up the profession was most prevalent in Argentina, Colombia and Spain, and least prevalent in El Salvador and Peru (Table 1).

The perception that the working conditions had caused personal deterioration was non-existent in the case of 1954 (16.9%) of the

Table 2
Adverse working consequences affecting the personal and family life. *n* = 11,530.

	Not at all *n* (%)	Little *n* (%)	Quite a lot *n* (%)	A lot *n* (%)
Have your working conditions affected your personal situation?				
Argentina (*n*: 7503)	872 (11.6)	2872 (38.3)	2809 (37.4)	950 (12.7)
Mexico (*n*: 1125)	358 (31.8)	512 (45.5)	198 (17.6)	57 (5.1)
Ecuador (*n*: 593)	190 (32.0)	249 (42.0)	116 (19.6)	38 (6.4)
Peru (*n*: 494)	146 (29.6)	254 (51.4)	71 (14.4)	23 (4.7)
Uruguay (*n*: 305)	41 (13.4)	124 (40.7)	114 (37.4)	26 (8.5)
Colombia (*n*: 337)	61 (18.1)	142 (42.1)	103 (30.6)	31 (9.2)
Guatemala (*n*: 199)	51 (25.6)	101 (50.8)	35 (17.6)	12 (6.0)
Spain (*n*: 175)	30 (17.1)	67 (38.3)	58 (33.1)	20 (11.4)
El Salvador (*n*: 121)	37 (30.6)	55 (45.5)	23 (19.0)	6 (5.0)
Other[a] (*n*: 678)	168 (24.8)	284 (41.9)	181 (26.7)	45 (6.6)
Total (*n*: 11,530)	1954 (16.9)	4660 (40.4)	3708 (32.2)	1208 (10.5)
Have your working conditions affected your family situation?				
Argentina (*n*: 7503)	1431 (19.1)	3656 (48.7)	2061 (27.5)	355 (4.7)
Mexico (*n*: 1125)	395 (35.1)	552 (49.1)	142 (12.6)	36 (3.2)
Ecuador (*n*: 593)	193 (32.5)	278 (46.9)	107 (18.0)	15 (2.5)
Peru (*n*: 494)	127 (25.7)	297 (60.1)	64 (13.0)	6 (1.2)
Uruguay (*n*: 305)	58 (19.0)	158 (51.8)	80 (26.2)	9 (3.0)
Colombia (*n*: 337)	73 (21.7)	159 (47.2)	91 (27.0)	14 (4.2)
Guatemala (*n*: 199)	50 (25.1)	108 (54.3)	35 (17.6)	6 (3.0)
Spain (*n*: 175)	35 (20.0)	98 (56.0)	37 (21.1)	5 (2.9)
El Salvador (*n*: 121)	46 (38.0)	52 (43.0)	20 (16.5)	3 (2.5)
Other[a] (*n*: 678)	190 (28.0)	324 (47.8)	149 (22.0)	15 (2.2)
Total (*n*: 11,530)	2598 (22.5)	5682 (49.3)	2786 (24.2)	464 (4.0)

[a] Countries with <1% of total sample such as Venezuela, Bolivia, Panama, Chile, Honduras, Nicaragua, Costa Rica and others.

participants, little in the case of 4660 (40.4%), quite a lot in 3708 (32.2%) and a lot in 1208 (10.5%). Argentina, Spain, Colombia and Uruguay were the countries with the greatest sensation of personal deterioration attributable to the working conditions (Table 2).

Perceived family deterioration as a consequence of the working conditions was non-existent for 2598 (22.5%) of the participants, 5682 participants (49.3%) stated that they had experienced little family deterioration, 2786 (24.2%) quite a lot, and 464 (4%) stated that they had experienced considerable family deterioration. Argentina and Colombia were the countries with the greatest expression of family deterioration, and Ecuador and El Salvador were the countries where this was experienced least (Table 2).

In studying the association between adverse working consequences and the different variables that were analysed, frequent absenteeism was associated with the following variables in the order given: the emotional exhaustion component of the MBI (OR = 1.03 (CI 95% 1.02–1.04)); chronic disease (OR = 1.50 (CI 95% 1.23–1.82)); perception of feeling valued (OR = 0.84 (CI 95% 0.77–0.91)); professions classified as medicine showed greater absenteeism in odontology (OR = 1.79 (CI 95% 1.06–3.01)) and less in the miscellaneous health professions (OR = 0.45 (CI 95% 0.24–0.83)); and finally the number of hours of leisure (OR = 1.00 (CI 95% 1.00–1.01)). In Argentina, absenteeism was mainly associated with a situation of emotional exhaustion and the perception of not being valued at work, whilst in Guatemala and Uruguay the predominant association was with depersonalisation (Table 3A).

In the perception of mistakes in the care provided, the order of entry in the model was as follows: depersonalisation of the MBI (OR = 1.05 (CI 95% 1.04–1.07)); emotional exhaustion of the MBI (OR = 1.03 (CI 95% 1.02–1.04)); years in the profession (OR = 0.97 (CI 95% 0.96–0.98)); personal satisfaction (OR = 0.90 (CI 95% 0.85–0.95)); personal economy (OR = 0.92 (CI 95% 0.88–0.96)); personal accomplishment of the MBI (OR = 0.98 (CI 95% 0.97–0.99)); and doing duties (OR = 1.23 (CI 95% 1.01–1.50)). Depersonalisation of the MBI was the variable that was most associated with the perception of mistakes in those countries with a greater prevalence of this consequence, except in Spain, where it was associated with a lower score on the perception of feeling valued variable. In Colombia, Peru, and as the second variable in Ecuador, professionals with a lower level of optimism had the impression that they committed more mistakes (Table 3B).

The following variables were associated with considering giving up the profession: in first place, emotional exhaustion of the MBI (OR = 1.07 (CI 95% 1.07–1.08)), followed by job satisfaction (OR = 0.81 (CI 95% 0.78–0.84)); perception of feeling valued (OR = 0.83 (CI 95% 0.78–0.88)); personal accomplishment of the MBI (OR = 0.98 (CI 95% 0.97–0.99)); personal economy (OR = 0.93 (CI 95% 0.90–0.96)); years in the profession (OR = 1.03 (CI 95% 1.02–1.05)) and age (OR = 0.97 (CI 95% 0.95–0.99)). Professionals with greater emotional exhaustion of the MBI were those who considered giving up with greater frequency in almost all of the countries. Job satisfaction was the second most important variable (the first in Peru) followed by the perception of feeling valued (Table 3C).

The variables that were associated with personal deterioration were emotional exhaustion of the MBI (OR = 1.07 (CI 95% 1.07–1.08)); personal economy (OR = 0.91 (CI 95% 0.88–0.94)); having a partner (OR = 0.64 (CI 95% 0.56–0.74)); low score in the perception of feeling valued variable (OR = 0.88 (CI 95% 0.83–0.93)); chronic disease (OR = 1.24 (CI 95% 1.08–1.41)); and the number of children (OR = 1.08 (CI 95% 1.03–1.13)). The emotional exhaustion of the MBI was found to be the most significant variable in almost all countries, followed by personal economy (Table 4A).

Family deterioration was associated in first place with emotional exhaustion of the MBI (OR = 1.06 (CI 95% 1.05–1.07)); followed by having a partner (OR = 0.47 (CI 95% 0.38–0.59)); the number of children (OR = 1.16 (CI 95% 1.08–1.25)); personal economy (OR = 0.90 (CI 95% 0.86–0.94)); male sex (OR = 1.53 (CI 95% 1.25–1.87)); low score in the perception of feeling valued variable (OR = 0.88 (CI 95% 0.81–0.96)); hours of leisure time (OR = 0.99 (CI 95% 0.98–1.00)); and chronic disease (OR = 1.22 (CI 95% 1.00–1.49)). By countries, family deterioration was mainly associated to the emotional exhaustion of the MBI in Argentina, Mexico, Uruguay

Table 3A
Association between *Absenteeism* and the MBI, demographic and working variables, using a multiple logistic regression model.[a]

	Variable 1 OR (CI 95%)	Variable 2 OR (CI 95%)	Variable 3 OR (CI 95%)
Argentina	EE = 1.03 (1.02–1.04)	Val = 0.82 (0.74–0.91)	CD = 1.50 (1.19–1.88)
Mexico	EE = 1.04 (1.01–1.07)	PS = 0.73 (0.59–0.91)	Age = 1.03 (1.00–1.07)
Ecuador			
Peru			
Uruguay	DP = 1.11 (1.03–1.20)		
Colombia	CD = 10.87 (1.18–100.11)		
Guatemala	DP = 1.13 (1.00–1.28)		
Spain			
El Salvador			
Other	CD = 4.26 (1.6–11.37)		

Variables: CD, chronic disease; DP, depersonalisation; EE, emotional exhaustion; PS, professional satisfaction; Val, perception of feeling valued.
[a] The first three variables to enter in the model are shown.

Table 3B
Association between Mistakes and the MBI, demographic and working variables, using a multiple logistic regression model.[a]

	Variable 1 OR (CI 95%)	Variable 2 OR (CI 95%)	Variable 3 OR (CI 95%)
Argentina	DP = 1.06 (1.04–1.07)	EE = 1.04 (1.03–1.05)	YP = 0.96 (0.95–0.97)
Mexico	EE = 1.07 (1.04–1.11)	Male = 5.63 (1.83–17.26)	YP = 0.94 (0.90–0.98)
Ecuador	Age = 0.83 (0.73–0.94)	OP = 0.67 (0.47–0.94)	
Peru	OP = 0.64 (0.48–0.86)	PS = 0.56 (0.39–0.80)	Male = 4.79 (1.09–21.00)
Uruguay	DP = 1.09 (1.01–1.19)	Age = 0.90 (0.84–0.97)	EE = 1.07 (1.01–1.14)
Colombia	OP = 0.62 (0.44–0.87)		
Guatemala	DP = 1.18 (1.00–1.38)	Age = 0.87 (0.79–0.95)	CD = 12.77 (2.68–60.90)
Spain	Val = 0.53 (0.29–0.98)		
El Salvador			
Other	DP = 1.10 (1.04–1.17)	PA = 0.94 (0.89–0.98)	Couple = 0.36 (0.15–0.86)

Variables: CD, chronic disease; DP, depersonalisation; EE, emotional exhaustion; OP, optimism; PA, personal accomplishment; PS, professional satisfaction; Val, perception of feeling valued; YP, years in profession.
[a] The first three variables to enter in the model are shown.

Table 3C
Association between *Considering giving up the profession* and the MBI, demographic and working variables, using a multiple logistic regression model.[a]

	Variable 1 OR (CI 95%)	Variable 2 OR (CI 95%)	Variable 3 OR (CI 95%)
Argentina	EE = 1.08 (1.07–1.08)	PS = 0.79 (0.76–0.83)	Val = 0.80 (0.76–0.86)
Mexico	EE = 1.08 (1.06–1.11)	OP = 0.78 (0.67–0.90)	
Ecuador	EE = 1.09 (1.56–1.13)		
Peru	PS = 0.60 (0.43–0.83)		
Uruguay	EE = 1.11 (1.07–1.16)		
Colombia	EE = 1.06 (1.03–1.10)	Val = 0.66 (0.50–0.87)	
Guatemala	EE = 1.07 (1.02–1.13)	PS = 0.68 (0.50–0.93)	
Spain	EE = 1.17 (1.08–1.26)	PS = 0.66 (0.48–0.92)	Val = 0.51 (0.29–0.89)
El Salvador			
Other	EE = 1.07 (1.04–1.10)	PS = 0.81 (0.68–0.97)	

Variables: EE, emotional exhaustion; OP, optimism; PS, professional satisfaction; Val, perception of feeling valued.
[a] The first three variables to enter in the model are shown.

Table 4A
Association between *Personal deterioration* and the MBI, demographic and working variables, using a multiple logistic regression model.[a]

	Variable 1 OR (CI 95%)	Variable 2 OR (CI 95%)	Variable 3 OR (CI 95%)
Argentina	EE = 1.08 (1.08–1.09)	Econ = 0.90 (0.87–0.93)	Couple = 0.69 (0.59–0.80)
Mexico	EE = 1.07 (1.05–1.10)	Nurse = 5.50 (1.87–16.14)	
Ecuador	EE = 1.04 (1.01–1.07)	Econ = 0.82 (0.69–0-96)	
Peru	Econ = 0.78 (0.62–0.99)	CD = 2.71 (1.12–6.55)	Dentist = 6.36 (1.59–25.49)
Uruguay	EE = 1.13 (1.08–1.18)	DP = 0.90 (0.82–0.97)	
Colombia	EE = 1.06 (1.02–1.09)		
Guatemala	EE = 1.07 (1.02–1.13)	PS = 0.71 (0.51–0.99)	
Spain	EE = 1.10 (1.05–1.15)		
El Salvador	Age = 1.11 (1.01–1.22)		
Other	EE = 1.06 (1.03–1.09)		

Variables: CD, chronic disease; DP, depersonalization; Econ, economy; EE, emotional exhaustion; PS, personal satisfaction.
[a] The three variables that entered in the model are given.

Table 4B
Association between *Family deterioration* and the MBI, demographic and working variables, using a multiple logistic regression model.[a]

	Variable 1 OR (CI 95%)	Variable 2 OR (CI 95%)	Variable 3 OR (CI 95%)
Argentina	EE = 1.07 (1.06–1.08)	Econ = 0.86 (0.82–0.91)	Male = 1.64 (1.32–2.05)
Mexico	EE = 1.06 (1.03–1.09)	Econ = 0.83 (0.70–0.97)	
Ecuador	OP = 0.63 (0.49–0.80)	Age = 0.93 (0.88–0.99)	
Peru	Couple = 0.10 (0.01–0.89)		
Uruguay	EE = 1.09 (1.02–1.16)	Male = 7.19 (1.37–37.60)	Econ = 1.57 (1.06–2.31))
Colombia	Nurse = 21.88 (3.49–137.09)	Couple = 0.19 (0.05–0.73)	EE = 1.05 (1.00–1.10)
Guatemala	EE = 1.11 (1.03–1.19)		
Spain	CD = 17.26 (1.51–196.49)	Leisure = 0.69 (0.49–0.96)	
El Salvador			
Other	EE = 1.04 (1.00–1.08)		

Variables: CD, chronic disease; Econ, economy; EE, emotional exhaustion; OP, optimism.
[a] The three variables that entered in the model are given.

and Guatemala. In Colombia, however, the variable that was most associated with greater family deterioration was being a member of the nursing profession (Table 4B).

4. Discussion

The present study of 11,530 Spanish-speaking healthcare professionals from Spain and Latin America reveals a considerable prevalence of adverse professional consequences associated especially with the different components of the burnout syndrome, particularly in terms of personal and family deterioration, and the intention of giving up the profession. The results are in broad agreement with the hypotheses that were formulated, although no conclusion can be reached with regards the optimism variable, which was only found to have a protecting influence in the perception of committing mistakes and family deterioration in certain countries. To the best of our knowledge, this is the first study to analyse adverse working consequences in such a large sample of Spanish-speaking healthcare workers.

On analysing these consequences, we find that the emotional exhaustion component of the MBI was the variable that was most associated in the case of absenteeism and considering abandoning the profession. In this respect, burnout, together with psychological problems, psychosomatic complaints and little control over the work, amongst other variables, was identified as a predictive factor of taking sick leave in a meta-analysis that included 20 prospective studies (Duijts et al., 2007). In another study it was found that a reduction in the level of burnout was a predictive factor of a reduction in the number of days off work (Borritz et al., 2006). However, in our sample Spanish health workers had the lowest prevalence of absenteeism despite having high levels of burnout and in the logistic regression model none of the dimensions of burnout had sufficient power to enter the model as associated with absenteeism. These results may conceivably be explained by cultural and legislative differences although it should be noted that we have not specifically studied this point (Grau Martín et al., 2009).

With regards to giving up the profession, other studies have also found an association between burnout and the intention of giving up the profession, especially in doctors (Wallace, Lemaire, & Ghali, 2009) and nursing professionals (Leiter & Maslach, 2009). Those countries which had the greatest percentage of health workers who said that they were considering giving up the profession (Spain, Argentina, Uruguay, and Colombia) coincided with the countries with the highest levels of burnout and, specifically, with the highest levels of emotional exhaustion (Grau Martín et al., 2009).

In the case of the perception of committing mistakes in the care provided, the variable that we found to be most was the depersonalisation component of the MBI followed by emotional exhaustion. In agreement with our results, Shanafelt et al. found an association between perceived medical mistakes with the burnout syndrome both in resident doctors (Shanafelt et al., 2002) and staff doctors (Shanafelt et al., 2010), and highlighted in this last case that each one-point increase in depersonalisation increased by 11% the likelihood of communicating an error, and each one-point increase in emotional exhaustion increased the likelihood by 5%. In contrast, each one-point increase in personal accomplishment reduced the likelihood by 3.6%. Similar results were described in a longitudinal study evaluating the declaration of mistakes at three months (West et al., 2006). When our global results are compared with these studies, the increase in the likelihood of perceived mistakes was frequently lower once adjusted by other variables in the model, but in the country-by-country analysis, the likelihood of perceived error was greater for depersonalisation in Guatemala and similar in Uruguay and in the group of other countries, whereas for emotional exhaustion it was greater in Mexico and Uruguay.

In the analysis of the adverse consequences related to the environmental context, four out of ten professionals referred to personal deterioration, especially in Argentina, Spain, Colombia and Uruguay, and almost three out of every ten participants referred to family deterioration related with work, especially in Argentina and Colombia. Although we have not found similar data in the countries studied that would enable direct comparison, a strong association has been found in other countries between burnout and family deterioration. Dyrbye et al. found that 62.2% of women and 48.5% of men referred to conflict between the work and home life in a sample of 7905 American surgeons with notable personal and cultural differences. Furthermore, conflict between work and home life and the resolution of this conflict in favour of work were two of the three independent predictive factors associated with burnout, together with the number of hours worked per week, both in men and women (Dyrbye et al., 2011). It has been found that the greater the professional demands, the greater the work-home interferences and conflict, resulting in worse health, which further aggravates this vicious circle and can lead to time being taken off work and the premature abandonment of the profession (van der Heijden et al., 2008). In the present study, personal and family deterioration are associated, in the first place, with emotional exhaustion in the MBI, clearly suggesting their association with burnout syndrome in most of the countries that were studied. However, the results must be viewed with caution as emotional exhaustion is the component which most overlaps other constructs (Alarcón et al., 2002), and, furthermore, causal relationships cannot be established given that this is a cross-sectional study.

The present study has several limitations. In first place, it should be noted that there is a possible selection bias in the study population, given that the decision to participate is likely to have been influenced by the degree of interest felt by the professional in the subject of burnout syndrome. Secondly, the predominance of doctors over other health professionals may have influenced the global

results, although an attempt has been made to minimise this effect by including this variable in the multiple regression model. The Cross-sectional design of the study is another limitation as the results point to associations but do not allow cause–effect relationships to be established. Finally, another limitation has been the difficulty in comparing our results with other studies from the same nations. Whilst burnout in health professions is a frequent area of study in Spain and less so in Latin America, the studies performed in both regions are often studies of prevalence showing high levels of burnout (Gandini, Paulini, Marcos, Jorge, & Luis, 2006; Gil-Monte & Marucco, 2008; Grau, Suñer, & García, 2005; Silva & Menezes, 2008) that may vary in function of the criteria applied due to transcultural influences (Gil-Monte & Marucco, 2008). Burnout is high in these nations especially in resident doctors, who show high levels of emotional exhaustion and signs of depression (Martins et al., 2011; Waldman et al., 2009). We are not aware of similar studies that analyse the adverse work-related consequences of burnout in these nations, although there are studies that found a correlation between burnout and worse scores in perceived quality of life and health impacts (Mingote, Moreno, & Gálvez, 2004; Schwartzmann, 2007). In any case, the countries studied have common cultural characteristics that could possibly generate burnout syndrome in terms of the fast and profound change from an industrial society to a service economy with psychological pressure at the workplace becoming a generalised phenomenon (Schaufeli et al., 2009). This transformation of the society has brought with it significant changes in the working conditions of doctors, dentists, nurses, etc., such as low salaries, pluriemployment, contractual insecurity and worsening working conditions; reduction of opportunities in the labour market and concentration of qualified professional (doctors and nurses) in urban areas, in most of the countries analysed. On the other hand, the significant economic differences between the countries studied also needs to be taken into account. In this respect, while health spending in the European Union between 2006 and 2011 amounted to 4187 dollars per person, in Latin American and Caribbean countries it was just 715 dollars, with the greatest resources being spent in Uruguay and Argentina and extremely little in Guatemala, El Salvador, Peru and Ecuador. In terms of the number of doctors per 1000 people, in the European Union there are 3.6 whereas in Latin American countries this figure is just 1.8 (WBG, 2014).

As far as the strengths of the study are concerned, the number of participants is very large indeed, predominantly doctors, but we have not wished to exclude other health professionals as we believe the sample size is sufficiently strong as to give valid results for these as well. We would also like to highlight the importance of having been able to illustrate the effects of burnout with the present results in a broad sample of healthcare workers, who despite being from different countries, cultures and healthcare organisations have manifested the same adverse effects of burnout syndrome, showing that burnout is expressed in similar ways amongst healthcare professionals. In this regard, reflecting on work and mental health, Essex and Rojas consider that work has to be experienced as a significant action, in other words, as an affirmation of one's faculties, which is recognised and gratified; if, on the other hand, work becomes an imposition, it gives rise to "a confiscation of the self", which ends up being perceived as something from which the worker is detached or estranged, resulting in severe consequences for the person's self-esteem and mental health (Esser & Rojas, 2006). In this respect, the consequences are similar between professionals of different cultures, however, some countries such as Argentina, Spain, Colombia and Uruguay; show a greater prevalence of adverse work consequences. These differences point to the influence of the social context in the genesis of burnout as a modulator of the professional and personal situation in which workers find themselves.

In conclusion, the present study describes a situation of a considerable prevalence of adverse work-related consequences associated to burnout syndrome, especially with regards to the deterioration in personal and family circumstances in a cohort of healthcare workers from different countries, cultures and healthcare organisations in the Spanish-speaking world.

The emotional exhaustion component of the MBI was the first associated variable in the case of absenteeism and of considering leaving the profession. In the case of the perception of committing mistakes in the care provided, the first associated variable was the depersonalisation component of the MBI followed by emotional exhaustion. In the analysis of the consequences of burnout related with the environmental context, personal and family deterioration are associated, in the first place, with emotional exhaustion in the MBI. Four out of every ten professionals referred to personal deterioration, especially in Argentina, Spain, Colombia and Uruguay, and almost three out of every ten participants referred to family deterioration related to the working conditions, especially in Argentina and Colombia.

Given the personal, family and social impact of burnout, and taking into consideration the present situation of change and crisis in the world of work today, it is ever more necessary to apply systematic and continued interventions to promote health in the workplace such as organisational measures, for example workplace training, supportive feedback from supervisors, role clarification, team culture, and coping strategies (Gómez-Gascón et al., 2013; Kristensen, 2000; Martínez García-Olalla, 2004; Ruotsalainen, Serra, Marine, & Verbeek, 2008). Such interventions have not been sufficiently developed up until now and there is limited evidence that they reduce the levels of stress, burnout, and general symptoms (Ruotsalainen et al., 2008), but they will probably be able to achieve significant reductions in the levels of stress and of burnout without having harmful consequences. Future research in this line should aim to test the effectiveness of interventions in reducing stress at work among health workers.

Author contributions

Study conception and design: RSS, AGM, DF, MP and FB.
Data collection: DF, MP and FB.
Data analysis: RSS and AGM.
Drafting of manuscript: RSS, AGM, DF.
Critical revisions of manuscript for important intellectual content: RSS, AGM, DF, SFM and MEG.
Statistical expertise: RSS, AGM and MEG.
Administrative, technical or material support: MP and FB.
Supervision: RSS, AGM and DF.

Conflict of interest statement

The authors declare that there are no conflicts of interest.

References

Alarcón, J., Vaz, F. J., & Guisado, J. A. (2001). Análisis del síndrome de burnout: psicopatología, estilos de afrontamiento y clima social (I). *Revista de Psiquiatría de la Facultad de Medicina de Barcelona*, *28*, 358–381.

Alarcón, J., Vaz, F. J., & Guisado, J. A. (2002). Análisis del síndrome de burnout: psicopatología, estilos de afrontamiento y clima social (II). *Revista de Psiquiatría de la Facultad de Medicina de Barcelona*, *29*, 8–17.

Borritz, M., Rugulies, R., Christensen, K. B., Villadsen, E., & Kristensen, T. S. (2006). Burnout as a predictor of self-reported sickness absence among human service workers: Prospective findings from three year follow up of the PUMA study. *Occupational and Environmental Medicine*, *63*, 98–106.

Brenninkmeijer, V., & VanYperen, N. (2003). How to conduct research on burnout: Advantages and disadvantages of a unidimensional approach in burnout research. *Occupational and Environmental Medicine*, *60*(Suppl. 1), i16–i20.

Duijts, S. F., Kant, I., Swaen, G. M., van den Brandt, P. A., & Zeegers, M. P. (2007). A meta-analysis of observational studies identifies predictors of sickness absence. *Journal of Clinical Epidemiology*, *60*, 1105–1115.
Dyrbye, L. N., Shanafelt, T. D., Balch, C. M., Satele, D., Sloan, J., & Freischlag, J. (2011). Relationship between work-home conflicts and burnout among American surgeons: A comparison by sex. *Archives of Surgery*, *146*, 211–217.
Esser, J., & Rojas, C. (2006). Subjectivity, work and Mental Health. *Salud de los Trabajadores*, *14*, 81–85.
Fleming, C. M., & Bowden, M. (2009). Web-based surveys as an alternative to traditional mail methods. *Journal of Environmental Management*, *90*, 284–292.
Freudenberger, H. J. (1974). Staff burn-out. *Journal of Social Issues*, *30*, 159–165.
Gandini, B. J., Paulini, S. S., Marcos, I. J., Jorge, S., & Luis, F. (2006). The professional wearing down or syndrome of welfare labor stress (burnout) among health professionals in the city of Cordoba. *Revista de la Facultad de Ciencias Médicas (Córdoba, Argentina)*, *63*, 18–25.
Gil-Monte, P. R., & Marucco, M. A. (2008). Burnout prevalence in pediatricians of general hospitals. *Revista de Saúde Pública*, *42*, 450–456.
Gil-Monte, P. R., & Peiró, J. M. (1999). Validez factorial del Maslach Burnout Inventory en una muestra multiocupacional. *Psicothema*, *11*, 679–689.
Gómez-Gascón, T., Martín-Fernández, J., Gálvez-Herrer, M., Tapias-Merino, E., Beamud-Lagos, M., Mingote-Adán, J. C., & Grupo EDESPROAP-Madrid. (2013). Effectiveness of an intervention for prevention and treatment of burnout in primary health care professionals. *BMC Family Practice*, *14*, 173.
Grau, A., Suñer, R., & García, M. M. (2005). Burnout syndrome in health workers and relationship with personal and environmental factors. *Gaceta Sanitaria*, *19*, 463–470.
Grau, A., Flichtentrei, D., Suñer, R., Font-Mayolas, S., Prats, M., & Braga, F. (2008). El burnout percibido o sensación de estar quemado en profesionales sanitarios: prevalencia y factores asociados. *Informació Psicológica*, *91–92*, 64–79.
Grau Martín, A., Flichtentrei, D., Suñer, R., Prats, M., & Braga, F. (2009). Influence of personal, professional and cross-national factors in burnout syndrome in Hispanic Americans and Spanish health workers. *Revista Española de Salud Pública*, *83*, 215–230.
Grau-Martín, A., & Suñer-Soler, R. (2011). Burnout syndrome and medical residents: Reflections on the magnitude of the phenomena. *Revista Clínica Española*, *211*, 112–113.
Honkonen, T., Ahola, K., Pertovaara, M., Isometsä, E., Kalimo, R., Nykyri, E., et al. (2006). The association between burnout and physical illness in the general population – Results from the Finnish Health 2000 Study. *Journal of Psychosomatic Research*, *61*, 59–66.
Kristensen, T. S. (2000). Workplace intervention studies. *Occupational Medicine*, *15*(1), 293–305.
Lee, R. T., Seo, B., Hladkyj, S., Lovell, B. L., & Schwartzmann, L. (2013, September). Correlates of physician burnout across regions and specialties: A meta-analysis. *Human Resources for Health*, *11*(48) http://dx.doi.org/10.1186/1478-4491-11-48
Leiter, M. P., & Maslach, C. (2009). Nurse turnover: The mediating role of burnout. *Journal of Nursing Management*, *17*, 331–339.
Martínez García-Olalla, C. (2004). Técnicas de afrontamiento del estrés para Atención Primaria. *Formación Médica Continuada*, *11*(Suppl. 3), 58–70.
Martins, A. E., Davenport, M. C., Del Valle, M. P., Di Lalla, S., Domínguez, P., Ormando, L., et al. (2011). Impact of a brief intervention on the burnout levels of pediatric residents. *Journal de Pediatria*, *87*, 493–498.
Maslach, C. (1976). Burned out. *Human Behavior*, *59*, 16–22.
Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Psychology*, *2*, 99–113.
Maslach, C., & Jackson, S. E. (1986). *Maslach burn-out inventory*. Palo Alto: Consulting Psychologists Press.
Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, *52*, 397–422.
Mingote, J. C., Moreno, B., & Gálvez, M. (2004). Desgaste profesional y salud de los profesionales médicos: revisión y propuestas de prevención. *Medicina Clínica*, *123*, 265–270.
Ruotsalainen, J., Serra, C., Marine, A., & Verbeek, J. (2008). Systematic review of interventions for reducing occupational stress in health care workers. *Scandinavian Journal of Work, Environment & Health*, *34*(3), 169–178.
Schaufeli, W. B., Leiter, M. P., & Maslach, C. (2009). Burnout: 35 years of research and practice. *Career Development International*, *14*, 204–220.
Schleyer, T. K., & Forrest, J. L. (2000). Methods for the design and administration of web-based surveys. *Journal of the American Medical Informatics Association*, *7*, 416–425.
Schulz, M., Damkröger, A., Voltmer, E., Löwe, B., Driessen, M., Ward, M., et al. (2011). Work-related behaviour and experience pattern in nurses: Impact on physical and mental health. *Journal of Psychiatric and Mental Health Nursing*, *18*, 411–417.
Schwartzmann, L. (2007). Health related quality of life in medical doctors: Study of a sample of Uruguayan professionals. *Vertex*, *18*, 103–110.
Shanafelt, T. D., Bradley, K. A., Wipf, J. E., & Back, A. L. (2002). Burnout and self-reported patient care in an internal medicine residency program. *Annals of Internal Medicine*, *136*, 358–367.
Shanafelt, T. D., Balch, C. M., Bechamps, G. J., Russell, T., Dyrbye, L., Satele, D., et al. (2009). Burnout and career satisfaction among American surgeons. *Annals of Surgery*, *250*, 463–471.
Shanafelt, T. D., Balch, C. M., Bechamps, G., Russell, T., Dyrbye, L., Satele, D., et al. (2010). Burnout and medical errors among American surgeons. *Annals of Surgery*, *251*, 995–1000.
Silva, A. T., & Menezes, P. R. (2008). Burnout syndrome and common mental disorders among community-based health agents. *Revista de Saúde Pública*, *42*, 921–929.
Soler, J. K., Yaman, H., Esteva, M., Dobbs, F., Asenova, R. S., Katic, M., et al. (2008). Burnout in European family doctors: The EGPRN study. *Family Practice*, *25*, 245–265.
van der Heijden, B. I., Demerouti, E., Bakker, A. B., & NEXT Study Group coordinated by Hans-Martin Hasselhorn. (2008). Work–home interference among nurses: Reciprocal relationships with job demands and health. *Journal of Advanced Nursing*, *62*, 572–584.
Waldman, S. V., Diez, J. C., Arazi, H. C., Linetzky, B., Guinjoan, S., & Grancelli, H. (2009). Burnout, perceived stress, and depression among cardiology residents in Argentina. *Academic Psychiatry*, *33*, 296–301.
Wallace, J. E., Lemaire, J. B., & Ghali, W. A. (2009). Physician wellness: A missing quality indicator. *Lancet*, *374*(9702), 1714–1721.
World Bank Group [internet]. World development indicators health systems. Available from http://wdi.worldbank.org/table/2.15#
West, C. P., Huschka, M. M., Novotny, P. J., Sloan, J. A., Kolars, J. C., Habermann, T. M., et al. (2006). Association of perceived medical errors with resident distress and empathy: A prospective longitudinal study. *Journal of the American Medical Association*, *296*, 1071–1078.