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AÑO 2017

CARACTERÍSTICAS CULTURALES NACIONALES, BURNOUT Y ACCIDENTABILIDAD LABORAL

JOSÉ ANTONIO GARCÍA-ARROYO

PROGRAMA DE DOCTORADO EN PSICOLOGÍA DE LA SALUD
DIRECTORA: Dra. Amparo Osca Segovia

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RESUMEN GENERAL

En el ámbito laboral, el burnout y la accidentabilidad han sido bastante estudiados, sin embargo, apenas hay estudios que consideren estos fenómenos comparando resultados de múltiples países conjuntamente y que analicen la influencia de las características culturales nacionales de cada país sobre ellos.

Los estudios que componen esta tesis contribuyen a llenar este vacío y van encaminados a esclarecer las relaciones entre estas variables. A lo largo de seis capítulos, se comparan, por un lado, resultados del burnout de más de 30 países estimando una medida media de su intensidad (tamaño de efecto), y se analizan las diferencias (heterogeneidad de resultados) y las variables que explican estas diferencias. Entre estas variables se incluyen las personales (sexo, edad, experiencia), las organizacionales (ocupación) y las culturales (dimensiones culturales, lengua). Por otro lado, se estudia de qué manera la cultura nacional puede influir en las diferencias de intensidad del burnout y en las diferencias en el uso de estrategias de afrontamiento. Por último, se examina cómo la cultura nacional puede influir en la cantidad y gravedad de los accidentes laborales de los trabajadores extranjeros (más de 30 nacionalidades) que trabajan en España. La metodología utilizada ha sido muy variada y va desde los análisis descriptivos y correlacionales, pasando por análisis de regresión lineal y no lineal, hasta análisis multinivel y meta análisis. Entre los principales hallazgos se encuentran que la intensidad media del burnout se estima entre baja y moderada y que hay variabilidad entre los países. Las variables contextuales tienen mayor poder predictivo que las personales, de forma que las dimensiones culturales pueden predecir el burnout. También se encontraron diferencias en el número de accidentes según el país de origen del trabajador y éstas se pueden predecir con las dimensiones culturales. Por último, se destaca la importancia y necesidad de incluir variables contextuales

(organizacionales y culturales) en los programas de intervención sobre el burnout y sobre los accidentes laborales.

Este trabajo contribuye con la literatura sobre el burnout, el afrontamiento y los accidentes laborales y su relación con las dimensiones culturales nacionales. Aunque los logros alcanzados son interesantes, sin embargo, el campo de investigación que se abre ofrece grandes oportunidades para futuras investigaciones.

Introducción

INTRODUCCIÓN

Un viaje inesperado

Es asombroso cómo el proceso de investigación te puede llevar por caminos que ni siquiera antes habías imaginado, pero que ahora, no lamentas haber recorrido. Mi *viaje* comenzó, como suelen señalar los expertos (Hernández, Fernández y Baptista, 2006), a partir de un problema, de algo que no me hacía mucho sentido y que no acertaba a explicar. Pero, empezaré la historia como es debido.

Acababa de presentar mi trabajo de fin de master, que por cierto recibió buenos comentarios de los evaluadores, así como una buena nota. Este trabajo consistía en un estudio sobre el burnout en una muestra de docentes de escuelas y colegios ecuatorianos. En él se explicaba cómo el burnout es un riesgo psicosocial que surge por una exposición prolongada a situaciones de estrés laboral y que puede tener efectos nocivos para la salud, tanto física como mental. Además, se señalaba que el burnout es más propio, o al menos ha sido más estudiado, en profesiones que implican el trato con otras personas, como son las de servicios sociales y, específicamente, los maestros. Por aquel entonces, yo trabajaba como docente en una universidad en Ecuador y me pareció interesante analizar el problema en este grupo, los docentes, con quienes, en cierto modo, tenía mayor cercanía, y que además nunca antes había sido investigado en ese país. Aprovechando que hacía poco tiempo, el gobierno ecuatoriano había reformado el sistema educativo nacional, con los ajustes y exigencias, así como con las protestas de algunos, que toda reforma suele acarrear, supuse, o mejor debería decir hipoteticé, que los docentes tendrían altos niveles de burnout como consecuencia de estos cambios. La sorpresa fue asombrosa. Aunque aquel grupo estaba formado por docentes, profesión que ha sido asociada con altos niveles de burnout (Aloe, Amo, y Shanahan, 2014) y estaban sometidos a mayores demandas laborales, que también es sabido que producen

este síndrome (Lorente, Salanova, Martínez, y Schaufeli, 2008), sin embargo, sus niveles de burnout eran bastante bajos.

Ante estos resultados aparentemente contradictorios con lo que en la literatura sobre el burnout se venía reportando, decidimos profundizar en el estudio del burnout para intentar comprender y explicar el porqué de aquellas *desavenencias*.

Antes de seguir, quiero hacer notar mi cambio del singular al plural. Las decisiones que se fueron tomando a partir de aquí, siempre fueron guiadas por mi directora de tesis, quien me ha acompañado en este viaje y sin la cual, yo hubiera sido incapaz de llegar a buen puerto.

La primera decisión que tomamos fue ampliar la muestra para comprobar si la intensidad del burnout encontrada en los docentes de primaria y secundaria se mantenía en este nuevo grupo. Con este objetivo se realizó un estudio en una muestra de docentes de universidad, ocupación que comparte prácticamente las mismas tareas que los docentes de escuelas y colegios y que igualmente experimentaron el incremento en las demandas fruto de las reformas legislativas. En este estudio se analizó la influencia de la sobrecarga de trabajo sobre el agotamiento emocional, así como el papel moderador que podían tener los estilos de afrontamiento. Los resultados sobre los niveles de burnout en este nuevo grupo fueron similares a los del grupo anterior y se describen en el capítulo de esta tesis que tiene por título *Work overload and emotional exhaustion in university teachers: moderating effects of coping styles* (capítulo 1).

Ante estos resultados, nos planteamos dos caminos a seguir. Por una parte, empezamos a sospechar que quizá tener bajos niveles de burnout era una característica de los docentes ecuatorianos y que, por tanto, necesitábamos compararlos con otro grupo de docentes que fueran de otro país. Aquí es donde apareció, inesperadamente, una de las ideas principales de esta tesis, y que tiene que ver con la influencia que la

cultura de cada país puede tener sobre los fenómenos que ocurren en dicho país, y de cómo las personas entienden y explican las cosas de forma diferente en función de la cultura en la que están inmersos. Si comparábamos una muestra de docentes ecuatorianos con una muestra de docentes de otro país culturalmente diferente, y obteníamos resultados diferentes, entonces sería plausible que estas diferencias se pudieran explicar, entre otras razones, gracias a las diferencias culturales entre los dos países.

De esta forma, se llevó a cabo un estudio cross-cultural, que comparó las diferencias en burnout y en estrategias de afrontamiento entre docentes ecuatorianos y docentes españoles y se analizó qué relación podía tener la cultura de cada país en las diferencias encontradas. Se calculó la distancia cultural entre los dos países mediante un procedimiento que ha dado buenos resultados en otros campos, como los negocios internacionales o la gestión del aprendizaje intercultural (Kogut y Singh, 1988), aunque apenas se ha usado en psicología organizacional. Al mismo tiempo, se operacionalizó la cultura a través de las dimensiones culturales propuestas por Hofstede (2001). Este autor ha desarrollado la tipología más popular, y más utilizada en investigación, que consiste en cinco dimensiones culturales principales: individualismo vs. colectivismo, distancia de poder, evitación de la incertidumbre, masculinidad vs. feminidad y orientación a largo plazo.

La distancia cultural entre España y Ecuador se halló lo suficientemente considerable, a pesar de compartir tradiciones, idioma y raíces históricas, como para explicar diferencias en comportamientos y actitudes, y en nuestro caso, en el uso de estrategias de afrontamiento y en los niveles de cinismo y de realización personal (dos de las dimensiones del burnout). Con este estudio pudimos constatar que la influencia del contexto cultural es un factor que debe tenerse en cuenta a la hora de explicar los

fenómenos sociales y organizacionales. La descripción de todo este proceso, así como de los resultados, se detalla en el capítulo 2 de esta tesis y que se titula: *The relation of culture to differences in burnout and coping strategies between Ecuadorian and Spanish teachers.*

Antes he mencionado que nos planteamos dos caminos a seguir, y que uno era el del enfoque cultural que acabo de explicar. El otro apuntaba hacia una diversificación desde el punto de vista metodológico, que tuvo, a su vez, consecuencias a nivel teórico. Quizá los resultados iniciales sobre el burnout en docentes ecuatorianos estaban relacionados con el método de análisis utilizado. Entonces decidimos emplear otras metodologías de análisis, que han resultado bastante útiles en algunos estudios similares, y que se basan en la idea de que las relaciones entre las variables no siempre son lineales, y que a veces la explicación no-lineal, es decir, curvilínea, explica mejor los fenómenos. Según esto, sometimos nuestros datos a modelos de análisis lineal, no-lineal y de interacción, y comparamos la capacidad de explicación de cada uno, obteniendo resultados interesantes. La comparación de los efectos lineales, no lineales y de interacción podían ayudar a aclarar las relaciones entre los estilos de afrontamiento y el burnout. La explicación principal de esta relación estaba dada por el efecto lineal, específicamente, las estrategias de afrontamiento centradas en la acción estaban negativamente relacionadas con el agotamiento y el cinismo, y positivamente con la realización personal de forma directa o lineal. Sin embargo, el afrontamiento centrado en la emoción manifestaba tener comportamientos no lineales y ser dañino si era empleado o muy poco o en extremo. Además, el exceso de afrontamiento centrado en la emoción podía eliminar los efectos positivos del afrontamiento centrado en la acción, cuando ambas estrategias se combinaban. También se constató que en todas estas relaciones era importante considerar la influencia de los valores culturales específicos

de cada organización o de cada país. Todos estos resultados se explican detalladamente en el capítulo 3 que lleva por título: *Coping with burnout: Analysis of linear, non-linear and interaction relationships*.

Ante estos dos hallazgos, que la cultura es importante y hay que tenerla en cuenta, y que la relación entre las variables puede ir más allá de la linealidad, decidimos profundizar más en el tema, tanto desde el punto de vista teórico como metodológico. Si las diferencias culturales encontradas entre España y Ecuador eran lo suficientemente importantes como para poder explicar las diferencias en burnout y en el uso de los estilos de afrontamiento, qué pasaría si en vez de dos, analizáramos el mayor número de países posible. Por otro lado, si el tipo de análisis era importante, debíamos ser muy rigurosos al respecto y considerar no solamente las variaciones entre unos países y otros sino también las variaciones dentro del mismo país y examinar su interrelación. Esto nos llevó a plantear la ejecución de un meta análisis que incluyera los estudios realizados en los últimos 10 años, sobre burnout en maestros, publicados en revistas de alto impacto, indexadas en bases de datos especializadas. Primero tuvimos que superar algunos problemas conceptuales y metodológicos relacionados con el concepto del burnout y su medida (número de dimensiones, forma de medirlo, entre otros). Finalmente, y tras establecer unos claros criterios de inclusión para que un artículo pudiera ser considerado dentro del meta análisis, obtuvimos un total de 48 artículos, que significaban 55 muestras independientes y más de 20,000 participantes de 24 países. Permítaseme el paréntesis para explicar que este tipo de meta análisis (donde la media es el tamaño de efecto) no es muy común pero que da muy buenos resultados para revelar el efecto de variables contextuales, como otros investigadores famosos (Fischer y Boer, 2011, Lipsey y Wilson, 2001) ya han demostrado. Se estimó el tamaño del efecto para cada una de las dimensiones del burnout para el total de la muestra, después

de un riguroso proceso de estandarización de datos. Luego se hizo el análisis de homogeneidad para probar si las diferencias entre los resultados de cada estudio se debían al azar o a alguna otra posible causa, y al ver que las muestras eran heterogéneas, se examinaron las posibles variables moderadoras. Esto nos llevó a realizar análisis de regresión jerárquica donde, no solo incluimos variables de nivel individual, sino también de nivel país. Esto último se hizo con el fin de probar si las diferencias de cada país podían explicar la variación de los resultados. En concreto, incluimos un indicador, tomado de los informes de la UNESCO, que diera cuenta de las diferencias en las demandas que el sistema educativo de cada país puede tener en el trabajo de los docentes. Además, teniendo en cuenta que la docencia suele ser una profesión dominada por mujeres, incluimos el sexo y el indicador cultural que mide la igualdad de rol de género (*gender egalitarianism*) tomado de entre los propuestos por el proyecto GLOBE (House et al, 2004). Con todo esto, y después de ejecutar los respectivos modelos de análisis multinivel de dos niveles, donde también se probó el posible efecto no-lineal y de interacción de las variables, se obtuvieron muchos resultados interesantes de los cuales quiero destacar dos de ellos. El primero, la intensidad media del burnout de los docentes en toda la muestra no es tan alarmante como en algunos estudios se ha descrito. En realidad, los niveles están entre bajos y moderados (2.53 para agotamiento, 1.51 para cinismo y 4.14 para realización personal, en una escala de 0 a 6, donde 6 significa el mayor nivel de intensidad para agotamiento y cinismo, y 0 lo sería para la realización personal). El segundo gran hallazgo fue que las variables a nivel de país (las demandas del sistema educativo y *gender egalitarianism*) explicaban un porcentaje significativo de la variación del burnout y que algunas de ellas manifestaban comportamientos curvilíneos y de interacción. Esto supuso un apoyo importante a la idea de que algunas dimensiones culturales pueden explicar las diferencias en burnout

entre países. El proceso de este arduo trabajo teórico y metodológico aquí esbozado, se explica con detalle en el capítulo 4 de esta tesis y que lleva por título: *Are teachers really burned out? A meta-analysis of burnout intensity and its predictors at country-level*.

Hasta este momento, habíamos analizado el problema del burnout en maestros de todo el mundo y habíamos llegado a dos conclusiones principales: que la intensidad del burnout en maestros a nivel mundial está entre baja y moderada y es similar a los niveles encontrados inicialmente en la muestra ecuatoriana, y que algunas características culturales nacionales podían explicar la variación de esta intensidad entre países. Entonces, decidimos dar un paso más, y analizar qué pasaría si nos enfocábamos únicamente en países que tuvieran características culturales similares, de acuerdo a los *clusters* culturales propuestos por Hofstede (2001), pero ampliando la muestra a otras ocupaciones que no fuera exclusivamente la de maestros. Siguiendo los mismos procedimientos explicados antes, realizamos un nuevo meta análisis con análisis multinivel de dos niveles, que incluyó 58 muestras (55 artículos) de 8 países latinoamericanos y de todo tipo de ocupaciones. El periodo de búsqueda incluyó los últimos 10 años y la búsqueda de literatura y la aplicación de los criterios de inclusión siguió los rigurosos lineamientos propuestos por la declaración PRISMA (Moher et al. 2015). En este caso, las variables culturales que se analizaron fueron el idioma, como expresión de la cultura, y la dimensión individualismo-colectivismo. Los análisis volvieron a arrojar resultados interesantes entre los que destacamos los siguientes: el nivel medio de intensidad de burnout en Latino América sigue siendo entre bajo y moderado (alrededor del 33% en agotamiento, del 28% en cinismo y del 80% en realización personal). Los resultados de los estudios son heterogéneos en agotamiento emocional, pero hay homogeneidad en las otras dos dimensiones. Las diferencias en

agotamiento se explicaban principalmente por la profesión (los profesionales de servicios sociales estaban más quemados, seguidos de los maestros y por último los profesionales de la medicina), por el idioma (los de lengua portuguesa estaban más quemados que los de lengua castellana) y marginalmente, por el individualismo (a mayor individualismo, mayor agotamiento). Estos resultados nos llevaron a plantear que las similitudes culturales entre los países de Latino América pueden estar relacionadas con la homogeneidad en la intensidad de cinismo y realización personal, ya que son actitudes, y las actitudes dependen grandemente de la cultura. Sin embargo, el agotamiento está más relacionado con las tareas y el tipo de trabajo, y por eso la ocupación es un factor explicativo importante. El detalle de estos análisis y resultados se encuentran en el capítulo 5 titulado: *Is Burnout a cultural matter? Meta-analytical review of burnout in Latin American countries and multilevel analysis of the effects of language and individualism.*

A estas alturas, teníamos claro, y habíamos podido comprobar, que algunas dimensiones culturales pueden explicar las variaciones en burnout entre países. Hay un cuerpo considerable de literatura sobre la relación, e influencia, entre la cultura y la salud mental, y entre la cultura y la salud en general y el bienestar. Pero la relación entre cultura, el burnout y el afrontamiento ha sido apenas estudiada, y en esto consiste uno de los principales aportes de esta tesis. Tampoco ha sido muy estudiada la relación de la cultura con otros aspectos de la salud laboral como son los accidentes laborales. En este sentido, y con la misma idea general de fondo, que la cultura (dimensiones culturales) está relacionada e influye en la forma de entender las cosas y de comportarse ente ellas, decidimos avanzar un poco más.

Nos propusimos averiguar si hay alguna relación entre la cantidad de accidentes de trabajo y el país del trabajador accidentado, y en caso de haberla, si esta relación se

podía explicar a partir de diferencias culturales. Los informes de los organismos oficiales (Instituto Nacional de Salud e Higiene en el Trabajo, INSHT, 2008) afirmaban que los trabajadores extranjeros tienen más accidentes que los españoles. Si esto era cierto, queríamos averiguar por qué.

Para ello, recogimos datos oficiales (del Ministerio de Empleo y Seguridad Social) sobre accidentes de trabajo en trabajadores españoles y extranjeros afiliados a la seguridad social pertenecientes al año 2015. Primero se hizo un análisis descriptivo por sexo, edad, tipo y gravedad del accidente, sector productivo, y país de origen del trabajador. Efectivamente, descubrimos que hay trabajadores de ciertos países que se accidentan más que los trabajadores españoles, pero otros no. Después analizamos las semejanzas culturales, en términos de dimensiones culturales de Hofstede, que tenían los países cuyos trabajadores se accidentaban significativamente más y menos que los trabajadores españoles. Finalmente, y mediante análisis de regresión lineal, se puso a prueba si las dimensiones culturales encontradas, comunes a los países de mayor cantidad de accidentes, podían explicar la variación en la accidentabilidad. De entre los principales hallazgos que encontramos, uno de los más importantes fue que, especialmente la evitación de la incertidumbre y la orientación a largo plazo, están relacionadas con la variación en el número de accidentes, con diferentes efectos dependiendo del sexo (cantidad de hombres en relación a las mujeres trabajadoras) y del sector. El informe detallado de este trabajo constituye el capítulo 6 de esta tesis y se titula: *¿Tienen más accidentes los trabajadores extranjeros? Un análisis de los accidentes de trabajo en España en función de las dimensiones culturales*.

La enseñanza principal que se desprende de este último trabajo es que, en un campo tan importante, pero a su vez, tan poco estudiado, como es el de los accidentes laborales, la influencia de los factores contextuales como la cultura del país, es algo que

se debe tener en cuenta. Este tema adquiere por tanto especial relevancia ya que se calcula que en 2060 uno de cada tres trabajadores de la UE será extranjero (o descendiente de extranjeros) (European Agency for Safety and Health at Work, 2013).

Como acabo de describir, este *viaje* nos ha llevado desde el análisis del burnout en una muestra de docentes ecuatorianos al análisis de accidentes laborales en España, de trabajadores extranjeros de más de 40 países, con un hilo conductor *inesperado*, el de la influencia de las características culturales nacionales. En el camino nos hemos encontrado con un aumento progresivo en la dificultad y profundidad con la que se han ido abordando los temas. No solo porque se han implicado variables como los estilos de afrontamiento o algunas dimensiones culturales, aparte de las demográficas que nunca faltan, sino porque el tratamiento de las variables ha exigido una mayor complejidad metodológica. He de confesar que, como estudiante de letras, para mi hasta hace unos pocos años, calcular correctamente un porcentaje era toda una hazaña, y que cuando comencé la investigación de los primeros trabajos para esta tesis, con dificultad calculaba análisis sobre la varianza y regresiones lineales. Para salir exitoso en esta empresa tuve que aprender sobre análisis cuadráticos y cúbicos, sobre interacciones, sobre meta análisis y análisis multinivel. Quien me lo iba a decir a mí. El apasionante mundo de la investigación te hace caminar por senderos estadísticamente significativos.

Sin embargo, la complejidad teórica y metodológica, y el tremendo esfuerzo que supone investigar, quizá no sea lo más difícil de esta labor. He podido experimentar, aunque de forma incipiente, lo difícil que es encontrar un lugar adecuado donde no te digan “lamentamos comunicarle que su trabajo no ha sido considerado prioritario para su publicación en nuestra revista”. En el actual mundo de la investigación, tan competitivo y mercantilizado, donde un aspecto principal es el factor de impacto de la revista en cuestión, cada día llegan cientos de artículos importantes y novedosos a los

buzones de entrada de los correos de los editores, de los cuales el 80% son rechazados *from de desk*, es decir, sin haber leído apenas el título, y el 20% restante es publicado, *if accepted, and after review and resubmission,* aproximadamente un año después. Hoy en día publicar es más difícil que investigar. Yo por mi parte, gracias a los sabios consejos de mi directora de tesis, he podido publicar ya, en conjunto con ella, dos de los capítulos de esta tesis, es decir el 30% de la misma, y los demás ya han sido sometidos para revisión en diferentes revistas. Este es el motivo de que la mayoría de los capítulos de esta tesis estén escritos en inglés.

Por último y para terminar esta introducción señalaré algunos aspectos de forma. La estructura de los capítulos sigue la estructura de un artículo de investigación: introducción, método, resultados, discusión y conclusiones, y referencias bibliográficas. La explicación teórica de los conceptos y variables estudiados en esta tesis se encontrará en la sección de introducción de cada capítulo. Por eso no se ha desarrollado en este apartado de introducción general. La última sección de este documento, que va inmediatamente después del capítulo 6, corresponde a las conclusiones generales. No lo hemos querido considerar como un capítulo más, ya que su función no es la de dar cuenta de un estudio realizado, sino la de recoger las principales conclusiones que se desprenden de los seis capítulos anteriores, que sería como el resultado condensado de todo el trabajo. Aquí también se detallarán algunas consecuencias desde el punto de vista aplicado, y las futuras líneas de investigación que se desprenden de este trabajo.

La literatura y bibliografía revisada en la elaboración de este documento de tesis doctoral es muy variada y abundante. Poner todo el listado de referencias al final del documento, como a veces se suele hacer, hubiera sido demasiado molesto a la hora de consultar una referencia al hilo de la lectura del texto. Por este motivo, y con fines prácticos para su consulta, se ha decidido poner la bibliografía referente a cada capítulo

al final del mismo. Esto permite, además, que esté mejor organizada temáticamente, de acuerdo a los conceptos que en cada capítulo se analizan. Con respecto a las tablas y figuras, éstas aparecen numeradas en el texto de forma consecutiva, pero con una nueva numeración en cada capítulo, de tal manera que a cada capítulo le corresponde su numeración propia. Esto ayudará y facilitará al lector la identificación de las mismas.

Después de haber expuesto mis motivos y de explicar el viaje de investigación, con el enfoque inesperado desde la psicología cross-cultural, terminaré esta introducción señalando formalmente los objetivos que la han guiado, tanto el objetivo general como los específicos,

El **objetivo general** de esta tesis ha sido analizar la relación entre las características culturales nacionales y el burnout, el afrontamiento y la accidentabilidad laboral.

Este objetivo se concreta en los **objetivos específicos** que se describen a continuación:

1º. Analizar las diferencias en burnout y en el uso de estrategias de afrontamiento en dos países culturalmente diferentes (España, Ecuador), y examinar si estas diferencias están relacionadas con las características culturales de cada país.

2º. Probar la hipótesis de que los factores culturales contextuales pueden influir sobre el burnout y sobre las estrategias de afrontamiento más que los factores personales, concretamente que el sexo, la edad o la experiencia.

3º. Analizar las relaciones lineales, no lineales y de interacción entre las estrategias de afrontamiento activo y evasivo y el burnout (agotamiento emocional, cinismo y realización personal).

4º. Examinar la importancia de considerar las dimensiones culturales en correspondencia con estos diferentes tipos de relaciones.

5º. Describir la intensidad del burnout (agotamiento, cinismo y realización personal) en los países de Latino América mediante un meta análisis, considerando las publicaciones de los últimos 10 años.

6º. Establecer puntos de corte normativos del burnout en Latino América que puedan guiar a los investigadores y profesionales en la determinación de si la presencia de burnout debe ser atendido por profesionales, y en el diseño e implementación de programas de prevención.

7º. Probar los efectos del del individualismo / colectivismo y del idioma y sobre el agotamiento emocional entre países, mediante el desarrollo de un modelo jerárquico de efectos mixtos multinivel (de dos niveles) que permita tener en cuenta los efectos a nivel de país.

8º. Comprender el efecto del burnout en maestros analizando la intensidad del síndrome entre diferentes países mediante un meta análisis que recoja estudios a nivel mundial.

9º. Analizar el efecto de las demandas en educación, el sexo y la igualdad de género sobre el burnout de los maestros a través de los países mediante un análisis multinivel.

10º. Describir la accidentabilidad de los trabajadores activos ocupados durante el año 2015, comparando los accidentes de trabajadores españoles y extranjeros a partir de los datos proporcionados por el Ministerio de Empleo y Seguridad Social.

11º. Analizar si las diferencias en accidentabilidad están relacionadas con las dimensiones culturales del país de origen, considerando la clasificación propuesta por Hofstede (2001).

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CAPÍTULO 1

Work Overload and Emotional Exhaustion in University Teachers: Moderating Effects of Coping Styles

Work Overload and Emotional Exhaustion in University Teachers: Moderating Effects of Coping Styles

Abstract

Changes in the education system in Ecuador have led to an increase in the workload of teachers producing stress and burnout. This study analyses the relation between work overload, coping strategies and emotional exhaustion in a sample of 202 university teachers using a hierarchical regression model analysis. The results showed that work overload is related to emotional exhaustion, and that active coping strategies are negatively related to emotional exhaustion and in contrast evasive coping strategies are positively related. Evasive coping moderated the relationship between work overload and emotional exhaustion so that teachers who use a lot of evasive coping in situations of high work overload experience less exhaustion. Finally, we discuss the limitations of this study and its theoretical and practical contributions for university teachers in Latin American contexts.

Key words: work overload, emotional exhaustion, active and evasive coping, university teachers

Resumen

Los cambios en el sistema educativo de Ecuador han repercutido en un aumento de la sobrecarga de trabajo de los docentes universitarios produciendo estrés y burnout. Este estudio analiza la relación entre la sobrecarga de trabajo, las estrategias de afrontamiento y el agotamiento emocional en una muestra de 202 profesores

universitarios mediante modelos de regresión jerárquica. Los resultados muestran que la sobrecarga está relacionada con el agotamiento y que el afrontamiento activo está relacionado negativamente con el agotamiento mientras que el afrontamiento evasivo se relaciona positivamente. El afrontamiento evasivo modula la relación entre la sobrecarga y el agotamiento de forma que los docentes que emplean muchas estrategias evasivas en situaciones de elevada sobrecarga experimentan menos agotamiento. Finalmente se discuten las limitaciones del estudio y sus implicaciones teóricas y prácticas para los docentes universitarios en contextos latino americanos.

*Palabras clave***:** sobrecarga de trabajo, agotamiento emocional, afrontamiento activo y evasivo, docentes universitarios

Introduction

The change in working conditions and, in particular, work overload is an important and representative source of occupational stress in the literature on stress (Buunk De Jonge, Ybema, & De Wolf, 1998). Among many other reasons, overload may occur due to the new legal and/or market demands, the introduction of new technologies, staff adjustments and reorganization. In Ecuador, the new Organic Law of Higher Education (2010) and the application of its Rules of Procedure (Consejo de Educación Superior, 2012) have produced changes that involve greater demands and overload affecting the work situation of the university teachers. These changes can lead to the appearance of stress symptoms and emotional exhaustion. Emotional exhaustion is considered to be the heart of the burnout (Worley, Vassar, Wheeler, & Barnes, 2008) and also the most widely reported dimension of the syndrome, therefore we focused on this dimension. It refers to feelings of emotional emptiness and a decrease of personal resources as a result of a long exposure to situations of chronic occupational stress (Maslach & Jackson, 1981).

The study of work overload and emotional exhaustion is very important because these are associated with relevant outcomes as job satisfaction (Skaalvik & Skaalvik, 2011), performance (Meng, Chen, Li, & Xiong, 2009), or absenteeism (Moriana & Herruzo, 2004). They cannot only influence the teacher's quality of life but also the quality of teaching and the academic preparation of future professionals. The aim of this study is twofold. First, we analyze the relationship between stress produced by work overload and emotional exhaustion and second we examine the role of coping strategies in this relationship.

It is also worth noting that we present the results of one sample of university teachers from Ecuador. The relationship between coping and burnout has hardly been studied in Latin America (Austria, Cruz, Herrera, & Salas, 2012; Palacio, Caballero, González, Gravini, & Contreras, 2012) and especially in Ecuador, where we have only found one study (Ilaja, & Reyes, 2016) that analyzed the mediating effect of health and emotional intelligence between stress and burnout in a sample of 60 teachers. Analyzing coping and burnout in Latin American countries whose cultural values are different from North American or European (Hofstede, 2001) helps to better understand the adaptive nature of coping and the importance of context.

Work overload and stress

Stress produced by intrinsic work factors refers to the contents of work itself and the tasks that are carried out in the work setting (Buunk et al., 1998) and it manifests especially in work overload or excess, both in quantitative and qualitative terms, associated with the introduction of systems to increase quality, a greater demand for training, and the introduction of information and communication technology applied to the work tasks.

The literature examined for this study links work overload to physical and psychological health problems (Shultz, Wang, & Olson, 2010). Evidence of the relation between work overload and burnout has also been found in samples of different professions such as members of the military forces (Ezrachi, 1985, cited by López-Araujo, Osca, & Rodríguez Muñoz, 2008), nursing staff (Gil-Monte & García-Juesas, 2008), pharmaceutical industry employees (Andrews & Kacmar, 2014), professionals of information technologies (Jung, 2013), or occupational therapists (Paulsen, Meredith, Khan, Henderson, Castrisos, & Khan, 2014), to name a few.

In the field of teachers, the meta-analysis carried out by Montgomery and Rupp (2005) with 65 studies on stress in teachers, revealed a strong association between the teachers' stressors, work overload, and burnout. Likewise, Marrau (2004) pointed out that job insecurity, especially in temporary or part-time teachers, leads them to an overload of work, trying to become indispensable, which generates a high level of chronic stress that usually causes symptoms of burnout. There is much evidence of the positive relation between overload and burnout (e.g., Abbas & Roger, 2013; León-Rubio, Cantero, & León-Pérez, 2011; Restrepo, Colorado, & Cabrera, 2006; Tripken, 2012). However, some studies have not found this relation. For example, Chennoufi, Ellouze, Cherif, Mersni, and M'rad (2012), in a study with teachers of public secondary schools, found that 75.2% of the sample reported overload as a factor of occupational stress, but there was no significant association between work overload and the burnout syndrome. Similarly, Gomes and Dos (2011) found that teachers with high work overload presented symptoms of depression but they did not report significant associations between work overload and burnout, concluding that the symptoms of burnout could be due to the influence of other variables. In spite of this indicated lack of consistency in the results it seems that the most intuitive position would be that which positively relates work overload to emotional exhaustion, therefore we propose the following hypothesis:

Hypothesis 1: Work overload will be positively related to emotional exhaustion.

Coping strategies and emotional exhaustion

According to Lazarus and Folkman (1984), coping strategies are behavioural and cognitive efforts carried out to deal with, reduce or tolerate the internal and external demands generated by stressful events. These authors point out two basic types of

coping strategies: those aimed at changing the situation, trying to modify the stressor, which are called *active* or *direct*; and those that are aimed at regulating the emotional response generated by the stressor, which are referred to as *evasive, indirect, or palliative*. Examples of the former are: trying to control the situation or the problem, seeking and assessing alternatives to solve it, taking cost-benefit into account, modifying the pressures, procedures or resources, or reducing the participation of the self. Examples of the latter would be avoidance, distancing, or positive comparisons.

Research shows that more direct coping strategies or strategies aimed at problem solving are positively related to psychological health (e.g., Austria et al., 2012; Greenglass & Fiksenbaum, 2009; Mark & Smith, 2012). However, there is less consensus about the more indirect strategies or strategies aimed at managing emotions, which, in some cases, are linked to lower psychological well-being (Deimling et al., 2006; Mark & Smith, 2012), but not in all situations (Fortes-Ferreira, Peiró, González-Morales, & Martin, 2006; Lin, Probst, & Hsu, 2010; Shimazu & Kosugi, 2003). Nevertheless, Dewe and Trenberth (2004) highlight that the lack of agreement is related to the complexity of the concept and the multiple ways of conceptualizing and measuring it. Shimazu and Kosugi (2003) argue that it is connected to the need of matching the coping strategies to the features of the stressor or to the situation in which it occurs.

In the university educational setting, Chan (2011) observed that active coping increases satisfaction and the feeling of personal accomplishment and reduces emotional exhaustion. On the other hand, Guerrero (2003) found that teachers who resort to passive or evasive coping strategies show higher levels of emotional exhaustion. Likewise, Mazon, Carlotto, and Câmara (2008) reported that greater use of

coping strategies focusing on emotions led to higher levels of emotional exhaustion. Similar results were reported by David and Quintao (2012) who observed that teachers who used strategies focused primarily on emotion experienced higher levels of burnout. Taking into account all these findings, we propose the following two hypotheses:

Hypothesis 2: Active coping will be negatively related to emotional exhaustion.

Hypothesis 3: Evasive coping will be positively related to emotional exhaustion.

In the Latin American setting, we found some studies with samples of university teachers from Colombia, Mexico, and Peru. These studies mainly analyzed the prevalence of burnout (e.g., Barbosa, Muñoz, Rueda, & Suárez, 2009; Ibañez, Bicenty, Thomas, & Martínez, 2011; Rojas & Grisales, 2011) and the coping strategies most commonly used (Garay, Farfán, & Moysen, 2010; Valadez, Bravo, & Vaquero, 2011), which are usually the active-focused coping strategies such as confrontation, planning or seeking social support.

Regarding the moderating role of coping strategies, Nizielski, Hallum, Schütz and Lopes (2013) observe that active coping acts as a mediator in the relationship between the appraisal of emotions and burnout. Moreover, some studies with double interactions show that it is appropriate to combine both the active and the evasive strategies (Fortes-Ferreira et al., 2006; Shimazu & Kosugi, 2003). In the same way, we analyzed the moderating role of coping strategies, expecting that coping would act especially in situations of high overload. Lastly, we addressed the study of the joint effect of the two coping strategies, as it is presumed that coping will be more efficacious when combining both strategies, active and evasive, simultaneously. Based on this we propose the two following hypotheses:

Hypothesis 4: Coping will play a moderating role in the influence of overload on emotional exhaustion, and this will be particularly evident in situations of high overload.

Hypothesis 5: *Coping will play a moderating role in the influence of overload on emotional exhaustion so that, in the face of high overload situations, the conjoint use of both coping strategies will be more efficacious.*

Method

Procedure

Sample selection was incidental and participation in this study was voluntary. The data were collected in various public and private universities of the city of Guayaquil (Ecuador). We used a questionnaire that was individually administered at times that did not affect the teachers' work schedule. Before administering the questionnaire, participants received instructions on how to complete it and were ensured of the confidentiality of their responses and the ethical treatment of the data. We had to reject some questionnaires (16% of total received) because they were uncompleted or incorrectly filled.

Participants

The final sample was made up of 202 teachers from Ecuadorian universities, of whom 73% were male and 27% were female. Their mean age was 46.5 years (*SD* = 12.5). Regarding their academic level, 3% were PhD, 72% held a master's degree, and 25% had the third level of studies. They had been teaching in the university for an

average of 12.3 years (*SD* = 11.3), and 59% worked in public universities, whereas the rest worked in private ones.

Instruments

We used the Spanish version of the *Occupational Stress Inventory* (OSI; Cooper, Sloan, & Williams, 1988). To measure work overload, we selected 8 items of the sub-scale *Intrinsic Work Factors*, specifically those related to work overload (example item: "*I have too much work to do*"). The items were rated on a 6-point Likert scale, ranging from 1 (*It is not at all a source of pressure)* to 6 (*It is definitely a source of pressure*). Reliability of this scale was appropriate (α =. 72). Emotional exhaustion was assessed with 5 items from the *Maslach Burnout Inventory General Survey* (Schaufeli, Leiter, Maslach, & Jackson, 1996), using the Spanish translation carried out by Gil-Monte (2002). An example item is: *"I feel emotionally exhausted by my work,*" rated on a frequency scale ranging from 0 (*Never*) to 6 (*Every day*). The alpha Cronbach for this scale was α =. 86. To measure coping, we used 17 items from the OSI scale, regrouped through factor analysis (with varimax extraction and rotation method) in the two theoretical dimensions of Dewe (1989): Active coping (8 items, α =. 76; i.e., *Using selective attention to focus on specific problems*) and Evasive coping (9 items, α =. 70; i.e., *Postponing the problem and putting it aside*). Using a 6-point Likert scale, respondents rate the frequency with which they use the different strategies, ranging from 1 (*I never use it*) to 6 (*I use it frequently*).

Data Analysis

To test the hypotheses of the study and verify whether the relations between work overload and emotional exhaustion are direct and/or moderated by active and evasive coping, we elaborated a hierarchical regression model as recommended to

determine the interaction effect (Cohen, Cohen, West, & Aiken, 2003). Specifically, in the first step, we entered the years of university teaching experience as a control variable; in the second step, work overload; in the third step, coping styles (active and evasive); in the fourth step, the double interactions between the stressor and the two types of coping; and lastly, in the fifth step, the triple interaction between the stressor, active coping and evasive coping.

Results

In Table 1 are presented the means, standard deviations, and correlations between the variables.

Table 1. Means, standard deviations and correlations

	Variables	Scale	Items	X	SD	2	3	4	5
1	University teaching experience	-	-	12.30	11.31	-.13*	.02	-.06	-.26***
2	Work overload	1 - 6	7	3.47	.96		-.06	.23***	.20**
3	Active coping	1 - 6	8	5.06	.69			.30***	-.28***
4	Evasive coping	1 - 6	9	3.87	.82				.10
5	Emotional exhaustion	0 - 6	5	1.86	1.39				

N = 192; * p< .05 **p< .01 *** p<.001

In Table 2 are shown the results of the regression equation to test the hypotheses. Control variable teaching experience, F (1,190) = 13.54, $p < .001$, was significant, explaining 6% of the variance of emotional exhaustion. Work overload (β = .17, $p < .05$), increased the explained variance to 9%. Both active coping (β = - .31, $p <$ .001) and evasive coping (β = .15, $p < .05$) were significant, increasing the explained variance to 18%, F (4,187) = 10.81, $p < .001$. The interaction between work overload

and evasive coping was significant (β = -.67, p < .10), F (6,185) = 7.70, p < .001, increasing the explained variance to 20%. The interaction work overload x active coping x evasive coping was non-significant.

Table 2. Regression equation to determine the interaction effect on emotional exhaustion

	PASOS				
Variables	I	II	III	IV	V
Teaching experience	-.25***	-.23**	-.22**	-.22**	-.22**
Work overload		.17*	.11	.25	.49
Active coping			-.31***	-.47†	-.45†
Evasive coping			.15*	.50*	.51*
Work overload x AC				.37	.12
Work overload x EC				-.67†	-.98
Work overload x AC x EC					.32
F	13.54***	9.90***	10.81***	7.70***	6.58***
R2	.06	.09	.18	.20	.20
ΔR2	.06***	.03*	.09*	.02†	.00

N = 200; †<.10 * p< ,05 ** p< ,01 *** p< ,001; AC = Active coping, EC = Evasive coping

Figure 1 shows the interaction of work overload with evasive coping. As can be observed in situations with low work overload, there are hardly any differences between individuals using evasive coping frequently or infrequently but when work overload is high, teachers who use fewer evasive coping strategies are more exhausted.

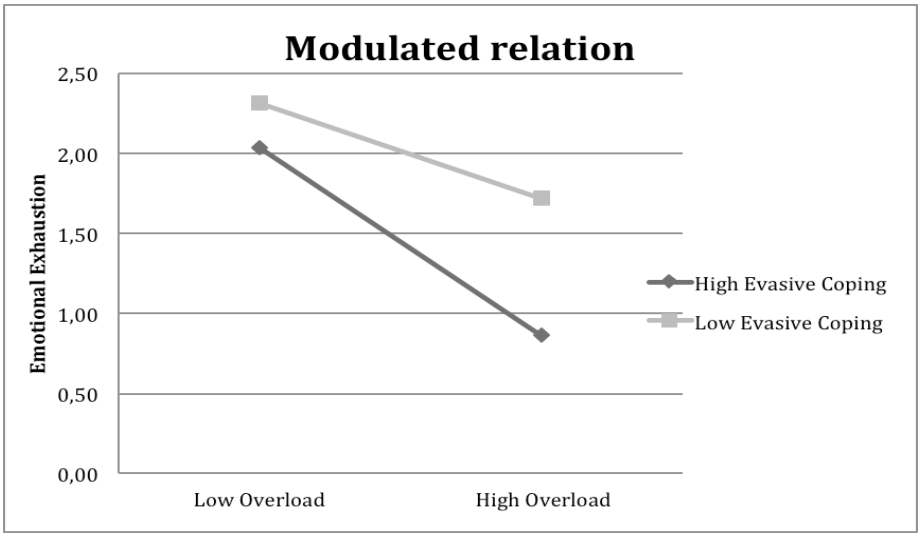

Figure 1. Modulated relationship between work overload and evasive coping to predict emotional exhaustion.

Discussion

The goal of this study was to analyse the relationship between the stress produced by work overload and emotional exhaustion and to study the role of coping strategies in this relationship in a sample of Ecuadorian university teachers. This general goal was reflected in four hypotheses about the relationship between work overload and active and evasive coping and emotional exhaustion. As expected, work overload is positively and significantly related to emotional exhaustion, thus supporting the first hypothesis. These results are consistent with many of the studies reviewed in which university teachers with higher work overload also had higher levels of emotional exhaustion (e.g., Abbas & Roger, 2013; Tripken, 2012). In the studies that did not find this relation, for example that of Chennoufi et al. (2012), this may be due to the weight of other aspects, such as poor working conditions or administrative difficulties, which were not taken into account in our study.

The second and third hypotheses related coping styles to emotional exhaustion and also received support in the expected direction. Our results coincide with those of studies revealing that the coping styles used by teachers are related to burnout (e.g., Meng, 2008), and especially, with those in which active and evasive coping were related, respectively, to lower and higher scores in exhaustion (Chan, 2011; Gantiva, Jaimes, & Villa, 2010). The results found in Ecuadorian teachers are similar to those found in teachers who are not Latin American. This allows us to state that, in the sample studied, the effect of coping strategies on health, and specifically on emotional exhaustion, coincides with the results obtained to date in most European or American contexts and countries.

The fourth hypothesis analyzed the moderating role of coping in the relationship between work overload and emotional exhaustion and proposed that its effect would be particularly evident in situations of high overload. Our results are interesting because they show that when overload is high, employees who use more evasive coping strategies are less exhausted than those who use evasive coping infrequently and no evidence was found that active coping behaves similarly. This fact merits highlighting and it qualifies the above finding of positive relations between evasive coping and exhaustion because, although evasive coping is related to the deterioration of psychological health, it seems that it can be beneficial in stressful situations. These results are consistent with other findings showing that, in order for coping strategies to be efficacious, they must adapt to the situation (Shimazu & Kosugi, 2003). To be more precise, evasive strategies are efficacious when it is difficult to change the situation or the stressors. For example, Oren (2012) notes that active coping is useful for employees with high levels of autonomy and control but for those with little capacity of control, active coping may be counterproductive for health due to the extra effort involved.

Lastly, we found no evidence of the triple interaction Work Overload x Active Coping x Evasive Coping, and unfortunately, the fifth hypothesis was not confirmed.

In spite of these results, which we think are interesting, some limitations of the study should be noted. The main one has to do with the characteristics of the sample, which was predominantly male and with considerable teaching experience. It should be underlined that sex and age have been related to the variables of interest, so in future studies, expanding the sample to increase heterogeneity in these variables should be a priority. Likewise, more research is needed in the study of organizational variables. For example, Álvarez Flores (2007) observes that teachers from Peruvian public institutions report more sources of pressure and lower job satisfaction than teachers from private institutions. Moreover, the other dimensions of burnout that are not examined in this study, that is to say, depersonalization and the loss of a sense of personal accomplishment, should also be considered in order to analyze their relationships with stress and coping strategies in more depth. It would also be interesting to introduce other variables, both stressors and coping strategies, in order to continue to confirm the adaptation thesis, as well as other variables that may also intervene in the observed relations, for example, social support (Shimazu, Shimazu, & Odara, 2005), the capacity of control (Mark & Smith, 2012), or professional self-efficacy, as they have proof to be important predictors of burnout in teachers (Aloe, Amo, & Shanahan, 2014). Lastly, our results should be compared with longitudinal data (e.g., van den Tooren, Jan Vlerick, & van de Ven, 2011), in which it can be determined whether the effect of the different coping strategies is more or less permanent.

From an applied viewpoint, the results obtained indicate that the variables considered in this study should be addressed if we want to improve the occupational

health of our teachers. In addition, younger teachers with less job tenure should receive more attention, as they have been observed to be more susceptible to having problems. To give further details, programmes should firstly identify their workload in order to ensure that it does not become a stressor, generating exhaustion. The universities should also set up formative activities in order to teach coping strategies that are appropriate to the situations experienced by the teachers. References can be found of the efficacy of certain practices, for example, training in emotion management (Kinman et al., 2011) or training in the experience of gratitude and happiness (Chan, 2011).

Lastly, we think that this study is a step forward in our knowledge of the quality of life and working conditions of Ecuadorian teachers because, to date, this kind of studies had not been carried out in this country before.

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CAPÍTULO 2

The relation of culture to differences in burnout and coping strategies between Ecuadorian and Spanish teachers

The relation of culture to differences in burnout and coping strategies in Ecuadorian and Spanish teachers

Abstract

Culture has an effect on how people perceive things including health and illness, and influences the way they cope with them. The present study analyzes the relationship between culture and differences in burnout (emotional exhaustion, cynicism, and personal accomplishment) and coping styles (action-focused coping and emotion-focused coping) in two teacher samples from Spain (n = 203) and Ecuador (n = 242). The results showed significant differences in burnout and in the use of coping strategies (evasive strategies). These differences, according to hypothesized, are related to the cultural differences between the two countries, measured in terms of cultural distance. It was also found that contextual differences (cultural and organizational) can predict the presence of burnout better than personal characteristics. Finally, the importance of considering the cultural context in the workplace.

Key words: Culture, burnout, coping styles, cultural distance.

Resumen

La cultura tiene un efecto en cómo la gente percibe las cosas, incluyendo la salud y la enfermedad e influye en el estilo de enfrentarse a ellas. El presente estudio analiza la relación entre la cultura y las diferencias en burnout (agotamiento emocional, cinismo y realización personal) y los estilos de afrontamiento (enfocado en la acción y enfocado en la emoción) en dos muestras de maestros de España (n = 203) y Ecuador (n = 242). Los resultados mostraron diferencias significativas en burnout y en el uso de

estrategias de afrontamiento (estrategias evasivas). Estas diferencias, conforme a lo hipotetizado, están en relación con las diferencias culturales entre los dos países, medidas en términos de distancia cultural. También se encontró que las diferencias contextuales (culturales y organizacionales) pueden predecir la presencia del burnout mejor que las características personales. Finalmente se destaca la importancia de considerar el contexto cultural en el ámbito laboral.

Palabras clave: Cultura, burnout, estilos de afrontamiento, distancia cultural.

Introduction

Culture can be defined as integrated patterns of learned beliefs and behaviors that are shared among groups and include thoughts, communication styles, ways of interacting, views of roles and relationships, values, practices and customs (Vaughn, 2010). Culture has an effect on the way the world is perceived and it is embedded and strongly influences cognitive processes. According to Triandis (2005) people has shared patterns of attitudes, beliefs categorizations, self-definitions, norms, role-definitions, and values that are organized around a theme. These patterns are like "umbrella constructs" and are called cultural syndromes. They must be identifiable among those who speak a language dialect, during a specific historic period, and in a definable geographic region. A cultural syndrome has many elements and it is much richer than a dimension of culture. The different way that people understand and explain the same things across countries is due to cultural syndromes. This is manifested for example in the different way of explaining issues such as health and illness (Helman, 2007), the meaning of work or organizational behavior (Fouka & Schlaepfer, 2017).

Burnout has been considered a highly prevalent globalized health issue that arises when coping strategies fail, and it consists of a response to prolonged exposure to chronic work environment stressors and causes significant physical and psychological health problems (Steinhardt, Smith, Faulk, & Gloria, 2011). It combines three dimensions as part of the same pattern. One dimension is emotional exhaustion (EE) entailing affective deterioration, not being able to give more of oneself on the affective level and exhaustion of energy and emotional resources. The second dimension involves negative attitudes and behaviours towards the beneficiaries of the service (depersonalization) or toward the work itself (cynicism) (C). The third dimension, lack of personal accomplishment (PA), implies cognitive deterioration, the loss of the

illusion about the work, the loss of the professional sense, and tendency to negatively evaluate one´s work (Maslach, Jackson, & Leiter, 1996). This widespread phenomenon is present in all countries and it "appears to be quite prevalent in both developing and developed countries and probably represents considerable economic, social and psychological costs" (Shirom, 2005, p. 263).

If burnout is present in all countries and each country conceptualizes things according to their cultural syndromes, then burnout, and how to deal with it, will be understood differently and will have diverse outcomes in countries with different cultures. Some research has analyzed the relationship between culture and coping strategies (Akhtar & Kroener-Herwig, 2017; Kuo, 2011; Tseng, 2012), but there is not much research linking culture and burnout (Etzion & Pines, 1986; Maris, 2014; Savicki, 2002). Previous studies have provided evidence that there are significant differences in symptoms of depression and coping strategies among samples of Latino and European American students based on the cultural characteristics of these populations (Beltran, 2006). Others have concluded that differences in burnout between teachers in France and Italy were more related to working conditions and cultural contextual factors than to personal characteristics such as sex or age (Pedrabissi & Rolland, 1993).

Based on these statements, the objective of this study is to analyse the differences in burnout and coping strategies in teachers from Ecuador and Spain, and to examine the relationship of these differences to cultural differences between these two countries. That is, to test the hypothesis that organizational and cultural contextual factors may influence on burnout and coping strategies more than personal factors.

Differences between the cultural syndromes of Ecuador and Spain

Differences in cultural syndromes have been operationalized through cultural models and dimensions. Cultural dimensions are criteria or ways of characterizing a culture in terms of issues related to life and to the human being. Characterizing a culture does not mean that all individuals in that culture are programmed in the same way. Although individual differences exist and are recognized, however, the cultural dimension is a sort of "average pattern of beliefs and values" shared by members of the same culture (Hofstede, 1983, p. 78). Schwartz (1999) argued that one of the advantages and benefits of cultural models and dimensions is that they can be used to predict and understand national differences in work-related issues. In turn, Taras, Steel, and Kirkman (2011), in their work that covers 30 years of research, conclude that Hofstede indicators (2001) continue to be useful and provide a strong empirical basis for research on cultural dimensions. According to their results, cultural dimensions weigh more than age, experience, sex, race or educational level, in aspects as important as health at work. Based on this statement, our study appropriates the Hofstede model, which is explained below, to analyse the cultural differences between Spain and Ecuador.

The Hofstede model

From a survey of more than 115,000 subjects, workers from the IBM multinational in more than 80 countries and collected between 1968 and 1972, Hofstede (1983) initially proposed a model of four dimensions independent of each other: individualism vs. collectivism, power distance, uncertainty avoidance, and masculinity v. femininity. Subsequently (2010) introduced an additional dimension: long-term orientation. Each is briefly explained below.

The dimension of individualism versus collectivism has to do with the relationship between individual and his/her peers in a society. In societies that score

high on individualism, each individual is expected to worry only about himself or people very close to him. This is possible if society gives much freedom to its members. In collectivist societies, on the other hand, individuals expect their peers or members of one group to care for each other as part of a common loyalty. People are born into groups such as the family and belong to them, where they find security and protection and in return they share and defend the beliefs and unity of the group.

The power distance has to do with how society faces the fact of inequality between people. It expresses the degree to which the less powerful people in a society expect and accept that power is unevenly distributed. Societies with high inequality in the distribution of power are thus maintained by the psychological need for dependence on the less powerful. In societies with high power distances, people accept the inequality and the hierarchical order in which each one has a place without needing to be justified. In societies with low power distance people seek the equitable distribution of power and ask for justification for the inequalities encountered.

Uncertainty avoidance refers to the degree to which the members of a society are comfortable with uncertainty and ambiguity, and how a society is confronted with the uncertainty of the future (Hofstede, 2001). Societies with high uncertainty avoidance try to control the future and have strict and rigid codes about beliefs and behaviour, people have a higher level of anxiety and aggressiveness and try to ensure security through technology, laws or religion. On the other hand, in societies with low uncertainty avoidance people tend to accept things as they come, take risks easily, are more tolerant of different opinions and have a tendency to feel relatively secure.

The masculinity vs. femininity dimension refers to how social roles are shared between the sexes. Although the only activities that are strictly determined by sex are those related to procreation, however, throughout history, certain roles have been

specifically attributed to men and others to women. This is known as the gender role theory. Societies that strongly differentiate the division of sex roles are male societies where male social values predominate by showing preference for achievement, heroism, material rewards, and success. These societies are more competitive. Societies where the difference between social roles of gender is weak are female societies where the dominant values are those traditionally associated with the feminine, such as preference for cooperation, modesty, caring for the weak, and quality of life. These societies are more oriented towards consensus. High scores in this dimension indicate greater masculinity.

Finally, long-term orientation has to do with how societies deal with the passage of time assuming their past, their present and their future. Societies that score high in this dimension are pragmatic, encourage savings and strive for a good education that prepares for the future. On the contrary, societies that score low on this dimension see change as a threat and cling to traditions and norms as treasures of the past that must be maintained.

To quantify national cultural dimensions, Hofstede (2001) used a scale that runs from 0 to 100 with 50 as a midlevel. The rule of thumb is that if a score is under 50, the culture scores relatively low on that scale, and if any score is over 50, the culture scores high on that scale. These scales are progressive so that a score of 40 on a scale indicates a low level in a given dimension but a score of 20 would indicate an even lower level in that dimension. In the case of individualism, the low side (under 50) is considered "Collectivist" and above 50 considered "Individualist". In the case of masculinity, a score below 50 indicates “Femininity”, and above 50 indicates “Masculinity”.

Differences between Ecuador and Spain

Quantifying the cultural dimensions of countries also allows quantifying cultural differences or distances between countries. The concept of national cultural distance can be defined as the extent to which the shared norms and values in one country differ from those in another (Hofstede, 2001; Kogut & Singh, 1988), and it has been used especially in the field of international business (Drogendijk & Slangen, 2006; Farías, 2016), in the management of expatriates (Chen, Kirkman, Kim, Farh, & Tangirala, 2010), and in relation to learning (student's mobility, language learning) (Moore, May, & Wold, 2016).

The methodology for quantifying the national cultural distance was proposed by Kogut and Singh (1988), who developed a cultural distance index for the cultural dimensions measured by Hofstede (1983). Kogut and Singh (1988) combined the cultural dimensions of Hofstede (1983) in an aggregate measure of cultural distances between countries. Such a measure has been widely used in further research in various areas of the social sciences (eg, Agarwal, 1993; Barkema, Bell, & Pennings, 1996). This index is formed "from the average of the deviations of the indices (I) between country "X" and country "Y" in each of the "i" cultural dimensions, corrected for the variance (V) of each "I" cultural dimension "(Kogut and Singh, 1988, 422). Algebraically, the cultural distance index between country "X" and country "Y" (Cultural Distance - CDxy) is calculated with the following formula:

$$CDxy = \sum_{i=1}^{4} \left\{ \left(I_{iecu} - I_{isp} \right)^2 / V_i \right\} / 4 \qquad (1)$$

where CDxy is the cultural distance between country "x" (Ecuador in this case) and country "y" (Spain in this case), I_{iecu} is country x's score on the *i* th cultural dimension, I_{isp} is the score of Spain on this dimension, and V_i is the variance of the score of the dimension.

In this study, we have considered four Hofstede national cultural dimension scores for Ecuador and Spain (see Table 1. There is no long-term orientation score for Ecuador).

Table 1. National Cultural Dimension Scores for Ecuador and Spain

	Ind.	PD	UA	Mas.
Ecuador	8	78	67	63
Spain	51	57	86	42

Source: Hofstede (2001). Scores range from 0 to 100. Note: Ind. = Individualism; PD = Power Distance; UA = Uncertainty avoidance; Mas. = Masculinity.

According to Kogut and Singh index (1988), the general cultural distance between Ecuador and Spain is 1.001. To better understand this value, we point out that the average cultural distance between Ecuador and Latin American countries is 0.409 (0.935 compared to Argentina, 0.397 compared to Brazil, 0.624 compared to Chile, 0.097 compared to Colombia, 0.337 compared to Peru, 0.063 compared to Venezuela), and 1.945 compared to Germany, 1.131 compared to Japan and 2.799 compared to the United States. These references can help us to more appropriately dimension the distance between the culture of Ecuador and Spain.

This would mean that although there are many cultural ties between Ecuador and Spain, related to their history and traditions, and that they share the same language, however, there is an important cultural distance. The main cultural difference between Ecuador and Spain appears in the individualism vs. collectivism dimension, being Ecuador a very collectivist country. In turn, in Ecuador there would be a great power distance and a higher level of masculinity than in Spain.

Cultural differences and burnout

From the cross-cultural point of view, some authors have compared differences in burnout levels between countries. For example, Fischer and Boer (2011) analysed emotional exhaustion in 25 countries (245 samples) finding that the country effect was significant accounting for 44% of the variance of exhaustion, and that the country's individualism score was negatively related with exhaustion. Other authors have found variation in exhaustion according to the meaning given to life and existence in the country. Pines and her colleagues (Etzion y Pines, 1986; Keinan y Perlberg, 1987; Pines, 2002; 2003; 2004; Pines, Ben-Ari, Utasi y Larson, 2002) have compared samples of Israelis with other societies (American, Israeli Arab or Hungarian). Their main finding is that, although life in Israel is more stressful, samples of Israelis report lower levels of burnout than other samples, contrary to what might be expected, and the explanation is posed from an existential perspective, and the need of people to believe that their lives make sense. According to Pines (2004), Israelites have less burnout because constant reminders of threats to their existence lead them to make more sense to stay alive. Nevertheless, other authors have found no differences in burnout depending on the country, for instance Jamal (2007), who examined exhaustion in samples of workers from Canada and Pakistan. This author argues that the lack of difference in exhaustion between these two countries is due to the influence of globalization, which affects both developed and developing countries. However, Denton, Chaplin, and Wall, (2013) suggest that it is important to consider not only exhaustion but more than one dimension. They analysed cultural differences and similarities in burnout in teachers between Jamaica and the United States, finding that when burnout is moderate, exhaustion explains better the differences between countries, but when burnout is high, the dimension that best explains these differences is cynicism.

From a different point of view, some studies have analysed the relationship between cultural dimensions and burnout. In fact, Taras et al. (2011) conclude that cultural dimensions are one of the best predictors of attitudes, behaviours and performance at work, and according to their results, cultural dimensions weigh more than age, experience, sex, race or educational level, in aspects as important as health or well-being at work. For example, Farzianpour, Abbasi, Foruoshani, and Pooyan, (2016) found that components of culture, including individualism/collectivism, power distance, uncertainty avoidance and masculinity/femininity, are related to, and explain a 9.3% of variance of job burnout.

Individualism / collectivism refers to relationship between an individual and his peers in a society. The greater the individualism in a society, the greater the competitiveness among individuals. People compete with each other to achieve their goals and this leads them to take greater risks, to perform more aggressive and risky behaviours and to assume a greater workload, which results in greater levels of exhaustion. In turn, depersonalization increases as the individual is more independent and is easier for him / her to stay at a distance from others (Triandis, 1994). On the other hand, in the most collectivist societies, exhaustion and depersonalization would be minor, since the responsibility for actions is not individual but group, and there is also more social support. However, personal accomplishment would diminish because the success of the group is what matters. Although in these societies social support is greater, however the pressure of the group and the group decision making can lead to the feeling that personal performance is not successful, reducing personal accomplishment. Also, the contagion of burnout would be greater in collectivist societies. The Welbourne, Gangadharan, & Sariol (2015) study provides evidence on these claims.

As far as power distance is concerned, it would be negatively related to burnout. The greater the power distance, the better people accept the inequality in the distribution of power. This implies that the vast majority who have no power only have to follow the instructions of those who are in charge, which involves less responsibility and less stress. In turn, a good leadership style of those with power produces more satisfaction in followers, as well as lower levels of burnout (Bagher, Rezaee, & Abed, 2012; Lin, Wang, & Chen, 2013).

The uncertainty avoidance relates to how society is confronted with the uncertainty of the future. Trying to control the future and uncertainty can become a stressful activity because it involves trying to control unknown aspects that have not yet taken place, as well as a constant state of alert (Buhr & Dugas, 2012; De Meulenaer, De Pelsmacker, & Dens, 2015). In this sense, societies with high uncertainty avoidance would be related to greater stress and burnout, whereas more relaxed societies would tend to accept things as they come and thus have a lower level of burnout (Golembiewski, Scherb, & Boudreau, 1993).

Finally, the masculinity vs. femininity dimension refers to how social roles are shared between the sexes. The fact that men and women in most cultures have different roles, with the male roles higher in self-assertion and mastery of the environment and the female roles higher in selfless concern for the welfare of others, results in gender roles inequality (Eagly & Kite, 1987). In a masculine society, the difference between roles is very marked so that men have to perform the masculine roles emphasizing the activity, aggressiveness, and rationality, whereas the women would have to play the feminine roles that would consist in passive, emotional, tenderness and nurturing (Gutek & Cohen, 1987). Meanwhile, in a more feminine society gender roles would be more evenly matched. There is no evidence in the literature of how masculinity /

femininity affects burnout, but it could be expected that high masculinity would be related to exhaustion and depressive symptoms (Stoppard and Paisley, 1987), since the masculine role is associated with riskier jobs, greater responsibilities, greater overload, where strength plays an important role. This would imply that burnout will be higher in societies with high masculinity.

In short, societies that score high in individualism, low in power distance, high in uncertainty avoidance and high in masculinity would experience higher levels of burnout. The first three characteristics are given in the scores of Spain with respect to those of Ecuador. This leads us to propose the following hypothesis:

Hypothesis 1: *The levels of burnout in the sample from Spain will be higher than those in the sample from Ecuador (Higher EE and C, and lower PA in Spain) based on the individualism, power distance and uncertainty avoidance scores of these countries.*

Hypothesis 2: *The prevalence of the syndrome will be higher in the sample from Spain than in the sample from Ecuador.*

Cultural differences and coping

Coping mechanisms are the behavioural and cognitive efforts made to manage, reduce or tolerate the internal and external demands generated by stressful events (Lazarus & Folkman, 1984). Literature has identified three kinds of strategies as being significant for mental health, namely, problem focusing, seeking social support, and avoidance coping, which are active or passive coping behaviours. Active coping strategies are also called problem-focused coping, while passive coping is known as emotion-focused coping (Carver, Scheier, & Weintraub, 1989).

Some authors (Chun, Moos, & Cronkite, 2006; Kuo, 2011; Lazarus, 2000) have argued that coping strategies are socially acquired and influenced by culture, and tend to produce a characteristic behaviour in individuals who share similar cultural values and norms, so that individuals from similar cultures tend to approach problems in a similar way (Akhtar, & Kroener-Herwig, 2017). In this sense, and generally speaking, individuals from individualistic cultures tend to appraise stressors as a challenge than as a threat, engage in more active or approach coping, and coping strategies that confront and modify external stressors (e.g., behavioural or approach-focused coping strategies) are expected to be more common. By contrast, individuals from a collectivistic culture are more likely to appraise stressors as a threat than as a challenge, are more likely to be sensitive to actual harms and losses incurred by stressors, engage in more passive or avoidance coping, and coping strategies that avoid external stressors and instead modify internal psychological states (e.g., cognitive or avoidance-focused coping strategies) are expected to be more common (Chun et al., 2006). Beltrán's work (2006) that compares the use of coping strategies between Mexican American (collectivist society) and European American (individualistic society) samples supports these claims. She found that the Latino sample tended to manage their external and internal resources in a "passive" or "self-modifying" way when confronted with stressful life events, tended to rely on emotion-focused and avoidance coping strategies to a greater extent than European Americans, they reliance on religious practices to reduce stress, and use members of their social network, whether it is family or close family friends (i.e. seeking social support), to assist in the coping process.

However, evidence on the use of coping strategies in cross-cultural research is inconclusive. Some studies have found evidence to support other patterns. For example, McCarty et al. (1999) found that emotional-focused coping strategies where more used

in some individualistic countries when coping with physical injury. In turn, Bjorck, Cuthbertson, Thurman, and Lee, (2001) found no significant cultural differences in active-focused coping, and Lee and Liu, (2001) did not found differences with respect to indirect coping. In any case, it is worth noting that from cross-cultural research on coping two main ideas emerge: people rely on multiple coping strategies (Bjorck et al., 2001), and that "observed cultural (ethnic or national) differences are in terms of relative magnitude" (Chun et al. 2006, p. 43).

Based on these statements we propose the following hypothesis:

Hypothesis 3: *There are significant differences in the coping styles between the samples from Spain and Ecuador so that the sample from Spain will score higher in action-focused coping while the sample from Ecuador will do in emotion-focused coping.*

On the other hand, the results of the literature on coping and health outcomes are inconclusive. Some research shows that more direct coping strategies or problem-focused strategies are positively related to psychological health (e.g., Austria, Cruz, Herrera, & Salas, 2012; Mark & Smith, 2012). Furthermore, some authors have found that the effects of active coping are related to better health in some ethnicities but not in others depending on their ethnic characteristics (Watson, Logan, & Tomar, 2008). However, there is less consensus about the more indirect strategies or strategies aimed at managing emotions (palliative, avoidance, and passive coping, also named maladaptive coping styles) which, in some cases, are linked to lower psychological well-being (Fledderus, Bohlmeijer, & Pieterse, 2010; Mark & Smith, 2012), and the negative effects are particularly manifested in the long-term (Flanagan, Jaquier, Overstreet, Swan, & Sullivan, 2014). Nevertheless, other investigation has not found these negative effects (Lin, Probst, & Hsu, 2010).

Specifically, in relation to burnout Shin, Park, Ying, Kim, Noh and Lee (2014) found, in a meta-analysis with 36 studies, that active or action-focused coping strategies were negatively related to emotional exhaustion and cynicism and positively to personal accomplishment, while evasive or emotion-focused coping strategies were positively associated with emotional exhaustion and cynicism and negatively with personal accomplishment. More recently, García-Arroyo and Osca (2017) also found significant negative relationships between emotion-focused coping and exhaustion and cynicism, and positive relationships with personal accomplishment in a sample of university teachers.

Considering these statements, we proposed the next hypothesis:

Hypothesis 4: *Active-focused coping will be related negatively to emotional exhaustion and cynicism and positively to personal accomplishment in the sample from Spain. There will also be no significant relationship between emotion-focused coping and burnout dimensions.*

Hypothesis 5: *Emotion-focused coping will be related positively to emotional exhaustion and cynicism and negatively to personal accomplishment in the sample from Ecuador. There will also be no significant relationship between action-focused coping and burnout dimensions.*

Finally, respected the factors that better predict burnout we hypothesised that,

Hypothesis 6: *The predictors of burnout will be different in the Spanish sample than in the Ecuadorian.*

Hypothesis 7: *Job conditions (teaching level and institution), and cultural factors (coping strategies) will better predict burnout than personal factors (sex, age, academic degree) in both samples.*

Method

Participants

The Spanish sample is made up of 203 teachers where 62.1% are women. The mean age is 45.92 years (SD = 8.96), where 31% are under 40 years. 7.4% have middle education degree and 92.6% have higher education degree. 22.7% teach in primary education and 77.3 teach in secondary education. 77.8% work in public schools and 22.2% in private schools. 6.9% have a tenure under 5 years, 14.8% have been working between 6 and 10 years, and 78.3% have been working more than 10 years.

The Ecuadorian sample is made up of 242 teachers where 75.2% are women. The mean age is 42.22 years (SD = 12.11), where 47.5% are under 40 years. 29.8% have middle education degree and 70.2% have higher education degree. 29.8 teach in primary education and 58.7 work in public schools. 53.7% have a tenure under 5 years, 21.1% between 6 and 10 years, and 25.2% more than 10 years.

Instruments

To measure burnout the Spanish translation by Gil-Monte (2002) of the Maslach Burnout Inventory General Survey, MBI-GS (Schaufeli, Leiter, Maslach, & Jackson, 1996) was used. Although there is a specific version for educator, MBI-GS has shown adequate reliability and a good fit to the data in samples of teachers (for example see Tomás, De los Santos, Alonso-Andrés, & Fernández, 2016). This scale has 16 items that are allocated in three dimensions: EE (5 items, $\alpha = .87$), cynicism (5 items, $\alpha = .81$) and personal accomplishment (6 items, $\alpha = .74$). Responses are measured on a seven-level frequency scale ranging from 0 = "Never" to 6 = “Everyday”.

To measure coping, the Occupational Stress Indicator (OSI) (Cooper, Sloan, & Williams, 1988) were used. The original OSI factor structure for coping is ambiguous

with six dimensions in its original form (Evers, Frese, & Cooper, 2000). Nevertheless, previous research (Lyne, Barret, Williams, & Coaley, 2000; Steiler, & Paty, 2009) have carried out exploratory factor analysis finding a parsimonious two-factor solution leading "to a first factor, centred on the problem and a second factor centred on emotion" (Steiler, & Paty, 2009, p.116), including items related to seek social support (Lyne et al., 2000, p. 208). Therefore, we operationalized coping measure in two dimensions: action-focused coping with 6 items (α = .72; an example item: "Coping with problems as they occur") and emotion-focused coping with 7 items (α =. 70; example item "Postpone the problem and park it", "When I have problems, I discuss them with my partner or my friends"). The selection of items was made on the basis of expert judgment, keeping in mind the Steiler and Paty, (2009) factorial solution of two factors and the concept validity of action-focused coping and palliative coping (Dewe, 1989; Lazarus & Folkman, 1984). This procedure has been used in a similar way in previous research (Fortes-Ferreira et al. 2006; García-Arroyo & Osca, 2017). Responses are measured in a six-level scale that asks how often different strategies are used ranging from 1 = "I never use it" to 6 = "I use it very frequently".

Procedure

A letter was sent at random to headmasters from public and private schools from a list of institutions in Spain (Alicante and Valencia) and Ecuador (Guayaquil). The letter explained the purpose of the research and invited teachers to voluntarily participate in the study. The questionnaire was on-line administered in Spain and in person in Ecuador. In both cases we explained the instructions to properly fill the questionnaire before teachers completed it. Data were collected in June 2015. A total of

470 questionnaires were collected, but 25 of them were discarded because of incompletely filled.

Data analysis

To test our hypotheses, we have first performed descriptive analysis and mean differences (*t*-tests) analysis. Later, to analyse which factors may predict burnout in both countries we calculate the prevalence of the syndrome following the method proposed by Maslach and Jackson in the MBI manual (1996). For each dimension, the scores were divided into three groups according to the 33rd and 66th percentiles to obtain three levels of intensity, low, medium and high. The presence of the syndrome was considered when simultaneously high scores in EE and C and low scores in AP were found, and the absence of the syndrome when this condition is not fulfilled. Finally, we conduct a multinomial logit regression analysis both for Spain and Ecuador to test which factors may predict the presence of burnout. Categorical variables were coded as follows: For sex, 0 = female, 1 = male; for age, 0 = < 40 years old, 1 = > 40 years old; for academic level achieved, 0 = middle degree, 1 = higher degree; for teaching level, 0 = teach in primary education, 1 = teach in secondary education; for institution, 0 = public, 1 = not public (private / concerted).

Results

Table 2 shows that the level of burnout is higher in Spain than in Ecuador, with significant differences in cynicism and personal accomplishment, with a moderate effect size in terms of Cohen (1988). The value of emotional exhaustion is also higher in Spain but not significantly compared to Ecuador. These data partially confirm hypothesis 1. Considering coping strategies, the values do not show significant

differences in active-focused coping, but are significantly higher in Ecuador in emotion-focused coping, that is, teachers in Ecuador use the most frequently emotion and evasive strategies. These data partially confirm hypothesis 3.

Table 2. Analysis of means (Student t-tests) for dimensions of burnout and coping styles

	Country	Mean	SD	*t*	Cohen's d
Emotional Exhaustion	Spain	2.53	1.25	0.77	0.07
	Ecuador	2.43	1.48		
Cynicism	Spain	1.69	1.17	8.20***	0.78
	Ecuador	0.82	1.06		
Personal Accomplishment	Spain	4.76	0.72	-6.16***	-0.59
	Ecuador	5.21	0.81		
Action-focused coping	Spain	4.19	0.82	-1.27	-0.12
	Ecuador	4.30	1.02		
Emotion-focused coping	Spain	2.11	1.69	-18.62***	-1.87
	Ecuador	4.55	0.85		

*** $p < .001$. Note: Degrees of freedom for t-tests = 443.

Table 3 shows the correlation matrix between the variables in the sample from Spain (above the diagonal) and the sample from Ecuador (under the diagonal). In the sample from Spain action-focused coping is significantly related to burnout dimensions an in the expected direction (hypothesis 4). In turn, in the sample from Ecuador emotion-focused coping is positive and significantly related to emotional exhaustion and cynicism but not to personal accomplishment, providing partial support to hypothesis 5.

Table 3. Correlations between variables

		1	2	3	4	5
1	Emotional Exhaustion		.49**	-.18*	-.20**	.15*
2	Cynicism	.45**		-.42**	-.36**	.14
3	Personal Accomplishment	-.18**	-.27**		.34**	-.04
4	Action-focused coping	.05	-.09	.11		-.11
5	Emotion-focused coping	.18**	.13*	.04	.06	

* p < .05, ** p < .01. Spanish sample correlations above diagonal (n = 203); Ecuadorian sample correlations under diagonal (n = 242)

Prevalence data were calculated according to the MBI Manual, that is, each sample was divided into three groups according to the 33rd and 66th percentiles, considering the presence of the syndrome when the EE and C scores are high and those of PA are Simultaneously. Thus, the percentage of people suffering from the syndrome is significantly higher in Spain (27.1%) than in Ecuador (12.8%), $\chi^2 = 14.45$, df = 1, p <.001, providing evidence to accept hypothesis 2.

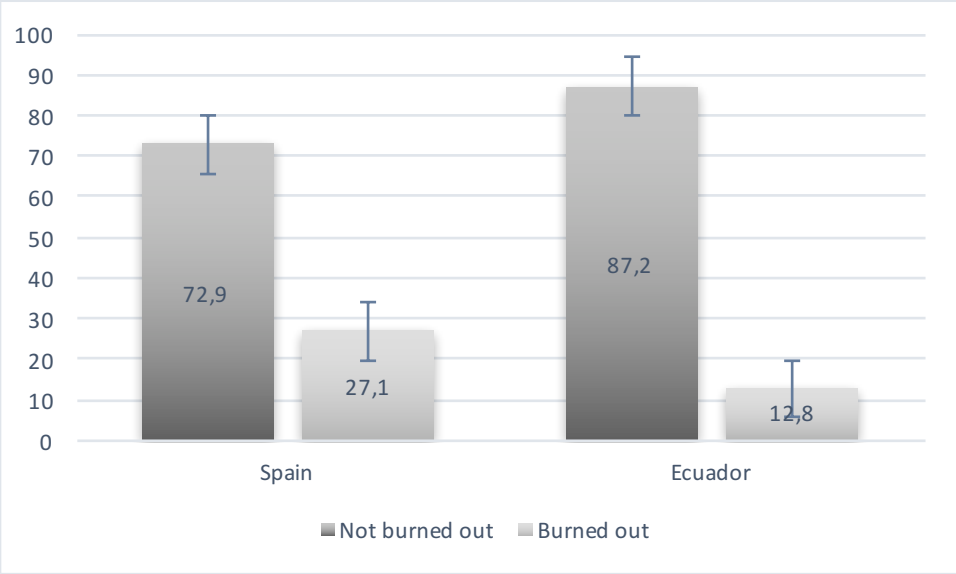

Figure 1. Prevalence of burnout syndrome in Spain and Ecuador (%), $\chi^2 = 14.45$, df =1, p < .001

To examine which factors may explain whether a person is burned out or not, binomial logistic regressions were performed for Spain and Ecuador (Table 4). In the case of Spain, the distribution of cases (burned and unburned) in block 0 allows to make predictions with a 72.9% probability of success. This probability increases to 76.4% by including the predictor variables in block 1. This model (block 1) has a suitable fit to the data, Hosmer and Lemershow $\chi^2 = 7.17$, df = 8, p = .52, and accounts for 22.8% of the variance (R^2 Nagelkerke = .228). The factors that contribute to the prediction are the level of education (*B* = -1.75, Wald (1) = 8.31, p <.01), where teachers are 0.17 times less burned in primary than secondary school, and the active coping strategy, where the most burned are the ones that do the least active coping (B = -0.74, Wald (1) = 14.51, p <.001).

As for Ecuador, the case distribution allows predictions with a probability of success in block 0 of 87.2%. The proposed model (block 1) has a suitable fit to the data, Hosmer and Lemershow $\chi^2 = 6.38$, df = 8, p = .61, and explains the 16.9% of variance (R^2 Nagelkerke = .169). In this case, the type of institution, public vs. private, is a contributing factor in prediction, where public school teachers are 6.34 times more burned out than private school teachers (*B* = 1.85, Wald (1) = 10.13, p <.01). The emotion-focused coping contributes positively and significantly to the prediction of burnout (*B* = 0.81, Wald (1) = 6.49, p <.01, *Exp* (*B*) = 2.26), so teachers who do more emotion-focused coping are 2.26 times more burned out than those who do less emotion-focused coping.

Table 4. Binomial logit regression values to predict Burnout in Spain and Ecuador

	Spain				Ecuador			
	B	SE	Wald (*df* =1)	*Exp*(B)	B	SE	Wald (*df* =1)	*Exp*(B)
Block 0								
Constant	-0.99	0.16	39.29***	0.37	-1.92	0.19	99.42***	0.15
Block 1								
Sex	-0.01	0.36	0.00	1.00	-0.25	0.45	0.32	0.78
Age	-0.57	0.40	2.04	0.56	0.45	0.42	1.16	1.58
Academic Level	0.52	0.75	0.49	1.69	-0.55	2.04	0.07	0.58
Teaching Level	-1.75	0.61	8.31**	0.17	0.68	2.03	0.11	1.98
Institution	0.04	0.44	0.01	1.04	1.85	0.58	10.13**	6.34
AFC	-0.74	0.19	14.51***	0.48	-0.66	0.43	2.39	0.52
EFC	0.21	0.11	4.01	1.23	0.81	0.32	6.49*	2.26
Constant	1.86	0.98	3.64	6.43	-3.85	1.95	3.92*	0.02

* p < .05, ** p < .01, *** p < .001. AFC = Action-focused coping; EFC = Emotion-focused coping. For sex, 0 = female, 1 = male; for age, 0 = < 40 years old, 1 = > 40 years old; for academic level achieved, 0 = middle degree, 1 = higher degree; for teaching level, 0 = teach in primary education, 1 = teach in secondary education; for institution, 0 = public, 1 = not public (private / concerted)

According to the results, Spain and Ecuador agree that individual factors such as gender, age and academic level do not seem to influence the prediction of burnout. However, there are differences between the two countries in terms of organizational factors and coping strategies. In Spain, the predictive factors are the level of education (primary vs. secondary) and active-focused coping, while in Ecuador are the type of institution (public vs. private) and emotion-focused coping. These results provide evidence to support hypothesis 6 and 7.

Discussion

The objective of this work was to analyse the differences in burnout and coping strategies in teachers from Ecuador and Spain, and to examine the relationship of these differences to the cultural differences between these two countries.

We have been able to verify that, although these two countries have important historical connections, share some traditions and have the same language, however the cultural differences between them are important in such a way that, in terms of Hofstede and compared to Spain, Ecuador is characterized for being a very collectivist country, and scores higher in power distance and masculinity, and lower in uncertainty avoidance. The magnitude of these cultural differences, measured in terms of cultural distance, is understood when compared with other countries, and therefore it is relative (Chun et al., 2006), but it helps to have an idea about similarities and differences of one society related to another, in terms of behaviours and attitudes towards issues such as burnout or coping. In this sense, it can be said that the concept of cultural distance, which has been found useful in analysing commercial and economic relations between culturally different countries (Drogendijk & Slangen, 2006), as well as in analysing the behaviours and performances of workers and students who are in other countries than the one of origin (Chen, et al., 2010, Moore, et al., 2016), may also be useful in cross-cultural and organizational psychology. In this sense, our study is innovative since we have not found in the literature on organizational psychology other studies that apply the concept of cultural distance when analysing cross-cultural issues, as far as we know. Our results provide significant evidence of differences in burnout and in the use of coping strategies between the sample from Ecuador and Spain. Thus, with respect to burnout, higher levels of exhaustion and cynicism and lower levels of personal accomplishment were found in the Spanish sample, with significant differences in the

latter two, confirming partially the hypothesis 1. The absence of significant difference in emotional exhaustion may be due as consequence of the globalization. Thus, the meta-analysis by Alarcón (2011) provides evidence to support that exhaustion is the first symptom of the syndrome that appears, followed by cynicism and lack of personal accomplishment. On the other hand, as pointed out by Schaufeli et al. (2008), the development of burnout in countries seems to be associated with economic development and with changes in the economy and in the forms of work that this development entails. In this way, it seems logical to think that in Ecuador, which has experienced significant economic growth in recent years, the first developmental effects begin to be noticed, including exhaustion, but not yet experienced cynicism or lack of personal accomplishment. This could explain that there are no significant differences between the sample of Spain and that of Ecuador in exhaustion, but in the other two dimensions.

The differences in the intensity of burnout are also displayed in significant differences in the prevalence of the syndrome between the two samples where, according to the hypothesized, the prevalence is higher in the sample from Spain. With respect to the use of coping strategies, the sample from Ecuador uses more frequently the two types of strategies (action-focused coping and emotion-focused coping) than the sample from Spain, but this difference is only significant with respect to emotion-focused coping strategies. This leads us to partially accept hypothesis 3.

The differences found in burnout and coping between the Spanish and the Ecuadorian samples are consistent with the literature regarding differences between countries with different cultural characteristics. Thus, the Spanish sample, that reports higher levels of burnout, would be associated with higher levels of individualism and uncertainty avoidance and lower power distance, while the Ecuadorian sample, which comes from a more collectivist country, with greater power distance and lower

uncertainty avoidance, reports lower levels of burnout (Golembiewski et al., 1993, Lin et al., 2013, Welbourne et al., 2015). The same can be said with respect to coping. The most collectivist countries and specifically the Latin American countries tend to rely on emotion-focused and avoidance coping strategies (Beltrán, 2006), coinciding with a significant greater use of these strategies in the Ecuadorian sample. These results would strongly suggest the existence of an association between the cultural characteristics of a country and the way in which phenomena such as burnout and coping are experienced, and are in line with previous research (Akhtar, & Kroener-Herwig, 2017; Beltran 2006; Helman, 2007).

With respect to which characteristics explain the burnout better in each country we find some similarities and differences in our samples. The gender, age and academic level had no influence on the prediction of burnout in any of the two samples. The organizational variables influence the prediction of burnout differently in the Spanish sample than in the Ecuadorian. In the Spanish sample, the level of teaching is significant (greater burnout in teachers teaching in primary schools), while in the Ecuadorian sample the type of institution is significant (greater burnout in private institutions). These organizational differences may be associated with differences in educational systems between the two countries, where for example, private education in Ecuador is characterized by a greater demand on teaching activity resulting in higher levels of burnout. This finding is in line with Pedrabassi and Rolland's claims (1993) that different cultural and professional contexts exert a greater influence on burnout in subjects who do the same job, and that these variables are more significant than sex or age.

Regarding the coping strategies, we have found that action-focused coping is more adequate to predict burnout in Spain, while emotion-focused coping is predictive

of burnout in Ecuador. This is consistent with the literature that collectivist countries often practice more evasive coping while individualists practice more active coping (Beltrán, 2006; Chun et al., 2006). The direction of prediction is also consistent with the literature, in the sense that active strategies are usually related to greater well-being (less burnout) and psychological health (Austria et al., 2012; Mark & Smith, 2012), while evasive strategies (maladaptive coping styles) are linked to lower psychological well-being (Fledderus et al., 2010; Flanagan et al., 2014; Mark & Smith, 2012). Therefore, we can conclude, not only that predictors are different between the samples, but also that working conditions and cultural characteristics are better predictors than personal attributes.

Our results are interesting, but we must also mention some limitations of our study. The main one has to do with measurement levels. In addition to using national measures of cultural dimensions, individual measures could have been used, because national culture is a kind of average pattern of beliefs and values, around which individuals in the country vary (Hofstede, 1983). This would have made it possible to analyse variations at the individual level. However, the use of measures at the national level has been widely used in previous research to compare cultural differences between countries in relation to issues such as communication (Meeuwesen, van den Brink-Muinen, & Hofstede, 2009), health (Alegría, Takeuchi, Canino, Duan, Shrout, Meng, et al., 2004; Widyanti, de Waard, Johnson, & Mulder, 2013), or organizational justice (Tata, 2005).

Few studies have analysed health from a cross-cultural approach and even less health and psychological well-being at work. In this sense, our study is innovative and supposes an important contribution to the literature. However, further research is needed. For example, it would be important to conduct studies that include more than

two societies and allow multi-level analysis. It would also be important to analyse the relationship of cultural characteristics with features of occupational health, such as occupational accidents or the safety culture across countries. Although the literature on coping and culture is more copious, nevertheless the results are not conclusive, as previously explained. It has mainly investigated which strategies are most used depending on the culture and the linear relationships between these variables. However, the dynamic and adaptive nature of coping has not received much attention, so other nonlinear approximations, such as curvilinear or interaction approaches, would be interesting.

Conclusion

Cultural syndromes influence all areas of life. In this study, we have shown how the cultural differences between two countries (Spain and Ecuador) are related and can predict differences in burnout and in the ways of coping with it. These findings are important because they make us become more aware of the importance of the national cultural context in the workplace, in addition to other factors such as organizational or personal.

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CAPITULO 3

Coping with burnout: Analysis of linear, non-linear and interaction relationships[1]

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Coping with burnout: Analysis of linear, non-linear and interaction relationships

Abstract

This study analyzes the relationship between action-focused coping, emotion-focused coping and burnout dimensions (emotional exhaustion, cynicism and personal accomplishment) by comparing linear, non-linear and interaction models using quadratic regression analysis. The sample consisted of 202 college professors. Variables such as gender or age were not significant when explaining the relationship between coping and burnout. The results show significant negative relationships between emotion-focused coping and exhaustion and cynicism, and positive relationships with personal accomplishment (linear model). They also show that very low or very high levels of emotion-focused coping diminish personal accomplishment significantly (non-linear model), and that the combined effect of strategies is significant, so that when the use of emotion-focused coping is greater than the use of action-focused coping, exhaustion increases and personal accomplishment decreases. These results support the idea that in order to better understand the flexible and adaptive nature of coping and that it operates in a combined process where one strategy affects the other, the application of non-linear and interaction models are very useful. Finally, we discuss the practical implications for future research and for prevention and intervention programs on burnout.

*Key words***:** Action-focused coping; emotion-focused coping; burnout; linear relationship; non-linear relationship; interaction effect.

Resumen

Este estudio analiza la relación entre el afrontamiento centrado en la acción y en la emoción y las dimensiones del burnout (agotamiento emocional, cinismo y realización personal) comparando los modelos lineal, no-lineal y de interacción mediante análisis de regresión cuadrática. La muestra consistió en 202 profesores de universidad. Variables como el sexo o la edad no resultaron significativas al explicar la relación entre el afrontamiento y el burnout. Los resultados muestran relaciones significativas negativas entre el afrontamiento centrado en la emoción y el agotamiento y cinismo y positivas con la realización personal (modelo lineal). También muestran que niveles muy bajos o muy altos de afrontamiento centrado en la emoción disminuyen la realización personal de forma significativa (modelo no-lineal), y que el efecto combinado de estrategias de afrontamiento es significativo, de forma que cuando el uso de las estrategias enfocadas en la emoción es mayor que el de las enfocadas en la acción, el agotamiento aumenta y la realización personal disminuye. Estos resultados apoyan la idea de que para comprender la naturaleza flexible y adaptativa del afrontamiento y de que éste opera en un proceso combinado donde unas estrategias afectan a las otras, es de gran utilidad la aplicación de modelos no-lineales y de interacción. Finalmente, se discuten las implicaciones prácticas para futuras investigaciones y para los programas de prevención y de intervención sobre el burnout.

Palabras clave: Afrontamiento enfocado en la acción; afrontamiento enfocado en la emoción; burnout; relación lineal; relación no lineal; efecto de interacción.

Introduction

One of the main efforts on burnout research has focused on discovering the nature of the association between this concept and other variables. For instance, in the last ten years the nineteen meta-analysis published on burnout have examined its antecedents and consequences (Lee, Lim, Yang, & Lee, 2011), gender differences (Purvanova, & Muros, 2010), job demands, resources, attitudes and personality factors related to burnout (Alarcon, 2011; 2009) among others. This huge amount of research suggests that researchers continue to be interested in the nature of burnout (Cox, Tisserand, & Taris, 2005), because it is an important consequence of stress at work related to health and performance and it appears to represent considerable economic, social and psychological costs to employees and employers (Shirom, 2005).

Burnout is a syndrome that arises when coping strategies fail and it consists of a response to prolonged exposure to chronic work environment stressors that negatively affects physical and psychological health of workers as well as their performance being the cause of dissatisfaction and in many cases producing the intention to quit (Huang, 2009). It has also been considered as the result of unfulfilled expectations of the subject that will produce demotivation and mechanized behaviours (Manzano-García, & Ayala-Calvo, 2013). From a psychosocial perspective, burnout combines three dimensions as part of the same syndrome, but each can be studied separately (Schaufeli, Leiter, & Maslach, 2008). One dimension is emotional exhaustion (EE) and it consists of affective deterioration, not being able to give more of oneself on the affective level and exhaustion of energy and emotional resources. The second dimension involves negative attitudes and behaviours towards the beneficiaries of the service (depersonalization) or toward the work itself (cynicism) (C). It is a kind of coping with EE. The third dimension, lack of personal accomplishment (PA), implies cognitive deterioration, the

loss of the illusion about the work, the loss of the professional sense, and tendency to evaluate negatively. As a consequence, workers are dissatisfied with themselves and with their professional results. This three-dimension structure has been discussed by some authors such as Demerouti, Bakker, Vardaku, and Kantas (2002) or Halbesleben and Demerouti (2005) who defended a two-dimension structure or such as Kristensen, Borritz, Villadsen, and Christensen (2005), Pines and Aronson (1981), and Shirom and Melamed (2005) who proposed a single dimension, that is exhaustion. Although the debate on the number of dimensions has not yet been settled, it seems clearer to accept that burnout has an emotional component, that is exhaustion as a reaction to stress, and an attitudinal component: cynicism as coping with exhaustion, and low personal accomplishment as a negative attitude toward oneself in relation to work performance, and also a coping strategy to face emotional exhaustion but in this case associated with low self-esteem (Buunk, & Schaufeli, 1993).

In addition, following Lazarus and Folkman (1984), coping mechanisms are the behavioural and cognitive efforts made to manage, reduce or tolerate the internal and external demands generated by stressful events. According to these authors, there are two basic types of coping strategies. One, called direct or action-focused coping, aims at changing the situation, trying to modify the source of stress, focused on the solution of the problem. The other is called indirect or emotion-focused coping and it is addressed to regulate the emotional response generated by the source of stress, or to avoid the problem by taking refuge in other activities of distraction or seeking social support. Examples for action-focused coping are: trying to control the situation or problem, finding and evaluating alternatives to solve it, taking into account cost-benefit, modify pressures, procedures or resources or reduce the participation of the self. Examples for emotion-focused coping are avoidance, distancing, doing positive comparisons, to seek

refuge in hobbies, in religion, to seek someone company or social support. This categorization of coping strategies can be very useful but when analyzing the findings related to coping it is important not forget the complexity of the concept, the multiple ways it can be conceptualised and measured (Dewe & Trenberth, 2004) and the need to adjust coping strategies to the stressor or situation characteristics where it takes place (Shimazu & Kosugi, 2003). Not considering these important characteristics can lead to inconsistent results from one study to another.

Direct relationships between coping strategies and burnout symptoms have been widely studied. Literature has found that coping has a direct influence on the consequences of burnout. In a meta-analysis with 36 studies Shin, Park, Ying, Kim, Noh and Lee (2014) found that active or action-focused coping strategies were negatively related to EE and C and positively to PA, while evasive or emotion-focused coping strategies were positively associated with EE and C and negatively with PA. Other authors (Carson, Tsouloupas, & Barber, 2012) also found that C was related to both active and evasive strategies. These results suggest that there is a direct relationship between coping strategies and burnout. Other studies (Guerrero, 2003) found that different grades of burnout (high, medium and low) were associated with different coping strategies.

On the other hand, interaction relationships have also been analyzed. Some studies have found that coping may moderate the relationship between stress and burnout (Abbas & Roger, 2013), although other studies did not find this effect (Rick & Guppy, 1994). Coping may also mediate the relationship between some antecedents as social support or personal variables and burnout (Lewin & Sager, 2008, Nizielski, Hallum, Schütz, & Lopes, 2013; Raedeke, & Smith, 2004). Even more, the interdependency between coping strategies has been explored. Some studies have

shown that it is appropriate to combine coping strategies, both active as well as evasive, because it is presumed that coping will be more efficacious when active and evasive are combined together (Fortes-Ferreira, Peiró, González-Morales, & Martin, 2006; Shimazu & Kosugi, 2003). For instance, Koeske, Kirk, and Koeske (1993) pointed that evasive coping seem to be beneficial only if active strategies are also used. Similarly, Lazarus (2000) explained that in order to better understand how coping works, we must study coping strategies in a combined process, examining how they operates and affects each other, because of their flexibility and adaptive nature. In this way, some studies with double interactions show that it is positive to combine the action-focused coping and the emotion-focused coping strategies. For example, Fortes-Ferreira et al. (2006) found that the interaction between action-focused coping and emotion-focused coping predicts psychological distress and psychosomatic complaints, so that coping strategies seem to better predict wellbeing when action-focused coping is high and emotion-focused coping is low. Similarly, Shimazu and Kosugi (2003) found that evasive coping may assist action-focused coping to reduce source of the problems thereby indirectly minimize psychological distress. These results suggest that coping strategies have a combined effect.

Usually significant associations between these variables have been assumed as linear (Rydstedt, Ferrie, & Head, 2006). However, there are hints of non-linear explanations that can be more appropriate. In some cases, too low or too high levels in some personal or work conditions may be more detrimental than moderate levels (De Jonge, Reuvers, Houtman, Bongers, & Kompier, 2000; Warr, 1990). According to the vitamin model proposed by Warr in 1987, working environment influences mental health in a similar way that vitamins do on physical health. Vitamins have different effects on physical health, so vitamins *C* and *E* improve health, while an excess of

vitamins *D* and *A* will have negative consequences. Moving this idea into the workplace, Warr (2013) identifies twelve characteristics of work that can influence the psychological health of workers. These characteristics are divided into two groups according to their linear or curvilinear effect. Thus, physical security, salary, career development, equity, valued social position and supervisor support are linearly related to psychological health as vitamins *C* and *E* are with physical health. This implies that the more these characteristics increase, the more psychological health will be, until they reach a point where there will be no more significant effects even if they keep on growing. The other six characteristics (opportunity for control, opportunity for use and acquisition of skills, externally generated goals, variety, clarity of environment and contact with others) display an inverted U-shaped curvilinear relationship. This means that these characteristics improve psychological wellness until they reach a point where psychological health begins to decline.

From the empirical point of view, some authors have found evidence that supports the curvilinear explanation of some stressors in relation to outcome variables. For example, Noblet, Rodwell and Allisey (2009) and Warr (1990) found that job satisfaction has a significant curvilinear inverted U-shaped relationship with job demands. In the same way, Yankelevich, Broadfoot, Gillespie, Gillespie and Guidroz (2012) examined the nonlinear relationships between a general measure of stress at work and two outcomes, intention to quit and job satisfaction, finding evidence for an explanation of the curvilinear behaviour of these variables. Similarly, Pisanti, Gagliardi, Razzino and Bertini (2003) found that job demands, including role stress, were curvilinearly associated with both EE and somatic symptoms (headaches, body discomfort) in a sample of high school teachers. But they did not find this relationship with regard to C and PA.

Despite these findings, other investigations failed to find curvilinear relations between stressors and outcome variables (Parkes, 1991). In the face of these inconsistencies Preston (2013) gave an explanation based on the transactional model of Lazarus and Folkman (1984) and the contributions of Cavanaugh, Boswell, Roehling and Boudreau (2000). According to the transactional model, experiences of stress are totally contingent because they provoke different answers in each subject depending on how each one evaluates the stress and the resources that has to cope with it. Moreover, Cavanauhg, et al. (2000) explained that the stressors at work could behave as enhancers or as barriers depending on the subjective response of each subject. The same stressor could be considered as an enhancer by one person and as a barrier by other, and even the same person might assess the stressor as a threat, a barrier, a challenge or an enhancer depending on their intensity. Therefore, coping strategies will depend on how each individual values the stressful experiences.

There are hardly any studies that analyze the curvilinear behaviour of coping strategies. We have found some examples of non-linear relationships between coping and stress. For instance, Anderson (1976) analyzed the relationship between the level of stress and the use of coping strategies. He found that active coping strategies follow an inverted U-behaviour such that when stress levels are moderate active strategies are used more than when stress levels are too low or too high. As stress increases, active strategies are less used and more emotional strategies are practiced, and these have a linear behaviour. On the other hand, Weiss, Duke, and Sullivan (2014) analyzed the behaviour of evasive coping strategies in situations of drug use problems. They found that evasive coping is an adaptive strategy and it had a U-shaped behaviour such that when drug use problems were higher the use of evasive coping strategies was either non-existent or very numerous, but when drug use problems were lower the use of

evasive coping strategies was moderate. But we have not found any study that analyzes nonlinear relationships between coping and burnout, or any of its dimensions.

The present study

This paper aims to contribute to the literature on coping and burnout. It analyzes the linear, non-linear and interaction relationships between active-focused coping, emotion-focused coping and the three dimensions of burnout (emotional exhaustion, cynicism and personal accomplishment). Although there is strong support for the direct effects of coping on burnout (Shin et al., 2014), the adaptive nature of coping suggests that its relation to burnout is much more complicated involving non-linear relationships. At the same time, the interaction hypothesis (action-focused coping x evasive-focused coping) indicates that the influence of active coping is highly dependent on evasive coping (Fortes-Ferreira et al., 2006).

Concerning the direct relationship between coping strategies and burnout we propose the following hypothesis:

Hypothesis1: *Action-focused coping will relate negatively to EE and C and positively to PA.*

Hypothesis 2: *Emotion-focused coping will relate positively to EE and C and negatively to PA.*

In relation to the combined effect of coping, we propose the following hypotheses about interaction relationships between coping strategies and burnout:

Hypothesis 3: *The interaction between action-focused coping and emotion-focused coping, will have a combined effect, so that EE and C will decrease and PA will increase when action-focused coping is high and emotion-focused coping is low.*

Finally, related to the non-linear effects and considering the scarcity of literature about curvilinear relationships we propose the following exploratory hypotheses:

Hypothesis 4: *Action-focused coping will have a curvilinear behaviour so that high levels of action-focused coping will correspond to moderate levels of burnout (all three dimensions) while low action-focused coping levels will be consistent with very low or very high levels of EE, C, and PA.*

Hypothesis 5: *Emotion-focused coping will bear a curvilinear behaviour so that moderate levels of emotion-focused coping will be associated with low levels of EE and C and high PA, and low or high levels of emotion-focused coping will be associated to high level of EE and C and low PA.*

Previous research (Noblet, Rodwell, & Allisey, 2009) has shown that comparing direct, indirect and interaction effects can help clarify the relationships between variables. We therefore hope that the results of this study will help us to better understand the relationship between coping and burnout. These findings can also be a good guide when designing health intervention programs focused on the development of coping strategies.

It is also worth noting that we present the results of one sample of university teachers from Ecuador. In Latin America and especially in Ecuador, the relationship between coping and burnout has hardly been studied. We have only found a study from Ecuador (Ilaja, & Reyes, 2016) that analyzed the mediating effect of health and emotional intelligence between stress and burnout in a sample of 60 teachers. Analyzing coping and burnout in Latin American countries whose cultural values are different from North American or European countries (Hofstede, 2001) helps to better understand the adaptive nature of coping and the importance of context.

Method

Participants

The sample is made up of 202 university teachers. The 73% are men. The mean age is 46.53 years (S.D. = 12.52, range 22-73). 61% are married, and 58% have children. Regarding their academic level: 3% are doctors, 72% have master studies and 25% have bachelor studies. 59% work in public universities and 41% in private universities. The tenure mean as university teacher is 12.58 years (S.D. = 11.49). All participants work full time and have a stable contract. The teaching areas cover a wide range of specialties from management and marketing to political sciences, biology or philological studies and languages, among others.

Measures

To measure burnout the Spanish translation by Gil-Monte (2002) of the Maslach Burnout Inventory General Survey, MBI-GS (Schaufeli, Leiter, Maslach and Jackson, 1996) was used. Among the available versions of the scale, the MBI-GS was developed to measure the three dimensions of burnout regardless of the type of work. Its application in samples of university teachers has shown adequate reliability and a good fit to the data (for example see Tomás, De los Santos, Alonso-Andrés, & Fernández, 2016) and it is more parsimonious because it has a smaller number of items for each subscale. Moreover, it does not focus as much on the asymmetrical relationship between the teacher and the student (as it occurs with MBI-Educators Survey), but also on the relation of the person to his work, and therefore assesses attitudes towards one's own work (Díaz, & Gómez, 2016). This scale has 16 items that are distributed in three dimensions: EE (5 items, $\alpha = .87$), cynicism (5 items, $\alpha = .66$) and personal

accomplishment (6 items, α = .78). Responses are measured on a seven-level frequency scale ranging from 0 = "Never" to 6 = “Everyday”.

To measure coping, the Occupational Stress Indicator (OSI) (Cooper, Sloan, & Williams, 1988) were used. The original OSI factor structure for coping is ambiguous with six dimensions in its original form (Evers, Frese, & Cooper, 2000). Nevertheless, previous research (Lyne, Barret, Williams, & Coaley, 2000; Steiler, & Paty, 2009) have carried out exploratory factor analysis finding a parsimonious two-factor solution leading “to a first factor, centred on the problem and a second factor centred on emotion” (Steiler, & Paty, 2009, p.116), “with items about seeking social support and having interests outside of work” (Lyne et al., 2000, p. 208). Therefore, we operationalized coping measure in two dimensions: action-focused coping with 6 items (α = .71; example item: "Coping with problems as they occur”) and emotion-focused coping with 7 items (α =. 70; example item "Postpone the problem and park it”, “When I have problems, I discuss them with my partner or my friends”). The selection of items was made on the basis of expert judgment, keeping in mind the Steiler and Paty, (2009) factorial solution of two factors and the concept validity of action-focused coping and palliative coping (Lazarus, & Folkman, 1984; Dewe, 1989). This procedure has been used in a similar way in previous research (Fortes-Ferreira et al. 2006). A confirmatory factor analysis confirms an adequate overall fit of the two-factors model (goodness of fit index = .93; adjusted goodness of fit index = .91; root mean square error of approximation = .07). Responses are measured in a six-level scale that asks how often different strategies are used ranging from 1 = "I never use it" to 6 = "I use it very frequently".

Procedure

To select the sample, we use the incidental method. We sent a letter to 20 deans from public and private colleges in the city of Guayaquil (Ecuador) explaining the purpose of the investigation and inviting teachers of those colleges to voluntarily participate in the study. The questionnaire was individually administered not affecting the teachers´ workday. We explained the instructions to properly fill the questionnaire before teachers completed it. We also informed that data collected has research purposes only. Additionally, confidentiality and ethical data treatment was guaranteed. 243 questionnaires were collected but we had to discard 41 because they were not completely filled, with a response tax of 83%.

Data Analysis

To test the hypothesis concerning the linear relationship between the variables (H1 and H2), a correlation analysis was performed. In order to test the non-linear relationships and the interaction effects (H3 to H5), three hierarchical quadratic regression analyses were conducted, where each dimension of burnout entered in the model as a criterion variable. To reduce problems of multicollinearity the predictor variables were centred before being introduced into the equation as recommended by Cohen, Cohen, West and Aiken (2003). In the first step of the equation gender and age were introduced to control the effects of these demographic variables. In the second step of the equation the coping variables, action-focused coping and emotion-focused coping, were introduced. In the third step we introduced the squared coping to test the quadratic effect, and in the fourth step we introduced the interaction between action and emotion coping to prove the combined effect.

Results

We first performed a one-way ANOVA with socio-demographic variables type of university (public vs. private), marital status (single vs. married) and academic degree (bachelor, master and doctor). None of these variables resulted significant for any dimension of burnout (results are detailed in table 1). Therefore, these variables were excluded from the rest of analyzes.

Table 1. ANOVA results for socio-demographic variables

			Emotional Exhaustion			Cynicism			Personal Accomplishment		
		N	Mean (Sd)	*F(df)*	*Sig.*	Mean (Sd)	*F(df)*	*Sig.*	Mean (Sd)	*F(df)*	*Sig.*
TU	Public	118	1.90 (1.42)	0.22	.64	1.35 (1.03)	2.12	.15	5.14 (0.94)	1.36	.2
	Private	84	1.96 (1.35)	(1,200)		1.56 (1.14)	(1,200)		4.97 (1.07)	(1,200)	
MS	Single	80	1.74 (1.32)	2.39	.12	1.30 (1.11)	0.14	.87	5.12 (0.99)	2.83	.06
	Married	122	2.05 (1.43)	(1,200)		1.54 (1.05)	(1,200)		5.04 (0.99)	(1,200)	
AD	Bachelor	49	2.04 (1.60)	1.50	.22	1.53 (1.00)	0.56	.64	5.15 (1.00)	1.08	.36
	Master	146	1.91 (1.34)	(1, 199)		1.41 (1.09)	(1,199)		5.07 (0.97)	(1,199)	
	Doctor	7	1.63 (0.94)			1.46 (1.45)			4.57 (1.42)		

Table 2 shows the descriptive statistics, means and standard deviations. It also shows the correlation between the study variables. It can be observed that action-focused coping correlates negatively with EE and with C, although only significantly with C (r = -16, p = .02) and positive and significantly with PA (r = .22, p = .002). Emotion-focused coping correlates significantly with the three dimensions of burnout in the unexpected direction, r = -17, p = .01 for EE; r = -. 35, p < .01 for C; and r =. 61, p < .01 for PA. These results lead us to accept partially hypothesis 1 and to reject totally hypothesis 2.

Table 2. Descriptive statistic and bivariate correlations.

	Scale	Mean	SD	1	2	3	4
1 Action-focused coping	1-6	4.99	0.65				
2 Emotion-focused coping	1-6	3.77	0.84	.22**			
3 Emotional Exhaustion	0-6	1.93	1.39	-.13	-.17*		
4 Cynicism	0-6	1.44	1.08	-.16*	-.35**	.30**	
5 Personal Accomplishment	0-6	5.07	0.99	.22**	.61**	-.17*	-.29**

* $p < .05$, ** $p < .01$

Table 3 shows the results of the regression equations concerning non-linear and interactions effects. There is no evidence to prove the curvilinear relationship between action-focused coping and burnout dimensions, so we reject hypothesis 4. In this case the linear explanation is more suitable. There is not enough evidence to say that emotion-focused coping bears a curvilinear behaviour regarding EE and C. But it is enough evidence to accept a curvilinear relationship between emotion-focused coping and PA ($\Delta R^2 = .13$, $p < .001$, $F(6,195) = 34.47$, $p < .001$, $\beta = -.36$, $p < .001$), so that higher levels of PA are achieved when the use of emotion-focused coping is moderate, but when these strategies are used too little or too much, PA decreases. These results allow us to partially accept hypothesis 5. The graphical U-inverted representation of this curvilinear relation is shown in figure 1. As we have hypothesised, we have higher PA levels when emotion-focused coping strategies are used moderately, but when the use of these strategies is very low or very high PA is significantly lower.

Table 3. Hierarchical quadratic regression analysis of coping mechanisms and burnout.

	Emotional Exhaustion	Cynicism	Personal Accomplishment
Step 1: R^2 =	.005	.010	.009
Gender	-0.03	-0.10	0.03
Age	0.06	0.01	-0.08
Step 2: ΔR^2 =	.035*	.12***	.375***
Gender	-0.01	-0.05	-0.07
Age	0.04	-0.03	-0.02
Action-focused coping	-0.10	-0.09	0.09
Emotion-focused coping	-0.14*	-0.32***	0.60***
Step 3: ΔR^2 =	.003	.014	.131***
Gender	-0.02	-0.04	-0.02
Age	0.04	-0.03	-0.02
Action-focused coping	-0.09	-0.14	0.13*
Emotion-focused coping	-0.14	-0.34***	0.61***
Action-focused coping^2	0.04	-0.13	-0.04
Emotion-focused coping^2	0.04	-0.01	-0.36***
Step 4: ΔR^2 =	.020*	.014	.013*
Gender	-0.03	-0.04	-0.02
Age	0.04	-0.03	-0.03
Action-focused coping	-0.05	-0.11	0.09
Emotion-focused coping	-0.20*	-0.38***	0.65***
Action-focused coping^2	-0.02	-0.18*	0.01
Emotion-focused coping^2	-0.02	-0.05	-0.32***
Action x emotion	0.18*	0.15	-0.14*

* $p < .05$, *** $p < .001$

Note: Gender was coded 1 for men and 2 for women.

Action-focused coping and emotion-focused coping were mean centred before entered in the equation (Cohen, Cohen, West, & Aiken, 2003). Action-focused coping^2 and emotion-focused coping^2 are squared.

Figure 1. The scatterplot shows the graphical representation of curvilinear relationship between emotion-focused coping and personal accomplishment.

The combined action of active and emotion coping was significant for EE (β = .18, p < .04) and for PA (β = -.141, p < .02). Figure 2 shows the combined action of coping strategies with respect to EE in such a way that high emotion-focused coping predicts higher EE than low emotion-focused coping whether action-focused coping is high or low. In other words, regardless of the amount of action-focused coping, high emotion-focused coping always predicts more EE than low emotion-focused coping.

Figure 3 shows the effect of the combined action and emotion focused coping strategies on PA. In this case, there are hardly any differences in PA when action-focused coping is low, however when action-focused coping is high and so is the emotion-focused coping their PA decrease. These results do not allow us to accept hypothesis 3.

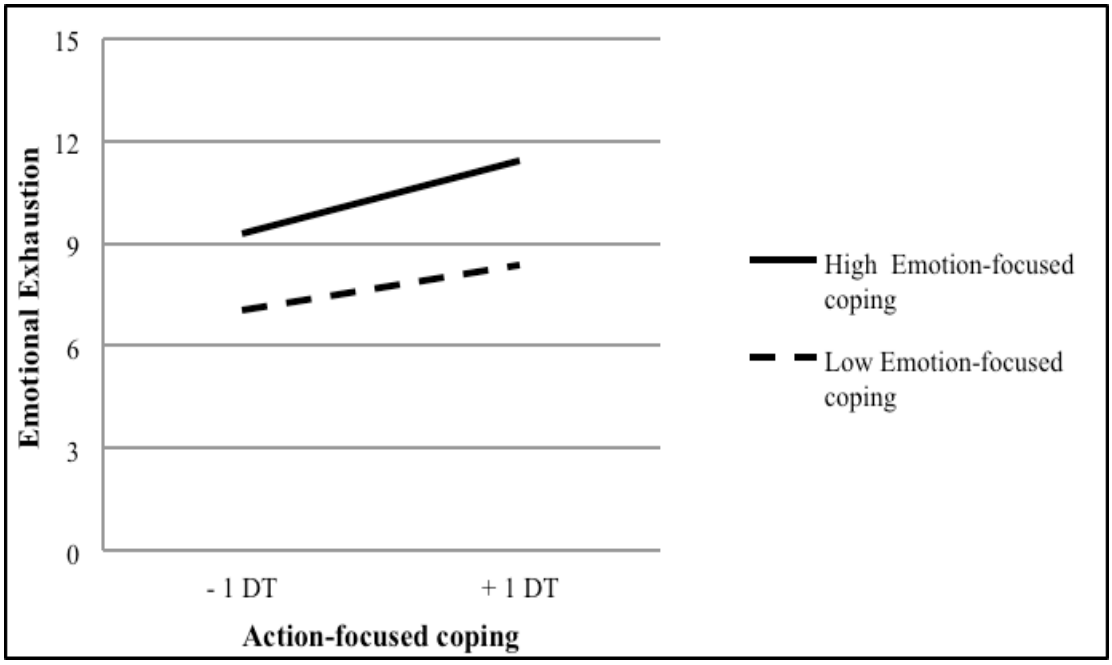

Figure 2. When combining high action-focused coping and high emotion-focused coping, emotional exhaustion increases significantly (β = .179, p = .04).

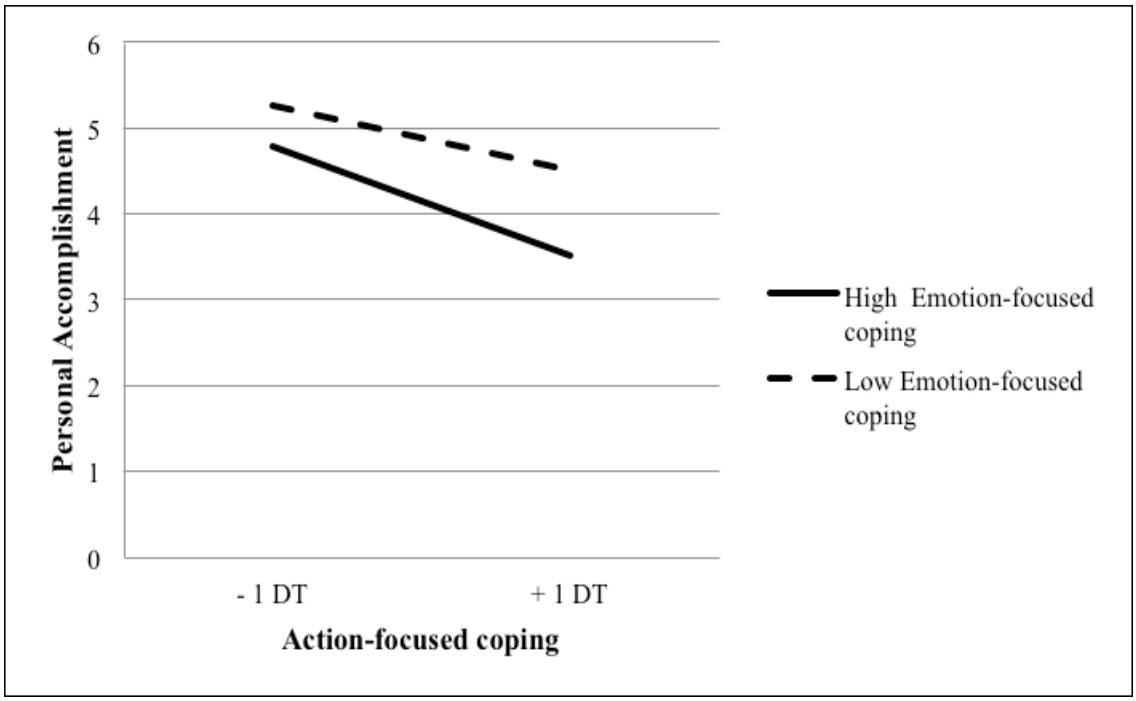

Figure 3. Personal accomplishment significantly decreases when combining high emotional-focused coping with high action-focused coping ((β = -.141, p = <.02).

Discussion

In this paper, we have analyzed the linear, non-linear and interaction relationships between coping strategies (action-focused and emotion-focused) and burnout. The proposed hypotheses 1 and 2 tested direct or linear relations. The results shown that coping strategies have direct effect on the burnout but in the case of emotion-focused coping the association points the unexpected direction. According to the literature, emotion-focused coping predicts burnout and it is positively related to EE and C and negatively related to PA (Shin et al., 2014). In our study, associations between emotion-focused coping and burnout dimensions are significant but in the opposite direction. This may be due to two reasons: First, as explained above the emotion-focused coping sub-scale referred to avoidance but including items that emphasize social support (Steiler, & Paty, 2009), and as the meta-analysis by Kay-Eccles (2012) has reported an adequate level of social support is a resource that reduces EE and C and enhances PA. This suggest that it is important not forget the complexity of the concept and how the multiple ways it can be conceptualised and measured (Dewe, & Trenberth, 2004) can lead to variable results between studies. Secondly, an explanation from the cultural point of view is possible. The sample is taken from teachers in Ecuador, a country that according to Hofstede (2001) has very low levels of individualism and, on the contrary, very high levels of collectivism. In collectivist societies individuals expect their peers or members of a group to care for each other as part of a common loyalty. People are born into groups, such as the family, and belong to them finding security and protection and in return they share and defend the beliefs and the unity of the group. By contrast, in individualistic countries each individual is expected to be concerned only with himself or with people very close to him, such as the family. In relation to burnout it would be expected that the higher collectivism, the lower EE and C and the higher PA because

social support between individuals is also higher. By contrast, it would be expected that the greater individualism the greater EE because of the competitiveness between individuals is higher, and also the greater C, because it is easier for an individual to be away from others because of higher independence. In a similar way, another example of the importance of cultural differences between individualist and collectivist countries can be seen in explaining the inconsistent results concerning to the behaviour of the evasive coping between Fortes-Ferreira, et al. (2006) and Shimazu and Kosugi (2003). In Fortes-Ferreira's study, with a sample from Spain, a country that scores higher than Japan in individualism, emotion-focused coping is associated with low levels of wellbeing. Whereas in Simazu and Kosugi's study, emotion-focused coping is associated with high levels of wellbeing in a sample from Japan that scores higher in collectivism than Spain.

Concerning to curvilinear behaviour, only emotion-focused coping strategies were significant in relation to PA, predicting 13% of the explained variance of this variable. Based on these results we reject hypothesis 4 and accept partially hypothesis 5. In line with explained before, emotion-focused coping has a high social support component and this has helpful effects by increasing PA levels until it reaches the point where too much emotion-focused coping begins to have harmful effects and PA decreases. These findings are similar to those by Wais, et al. (2014) who suggests that evasive coping is an adaptive strategy and it had a curvilinear behaviour such that when the use of evasive coping strategies was either non-existent or very numerous, wellness was lower, but when the use of evasive coping strategies was in a moderate level, wellness was higher. The underlying conclusion is that action-focused coping has a direct beneficial effect on health until it reaches a point where it no longer produces any significant effect, like certain vitamins or certain job characteristics according to Warr´s model (2013),

meanwhile emotion-focused coping is helpful until it reaches a point where its effects begin to be harmful.

In this line of argument, hypothesis 3 posed the combined relationship between action and emotion focused coping strategies and their effects on burnout suggesting that the best situation for wellness, i.e. low EE and C and high PA, is produced when action-focused coping is high and emotion-focused coping is low. Our results do not allow us to support this hypothesis. For both EE and PA the interaction was significant, although the increase in the variance explained is small. According to our results, EE increases and PA decreases when emotion-focused coping is high. In both cases the level of action-focused coping hardly affects the variation. Combining action and emotion coping strategies has significant effects as pointed out by Fortes-Ferreira, et al. (2006), and by Shimazu and Kosugi (2003), but it should be noted that excessive use of emotion-focused coping might end up cancelling the beneficial effects of action-focused coping. That is, although action-focused coping strategies, pointed directly on the problem or stressor, have good results to combat the sources of stress, however the prolonged use of these strategies can cause great deterioration on the subject so that the combined use of action and emotion strategies can help the subject recover from that worsening. However, if the use of emotion-focused coping is high, its beneficial effects of balance would be changed into detrimental. In addition, we must take into account cultural influence in the sense explained above, and how for some cultures, as in our case, the most direct coping may not be the best strategy. It seems clear that these two types of coping strategies never act independently of one without the other, but in a combined and adaptive way (Lazarus, 2000; Wais, et al., 2014).

The three types of relationships (linear, non-linear and interaction) contribute in the explanation of burnout although not significantly in all cases. However, we must

consider that the linear or direct effect explained the highest percentage of variance of EE, C and PA. Curvilinear effect only explained significantly PA but considering that research on the curvilinear effects is scarce we think that it is an interesting result and worthy of further investigation. Finally, interaction effects explained a significant proportion of variance of EE and PA. Regarding these effects of interaction, literature has mainly focused on the role of coping as a moderator between a stressor and an outcome, and not on the combined or conjunct effects between action and emotion coping strategies. So, more research is needed to confirm our results.

From the applied point of view our results suggest that combining the two types of coping strategies can be beneficial to combat burnout. This should be taken into account in individual and group behaviour. Intervention programs should consider the joint effect of coping strategies. These programs should mainly promote the use of active strategies, but not forgetting the evasive ones. On the other hand, intervention programs should take into account the environmental and working conditions of each occupation as well as organizational culture and cultural values of each country, since evasive behaviours, such as social support or avoidance, may produce very good results in some cultures. It would also be important to consider the possible non-linear effect of coping strategies. Although more research is needed to better understand this type of relationship of coping on the dimensions of burnout, it should be considered that the total absence or excessive use of certain strategies, such as those focused on emotion, can be detrimental. That is why the dynamic and adaptive nature of coping must be taken into account. Finally, it should not be forgotten that human behaviour is a complex reality that can be approached and understood from different perspectives.

Limitations

Although our results are quite interesting however we must consider some limitations of the study. First, from the transactional theory coping is the result of a valuation that the subject performs when faced with a stimulus that considers as a potential threat (Lazarus, 2000). That is to say, this model proposes some antecedent variables, that are the stressors, some intermediate variables, that moderate, these can be the coping strategies, and some consequent variables, for example the burnout. However, in our study we have considered the coping strategies as antecedent variables. Although methodologically there is no problem in analyzing the relationship between coping and burnout, it would be interesting to include antecedent variables in future research. Due to the adaptive nature of coping, it can be assumed that the behaviour of action and emotion-focused coping strategies will be different depending on the stressor. Second, other limitation is that the sample only includes university teachers from a single country and therefore, due to cultural differences between countries, our results cannot be generalized to countries with different cultural values. Taking into account that culture determines our way of conceiving things as well as our behaviours (Hofstede, 2001) it would be important to carry out studies that consider samples of different cultures, both organizationally and at the country level. In spite of this limitation we consider that our study is pioneering and it opens the way in the research on burnout and coping in Latin America and specifically in Ecuador, country where this phenomenon has not been studied. Third, we believe that one limitation of our study is its cross-sectional design. Considering the dynamic and adaptive nature of the coping, it would be very interesting to analyze in future studies its behaviour over time through a longitudinal design. Fourth, another limitation may be the use of self-report questionnaires for data collection. Although the use of this type of questionnaires has been criticized, self-report questionnaires are widely used in behavioural research and

are accepted as long as they guarantee minimum psychometric standards of reliability and validity (Fernández-Ballesteros, 2004; Lazarus, 2000; Spector, 1994).

Finally, the reliability of the scale of C is moderate (α = .66) according to Nunnally and Bernstein (1994). However, the meta-analysis by Wheeler, Vassar, Worley, and Barnes (2011) examined 84 studies finding that this scale shows reliability ranging from .50 to .91, and this variation may depend on whether the questionnaire was the English version or a foreign-language translation. Translated questionnaires (36 studies) showed lower reliability with a confidence interval ranging between .65 and .71. In this sense, our level of reliability can be considered as acceptable.

Conclusion

Comparing the linear, non-linear and interactions effects may help clarify the relationships between coping and burnout. The main explanation is given by the linear effect, specifically, action-focused coping strategies are direct o linear negative related to EE and C and positive to PA. Nevertheless emotion-focused coping may have non-linear behaviours and become harmful if they are used too little or too much. In addition, the excess of emotion-focused coping can eliminate the positive effects of action-focused coping, when both strategies are combined. In all these relationships, it is important to consider the influence of the specific cultural values of each organization or each country. All of these evidences suggest the importance of researchers continuing to investigate the behaviour of coping strategies.

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CAPÍTULO 4

Are Teachers Really Burned Out?

A Meta-Analysis of Burnout Intensity and its Predictors at Country-Level

Are Teachers Really Burned Out? A Meta-Analysis of Burnout Intensity and its Predictors at Country-Level

Abstract

Are teachers really burned out? Burnout intensity has hardly been compared across countries with inconclusive results despite it has become a global health issue. In the current meta-analysis, the authors examined teacher's burnout intensity, its variation across countries, and the effect that demands (national learning assessments, NLA), sex stereotypes and gender egalitarianism have on these variations. With a total sample of 20 704 individuals from 24 countries and using a 2-level variance known model, the authors found that teachers experience moderate burnout intensity although there are significant differences across countries. Linear and curvilinear effects of NLA and gender egalitarianism explained significantly variations on emotional exhaustion, depersonalization and personal accomplishment across countries. Interaction effects between NLA and gender egalitarianism were found significant on depersonalization and personal accomplishment, although reciprocal suppression situations articulate this interaction effects. Contrary to what we expected, being male or female did not have significant effects on the variation of teacher burnout, not providing support for the sex stereotype. Implications for teacher burnout programmes of prevention are also outlined.

Keywords: burnout, teachers, sex stereotypes, gender egalitarianism, multilevel analysis, meta-analysis

Highlights:

- On average intensity of teacher burnout is low with differences across countries
- The number of national learning assessments performed is related to burnout
- Being male or female does not influence or moderate burnout intensity
- Gender egalitarianism influence the variation of burnout across countries
- Gender egalitarianism moderates the effect of learning assessments on burnout

Introduction

Teaching is an occupation that provides a very important service to society. Nonetheless, lately it has been often degraded in many aspects such as status loss (Author et al, 2007), and it has been identified as a profession that generates more stress and burnout than others (Aloe, Amo, & Shanahan, 2014; Kyriacou, 2011). Burnout in teachers is a health issue currently present in many regions around the world, such as North America (Aloe et al., 2014), Europe (Stoeber & Rennert, 2008), Australia (Parker, Martin, Colma, & Liem, 2012) or China (Liu & Wang, 2004) among others. Concerning the most important outcomes related to burnout, literature includes physical and mental disorders (Bellingrath, Weigl, & Kudielka, 2008; Steinhardt, Smith, Faulk, & Gloria, 2011), low morale which in turn influences behaviour and performance of students (Raines, 2011; Oberle & Schonert-Reichl, 2016; Roloff & Brown, 2011), the intention to quit (Leung & Lee, 2006; Roloff & Brown, 2011) and work-family conflict (Noor & Zainuddin, 2011).

Due to the importance for teachers of these outcomes, with clear implications for health and efficacy, research on this issue remains critical,

"particularly at a time when political and social pressures on education are far-reaching" (Gore, Holmes, & Smith, 2015, p. 256). Lately, research on teacher's burnout has focused on the importance of contextual factors such as the school environment (Fernet, Guay, Senécal, &Austin, 2012; Pyhältö, Pietarinen, & Salmela-Aro, 2011; Skaalvik & Skaalvik, 2009) or the school organizational climate (Grayson & Alvarez, 2008; Sungtaek & Sungming, 2014), but little research has focused on the demands associated to the improvement of the quality of education and learning outcomes, and on cultural differences (Li, Mitton-Kükner, &Yeom, 2008).

In fact, as a global phenomenon burnout can be interpreted and understood differently in different cultures and cultural models. Hofstede (1983) noted the importance of considering national and cultural differences because our view and interpretation of situations and facts depends on the conditioning and mental programming we have, so that our culture provides the lens and influences the way we see and interpret new experiences. According to this "collective mental programming" (Hofstede, 1983, p. 76) different societies adopt different cultural constructions of gender roles. Some authors have quantified these differences across societies taking gender egalitarianism as a measurement standard (House, Hanges, Javidan, Dorfman, & Gupta, 2004), where low gender egalitarianism refers to societies with marked gender roles differences and high gender discrimination.

In addition, it has been found that sex aligns burnout so that males tend to score higher in cynicism while females score higher in emotional exhaustion (Purvanova & Muros, 2010; Watts & Robertson, 2011) although empirical studies show inconsistent results (Ju, Lan, Li, Feng, & You, 2015; Zaidi, Wajid, & Zaidi,

2011). So burnout in teachers should be analysed taking into account not only the fact of being male or female but also the differences in gender roles in each society.

There are few studies on burnout comparing results across countries or analysing the role of social and cultural contexts in its management and development (Brunsting, Sreckovic, & Lane, 2014; Díaz & Gómez, 2016; Tifner, Martín, Albanesi, & De Bortoli, 2006). Moreover, existing studies have some limitations; for example, sometimes the number of countries compared is usually limited to two or three (Pines, 2002; 2003; 2004; Pines, Ben-Ari, Utasi, & Larson, 2002). In other studies, only emotional exhaustion is addressed because it is considered the most important manifestation of the burnout syndrome (Fischer & Boer, 2011; Kristensen, Borritz, Villadsen, & Christensen, 2005). However, considering one dimension rather than three is a less restrictive criteria and it may result in higher intensity levels of burnout that could lead to inconsistent conclusions when several studies are compared (for example see Azeem & Nazir, 2008; Laugaa, Rascle, & Bruchon-Schweitzer, 2008; Rojas & Grisales, 2011). This raises some questions: What the burnout intensity across countries actually is? Is the teachers' burnout really high? Do gender values affect differently burnout from one country to another? In order to answer these questions our meta-analysis examined the intensity of burnout in teachers in studies from 24 countries. This is needed because "burnout appears to be quite prevalent in both developing and developed countries and probably represents considerable economic, social and psychological costs in these countries" (Shirom, 2005, p. 263).

This paper contributes to a better understanding of burnout in teachers as a global phenomenon. It analyses the intensity of this syndrome across countries and

the effect that demands, expressed as national learning assessments (NLA), sex, and gender egalitarianism have to explain burnout variation. This cross-cultural approach may impact the public perception and the understanding of burnout in teachers so that, having in mind differences in cultural values can serve to create appropriate prevention programmes for each country to strengthen the action of teachers in each school community.

The Intensity of Burnout Across Countries

"To be a quite prevalent global issue" means that it affects a considerable number of people in relation to a population with a certain degree of intensity. But the number of people affected depends on the degree of intensity established as a threshold, in such a way that when the intensity threshold increases the number of burned out people usually decreases. Therefore, the intensity with which the phenomenon occurs is the key factor to understand burnout.

There are some important concerns to examine when trying to evidence the intensity of burnout. First, researchers have questioned the dimensionality of burnout and its structure. Maslach and Leiter (2016) defend burnout as a multidimensional concept consisting in three dimensions (Maslach, 1976; 1993; Maslach & Jackson, 1981; Schaufeli, Leiter, & Maslach, 2008), which are emotional exhaustion (EE), depersonalization (DP) and lack of personal accomplishment (PA). EE refers to a general feeling of extreme chronic fatigue, caused by continuous exposure to demanding working conditions and a decrease of emotional resources. DP is defined as a callous, distant and cynical attitude toward the work itself or the people with whom one works. The reduced PA refers to the decrease in feelings of competence and achievement at work (Maslach, 1993). However, according to Kristensen et al. (2005), the concept of burnout inappropriately mixes an individual state (EE), a coping strategy

(DP) and a consequence (lack of PA), and they argue that it consists of a single dimension that is exhaustion but manifested in different ways such as physical, emotional and cognitive aspects. Pines and Aronson (1988), and Shirom and Melamed (2005) also support the position of a single dimension. Other authors, such as Demerouti, Bakker, Vardakou, and Kantas (2002), and Halbesleben and Demerouti (2005) support the idea of only two dimensions, exhaustion and depersonalization. Statistically, many studies on the factorial structure of MBI have been conducted (Aluja, Blanch, & García, 2005; Worley, Vassar, Wheeler, & Barnes, 2008) finding evidence to support the model of three dimensions. Differences in understanding dimensionality are important when determining the intensity of burnout. If burnout consists only in exhaustion, as a core dimension, only high scores on exhaustion are needed to consider that a person is burned out, but if burnout involves the three dimensions high scores in all three will be required simultaneously. Clearly, the intensity of the syndrome will be higher when using a flexible approach considering only one dimension, and lower when a more demanding criterion is used considering the three dimensions at the same time (León-Rubio, León-Pérez, & Cantero, 2013).

Secondly, researchers debate whether burnout is a phenomenon that should apply only to work contexts or if it should be context free (Kristensen et al., 2005). Answers are linked to dimensionality. If only EE is admitted then burnout may be considered as context free, since in any context (personal, family, work) a person may be exhausted, both physically and mentally. However, DP (or cynicism) and lack of PA (or reduced professional efficacy) only make sense when they apply to work settings (Schaufeli et al., 2008). Burnout intensity will be higher when context free is understood. In studies on burnout in teachers it is important to consider the individual,

class, school and community backgrounds (Brunsting, Sreckovic, & Lane, 2014) as well as the social and cultural characteristics (Ochiai, 2003).

Thirdly, in relation to the measure, the most widely used instrument is the Maslach Burnout Inventory (MBI), although some authors have criticized this instrument (Kristensen et al., 2005). Nevertheless, Schaufeli and Taris (2005) point out that there are many studies on cross-national validity of the instrument with acceptable results. For example, the meta-analysis by Wheeler, Vassar, Worley and Barnes (2011) analysed the internal consistency of the three subscales of MBI in 84 studies, finding that the average alpha of the subscales ranged between .70 and .80.

In fourth place, the last difficulty is to consider the measure of burnout as continuous or dichotomous. It is appropriate for statistical methods to consider it as continuous score, but not for professional practice and practitioners. The problem is where to set the "cut-offs" to regard someone as burned out, or to state officially when someone should be medically treated. It is very common to transform continuous scores into dichotomous differentiating among high, medium and low levels of burnout. The MBI Manual (Maslach, Jackson, & Leiter, 1996) proposes to divide the sample into three groups for each sub-scale, so burnout intensity can be low, medium and high. Converting the scores in percentiles, the cut-offs would be at < 30 = Low, from 30 to 60 = Medium, and > 60 = High. These "cut-offs" are based on the distribution of frequencies of each sample so that, when there is a lack of an external criterion, their generalization can be dangerous. Thus, they must be carefully established for the classification of the burnout intensity and they would have to be different for each country as suggested Schaufeli and Van Dierendonk (1995) and Author et al. (2000). Shirom (1989), Pines and Aronson (1988), and Pines (2004) propose to consider the

points on the scale so that, on a scale ranged from 0 to 6, 4 indicate the presence of the syndrome and 5.5 or higher indicates the immediate need for help.

Given these conceptual and methodological difficulties, it is not surprising that studies report inconsistent measures (e. g. see Fiorilli et al., 2015; Kuntz, Näswall, & Bockett, 2013). Researchers should be very cautious when reporting the results on burnout intensity and must consider the dimensionality, the instruments, the scales and the cut-offs used in each case. In order to reduce these problems in our meta-analysis we have examined burnout as three-dimensional phenomenon, and it only included studies that used the MBI to measure the three dimensions. We have treated the measures as continuous with the arithmetic mean being the reference point. Meta-analysis of means has already been used in some studies (Fischer & Boer, 2011; see also Lipsey & Wilson, 2001). Taken into account all of these concerns and the consideration that teachers is an occupational group with high levels of burnout we propose the following hypothesis:

> Hypothesis 1*: The mean intensity of burnout in teachers across countries will be over 3 in a scale ranging from 0 to 6 for EE and DP and below 3 in PA.*

Work Demands as Significant Antecedent of Burnout in Teachers in Different Countries

The research literature on teachers' burnout has focused mainly on increasing work demands. The classroom, the school and the society demand teachers to give more, without providing resources proportionally. This imbalance causes burnout. For example at the classroom level, literature has highlighted the student achievement and the student inappropriate and challenging behaviours as generators of burnout (Hastings & Bham, 2003; Otero-López et al., 2008). Also, job demands, as overloading of amount

of paperwork (Billingsley, 2004), and the pressure to teach to standardized test generate burnout. In addition, teachers not only teach in the classroom but also have to plan, to assess and to play extra role and coaching activities (Roloff & Brown, 2011). According to Hallowell (2010) teaching is a profession that demand constant and complete attention for seven hours a day.

At the school level, poor infrastructure and classroom materials, such as textbooks (UNESCO, 2015), as well as the perception that the teacher must keep the standards high for the school reputation (Grayson & Alvarez, 2008) generate burnout. From the social point of view, twenty-first century educators face more demands than teachers in any previous era. Despite broken families, illness, or poverty, all students should have a chance to learn. As a result, teachers are expected to act as social workers, health care providers, and parents while they continue to educate the children about core content areas, technology, and the global community (Kozol, 2008). Even though teachers are providing more and more services to children, politicians and community members continue to add new educational initiatives (Roloff & Brown, 2011).

Higher demands are frequently related to the goal of achieving a higher quality of education and tend to be generalized but they do not happen with the same intensity in all countries. Nevertheless, country differences in this area are difficult to assess given the high variability of relevant aspects across countries. Some important indicators of the quality of education are the learning outcomes provided by national learning assessments (NLA) and they may also be considered as indicators of demands. The NLA are intended to provide systematic information on the state of learning outcomes and the level of competences students have attained across the country and in schools as defined by national standards, and serve to highlight those areas that require

the attention of governments and the implementation of programmes (Benavot & Tanner, 2007; UNESCO, 2008). NLA have become a common feature of national education systems around the world. The prevalence of countries that have carried out national assessments varies between regions and development status but it has increased from 2000 onwards, and there is a positive relationship between the number of assessments carried out and the level of economic development the country has reached (Benavot & Tanner, 2007). NLA evaluate grades from 1 to 9 but tend to focus on grades 4 to 6 so both primary and secondary school teachers are involved. Although the standards and scales of measurement vary from one country to another, however the goal is the same in all countries: to improve the knowledge and skills of students. This implies a greater commitment and responsibility of the educational authorities as well as a greater workload for the teachers who have the pressure to teach to standardized test, and a constant need to defend themselves against the public belief that schools are failing (Kozol, 2008). Some studies (Fontenot, 2012) have analysed the impact of learning assessments on teacher attitudes and engagement, finding low and moderate levels of commitment and moderate relationships between teacher attitudes and the benefits they expect from assessments. This study also highlights some concerns of teachers such as the amount of time it takes to conduct these assessments, the feeling that assessments are primarily performed to meet compliance mandates and a mistrust about the use that is given to the assessments results within the institution. These findings suggest a possible relationship between the number of assessments performed in a country and the teacher burnout intensity levels. So, we propose the following hypothesis:

Hypothesis 2*: Demands in teachers, measured as NLA, will be associated to burnout across countries, so the higher the amount of NLA, the higher teachers' EE and DP and the lower teachers' PA.*

Burnout, Sex and Gender Values Across Countries

Teaching in schools is considered a female dominated occupation (Author et al, 2010; Grimshaw, 1998). It is enough to do a demographic analysis to conclude if a profession is dominated by males (e.g., law, enforcement, construction, engineering occupations) or by females (e.g., nursing, teaching, clerical occupations). Male-dominated occupations would emphasize activity, aggressiveness, and rationality elements and female-dominated occupations would be viewed as passive, emotional, and nurturing (Gutek & Cohen, 1987). Regarding burnout, the meta-analysis by Purvanova and Muros (2010) points out that men score higher in DP while women in EE, explaining these findings through sex stereotypes (Eagly & Kite, 1987). The female stereotype states that women are emotional, appreciative and weak and they are more focused on motherhood and domesticity being allowed and even demanded to show emotions. The male stereotype affirms that men are aggressive, adventurous and independent, and associates male with strength and teaches him to practice detachment and to hide emotions because expressing them means weakness. This sex stereotype not only influences the way we perceive stress but how to cope with it. Consequently, males use distancing strategies while females most often use emotional discharge (Gonzalez-Morales et al., 2010). Nevertheless, later studies show inconsistent results. For example, Leon-Rubio et al. (2013), and Watts and Robertson (2011) reported that males score higher in DP and reduced PA while females score higher on EE. However, Zaidi et al. (2011) found that females score higher in DP. Some studies have found that gender has

a modulatory role (Livingston, 2014; Moya-Albiol, Serrano, & Salvador, 2010) but others argue that gender does not influence or moderate any of the dimensions of burnout (Ju et al., 2015). Taking into consideration these arguments we propose the following hypothesis:

Hypothesis 3*: The percentage of males will have a significant effect on the dimensions of burnout so that the greater percentage of males the higher of DP, and the smaller the percentage of males the higher of EE.*

The fact that men and women in most cultures have different roles, with the male roles higher in self-assertion and mastery of the environment and the female roles higher in selfless concern for the welfare of others, results in gender inequality. Some theorists have argued that differences based on biology have evolved depending on the activities that men and women have performed to survive in different ecological settings (Williams & Best, 1990). Thus, the fact that women are the ones who bear children has determined the activities they could do, especially during pregnancy and raising children, avoiding dangerous activities, such as hunting, that could put them at risk. This differentiation in activities created differentiation in gender roles. In those more modern and evolved societies, where dangerous activities and muscular strength are less necessary, the differentiation between gender roles would be smaller (Triandis, 1994). Consequently, there are authors that believe that cultural evolution has gone through several stages from a primitive form with equal tasks and activities between men and women and characterized by nomadism, hunting, fishing and food gathering, passing through intermediate stages such as agrarian and industrial societies with high differentiation of functions and activities between men and women to reach an information society with equal activities and tasks between men and women (O'Kelly & Carney, 1986). This suggests that there is a relationship between gender role equality

and the development of societies and it has a curvilinear U-shape behaviour (Giele & Smock, 1977).

Since gender role differences are cultural rather than biological, cultural values may be useful for predicting and explaining differences across countries (Schwartz, 1999). Gender egalitarianism (House et al., 2004) is a cultural value that explains how social gender roles are distributed in a society. Gender egalitarianism expresses the degree to which an organization or society minimizes the differences in gender roles and gender discrimination while promoting gender equality (House et al., 2004). High scores on gender egalitarianism indicate greater equality between genders.

Previous research (Ushiro & Nakayama, 2010) has found that gender egalitarianism is related to burnout so that high gender egalitarianism in the home environment as well as low gender egalitarianism in the work environment would have positive effects on burnout. Related to teachers' burnout it can be expected that gender egalitarianism will develop a direct but curvilinear effect on burnout and an indirect moderator effect in the relationship between demands and burnout. So, we propose the following hypotheses:

> Hypothesis 4*: Gender egalitarianism will significantly relate to burnout in teachers bearing a curvilinear behaviour so higher intensity of EE and DP, and lower intensity of PA is expected in societies with low and high scores of gender egalitarianism, while low intensity of EE and DP and high PA is expected when gender egalitarianism scores average.*

The interaction effects of gender egalitarianism have been little explored so far and the results found are inconclusive. For example, some studies explored the moderating role of gender egalitarianism finding significant effects (Ott-Holland et al., 2013) but other studies have not found these effects (Lyness & Judiesch, 2014).

Assuming that there is a positive relationship between NLA, burnout and the development of a society, a positive relationship between gender egalitarianism and the development of a society and a direct but curvilinear relationship between gender egalitarianism and burnout one would expect that gender egalitarianism has a modulator role in the relationship between NLA and burnout. Keeping this in mind, as well as the inconclusive and scarce literature, we proposed the following exploratory hypothesis:

> Hypothesis 5*: Gender egalitarianism will have a negative moderation effect between NLA and teacher's EE and DP and a positive moderation effect between NLA and PA.*

In summary, our study contributes to the literature comparing burnout in teachers across countries and analysing its intensity. We also examine the relationship between demands (considered as the number NLA) and burnout across countries and finally we test if gender egalitarianism plays a moderating role in the relationships between demands and burnout in teachers, being a female occupation. These three contributions have not been examined in the literature before.

Method

Literature Search and Inclusion Criteria

This quantitative review was based on a systematic search of papers indexed by PsycINFO. We limited the results of searches to "peer-reviewed" journals and we used the key words "burnout" AND "teacher" in the title. We did not search for the burnout dimension words separately because we needed studies including the three dimensions all together. The PsycINFO search yielded 200 titles and their abstracts. In the first stage, we selected only the articles whose detailed record indicated that the MBI had been used in some of its versions to assess burnout, and only 119 papers met this

criterion. In a second stage the first and the second author independently analysed the 119 papers considering the following inclusion criteria: a) academic papers published between 2006 (January) and 2016 (June) in scientific journals indexed in the PsycINFO database; b) the instrument to measure burnout was the Maslach Burnout Inventory in any of its versions for human social services (MBI-HSS) for educators (MBI-ES) or general survey (MBI-GS); c) studies had to report scores in sums or means from all three dimensions and d) the samples had to be of primary and/or secondary education teachers. Based on this analysis we considered 48 articles that met the inclusion criteria, with data from 55 samples (20 704 participants) from 24 countries. The agreement rate between first and second author was 94%.

Study Characteristics

The mean age of study participants was 41.60 (*SD* = 3.70) and the average experience was 14.59 years (*SD* = 3.43). From them, 30.21% of participants were men. Information on age was missing in 43% of the studies (k = 21), information about the experience was missing in 41% (k = 20) and missing information about gender in 33% studies (k = 16). The missing information was replaced with the average.

Procedure

First, we standardized all results on burnout intensity reported in the studies. This standardization was based on the arithmetic mean calculated by dividing the total score by the number of items in each sub-scale that were specified in each article. All articles that used MBI-HSS or MBI-ES agreed that EE sub-scale had 9 items, DP sub-scale had 5 items and PA sub-scale had 8 items. Studies that used the MBI-GS coincided in 5, 5 and 6 items for the sub-scales of EE, DP and PA respectively. The response scale in most articles ranged from 0 to 6 where 0 = never and 6 = every day. In

articles with a different response scale we proceeded to standardize the values following the procedure explained by Cohen, Cohen, Aiken and West, (1999) calculating the percentage of the maximum possible (POMP). When the results of PA were expressed as *lack* of PA we proceeded to calculate the reverse score. Thus, in all studies high scores in EE and DP and low scores in PA determine burnout. Standard deviations data of all studies were also collected to calculate the inverse variance.

Country Level Indicators

We introduced two country indicators. First, NLA was the country indicator to measure the demands of teachers' work. This indicator was calculated by adding the total number of national learning assessments (NLA) carried out in each country from 2000 to 2007 according to the data provided by the monitoring report *Education for All in the World* (UNESCO, 2008) (See data in Table 1). These assessments assess students' knowledge and skills in language and literacy, mathematics, science, and the social sciences. In addition to being an indicator of the quality of education NLA are also related to the teacher's workload (Fontenot, 2012).

The second country indicator is related to differences in gender roles and was operationalized in terms of gender egalitarianism country scores taken from the standardized scores (response bias corrected) from the Project GLOBE research (House et al., 2004), based on surveys of over 17 000 middle-level managers in 62 societies, which measured cultural practices, defined as “the way things are” (Javidan, House, & Dorfman, 2004) (See data in Table 1). The gender egalitarianism practice measure exhibited acceptable inter item reliability ($\alpha = .77$) (Hanges & Dickson, 2004). The scale ranges from 1 to 7 where higher scores indicate higher level of gender egalitarianism. Missing data for Cyprus and Syria were completed using the same score

as for Turkey based in the country classification by cultural clusters where these both countries belong to Middle East cluster that reflects Arabic Muslim culture (House et al., 2004).

Meta-Analytical Strategy and Data Analysis

As previously raised, we considered the three dimensions of burnout and measures as continuous. The statistic used was the mean, so that those teachers who scored above average in EE and DP and below average in PA are more burned out than those not getting these scores.

Meta-analyses of arithmetic means are less frequently reported in the literature, however they can provide useful information about contextual effects (for example see Fischer & Boer, 2011; Fischer & Mansell, 2009). In this study the meta-analysis answered these three questions: a) what is the overall effect size of burnout in the studies considered? (the mean, in this case, -see Lipsey & Wilson, 2001), b) do burnout intensity significantly differ across countries? and, c) do country-level indicators (NLA and gender egalitarianism), influence burnout indicators?

We used a multilevel mixed effects model in our analysis. Mixed effects model uses a combination of fixed and random models estimating the effect size variation at the subject level, but also tests whether the variability is explicable by context-specific variables beyond random variation. Samples size and the number of studies by country were taken into account because this variation influences the final result. As effect size for the meta-analysis, the arithmetic mean of burnout dimensions was calculated. Effect sizes were weighed by the inverse variance calculated on the basis of both standard deviation and sample size. Standard error was calculated by dividing the standard deviation by the square root of the sample size.

Studies were nested by country, and this nesting will be taken into account so that, following the inspiring work by Fischer and Boer (2011), a two-level structure was developed. Level 1 was for the overall effect size and level 2was for the country. We conducted a two-level variance known meta-analysis. At level 1, the mean was the effect size and the variance was based on the sample size (Lipsey & Wilson, 2001). At level 2, country level variables were grand mean centred.

We analysed the influence of possible moderating variables at different levels. We followed the procedure explained in Charlton (2017) by conducting a two-level variance known meta-analysis. So, we tested seven models. The first model examined socio-demographic effects on burnout scores (level 1). The second and third models investigated the linear impact of NLA and gender egalitarianism (Level 2), respectively. The fourth model assessed the linear impact of both NLA and gender egalitarianism entered together. Models 5 and 6 tested squared and cubic effects respectively, and model 7 tested the interactive effects of NLA and gender egalitarianism on country-level burnout scores. Following Fischer and Boer (2011), we also computed models with only the curvilinear effects of NLA and gender egalitarianism separately (Models 5a and 5b for quadratic effects and models 6a and 6b for cubic effects), and tested the interaction alone and with the quadratic effects controlled (Models 7a and 7b).

Results

Intensity of burnout: Meta-Analysis Results

The current meta-analysis includes data from 55 samples (20 704 participants) from 24 countries. The average EE mean was 2.53, and the standard error was .08, with the 95% CI ranging from 2.36 to 2.70. The between-country (level 2) variance in EE is estimated as 0.13 and the within-country between samples (level 1) variance is

estimated as 0.26. Thus, the total variance is 0.13 + 0.26 = 0.39. The variance partition coefficient (VPC) is 0.33, which indicates that 33% of the variance in EE can be attributed to differences between countries. The maximum likelihood ratio test (*LR* (1) = 4.43, $p < .05$) is significant indicating that there is evidence of country effect on EE. The means were highly heterogeneous: $Q_T(54) = 6179.19$, $p < .001$. The random effects mean per country are reported in Table 1.

The average DP mean was 1.51, and the standard error was .09, with the 95% CI ranging from 1.33 to 1.68. The between-country (level 2) variance in DP is estimated as 0.16 and the within-country between samples (level 1) variance is estimated as 0.24. The total variance is 0.40. The VPC is 0.40, which indicates that 40% of the variance in DP can be attributed to differences between countries. The maximum likelihood ratio test (*LR* (1) = 9.90, $p < .01$) is significant indicating that there is overwhelming evidence of country effect on DP. The means were highly heterogeneous: $Q_T(54) = 8{,}087.15$, $p < .001$ (See the random effects mean per country in table 1).

Finally, the average PA mean was 4.14, and the standard error was .10, with the 95% CI ranging from 3.93 to 4.35. The between-country (level 2) variance in PA is estimated as 0.24 and the within-country between samples (level 1) variance is estimated as 0.34. The total variance is 0.54. The VPC is 0.41, which indicates that 41% of the variance in PA can be attributed to differences between countries. The maximum likelihood ratio test ($LR(1) = 9.02$, $p < .01$) is significant indicating that there is evidence of country effect on PA. The means were highly heterogeneous: $Q_T(55) = 30{,}169.60$, $p < .001$. (See table 1, for random effects means per country). According to these results we reject the first hypothesis.

Table 1. Country scores of burnout dimensions, NLA and gender egalitarianism.

Country	*k*	*n*	EE Mean	DP Mean	PA Mean	NLA*	Gender Egalitarianism**
Australia	6	1176	2.54	1.17	4.51	18	3.41
Canada	2	1329	2.85	1.28	4.76	6	3.66
China	4	1117	2.98	2.13	4.27	7	3.03
Colombia	1	47	2.50	1.89	3.98	20	3.64
Cyprus	1	771	3.04	0.88	4.77	8	3.53
Ecuador	1	203	2.39	0.76	5.24	5	3.09
Finland	1	2038	2.05	1.68	3.87	29	3.55
France	1	259	3.59	2.39	2.82	17	3.81
Germany	3	907	2.13	1.52	4.21	10	3.25
Greece	3	1008	2.24	0.98	4.81	8	3.53
Iran	1	113	1.59	0.78	4.52	1	2.99
Italy	3	396	1.51	0.57	4.63	12	3.30
Malaysia	1	103	2.04	1.17	3.87	20	3.31
Netherlands	2	869	1.91	1.09	4.08	27	3.62
New Zealand	1	125	3.44	1.78	3.32	14	3.18
Norway	2	807	3.06	1.65	2.66	17	3.55
Portugal	1	308	2.55	1.64	4.60	14	3.69
South Korea	2	569	3.16	2.56	3.34	41	2.45
Spain	10	5396	2.72	1.72	3.57	17	3.06
Switzerland	1	135	1.80	0.69	4.81	17	3.12
Syria	1	608	2.17	1.56	4.52	1	2.99
Turkey	2	1154	2.28	1.79	3.36	5	3.02
United Kingdom	1	123	2.74	1.81	4.97	10	3.67
United States of America	4	1143	2.51	1.19	4.62	14	3.36

Note: *k* = number of samples per country; *n* = sample size per country; EE = Emotional Exhaustion; DP = Depersonalization; PA = Personal Accomplishment; NLA = National Learning Assessments.

* Source: UNESCO (2008); ** Source: House, et al. (2004).

Regarding intensity of burnout across countries, the forest plots in figures 1 to 3 represent the means and 95% confidence intervals of the countries for each dimension. The dotted line represents the average country mean and the solid line represents the mean of the scale (3 in a scale from 0 to 6), as a reference beacon. As shown in Figure

1, only the mean scores of Cyprus, France, New Zealand, Norway and South Korea exceed the score of 3 but their confident intervals overlap this threshold so there is a 5 percent chance that the intensity of EE in these countries may be below the average of the scale. These results suggest that teachers in these countries have a higher level of EE intensity than in the other countries examined. By contrast, Italy and Iran are the countries with less intensity levels in EE. Figure 2 shows DP across countries. In this occasion France and South Korea have the highest scores, but only the confidence interval for South Korea overlaps the threshold of the scale. Italy and Switzerland ranked with the lowest intensity of DP. Finally, in Figure 3 lower intensity of PA may indicate burnout. Both France and Norway means are below the mean of the scale but their confidence intervals overlap the threshold limit. By contrast, Ecuador is the country with the highest intensity of PA. According to these results none of the 24 countries are above 3 in EE and DP and below 3 in PA simultaneously. However, the countries with higher intensity levels of burnout in their teachers are France, Norway and South Korea.

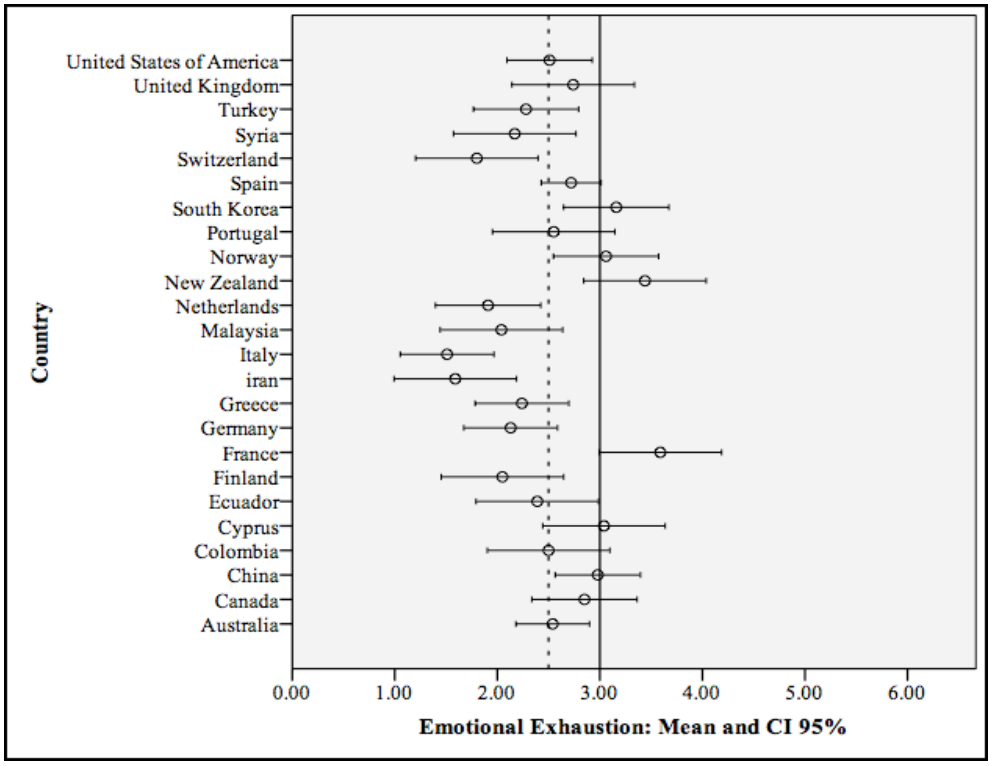

Figure 1. Emotional Exhaustion by country. Dotted line indicates the mean of countries and solid line indicates the mean of the scale of emotional exhaustion (Overall mean = 2.53, CI 95% 2.36, 2.70).

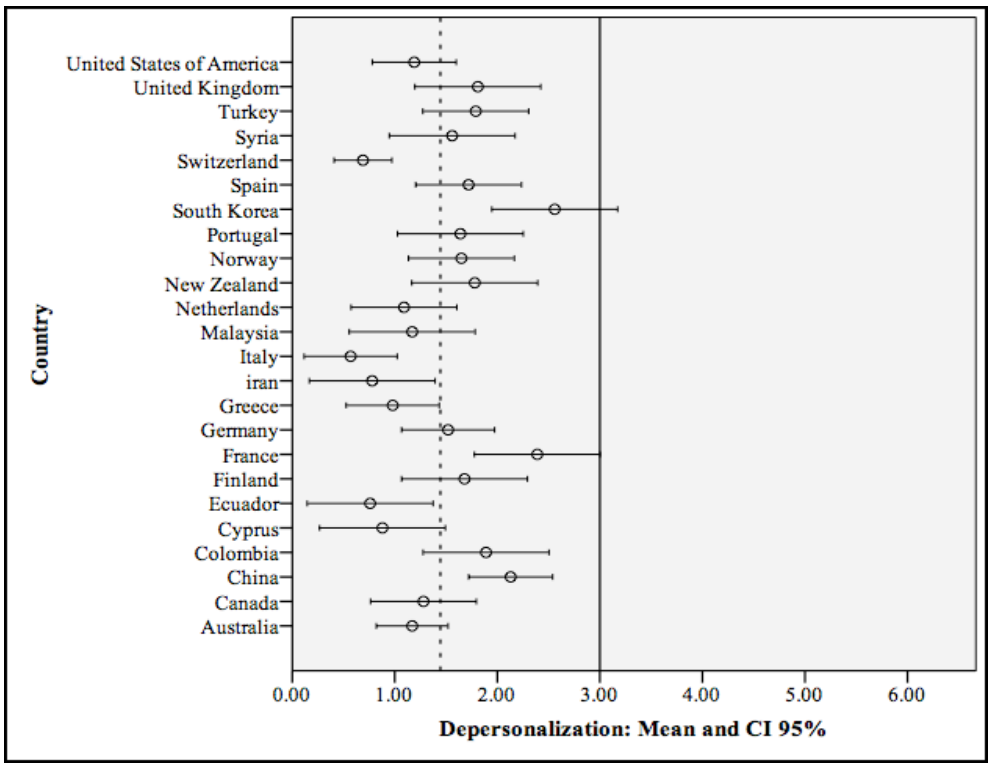

Figure 2. Depersonalization by country. Dotted line indicates the mean of countries and solid line indicates the mean of the scale of depersonalization (Overall mean = 1.51, CI 95% 1.33, 1.68).

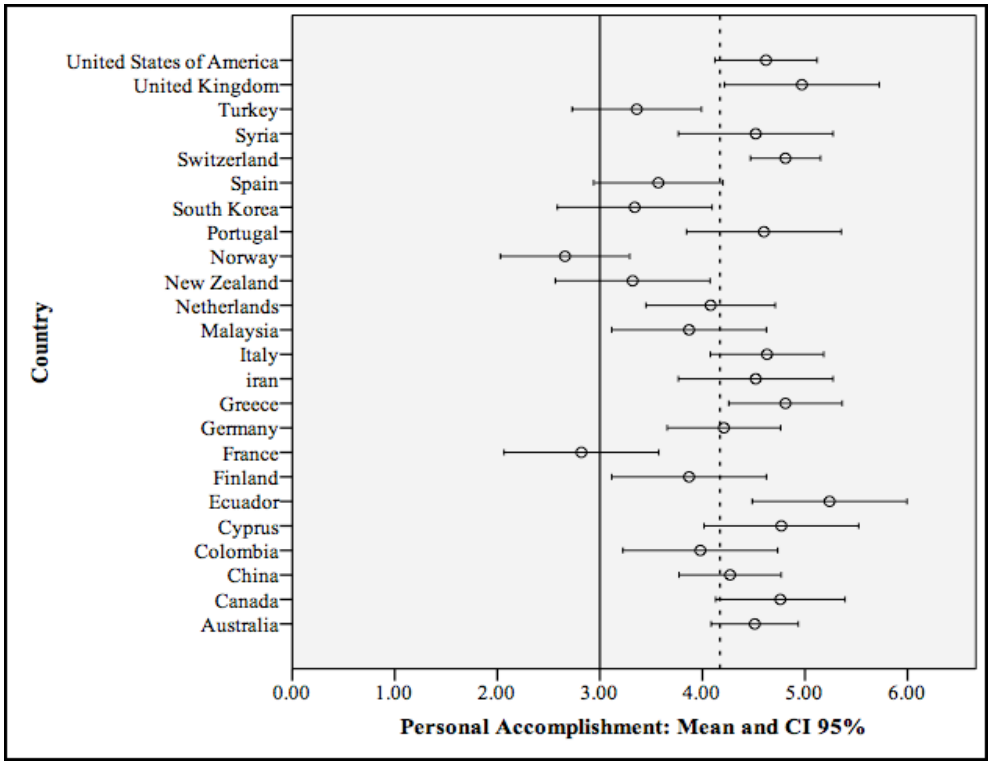

Figure 3. Personal Accomplishment by country. Dotted line indicates the mean of countries and solid line indicates the mean of the scale of personal accomplishment (Overall mean = 4.14, CI 95% 3.93, 4.35).

Predictors and Moderators of Burnout Dimensions

Bivariate Pearson correlations between dimensions of burnout are highly significant in the overall sample. EE is positively related to DP (r = .73, p < .001) and negatively to PA (r = -.36, p <. 01). DP is negatively related to PA (r = -.64, p < .001). These findings point out burnout as an integrated second order construct. Additionally, DP positively correlates to NLA (r = .31, p = .02) and negatively to gender egalitarianism (r = -.31, p = .02), and PA is negatively correlated to NLA (r = -.38, p < .01). The NLA mean is 14.08 (SD = 9.25) and the gender egalitarianism mean is 3.27 (SD = 0.32).

Entering first the study variables at level 1 in the V-known multilevel model we found no significant effect of sample size, percentage of males and age for any burnout dimension. Based on these results we reject hypothesis 3 that stated a positive effect of

sex in burnout in such way that the more males in the sample the higher DP, and the less males the higher EE.

At level 2 after the study variables effects were controlled, the curvilinear effects of NLA were significant on EE when entered separately (table 2, model 6a) and when entered with gender egalitarianism together (table 2, models 5 and 6). We also found a marginal positive effect of NLA on DP (table 3, models 2 and 4) and a negative direct effect on PA (table 4, models 2 and 4). These results provide evidence to accept hypothesis 2.

Figure 4 shows the pattern for NLA. The EE increases until the number of NLA reaches the average (Recall this variable were mean centred, therefore 0 = 14.08 assessments) where it begins to descend until it reaches a point (approximately 29 assessments) where the EE increases considerably.

In relation with gender egalitarianism we found no significant direct effects on any burnout dimension but we found significant curvilinear effects when entered with NLA together in the models for EE (table 2, model 5), when entered both separately and together with NLA for DP (table 3, models 5 and 5b) and a marginal curvilinear effect for PA (table 4, model 5). The patterns for these curvilinear effects are shown in figures 5 to 7. Figure 5 shows that when gender egalitarianism is too low or too high, EE is higher but when gender egalitarianism is average EE is low (recall this variable were mean centred, so 0 = 3.27). The same curvilinear behaviour is shown in Figure 6 for DP, when gender egalitarianism is too low or too high, DP is higher but when gender egalitarianism is average DP is low. Figure 7 shows an inverted U-shape consequently with the reverse sense of PA. In this case when gender egalitarianism is too low or too high, PA is low but when gender egalitarianism is average PA is high. These results provide evidence enough to accept hypothesis 4.

Interaction effects were also tested in our models. We found significant effects of the interaction between gender egalitarianism and NLA but only when curvilinear effects were controlled ($\gamma = .07$, $p < .05$ for DP; $\gamma = -.10$, $p < .05$ for PA. See Model 7b in tables 3 and 4). This indicates a reciprocal-suppressing situation (Tzelgov & Henik, 1991). These interactions should be interpreted with caution due to the high complexity. The main idea is that gender egalitarianism moderates the effect of NLA on the DP by enhancing it when the number of assessments increases, but hindering it from a certain point (when the number of assessments in the country exceeds the average). A similar pattern occurs with PA. Although in this case the sign of the slope is negative since the direction of PA is inverse to that of DP. These results lead us to accept hypothesis 5 that stated the moderator effect of gender egalitarianism on burnout dimension. Figures 8 and 9 show the moderator effects.

Table 2. Two Level Multilevel Analysis for Emotional Exhaustion

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 5a	Model 5b	Model 6	Model 6a	Model 6b	Model 7	Model 7a	Model 7b
Intercept	2.83**	3.21**	3.06**	2.94**	3.32**	3.42**	3.01**	3.58**	3.62**	2.99**	3.31**	3.20**	3.04*
Sample size	-0.00	0.00	0.00	-0.00	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	-0.00
% Males	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age	-0.01	-0.02	-0.01	-0.01	-0.02	-0.02	-0.01	-0.03	-0.02	-0.01	-0.02	-0.02	-0.02
NLA		0.01		0.01	0.01	0.02		-0.01	-0.02		0.01	-0.01	0.01
NLA^2					-0.01**	-0.00		-0.01**	-0.01*		-0.01*		-0.01*
NLA^3								0.00	0.01*		0.00		
Gender Egalitarianism			0.07	0.15	0.63*		0.31	-0.61		-0.21	-0.56	0.46	-0.61
Gender $Egalitarianism^2$					5.14**		1.51†	4.84*		2.49†	5.15*		5.03*
Gender $Egalitarianism^3$								0.28		2.09	-0.46		
NLA x Gender Egalitarianism											0.01	-0.05	-0.01

† $p < .10$, * $p < .05$, ** $p < .01$. NLA = National Learning Assessments

Table 3. Two Level Multilevel Analysis for Depersonalization

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 5a	Model 5b	Model 6	Model 6a	Model 6b	Model 7	Model 7a	Model 7b
Intercept	0.46	1.21	0.84	1.04	0.93	0.98	0.82	1.13	1.03	0.88	0.85	1.16	0.55
Sample size	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.00	0.00	0.00	0.00	-0.00
% Males	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age	0.03	0.01	0.02	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.02
NLA		0.02†		0.02†	0.02	0.02		0.03	0.01		0.02	0.02	0.02†
NLA^2					-0.01**	0.00		-0.01*	-0.00		-0.01*		-0.01*
NLA^3								-0.00	0.00		0.00		
Gender Egalitarianism			-0.39	-0.28	-0.94*		-0.09	1.80**		-1.16†	-1.57*	-0.19	-1.43***
Gender $Egalitarianism^2$					4.50**		1.93*	5.43**		3.85**	6.37**		6.73***
Gender $Egalitarianism^3$								3.84		4.17†	1.39		
NLA x Gender Egalitarianism											0.05	-0.01	0.07*

† $p < .10$, * $p < .05$, ** $p < .01$. NLA = National Learning Assessments

Table 4. Two Level Multilevel Analysis for Personal Accomplishment

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 5a	Model 5b	Model 6	Model 6a	Model 6b	Model 7	Model 7a	Model 7b
Intercept	5.63***	4.74***	5.40***	5.08***	4.75***	4.55**	5.45***	4.55***	4.56**	5.45***	4.87***	4.87***	4.98***
Sample size	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
% Males	-0.01	0.00	-0.01	-0.01	0.00	0.00	-0.01	-0.01	0.00	-0.01	-0.01	-0.01	0.00
Age	-0.03	-0.01	-0.02	-0.02	-0.01	-0.01	-0.02	0.00	-0.01	-0.02	0.00	-0.01	-0.01
NLA		-0.03*		-0.03*	-0.04*	-0.04*		-0.07**	-0.04		-0.06*	-0.04*	-0.04**
NLA^2					0.01*	0.00		0.00	-0.00		0.01		0.01**
NLA^3								0.00	0.00		0.00		
Gender Egalitarianism			0.42	0.22	0.93†		0.20	1.72*		1.13	1.42†	0.42	1.56**
Gender $Egalitarianism^2$					-3.26†		-1.42	-6.07**		-3.10†	-7.32**		-6.75**
Gender $Egalitarianism^3$								-1.38		-3.60	1.87		
NLA x Gender Egalitarianism											-0.07	-0.03	-0.10*

† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$. NLA = National Learning Assessments

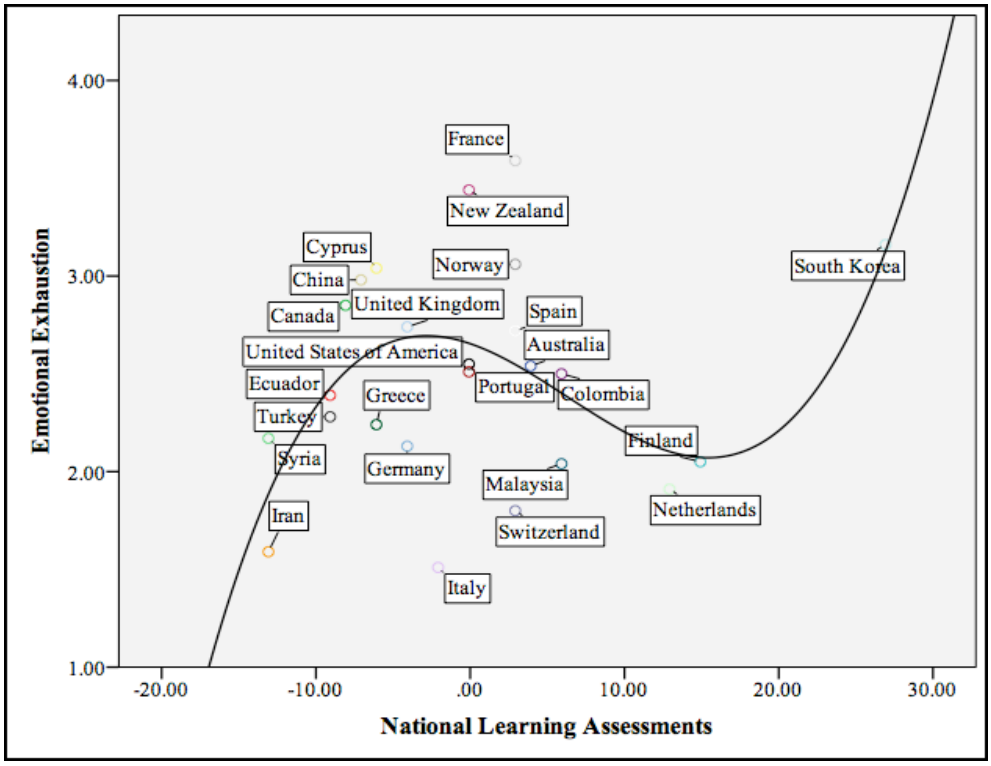

Figure 4. Relationship between national learning assessments and emotional exhaustion scores, R^2 Cubic = .25 (Table 2, Model 6a)

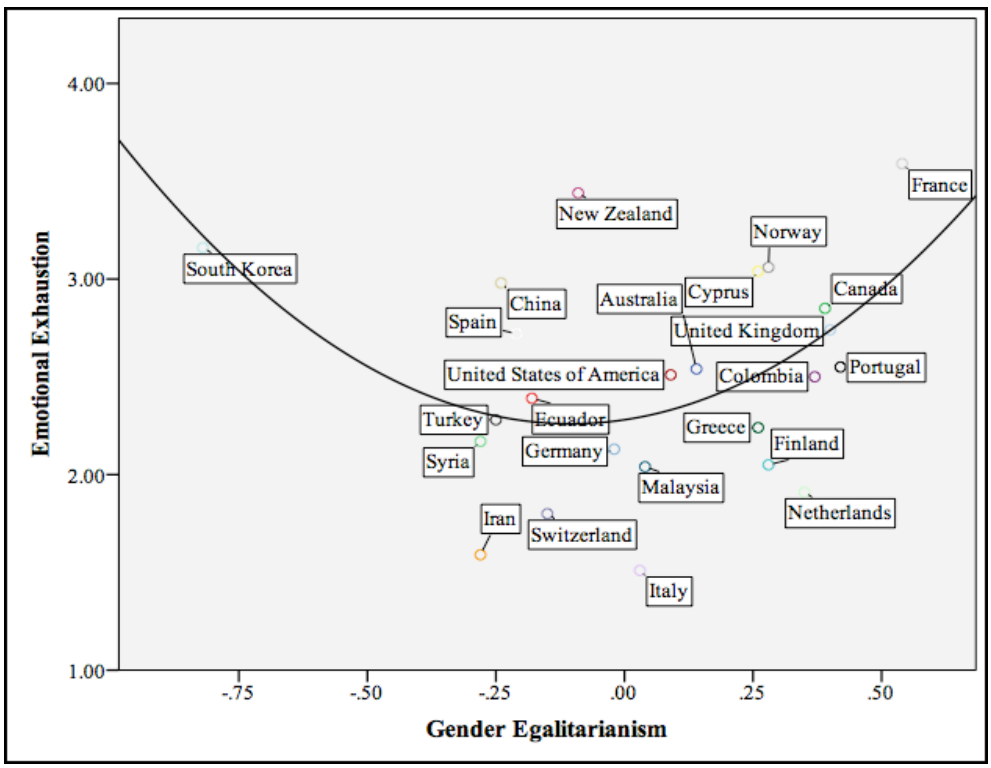

Figure .5. Relationship between gender egalitarianism and emotional exhaustion scores, R^2 Quadratic = .23 (Table 2, Model 5).

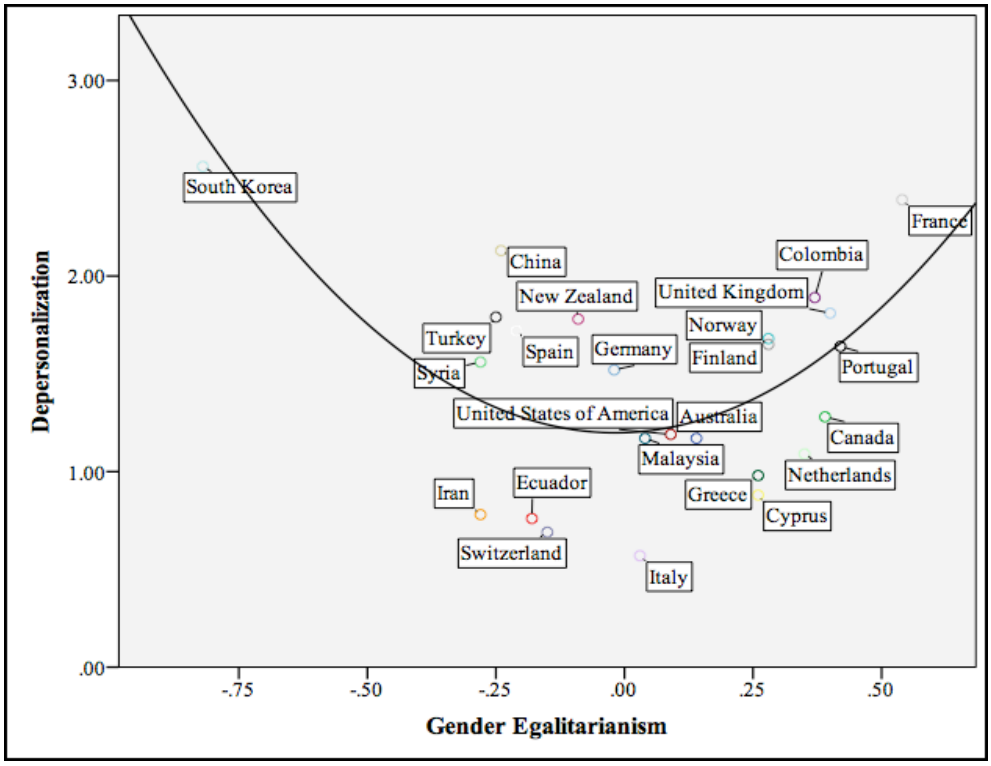

Figure 6. Relationship between gender egalitarianism and depersonalization scores, R^2 Quadratic = .38 (Table 3, Model 5).

Figure 7. Relationship between gender egalitarianism and personal accomplishment scores, R^2 Cubic = .12 (Table 4, Model 6).

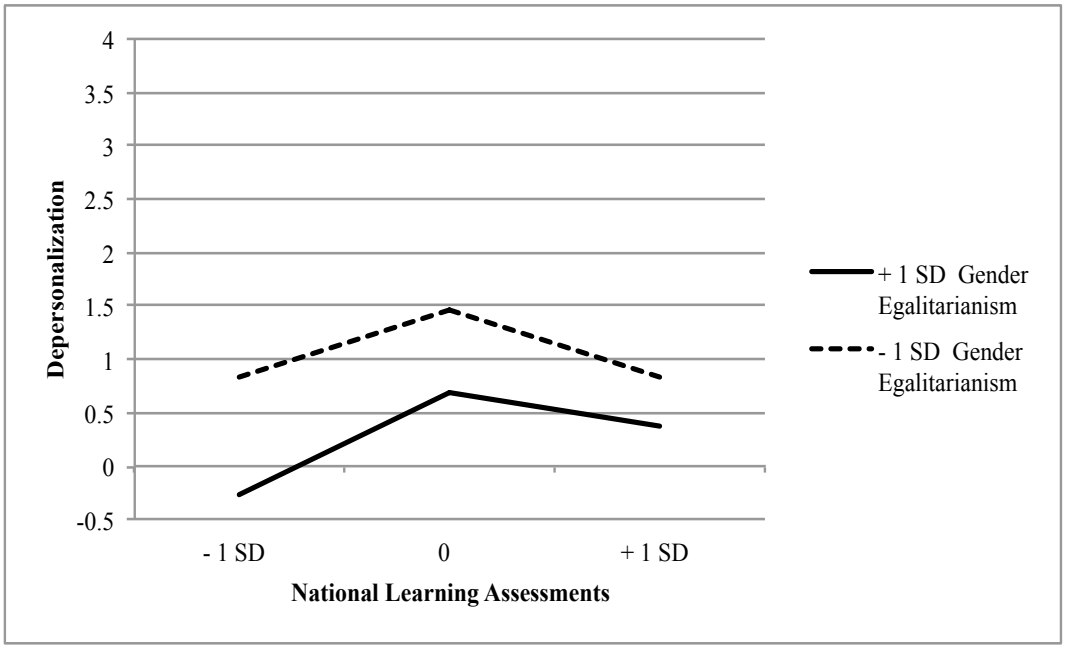

Figure 8. Interaction between number of national learning assessments and gender egalitarianism to explain depersonalization after controlling quadratic effects ($\beta = 0.07$, $p < .05$).

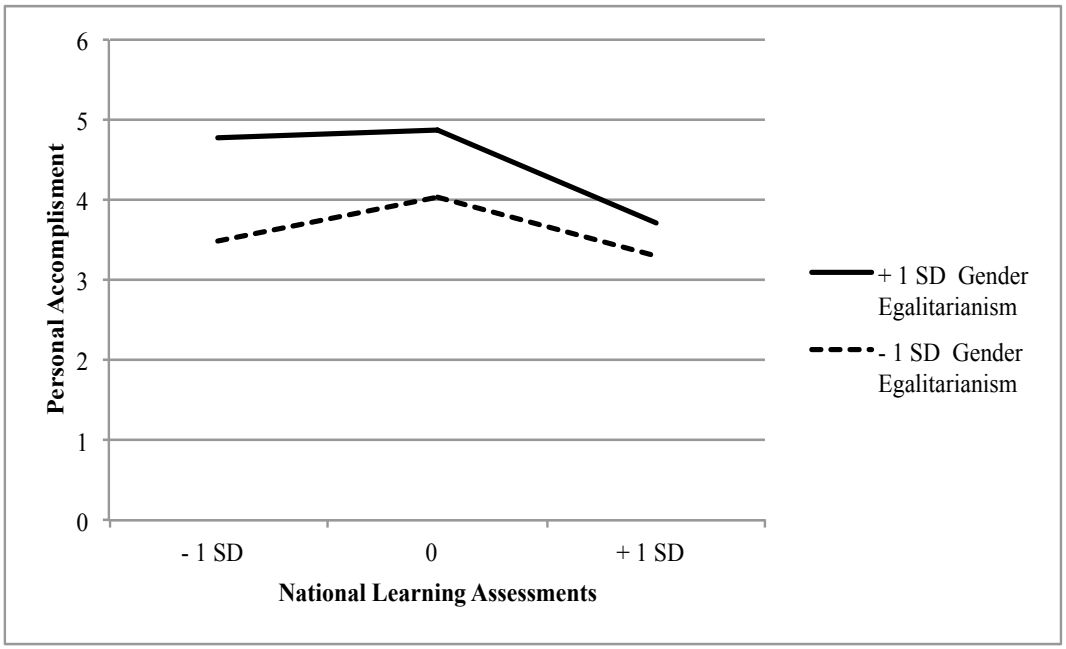

Figure 9. Interaction between number of national learning assessments and gender egalitarianism to explain personal accomplishment after controlling quadratic effects ($\beta = -0.10$, $p < .05$).

Discussion

The aim of this study was threefold: first we analysed the intensity of burnout as a global phenomenon across countries and we described the differences between countries. Second, we examined the relationship between demands, expressed as the number of national learning assessments and burnout in teachers and third, we analysed the effect that sex and gender egalitarianism have on burnout dimensions across countries, and for this purpose we proposed five hypotheses.

The first objective of this study was to analyse the intensity of burnout in teachers comparing studies from different countries. We wanted to answer the question of how burned out the teachers are, since previous research tends to indicate that this group suffers high levels of intensity but the results of research are not conclusive. Therefore, the first hypothesis established that the intensity of burnout is higher than 3 in EE and DP and less than 3 in PA. Although some authors have proposed as appropriate cut-off points those of the normative samples of each country (Moriana & Heruzo, 2006; Schaufeli & Van Dierendonk, 1995), however, many countries do not have these normative samples, and using this criterion would make difficult to compare. For this reason, to establish the mean of the instrument scale (MBI) as a neutral reference was, a priori, a good option from the methodological point of view, allowing us to assess the severity of the intensity obtained. However, in order to compare levels of burnout intensity across countries, the best explanatory model, a posteriori, is the overall mean obtained with their confidence intervals. According to this, the results obtained lead us to reject the first hypothesis. Neither the average mean of the overall sample nor the confidence intervals overlap the initial baseline proposed for each dimension indicating low levels of burnout intensity (below average), although there are significant differences between countries that will be discussed later.

If we take into account the three dimensions we found that there is no country that simultaneously scores high (above average) in EE and DP and low (below average) in PA to consider the presence of the syndrome. However, Cyprus, France, New Zealand, Norway and South Korea are the countries with the highest scores in EE, France and South Korea have the highest scores in DP and France and Norway have the lowest scores in PA. These results should be analysed with caution because, although scores were weighted, we should note that there is only one study from France, so they cannot be generalized.

If we consider only one dimension (EE as the *core* of burnout) our results are slightly higher than those found by Fischer and Boer (2011), who obtained an average intensity of 35.03% (equivalent to 2.10 in the scale from 0 to 6). This difference may be due mainly to the fact that the percentage of men in their sample (44.7%) is higher than in ours, exerting a negative effect on the intensity level of EE, such that the greater number of men, the lower EE score.

This low intensity of burnout found can also be explained by the so-called "healthy-worker effect" (Karasek & Theorell, 1990). Those workers who left work because of health problems have not been investigated so that reported scores, which correspond to healthy workers, are lower. That is why Cox, Tisserand and Taris (2005, p. 188) pointed out that since the subjects participating in the studies are usually volunteers, studies on burnout report often results of workers who actually are not burned out. To test this healthy-worker effect, previous research (Moriana & Heruzo, 2006; Schaufeli & Van Dierendonk, 1995) compared samples with and without psychological health problems, finding that, as expected, burnout was significantly higher in samples with health problems.

Although the intensity of burnout reported in the results is low compared to the cut-off point, however there may be groups of teachers with higher levels of burnout, and therefore it is a health issue that is worth attending. At the individual level, there will always be some people more affected by the syndrome than others. In this case the cut-off point will allow the practitioner to diagnose who suffer from the syndrome and who should be medically treated. At the organizational level, much more important from the organizational psychology point of view, the cut-off point is like the traffic light that will indicate when preventive or corrective actions should be activated taking into account the environmental and cultural characteristics of each organization.

Our results show that differences between countries explain a significant percentage of burnout variability (33% for EE, 40% for PD and 41% for PA). Previous research reports similar results for EE (Fischer and Boer, 2011). This indicates that there are countries that have levels of intensity significantly different from the average of the group of countries analysed. In order to explain these differences between countries, it must be taken into account that there are many variables that can influence this variation and that the direct effect of some variables can be moderated (enhanced or diminished) by the effect of others. We have considered variables of three types: socio-demographic (age, sex), organizational (work demands operationalized as number of NLA) and cultural (gender egalitarianism). This connects with our second and third objectives.

Our second objective was to analyse whether differences in the demands of teachers' work expressed as NLA had an effect on the variation of burnout. Consequently, the second hypothesis stated a significant relationship between NLA and burnout in such a way that the higher NLA, the higher EE and DP and the lower PA. We found that NLA is positively related to DP and negatively with PA as well as a

curvilinear effect on EE. When the number of NLA in countries increases, DP increases and PA decreases. In addition, when NLA in countries increases, EE intensity also increases until it reaches a point (14 assessments, approximately the mean of this variable) where EE starts to decrease to again increase dramatically from 29 assessments on.

It should be noted that the number of assessments in each country covers the period from 2000 to 2007. This means that 14 assessments over an 8-year period play approximately two assessments per year. Although countries have gradually incorporated NLA into their education systems, mainly since 2000 (Benavot & Tanner, 2007), the overload involved in carrying out these assessments can produce consequences on the intensity of burnout in teachers (Fontenot, 2012). Implementing NLA requires infrastructures and organization and entails an extra workload for teachers. However, when a threshold is passed, due to the influence of variables such as self-efficacy (Skaalvik & Skaalvik, 2010) and the infrastructure is already working, the overload effect usually decreases and EE declines, until a new threshold of overload (29 assessments) arrives generating an increase of EE intensity.

On the other hand, there seems to be a positive relationship between the economic development of countries and the number of assessments performed (Benavot & Tanner, 2007). In addition, previous research has found no evidence of positive relationships between the development of countries and the level of burnout (Jamal, 2007). This suggests that economic development would have no effect on the relationship between NLA and the intensity of burnout.

Our third objective consisted in analysing the effect of sex and gender egalitarianism on the variation of teacher burnout. With respect to the effect of sex on the variation of burnout, the third hypothesis stated, based on previous research

(Purvanova & Muros, 2010), that the higher percentage of men in the sample the higher DP scores, while the lower percentage of men the higher EE scores. Our results lead us to reject this hypothesis. Contrary to our expectations, but coinciding with the results found by Ju et al. (2015), being male or female does not influence or moderate any dimension of burnout. Therefore, our results do not support the theory of sex stereotypes. Although some research has found that men score higher on depersonalization and women in emotional exhaustion however these results are inconclusive. This may suggest that sex does not have a determining role in the manifestation of this syndrome and that we would have to find out to other types of factors such as organizational or cultural. In any case, more research is needed.

In relation to gender egalitarianism we proposed the fourth and fifth hypotheses. The fourth hypothesis established that gender egalitarianism had a curvilinear behaviour in relation to burnout with a U-shape to EE and DP, and an inverted U-shape with respect to PA. Our results provide evidence to support this hypothesis. Although no direct effects were found however, the curvilinear effects were significant. Our results are similar to those reported by Ushiro and Nakayama (2010) in the sense that extreme scores in gender egalitarianism would be related to high burnout. However, the orientation of the curve does not seem to fully support the theory of cultural development proposed by O'Kelly and Carney (1986) and Triandis (1994) according to which the level of development of a society would be related to the inequality of gender role in such a way that in the primitive or very advanced societies the differences of gender role would be lower than in societies where an intermediate state of development is reached such as agrarian or industrial societies. Accordingly, the extreme levels in the development continuum would correspond to high gender egalitarianism. In turn, we have found that high scores in gender egalitarianism are related to high burnout. This

would suggest that extreme levels in development would be related to high burnout. However, although the level of development of the countries is not a variable included in our analyses, our data show that, for example, Switzerland or Germany, which are developed countries, do not have high scores in gender egalitarianism or in burnout. This would indicate again that the level of development is not directly associated with the level of burnout. In any case, these relationships should be further explored in later studies.

Finally, in relation to the gender role, we proposed the fifth hypothesis that posits that gender egalitarianism has an interaction effect in such a way that moderates the effect of NLA on burnout. Our results found significant interaction effects on DP and PA but not when the interaction entered alone in the model, but after controlling the curvilinear effects (Model 7b in Tables 3 and 4). This suggests a reciprocal-suppression situation (Tzelgov & Henik, 1991). In countries with high NLA and high gender egalitarianism there is a positive but weak slope of gender egalitarianism over DP, but in countries with low NLA and high gender egalitarianism the slope of gender egalitarianism over DP is strong and negative. In relation to PA the slope of gender egalitarianism is positive and strong in high NLA and high gender egalitarianism situations, but negative and very weak in low NLA and high in gender egalitarianism. In turn, when gender egalitarianism is low the slopes are very similar but the level of NLA is indifferent in the effect for both DP and PA. Previous research has shown that reciprocal-suppression situations are common in psychology (Ganzach, 1997) and may increase validity (Collins & Schmidt, 1997). However, due to their complexity, this type of interactions must be interpreted with caution, in addition to the need for further investigation.

Limitations

Although our findings in this study are important we must also consider some limitations. The scales reliability was reported in most of the studies we included in our analysis, with appropriate alpha values (higher than .70). Nevertheless, some studies did not include data on reliability. So, we could not verify biases related to this issue. Regarding the measure instrument, we focus on studies where BMI were used as measure instrument because this is the most used instrument in burnout research. But studies using other instruments, as the Copenhagen Burnout Inventory (CBI) by Kristensen et al., (2005) or the Oldenburg Burnout Inventory (OLBI) by Halbesleben and Demerouti (2005), among others could also have been considered. Although previous research (Duarte, Carlotto, & Marôco, 2012; 2013) has shown high correlations between some scales of these instruments with the MBI scales, however they are not totally similar. For example, the CBI only considers exhaustion as the central dimension of the syndrome and the OLBI only considers exhaustion and detachment. While in our study we consider the burnout as a three-dimension construct.

The mean and standard deviation are good estimators when the sample size is large. In our case, to avoid the problem of bias due to different sample sizes, the means were weighted based on the sample size of each country as well as on the inverse variance. However, the results of some countries answer to a single sample and therefore cannot be generalized as representative of the whole country, since variations in burnout scores within a country can be significant.

This study only covered primary and secondary teachers, not considering other occupations where burnout has also been studied as doctors, nurses, social services or students. When comparing our results with others that include different types of occupations in their samples (Fischer & Boer, 2011) we did not find large differences in

the average burnout scores, however it would be interesting including different occupations in future studies. It would also be interesting to compare samples of subjects affected by the syndrome with those who are not affected to have a better idea of the real intensity of this syndrome as suggested by Schaufeli and Van Dierendonk (1995). Additionally, it would be interesting to consider other cultural values to explain burnout such as individualism, power distance or future orientation as some authors have already done (Fischer & Boer, 2011; Kwanghyun, 2010; Quian et al, 2014), as well as to analyse the influence of other stressors.

In this study, we have found that the intensity of burnout in its three dimensions is below the mean of the scale in most of the counties analysed suggesting that this syndrome, although with low average levels of intensity, is a health problem that affects both developed and developing countries, being a global phenomenon that should be prevented. Prevention means taking actions so that a problem does not appear or does not reach alarming levels. For this reason, programs to prevent burnout should consider aspects such as dimensionality, how to measure it and the cut-off points established taking into account the country normative scores.

We have also found that culture and in particular the cultural value of gender egalitarianism has a curvilinear direct effect on burnout dimensions as well as a moderator effect which vary from one country to another. In this sense prevention plans must take into account the gender roles distribution in each country paying especially attention in those places where gender role diversity is higher in order to make these plans more effective.

NLA are good tools for governments to implement quality actions in country education systems. But it also must be considered their effect as stressors producing burnout and affecting wellbeing of teachers.

Conclusions

This study opens a wide field for future research. Although burnout has been considered as a globalized phenomenon, our results suggest that, understood as a multidimensional concept, its intensity does not seem such as serious problem today as some studies have reported. However, burnout must be taken into account in the framework of the increasing risk of psychosocial diseases that must be prevented. Similarly, given the essential role of teaching in today's knowledge society, the burnout in teachers is a central issue for research and health to be analysed across countries. Nevertheless, this research should be done with caution, following rigorous methodological criteria and taking into account the differences between countries, both at the level of country normative scores and at the level of cultural differences.

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CAPÍTULO 5

Is Burnout a Cultural Matter? Meta-Analytical Review of Burnout in Latin American Countries and Multilevel Analysis of the Effects of Language and Individualism

Is Burnout a Cultural Matter? Meta-Analytical Review of Burnout in Latin American Countries and Multilevel Analysis of the Effects of Language and Individualism

Abstract

In Latin America research on burnout has increased in recent years, however there are no studies that compare the results across countries. The present meta-analysis examines the intensity of burnout (emotional exhaustion, cynicism and personal accomplishment) in 58 samples from 8 countries (Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru and Venezuela). It also analyzes the effect of language and individualism / collectivism at the country level through a two-level multilevel model. Results show low intensity of burnout (below 35%) in all Latin American countries analyzed but there are significant differences between them in emotional exhaustion. These differences are related to occupation at the study level, and with language at country level. Social and human service professionals (police officers, drivers, public administration staff or salespeople) are more exhausted than health professionals (physicians, nurses) or teachers. The samples with Portuguese language score higher in exhaustion than those of Spanish language, supporting the theory of cultural relativism. Individualism has a positive marginal effect on emotional exhaustion. These findings suggest that culture may explain variations of burnout intensity. From the applied point of view, the results from this meta-analysis (effect size) can be used as baseline to establish the normative burnout cut-off points for the Latin American countries.

Keywords: burnout, language, individualism, Latin-American countries, meta-analysis, multilevel analysis.

Introduction

Culture can be defined as integrated patterns of learned beliefs and behaviors that are shared among groups and include thoughts, communication styles, ways of interacting, views of roles and relationships, values, practices and customs (Vaughn, 2010). Culture has an effect on the way the world is perceived and it is embedded and strongly influences cognitive processes. According to Triandis (2005) people has shared patterns of attitudes, beliefs categorizations, self-definitions, norms, role-definitions, and values that are organized around a theme. These patterns are like "umbrella constructs" and are called cultural syndromes. Individualism and collectivism are examples of cultural syndromes. They must be identifiable among those who speak a language dialect, during a specific historic period, and in a definable geographic region. A cultural syndrome has many elements and it is much richer than a dimension of culture. The different way that people understand and explain the same things across countries is due to cultural syndromes. This is manifested for example in the different way of explaining issues such as health and illness (Helman, 2007), the meaning of work or organizational behavior (Fouka & Schlaepfer, 2017).

Current changes in working conditions, increased stress and psychosocial risks have resulted in the development of burnout that has been considered a highly prevalent globalized health issue that causes significant physical and psychological health problems (Bellingrath, Weigl, & Kudielka, 2008; Steinhardt, Smith, Faulk, & Gloria, 2011), affecting morale, behavior and performance of workers (Oberle & Schonert-Reichl, 2016; Roloff & Brown, 2011). This widespread phenomenon occurs in all countries and is undoubtedly interpreted and has different consequences in terms of cultural syndromes.

Lately a lot of research has been made on burnout but little has focused on cultural aspects. During the last ten years 19 meta-analysis on burnout have been published, analyzing more than 700 papers. These studies have examined a great variety of topics, for example those related to demographics such as sex or age (Gómez-Urquiza, Vargas, De la Fuente, Fernández-Castillo, & Cañadas, 2016; Purvanova & Muros, 2010), to personality factors (You, Huang, Wang, & Bao, 2015), or related to work and organizational variables (Alarcon, 2011; Kay-Eccles, 2012; Maricuţoiu, Sava, & Butta, 2016). Other studies have looked at the problem of dimensionality (Worley, Vassar, Wheeler, & Barnes, 2008) and its measurement (Wheeler, Vassar, Worley, & Barnes, 2011). From the cross-cultural point of view, it is worth highlighting Fischer and Boer's meta-analysis (2011) that analyzed the relationship between burnout (emotional exhaustion), individualism and well-being in 200 studies (245 samples) published between 1981 and 2007 from 25 countries. However, this study does not consider cynicism and personal accomplishment, and there are no samples of Latin American countries although research on burnout in this region has considerably increased in recent years. For instance, a search in Google Scholar with the keywords "Burnout" and "Latin America" yields 46 results until the year 2000, increasing to 3,750 results until the end of 2016, indicating the growing importance of this topic. The systematic review by Díaz and Gómez (2016) points out some characteristics of this emerging research. Analyzing 89 articles on burnout from 12 Latin American countries published between 2000 and 2010, the authors found that the theories and instruments on burnout developed in non-Latin American countries have been used in Latin America "without the reflection about the specificity of work-health processes within this context and without the necessary adaptation to the specific factors of Latin American culture" (p. 122). Latin American countries share similar cultural

characteristics and have been grouped into the same cultural cluster (Gupta, Hanges, and Dorfman, 2002; Hofstede, 2001), where the collectivist pattern prevails although scores vary between countries.

To understand the individualist culture, we must also understand the collectivist. The first can be found mainly in the USA, Northern and Western Europe, Australia and New Zealand. The second is mainly in Asia, Africa and Latin America. Between the individualist and collectivist extremes can be found thousands of cultures where these two elements coexist in different proportions. Individuals also have part of these two elements. Very individualistic people, or idiocentric (self-centered), are very narcissistic. Extremely collectivist people, or allocentric (centered on the others) are super-conformists (Triandis, 2005).

There are four important attributes to define individualism / collectivism. First, Markus and Kitayama (1991) proposed that the self can be independent or interdependent. Interdependence can be with the family, the co-workers, or any other group. Second, the structure of the goals is a cue because when the goals of the person and the group conflict the individualist will choose what s/he wants while the collectivist will choose what the group wants. Third, the importance that is given to personal attitudes and values in relation to the importance given to norms, roles or group goals. Individualist people will give more importance to the former while the collectivist will prioritize the latter. Fourth, the fact of staying in a group even when one does not like it. The collectivist will remain because the group and its interests are priorities. These four aspects do not have exactly the same meaning in each culture and also often appear mixed in individuals. That is why when they are measured they usually show low correlations (Triandis & Gelfand, 1998). Even variability may be higher within a culture than between cultures (Minturn & Lambert, 1964).

To measure individualism and collectivism at country level, Hofstede indicator (2001) continues to be useful and provides a strong empirical basis for this cultural dimension (Taras, Steel, & Kirkman, 2011). Hofstede (2001) provides country scores for individualism / collectivism, in a scale ranging from 0 to 100 where higher scores indicate higher individualism. We focus on Latin American countries in this study. The average Latin American country scores for individualism is 23.25, indicating that, generally speaking, these countries are characterized by low levels of individualism (Hofstede, 2001). However, these values vary among the countries included. Argentina has the highest score in the group (46), possibly because it is the country that stands out for its large number of European immigrants. Brazil (38) and Mexico (30) are the countries with the highest gross domestic product (GDP) in the group. Brazil is also the country with different language, the Portuguese. The country with the lowest score is Ecuador (8), which matches with being the country with the lowest GDP of the group and with deep traditions of both Spanish and indigenous origin.

Previous research has analyzed the relationship between individualism / collectivism and burnout. For example, Welbourne, Gangadharan, and Sariol (2015) have found that collectivism is negatively associated with burnout. In turn, Farzianpour, Abbasi, Foruoshani, and Pooyan (2016) found positive relationships between individualism and burnout. On the contrary, the study by Fischer and Boer (2011) found negative relationships between the individualism and the emotional exhaustion. These findings suggest that there is evidence of a relationship between individualism / collectivism and burnout, however, the direction of this relationship is not conclusive. In our study, it would be expected that the greater the individualism, the greater the exhaustion due to the higher the competitiveness between individuals, and the greater

the cynicism, since being the most independent individual is easier to stay at a distance with others (Triandis, 1994).

Given these specific cultural characteristics and considering that individualism may be considered as a consistent predictor of burnout intensity (Fischer & Boer, 2011), our study contributes to the literature with two important outcomes. First, we describe the intensity of burnout by conducting a meta-analysis for each burnout dimension including studies of nonclinical adult Latin American samples published between 2006 and 2016. This is important because there are no previous studies, as far as we know, that analyze the intensity of burnout in Latin American countries, considering the three dimensions of burnout. Further, in order to compare the intensity of burnout across countries, and taking into account the difficulty of establishing normative and referential cut-offs to determine when a person is burned out (Schaufeli, Leiter, & Maslach, 2009), even more when national normative scales are not available (Schaufeli & Van Dierendonk, 1995), this will allow a benchmark to guide researchers and practitioners in determining whether the presence of burnout should be medically attended and when designing and implementing prevention programs. Secondly, following the work by Fischer and Boer (2011), we test the effects of cultural syndrome individualism / collectivism on burnout across countries by developing a two-level mixed-effect hierarchical modelling, which allowed us to account for effects at country level. This will provide a better understanding of the role that culture plays in the perception of this health problem, even in countries that culturally have similar characteristics.

Method

Literature search and inclusion criteria

We looked for articles in Psycinfo, Scielo and Google Scholar databases with the word "burnout" in the title, published between 2006 and 2016 and filtered by Latin American region. The search was conducted in January 2017 and yielded 368 results. Inclusion criteria were: (a) To be quantitative empirical studies; (b) to have samples from Latin American countries and; (c) to report measures of burnout through means or sums. In this study we follow the three-dimension model of burnout proposed by Maslach, et al. (1996), that is the most widespread in the literature, defining emotional exhaustion (EE) as the feelings of not being able to give more of oneself on an emotional level and a decrease of one's own emotional resources; depersonalization or cynicism (C) as a negative distance response, cynical feelings and behaviors towards other people, who usually are the users of the service or care; and reduced personal accomplishment (PA) or professional efficacy as the decrease in one's own feelings of competence and achievement at work (Maslach, et al., 1996).

The final number of studies included in this meta-analysis for EE is 55 that provided data from 58 samples, and a total of 20,578 subjects. For C and PA there are 54 studies with 57 samples and 20,378 subjects (References of studies included in this meta-analysis are in Appendix A). Figure 1 shows the complete process of inclusion detailing the discarded works and the reason for their elimination following the recommendations proposed by the PRISMA statement (Moher, et al., 2015).

Procedure

In addition to the bibliographic information as authors, year of publication, title, and journal where it was published, the following information was obtained in each study: sample size, sample country, occupation, percentage of men in the sample,

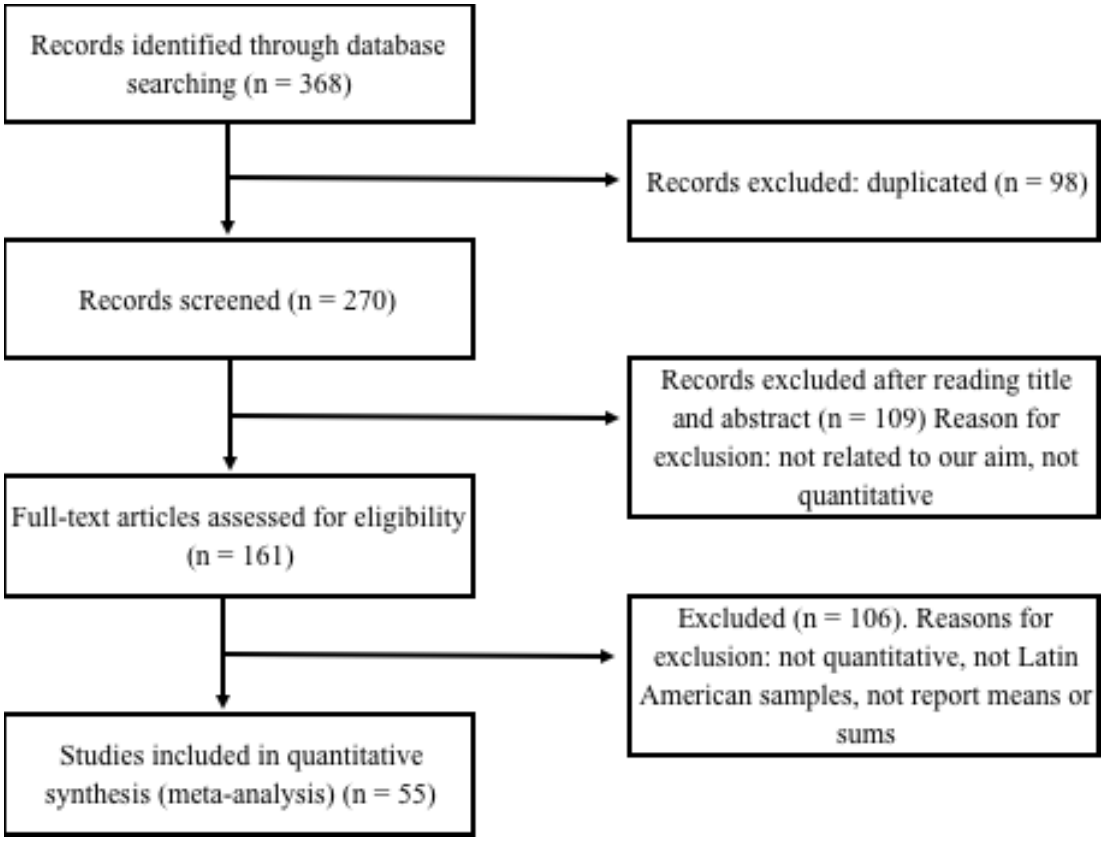

Figure 1. Flow chart indicating the selection of studies included in the meta-analysis.

average age, average time of experience, instrument used to measure burnout and reliability indexes, reported dimensions, number of items for each dimension and response scale.

We used the percentage of the maximum possible (POMP) (Cohen, Cohen, Aiken, & West, 1999) to standardize the means or sums reported in the studies, transforming them into scores ranging from 0 to 100, depending on the number of items and levels of response of each scale. The Maslach Burnout Inventory (MBI) is the most widely used instrument for burnout, but there are also others such as the *Cuestionario para la Evaluación del Síndrome de Quemarse por el Trabajo* (CESQT) or the *Escala de Caracterização do Burnout* (ECB). These instruments have scales that are conceptually similar to those of EE, C and PA. Therefore, we were able to obtain

statistic scores for these three dimensions through all the instruments reported in the studies. When PA was reported as *lack of* PA, we calculated the reverse score. Since the standard deviation was frequently reported, we were able to calculate the inverse variance estimated on the basis of both standard deviation and the sample size (Lipsey & Wilson, 2001). It is important to note that these studies correspond to non-clinical samples, so these results can be grouped and used to obtain national indicators on burnout.

The two authors of this study proceeded separately in the analysis of the inclusion criteria and in the standardization process obtaining an agreement of 94% between both of them. The final results, after the standardization process, express the arithmetic mean for each burnout dimension and this will be taken as the effect size (Lipsey & Wilson, 2001). Meta-Analyses on arithmetic means are less frequent in the literature, but they can be very useful in examining some context effects (for example Fischer & Boer, 2011; Fischer & Mansell, 2009).

Study characteristics

The total sample size was 20,578 including 55 studies (58 independent samples) for EE, and 20,378 in 54 studies (57 independent samples) for C and PA. 17% of the total studies were published in 2014 representing the year with most publications. The samples correspond to 8 Latin American countries (Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru and Venezuela). Most samples belong to Brazil (39%). The samples were grouped into 3 groups of occupations: Education (non-university teachers, university teachers and university students), Health (doctors, nursing, health personnel), and Social Services (military, police, prison guards, social workers, public administrative staff, drivers, housewives and salesmen). Health is the occupation with

more samples (24 samples, *n* = 10,768), followed by education (23 samples, *n* = 6,156). MBI was used in 48 studies with reliability reported in 18 studies where Cronbach's alpha ranged from .65 to .90. The CESQT was used in 5 studies reporting the reliability of their scales (work illusion, psychological exhaustion and indolence) ranging from .72 to .86. The remaining 5 studies used other instruments. The language of the instruments was Portuguese (23 studies) and Spanish (rest of studies). The average percentage of men is 36.41 (*SD* = 23.68). This data was only reported for 44 samples. Missing data for this variable was completed with the mean. The mean age was 37.89 years (*SD* = 7.94, range from 21 to 57). This data was reported in 33 samples. The work experience was only reported in 17 samples and the average is 12.24 years (*SD* = 4.72, range from 4 to 19). Missing data on age and experience did not allow them to enter the analyzes. Table 1 shows the description of the studies included in the meta-analysis grouped by country.

Country-level indicators

This study includes individualism scores, which correspond to the national scores of this cultural dimension according to Hofstede (2001). They are also available on the website of this author and updated to the year 2010 (see Table 2 for details). The scale ranges from 0 to 100, where higher scores indicate higher level of individualism. Portuguese was used in 38% of the samples. Language and culture are intimately connected. One of the long debates around culture and language is to what extent language influences culture and vice versa. The Sapir-Whorf hypothesis, also known as linguistic relativity, suggest that speakers of different languages think differently because of the differences in the construction and function of their languages. Therefore, we also included a dummy variable for language (0 = Spanish, 1 = Portuguese).

Table 1. Description of studies included in the meta-analysis

	Publicati	Samp	Occupation	%	Age	Exp
Argentina						
Galván, et al.	2012	162	Health			
Molina	2013	160	Health			
Brazil						
Carlotto & dos	2006	190	Education	21	37	13
Oliveira, et al.	2006	48	Health			
Carlotto & Gonçalves	2007	563	Education	31		
De Souza, et al.	2009	151	Health	9	32 (8)	7
Telles & Carvalho	2009	80	Social	6		
Robayo	2009	190	Health	20	34 (8)	7 (6)
Bezerra & Oliveira	2009	412	Social	100		
Carlotto & Moraes *	2010	881	Education			
Gil-Monte, et al.	2010	714	Education	16	39	14 (9)
Truzzi, et al.	2012	145	Health	19	57	4 (3)
Palazzo, et al.	2012	879	Social	31		
Silva, et al.	2013	169	Education	59	45 (9)	
Müller, et al.	2014	52	Health	14		13 (8)
Fernandes, et al.	2014	107	Health			
Carlotto, et al.	2014	630	Health			
Lima & Alchieri	2014	1040	Health	24	31 (7)	
Pimentel, et al.	2015	193	Health	7	34 (9)	5 (5)
Moraes, et al.	2015	116	Health	13	37 (9)	
Albuquerque, et al.	2015	228	Social	79	24	
Carlotto, et al.	2015	982	Education	16	39	14 (9)
Pizarro, et al.	2016	584	Health	13	38	
Chile						
Briones	2007	115	Social	81	33	
Melita, et al.	2008	91	Health			
Olivares-Faundez, et	2009	277	Social	25		
Darrigrande &Durán	2012	60	Education	50	43	
Ortiz, et al.	2012	133	Education			
Alfaro-Toloza, et al.	2013	90	Education	42		

Table 1. (Continuation)

	Publicati	Samp	Occupation	%	Age	Exp
Briones & Kinkead	2013	338	Social			
Olivares-Faundez, et	2014	957	Social	40	41	14 (9)
Seguel & Valenzuela	2016	336	Health			
Colombia						
Caballero, et al.	2007	202	Education	23	25 (5)	
Rojas, et al.	2009	89	Education		46	
Gantiva, et al.	2010	47	Education	26	43	18
Palacio, et al.	2012	284	Education	12	21	
Muñoz & Correa	2014	16	Education	44		
Rodríguez	2014	107	Social	84	36	
Caballero, et al.	2015	820	Education	21	24 (2)	
Ecuador						
García-Arroyo &	2014	203	Education	72	47	13
García-Arroyo	2015	243	Education	25	42	9
Mexico						
Magaña & Sánchez	2008	109	Education	73	47 (7)	
González, et al.	2009	200	Social	0	44 (9)	
Gil-Monte & Zúñiga-	2010	110	Health	58	46 (8)	19 (8)
Cruz, et al.	2011	477	Health	35	37 (9)	
Austria, et al. *	2012	654	Health	38	37 (9)	
Castañeda & García	2013	203	Health	56	42	15 (9)
Cárdenas, et al.	2014	100	Education	32	46	18
Peru						
Solorzano, et al.	2009	44	Health			
Estela-Villa, et al.	2010	103	Education	53	24	
Maticorena-Quevedo,	2014	5062	Health	38	44	17
Fernández, &	2016	61	Social	43	30	8 (8)
Venezuela						
Volcanes & Rivas	2007	120	Health			
Anello, et al.	2009	158	Education	24	40	
Torres & Guarino	2013	93	Health	59	42	

Note: Age (sd) = average age in year, standard deviation in brackets; Exp (sd) =

Meta-analytical strategy

Similar to other meta-analyses, we asked three questions: a) What is the overall effect size for all studies? (the mean, in this case, see Lipsey & Wilson, 2001); b) Are there significant differences in the intensity of burnout across studies? (The homogeneity question); and, c) What are the moderating variables of burnout intensity? To answer these questions, we run separated meta-analyses, one for each dimension. Samples size and the number of studies by country have been taken into account because this variation influences the final result. Thus, effect sizes were weighed by the inverse variance and therefore smaller samples have proportionally less influence on the overall pattern. Standard error was calculated by dividing the standard deviation by the square root of the sample size. As effect size for the meta-analysis, the arithmetic mean was calculated. For the analysis of the moderating variables, the mean was the effect size and the variance was based on the sample size (Lipsey & Wilson, 2001).

We use a multi-level mixed effects model. Mixed effects model uses a combination of fixed and random effect models estimating the effect size variation both at the subject level and at the study level, but also tests whether the variability is explicable by context-specific variables beyond random variation. The studies have been nested into countries resulting in a two-level structure where the effect sizes and socio-demographic variables correspond to level 1 and the analysis of the country is level 2. This structure allows controlling variables that have been found relevant in the explanation of burnout such as gender (Purvanova & Muros, 2010) or occupation (Taris, Bakker, Schaufeli, Stoffelsen, & van Dierendonck, 2005). We followed the procedure explained in Charlton (2017) by conducting a two-level variance known meta-analysis. At Level 1, the mean was the effect size, and the variance was based on the sample size (Lipsey & Wilson, 2001). Continuous variables were group centred or

left unstandardized (dummy variables). Country-level variables (Level 2) were grand mean centred. We tested seven models. The first model examined socio-demographic effects (year of publication, sample size, percentage of males, and instrument used where 0 = MBI, 1= Other instrument) on burnout scores (level 1). The second model examined the effect of occupation. Three dichotomous dummy variables were constructed: Education, Health and Social Services. We included education and health in model 2 (level 1 of analysis) being social services de reference category. Models 3 and 4 investigated the linear impact of language (0 = Spanish, 1= Portuguese) and individualism, respectively (Level 2). Model 5 assessed the linear impact of both language and individualism entered together. Finally, considering that individualism may bear a non-linear behavior, theoretically supported by the postmodern paradox (Fischer and Boer, 2011; Hogg, 2000), we tested squared effects of individualism entered with language and alone in Models 6 and 7.

Results

Meta-Analysis Results

The current meta-analysis includes data from 58 samples (20,578 participants) for EE and 57 samples (20378 participants) for C and PA from 8 countries. The average EE mean was 33.31, and the standard error was 2.02, with the 95% CI ranging from 29.35 to 37.27. The between-country variance in EE is estimated as 18.84 and the within-country between samples variance is estimated as 68.86. Thus, the total variance is 18.84 + 68.86 = 87.70. The variance partition coefficient (VPC) is 0.22, which indicates that 22% of the variance in EE can be attributed to differences between countries. The likelihood ratio test ($LR(1) = 12.21$, $p < .001$) is significant indicating that there is evidence of country effect on EE. The means were highly heterogeneous:

$Q_T(57) = 100.28$, $p < .001$. The random effects mean per country are reported in Table 2.

The average C mean was 27.71, and the standard error was 1.46, with the 95% CI ranging from 24.85 to 30.57. The between-country variance in C is estimated as 3.05 and the within-country between samples variance is estimated as 89.35. Thus, the total variance is 92.40. The VPC is 0.03, which indicates that 3% of the variance in C can be attributed to differences between countries. The likelihood ratio test ($LR(1) = 0.22$, $p > .05$) is not significant indicating that there is no evidence of country effect on C. The means were homogeneous, $Q_T(56) = 47.48$, $p > .05$. (See table 2 for the random effects mean per country).

Table 2. Country Mean Scores of Burnout Dimensions

	k	*N*	EE	C	PA	IND
Argentina	2	322	29.31	20.69	73.13	46
Brazil	23	8354	43.10	31.32	79.12	38
Chile	9	2397	32.80	28.86	79.41	23
Colombia	7	1565	33.00	28.69	76.63	13
Ecuador	2	446	31.72	23.17	86.58	8
Mexico	8	1853	29.71	27.56	84.36	30
Peru	4	5270	28.86	21.15	79.18	16
Venezuela	3	371	30.84	29.39	83.96	12

Note: *k* = number of samples; *n* = sample size; EE = Emotional Exhaustion; C = Cynicism; PA = Personal Accomplishment; IND = Individualism. For Mexico C and PA *k* = 7, and *n* = 1,653

Finally, for PA, the average mean was 79.90, and the standard error was 0.90, with the 95% CI ranging from 78.14 to 81.66. The between-country variance in PA is estimated as 0.09 and the within-country between samples variance is estimated as 45.52. Thus, the total variance is 45.61. The VPC is 0.002, which indicates that 0.3% of the variance in PA can be attributed to differences between countries. The likelihood

ratio test ($LR(1) = 0.00$, $p > .05$) is not significant thus we can conclude that there is no evidence of country effect on PA. The means were homogeneous, $Q_T(56) = 14.73$, $p > .05$. The random effects mean per country are reported in Table 2.

Analysis of moderators

Differences between countries were only significant for EE, so C and PA were excluded in the analysis of moderating variables. Table 3 shows the results for the tow level multilevel analysis for EE. The socio-demographic variables (model 1) have no effect on EE except for a slight negative trend of the sample size so that the larger the sample size the smaller EE. Occupation has a significant effect on the EE (model 2), so that education people have 6.29 times less EE than Social Services people (the reference category), and health people have 10.61 times less EE than those of Social services. This indicates that social service professionals are the ones with the highest EE. The effects of occupation are maintained in the rest of models suggesting the robustness of these results. At the country level, Model 3 tests the effect of language on EE with significant results. Studies conducted in Portuguese have 12.19 times more EE than those made in Spanish. This effect is maintained when both language and individualism come together in the model (Model 5). However, individualism has a marginal effect on EE only when it entered the model separately from the language (model 4) so that when individualism increases, the EE increases too. Models 6 and 7 test the quadratic effect of individualism finding non-significant results.

Table 3. Two Level Multilevel Analysis for Emotional Exhaustion

	Model	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Level 1							
Intercept	-	-743.38	-743.05	-784.06	-744.69	-730.04	-769.21
Year of	0.28	0.39	0.39	0.41	0.39	0.38	0.40
Sample size	-0.01†	-0.01†	-0.01†	-0.01†	-0.01†	-0.01†	-0.01†
Instrument	0.48	-1.17	-1.45	-1.54	-1.47	-1.43	-1.50
% Males	-0.02	-0.06	-0.04	-0.06	-0.04	-0.04	-0.06
Education		-6.29*	-5.85*	-5.69*	-5.83*	-5.92*	-5.76*
Health		-	-	-	-	-	-
Level 2							
Language			12.19**		12.11**	12.00**	
Individualism				0.27†	0.01	0.01	0.28†
Individualism^2						0.00	0.00

† $p < .10$, * $p < .05$, ** $p < .01$. Note: Instrument (0 = MBI, 1 = Other); Language (0 = Spanish, 1 = Portuguese); For dummy variables Education and Health the reference category is Social Service (military, police, prison guards, social workers, public administrative staff, drivers, housewives and salesmen).

Discussion

In this paper, we first have described the intensity of burnout by conducting a meta-analysis for each burnout dimension including studies of Latin American samples published between 2006 and 2016, and secondly, we have tested the effects of cultural syndrome individualism / collectivism on burnout across countries by developing a two-level mixed-effect hierarchical modelling. In order to compare the intensity of burnout across countries, and taking into account the difficulty of establishing normative and referential cut-offs to determine when a person is burned out (Schaufeli, Leiter, & Maslach, 2009), even more when national normative scales are not available (Schaufeli & Van Dierendonk, 1995), the best explanatory model is the overall mean (effect size) with their confidence intervals. According to our results, a 33% intensity of exhaustion, 28% of PD and 80% of PA would mean low levels of burnout in the Latin American countries. If we take into account the three dimensions together we found that there is

no country that simultaneously scores high in EE and C and low in PA to consider the presence of the burnout (Maslach et al., 1996). However, Brazil is the country with the highest score in EE, and C, and Argentina has the lowest score in PA. If we consider only one dimension (EE as the *core* of burnout) our results are very similar to those found by Fischer and Boer (2011), who obtained an average intensity of 35.03% in a set of samples in which Latin American countries were not represented. This suggests that EE intensity in Latin American countries is quite similar with those of other regions of the world. Much debate exists about where to establish cut-off points and whether continuous or dichotomous measures should be used as this may have repercussions on diagnosis and treatment involving economic consequences (Schaufeli et al., 2008). On the other hand, the great amount of literature that evidences that burnout generates serious problems of physical and psychological health (Bellingrath et al., 2008; Steinhardt et al., 2011) is an issue that cannot be denied. For this reason, an intensity of 33%, that is one third of the scale, means that burnout is a non-alarming problem, but worthy of being considered.

To explain the low levels of burnout some authors have used the so-called healthy worker effect (Karasek & Theorell, 1990). Those workers who left work because of health problems have not been investigated so that reported scores, which correspond to healthy workers, are lower. That is why Cox, Tisserand and Taris (2005, p. 188) pointed out that since the subjects participating in the studies are usually volunteers, studies on burnout report often results of workers who actually are not burned out. To test this healthy-worker effect, previous research (Moriana & Heruzo, 2006; Schaufeli & Van Dierendonk, 1995) compared samples with and without psychological health problems, finding that, as expected, burnout was significantly higher in samples with health problems. However, in our study the samples correspond

to adults without clinical problems and therefore the intensity of burnout could be expected to be low. But it should be noted that this intensity can be considered as the baseline for the healthy population of the Latin American countries nonclinical adult Latin American samples.

Our results show that the heterogeneity among the samples explains a significant percentage of EE variability (22%), mainly by occupation at the study level and language at the country level. With regard to occupation, health professionals report less intensity of EE than other occupations (teachers, military, police, drivers, salesmen, or housewives). There are many studies that analyze the prevalence of burnout within specific occupations, but very few compare the intensity between occupations. For example, Taris et al. (2005) found differences in burnout between occupations as a function of the job control, within the framework of the control-demands theory, so that there is a negative relationship between job control and burnout. However, this study limits the 28 occupations that analyze to the field of social services leaving out of the analysis to teachers, administrative staff, drivers, salesmen or housewives, which are included in our study. On the other hand, the occupations analyzed by Taris et al. (2005) correspond to the German context and the assessment of job control variable, based on the opinion of 8 expert judges, would not be applicable to the Latin American context. At country level, with relation to language, the studies in Portuguese are associated with higher EE, which is consistent with the higher EE scores in Brazil. It is important to note that language only affects the EE scale, but not the C or PA scales. So, to analyze this variation we examined the validity of the instruments used in samples with Portuguese language. MBI was used in 15 samples, the CESQT was used in 4 samples and the ECB was used in 2 samples. Of these 21 studies, 19 reported using validated instruments for the Brazilian population. The validation of MBI was made by Lautert

(1995), Tamayo (1997), Benevides-Pereira (2001), and Carlotto and Cámara (2004, 2006, 2007). Gil-Monte, Carlotto, and Cámara (2010) validated the CESQT, and Tamayo and Troccoli (2005) validated the ECB. All of them reported an adequate reliability. Factorial analysis resulted in three factors with eigenvalues greater than 1, with the main percentage of variance explained corresponding to EE, and significant inter-correlations between scales. In most cases, translation (and back translation) was done from the English version, although in the validation by Lautert (1995), the author admitted that the translation can be improved and, consequently, the adequacy of the instrument. These analyzes suggest that the EE variability explained by language is not due to the validity of the instruments but rather to the fact that language reflects cultural differences. The effect of language on EE can be explained by the Sapir-Whorf hypothesis, also known as linguistic relativity, that suggest that speakers of different languages think differently because of the differences in the construction and function of their languages. Language and culture are intimately connected. Because learning a language well typically occurs within the context of a culture, people learn to have different associations and feelings associated with a particular language (Vaughn, 2010). Different languages can make salient different information structures and memories, which in turn influence cognition (Perunovic, Ross, & Wilson, 2005).

At country level, we have also analyzed in the V-known model the effect of individualism on EE variation. Individualism has a positive but marginal effect on the EE. As noted above, Latin American countries are characterized by their collectivism, but as expected when individualism increases, EE also increases. These results are in line with Farzianpour, et al. (2016) and indirectly support the theory that the increase of individualism and materialism in modern societies is associated with a decrease in well-being (Schwartz, 2010), however do not match the findings of Fischer and Boer (2011)

that found negative relationships between individualism and EE. This suggests that individualism may follow a non-linear behavior. However, further research is needed. Finally, the homogeneity in the samples for C and PA would confirm the null hypothesis that all samples come from the same population and therefore there are no significant differences between them. This homogeneity may be due to the similarity of the cultural characteristics of the countries analyzed, and are in the line with the idea that within culture variance may be larger than between cultures variance (Minturn & Lambert, 1964).

Our results are quite important, but this study has some limitations. The reliability of the scales was reported in few of the studies included in our analysis with appropriate alpha values (higher than .70). Nevertheless, some studies did not include data on reliability. So, we could not verify biases related to this issue. The mean and standard deviation are good estimators when the sample size is large. In our case, to avoid the problem of bias due to different sample sizes, the means were weighted based on the sample size of each country as well as on the inverse variance. However, the results of some countries answer to a small sample and therefore cannot be generalized as representative of the whole country, since variations in burnout scores within a country can be significant.

The literature has pointed to several cultural indicators and models that may denote cultural differences between countries. We have examined two of them, language as an expression of cultural relativism (Vaughn, 2010), and individualism / collectivism as cultural syndrome (Triandis, 2005). However, others can be considered such as power distance, masculinity / femininity, uncertainty avoidance, or long-term vs. short-term orientation, to name a few. In this sense, research can be expanded in the future by including new models and cultural indicators to explain and predict burnout.

In this study, we have found that the intensity of burnout is low in the counties analyzed suggesting that this condition, although with low average levels of intensity, is a health problem that affects both developed and developing countries, being a global phenomenon that should be prevented (Cox et al., 2005). The intensity level found in our results may be set as a Latin American region cut-off point that will allow the practitioners to diagnose who suffer from burnout and who should be medically treated. At the organizational level, much more important from the organizational psychology point of view, the cut-off point may be like the traffic light that will indicate when preventive or corrective actions should be activated taking into account the environmental and cultural characteristics of each organization and country.

Conclusion

Burnout is a global occupational health problem that affects Latin American countries with low levels of intensity, although there are differences between countries specifically in emotional exhaustion. These differences are mainly related to occupation and to cultural aspects such as language and individualism, indicating that the cultural context of a country should be considered when studying this phenomenon, as well as when implementing preventive programs. This study has systematized the findings of many previous results, providing a baseline on burnout intensity, which may serve as a reference for future studies and as a cut-off point for assessing the intensity of this phenomenon, contributing to a better understanding of burnout in Latin America. On the other hand, we have shown that burnout is a problem related to occupation and that the effects of cultural context should be considered specially when analyzing different societies.

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CAPÍTULO 6

¿Tienen más accidentes los trabajadores extranjeros? Un análisis de los accidentes de trabajo en España en función de las dimensiones culturales[2]

[2] Este trabajo ha obtenido el Primer Premio Nacional Estudios Financieros 2017 en la modalidad de Recursos Humanos, otorgado por el Centro de Estudios Financieros, y está publicado en la Revista de Trabajo y Seguridad Social, CEF, núms. 413-414 (agosto-septiembre, 2017), págs. 229-258.

¿Tienen más accidentes los trabajadores extranjeros? Un análisis de los accidentes de trabajo en España en función de las dimensiones culturales

Do foreign workers have more accidents? An analysis of occupational accidents in Spain from a cultural perspective

Resumen

La idea de que los trabajadores extranjeros tienen más accidentes laborales con baja que las poblaciones autóctonas es un dato que normalmente aparece en las cifras oficiales. Sin embargo, los estudios al respecto son escasos y los resultados no concluyentes. Este trabajo analiza esta problemática con un doble análisis descriptivo y explicativo del contexto español poniendo a prueba la hipótesis cultural. A partir de los datos del Ministerio de Empleo y Seguridad Social se encontraron diferencias significativas en el número de accidentes según el país de origen del trabajador y que varían dependiendo del sector productivo (especialmente en construcción y servicios). También se encontró, que las dimensiones culturales de Hofstede (2001), especialmente la evitación de la incertidumbre y la orientación a largo plazo, están relacionadas con la variación en el número de accidentes, con diferentes efectos dependiendo del sexo (cantidad de hombres en relación a las mujeres trabajadoras) y del sector. Se discuten las implicaciones prácticas principalmente relacionadas con temas de formación y prevención desde la perspectiva de la *gestión de la diversidad* y del hecho de que los contextos de trabajo requieren de programas de intervención amplios. Se destaca la necesidad de seguir investigando en este campo.

Palabras clave: accidentes de trabajo, extranjeros, dimensiones culturales, sector productivo.

Abstract

Foreign workers are usually reported in official figures and reports having more work-related accidents than native populations. However, studies on this topic are scarce and the results inconclusive. This work examines this problem with a double descriptive and explanatory analysis of the Spanish context, and testing the cultural hypothesis. From official data provided by the Ministry of Employment and Social Security, there were found significant differences in the number of accidents depending on the country of origin of the worker, and that the number of accidents varies according to the productive sector (specially in Construction and Services). It was also found that the cultural dimensions by Hofstede (2001), especially uncertainty avoidance and long-term orientation, are related to the variation in the number of accidents, with different effects depending on sex (proportion of men in relation women) and the sector. Practical implications mainly related to training and prevention issues from the perspective of diversity management and the fact that work contexts require broad intervention programs are discussed. It is highlighted the need for further research in this field.

Keywords: accidents at work, foreigners, cultural dimensions, productive sector.

Introducción

La idea de que los trabajadores extranjeros tienen más accidentes que las poblaciones autóctonas es un dato que normalmente aparece en las cifras o informes oficiales (p. ej. Instituto Nacional de Salud e Higiene en el Trabajo, INSHT, 2008) y que se explica aludiendo a la precariedad laboral, pero también a variables relacionadas con las dimensiones o valores culturales de sus países de origen (p. ej. Reniers y Gidron, 2013). Variables como el *rechazo a la incertidumbre*, la *distancia de poder* o el *individualismo-colectivismo* pueden servir para explicar diferencias en la percepción de riesgos, problemas de comunicación o de implicación con las medidas de seguridad, aspectos que pueden relacionarse con los accidentes. En nuestro país, el estudio del INSHT (2008) indica que los extranjeros se accidentan más en todos los indicadores considerados: leves, graves y mortales, en hombres y mujeres y por sector profesional (a excepción de la construcción), siendo en la industria donde se encuentran las mayores diferencias entre españoles y extranjeros. Sin embargo, más allá de los datos estadísticos, los estudios explicativos son escasos, probablemente por las dificultades que entraña (múltiples variables implicadas, datos fiables, acceso a muestras, prejuicios de los investigadores, etc.).

Los accidentes por definición constituyen *fenómenos poli-causales* que se pueden analizar desde diferentes perspectivas y niveles: individual, grupal u organizacional y/o de sector productivo. Sin embargo, falta investigación que aborde este problema a *nivel de país*, y sobre todo, que analice las diferencias que se pueden dar en un mismo país, en función de las características culturales de los países de procedencia de los trabajadores. Por otro lado, hay que destacar la importancia de los trabajadores extranjeros para el desarrollo de la economía. En este sentido, la atención a *diversidad demográfica*, y en concreto, a la integración de los trabajadores extranjeros

en las economías de los países receptores se incluye en la Estrategia Europa 2020 (Comisión Europea, 2014), aunque faltan estudios sobre su salud laboral, y en concreto sobre accidentabilidad, y los que hay no arrojan resultados concluyentes que puedan ayudar en la elaboración de medidas o programas preventivos.

La revisión de Taras, Steel y Kirkman (2011), de tres décadas de investigación en el ámbito organizacional sobre las dimensiones culturales, concluye que son uno de los mejores predictores de las actitudes, conductas y desempeño en el trabajo. Según sus resultados, los valores culturales pesan más que la edad, la experiencia, el sexo, la raza o el nivel educativo, en aspectos tan importantes como la implicación con el trabajo, las relaciones interpersonales, el estilo de comunicación, el manejo de conflictos, la implicación con la seguridad o las preferencias por determinados estilos de liderazgo. Si las dimensiones culturales pueden ser utilizadas para predecir y comprender problemas relacionados con el trabajo (Schwartz, 1999), también se pueden utilizar para explicar las diferencias en la prevalencia de la accidentabilidad laboral. Sin embargo, autores como Guldenmund, Cleal y Mearns (2013) destacan la influencia de otros factores y, en concreto, de la precariedad laboral, aunque también reconocen que las diferencias en accidentabilidad pueden estar influidas por problemas de comunicación y de adhesión a las normas de seguridad, aspectos relacionados con las diferencias culturales. Se acepta que las tasas de siniestralidad laboral de un país se relacionan con variables como el desarrollo económico o formativo de su población, sin embargo se olvida el papel de las dimensiones culturales a pesar del reconocimiento de estas variables en otros ámbitos de la gestión de los recursos humanos.

Teniendo en cuenta estos antecedentes el objetivo de este estudio es doble. En primer lugar, describir la accidentabilidad de los trabajadores activos ocupados durante el año 2015, comparando los accidentes de trabajadores españoles y extranjeros a partir

de los datos proporcionados por el Ministerio de Empleo y Seguridad Social. En segundo lugar, analizar si las diferencias están relacionadas con las dimensiones culturales del país de origen, considerando la clasificación propuesta por Hofstede (2001). Aunque hay más clasificaciones (p. ej. GLOBE) ésta es la más utilizada, en general, y en el ámbito de la seguridad y los accidentes, en particular (p. ej. Lu, Lai, Lun y Cheng, 2012, Reniers y Gidron, 2013). Este estudio es novedoso ya que es el primero, que sepamos, que analiza la accidentabilidad en España según la procedencia del trabajador, considerando las dimensiones culturales de su país de origen y diferenciando por sector productivo, pues los niveles de precariedad entre la población española y la extranjera pueden ser más parecidos. Resaltar además que el uso de estadísticas oficiales, en un tema tan complejo como la accidentabilidad, da robustez a los resultados. Por tanto, creemos que puede contribuir a un mejor entendimiento del complejo problema de la accidentabilidad laboral, y sobre todo, puede ayudar en el diseño de medidas preventivas eficaces, con las consecuencias económicas, laborales y sociales que esto implica.

Accidentes de trabajo y dimensiones culturales

Los accidentes de trabajo son una lacra social de primer orden por sus consecuencias tanto personales como económicas. En los países industrializados y a pesar de la legislación vigente y los controles exigidos, las personas siguen accidentándose y perdiendo su vida en el trabajo. Según el informe anual de accidentes de trabajo en España en 2015 se produjeron 529.248 accidentes con baja (Ministerio de Empleo y Seguridad Social, 2016a). Siendo esta cifra importante, conviene añadir algunos datos para comprender mejor el problema. Por una parte, hay que considerar la cifra relativa, es decir, el *índice de incidencia* o número de accidentes de trabajo por

cada 100.000 trabajadores (con las contingencias profesionales cubiertas). Este dato fue de 3.252,0 accidentes e indica que los accidentes se han incrementado un 4,5% respecto al año 2014. Esta tendencia al alza se viene observando desde el año 2012, a pesar de la crisis económica y de la consecuente pérdida de puestos de trabajo. Por otra parte, se sabe que muchos accidentes menores, en torno al 50%, no llegan a registrarse. Respecto a los costes, aunque los cálculos también son difíciles, por la multiplicidad de variables incluidas (costes salariales directos e indirectos, pérdida de negocio, etc.), se estima que las enfermedades profesionales y los accidentes cuestan a las empresas de la Unión Europea unos 490,000 millones de euros al año.

Para reducir el número de accidentes, las administraciones públicas así como las organizaciones empresariales, apuestan principalmente por la prevención, y han considerado múltiples dimensiones (físicas, ambientales, ergonómicas o psicosociales), sin embargo y hasta ahora, no han incluido la *cultura del país* como aspecto importante. El impacto de las diferencias culturales entre los países ha sido estudiado principalmente desde el punto de vista de la administración, pero menos en su relación con la salud de los trabajadores y los accidentes de trabajo. Sin embargo, Hofstede ya señaló en los años 80 la importancia de considerar las diferencias nacionales y culturales pues, según él, la cultura es el lente a través del cual las personas comprenden e interpretan sus experiencias, e influye en sus formas de pensar y en sus comportamientos. La dimensión cultural es una especie de "patrón promedio de creencias y valores" que comparten los miembros de una misma cultura (Hofstede, 1983, p. 78). Diferentes autores han propuesto modelos culturales con dimensiones que a veces son iguales, a veces diferentes y otras veces se solapan unas a otras (Maleki y de Jong, 2014), sin embargo, el más utilizado en general, y en relación a la seguridad y accidentabilidad, en particular, ha sido el de Hofstede (1983, 2001), quien partiendo de

una encuesta a 115.000 trabajadores de la multinacional IBM en más de 80 países, entre los años 1968 y 1972, propone cuatro dimensiones culturales: *individualismo vs. colectivismo*, *distancia de poder*, *evitación de la incertidumbre* y *masculinidad vs. feminidad*. Posteriormente (2010) introdujo una adicional: la *orientación a largo plazo*. A continuación se explica cada una brevemente.

La dimensión de *individualismo* frente a *colectivismo* tiene que ver con la relación entre el individuo y sus semejantes. En las sociedades que puntúan alto en *individualismo* se espera que cada individuo se preocupe de sí mismo o de personas muy cercanas a él, como la familia, esto indica que la sociedad da mucha libertad a sus miembros. En cambio, en sociedades colectivistas se espera que sus miembros se preocupen unos de otros, por ejemplo de toda la comunidad, como una forma de lealtad común pero también de control.

La *distancia de poder* tiene que ver con cómo una sociedad enfrenta el hecho de la desigualdad entre sus miembros. Expresa el grado en el que los menos poderosos esperan y aceptan que se distribuya el poder de forma desigual. En las sociedades con alta *distancia de poder* las personas aceptan la desigualdad y el orden jerárquico en el que cada uno tiene su puesto sin necesidad de ser justificado. En las sociedades con baja puntuación en esta dimensión se busca la distribución equitativa del poder y se pide justificación por las desigualdades encontradas.

La *evitación de la incertidumbre* tiene que ver con el grado en que los miembros de una sociedad se sienten cómodos con la ambigüedad, es decir, con la forma en cómo se enfrentan a su futuro. Las sociedades con alta *evitación de la incertidumbre* intentan controlar el futuro y tienen códigos estrictos y rígidos sobre las creencias y las formas de comportamiento. En cambio, en las sociedades con puntuaciones bajas en esta dimensión las personas tienden a aceptar las cosas tal y como vienen, asumen riesgos

fácilmente, son más tolerantes a las opiniones diferentes y tienen tendencia a sentir relativa seguridad.

La dimensión *masculinidad vs. feminidad* se refiere a cómo se reparten los roles sociales entre los sexos. Las sociedades que diferencian fuertemente la división de los roles de género son sociedades masculinas pues los valores sociales masculinos predominan y muestran preferencia por el logro, el heroísmo, las recompensas materiales y el éxito. Estas sociedades son más competitivas. Las sociedades donde esta diferencia es más débil son sociedades femeninas, pues los valores dominantes están asociados tradicionalmente a lo femenino como la preferencia por la cooperación, la modestia, el cuidado de los débiles y la calidad de vida. Estas sociedades se orientan más al consenso.

La *orientación a largo plazo* tiene que ver con cómo las sociedades se enfrentan con el paso del tiempo asumiendo su pasado, su presente y su futuro. Las sociedades que puntúan alto en esta dimensión son pragmáticas, fomentan el ahorro y se esfuerzan en una buena educación que prepare para el futuro. Por el contrario, las sociedades que puntúan bajo en esta dimensión ven el cambio como una amenaza y se aferran a las tradiciones y normas como tesoros del pasado que hay que mantener.

Relación entre accidentes de trabajo y dimensiones culturales: principales resultados

Algunos autores utilizan las dimensiones culturales para explicar las diferencias en la forma en que las personas se comportan y las organizaciones actúan en materia de seguridad en el trabajo. Se pueden hacer varias suposiciones a este respecto. Por ejemplo, los trabajadores de culturas con *alta distancia de poder* aceptan las instrucciones de sus superiores más fácilmente. Sin embargo, la seguridad podría estar

en juego si los subordinados no cuestionan las decisiones de sus superiores en ciertas ocasiones. Del mismo modo, trabajadores de culturas *masculinas* tienden a mostrar más comportamientos arriesgados, mientras que, en culturas más femeninas, se valoran más las relaciones interpersonales y la preocupación por la seguridad, el cuidado y el bienestar. También los trabajadores de culturas con mayor *evitación de la incertidumbre* son más propensos a cumplir con las reglas y procedimientos de seguridad.

En cuanto a la evidencia empírica, algunas investigaciones previas han encontrado asociaciones entre los valores culturales y la accidentabilidad laboral. Håvold (2007), preguntando a marineros de 10 países, examina la relación entre los valores culturales de su país, evaluados según la clasificación de Hofstede (2001), y las actitudes hacia seguridad. Sus resultados muestran que los valores culturales influyen sobre las actitudes y sobre la adopción de medidas de protección, de forma que es más frecuente que los marineros con elevada *distancia de poder* y *rechazo a la incertidumbre* sigan las órdenes y cumplan los procedimientos establecidos que aquellos con valores culturales diferentes. Adicionalmente, en un estudio sobre errores humanos en una muestra de marineros, sector con altas tasas de siniestralidad, Lu et al. (2012) encuentra perfiles culturales diferentes entre marineros de distintos países y, concretamente, que se dan menos fallos cuando la distancia de poder es baja, y el colectivismo y el rechazo a la incertidumbre altas. Por su parte, Reader, Noort, Shorrock, y Kirwan (2015), con datos de 15.454 pilotos de aviación de 23 países, encuentran diferencias según los valores culturales en tres aspectos: los estilos de mando, las actitudes hacia los procedimientos y las actitudes hacia la automatización de los sistemas. Según su revisión es más probable que los pilotos de países con alta *distancia de poder* sigan las órdenes y los estándares establecidos, mientras que los de

países con elevado *individualismo*, tienden a ser más independientes y flexibles al seguir los procedimientos.

Por su parte Infortunio (2006) investiga la relación entre la *distancia de poder*, la *evitación de la incertidumbre*, el *individualismo* y la *masculinidad* y las tasas de accidentes, en 43 países durante un periodo de 30 años. Los resultados encontraron relaciones significativas con las tres primeras dimensiones y, concretamente, que el par *distancia de poder/individualismo* era el que mejor explicaba la ocurrencia de accidentes. También Renier y Gidon (2013) analizan si los valores culturales de Hofstede correlacionan con el número de accidentes (con resultado de muerte) en 22 países europeos. Según sus resultados la *distancia de poder* y el *individualismo* correlacionan en la dirección esperada, independientemente de los ingresos económicos y de la tasa de consumo de alcohol del país, y sin embargo, y en contra de lo que esperaban el *rechazo a la incertidumbre* y la *masculinidad* no presentan relaciones significativas. Por último, la relación entre las dimensiones culturales y los accidentes de tráfico analizada por Gaygisiz (2009) encuentra que los países (de la OCDE) con alta tasa de accidentes de tráfico se caracterizan por alta *distancia de poder* y alta *evitación de la incertidumbre*, mientras que los que tienen tasas más bajas son más *individualistas* y muestran una mayor *igualdad de género*.

El presente estudio

Este estudio describe en primer lugar la accidentabilidad de los trabajadores activos ocupados durante el año 2015 comparando los accidentes ocurridos a trabajadores españoles y extranjeros. Éstos últimos se han clasificado por continente y por país de origen, lo que permitirá saber si hay algún grupo específico de trabajadores que se accidente más que otros. Después se presentan los *perfiles culturales* de los

países con mayor y con menor porcentaje de accidentes para compararlos y saber qué dimensiones culturales componen cada perfil. Por último, se ponen en relación las características culturales con la *ocurrencia de accidentes con baja* en trabajadores españoles y extranjeros, para probar si existe alguna relación entre estas variables, y analizar si las diferencias en prevalencia de accidentes en trabajadores de distinto país de origen, puede estar asociada a sus características cultura. De esta manera, sabiendo qué características culturales están asociadas con un mayor porcentaje de accidentes, se podrían diseñar medidas preventivas más eficaces para grupos con características culturales específicas, con las consecuencias económicas, laborales y sociales que esto implica.

Considerando estos objetivos se plantean las siguientes hipótesis:

Hipótesis 1: *Existen diferencias significativas en la incidencia de accidentes entre los trabajadores según el país de origen.*

Hipótesis 2: *El individualismo se relacionará negativamente con el número de accidentes.*

Hipótesis 3: *La distancia de poder se relacionará positivamente con el número de accidentes.*

Hipótesis 4: *La evitación de la incertidumbre se relacionará positivamente con el número de accidentes.*

Hipótesis 5: *La masculinidad se relacionará positivamente con el número de accidentes.*

Hipótesis 6: *La orientación a largo plazo se relacionará negativamente con el número de accidentes.*

Método

Procedimiento

En este estudio se consideran solamente los *accidentes de trabajo con baja* que son aquellos que han causado la baja del trabajador accidentado dentro del año de referencia (2015) y que han sido aceptados tanto por la Entidad Gestora o Colaboradora, como por la Autoridad Laboral Autonómica.

Por lo que se refiere a las variables de clasificación utilizadas, los accidentes de trabajo se dividen en dos grandes grupos según el tiempo y/o lugar en donde se hayan producido. Se consideran *en jornada* cuando el accidente ha sucedido durante el tiempo de jornada laboral o en centro o lugar de trabajo, ya sea en el centro o lugar de trabajo habitual, en otro centro o lugar de trabajo distinto del habitual o en desplazamiento. Se consideran *in itinere* aquellos accidentes que se han producido durante el trayecto entre el domicilio del trabajador y el centro o lugar de trabajo, o viceversa (Ministerio de Empleo, 2016). Por su gravedad, los accidentes se clasifican en leves, graves (incluidos los muy graves) y mortales, según figura en el parte médico de baja. En este estudio, para efectos de simplificación se han integrado en un solo grupo a los accidentes graves, muy graves y mortales. En cuanto a la actividad económica y sector se utiliza la Clasificación Nacional de Actividades Económicas 2009 según establece el Real Decreto 475/2007, de 13 de abril.

Los datos de población activa ocupada española y de extranjeros se tomaron del Ministerio de Empleo y Seguridad Social (2016b), pertenecientes a los trabajadores afiliados a la Seguridad Social en alta laboral, y corresponden a la media anual del año 2015. Los datos sobre accidentes de trabajo se tomaron del informe *Estadísticas de accidentes de trabajo de 2015* publicado por el Ministerio de Empleo y Seguridad Social (2016a). Se ha considerado el año 2015, como año de estudio ya que, en el

momento de realizar esta investigación, no estaban publicados los datos anuales sobre accidentes correspondientes al año 2016.

Para las dimensiones culturales se han considerado las propuestas por Hofstede (2001), a saber: individualismo, distancia de poder, evitación de la incertidumbre, masculinidad y orientación a largo plazo. Las puntuaciones de los países para estas dimensiones se tomaron de Hofstede (2001). La fecha de actualización de la mayoría de estos datos corresponde al año 2010 y están disponibles en la página web de este autor. Las escalas de medida para estas dimensiones culturales van de 0 a 100 donde puntuaciones altas indican que la cultura del país se caracteriza por esa dimensión.

Participantes

Los accidentes considerados se ponen en relación con la población activa ocupada de cada país, para tener una medida que pueda ser comparada entre los distintos países considerados. En este sentido, los participantes del estudio son los trabajadores activos ocupados, es decir, aquellos de más de 16 años que estando activos, no están parados. Además, se consideran solamente los trabajadores afiliados a la Seguridad Social con alta laboral, ya que no se tienen datos de trabajadores no afiliados. Según esto, la tabla 1 muestra los valores de población activa ocupada (PAO) (no en paro) de españoles y no españoles por sexo.

Tabla 1. Población activa ocupada por sexo (En miles).

	2015		
	Varones	**Mujeres**	**Total**
PAO Españoles	8.763,7	7.193,9	15.957,6
PAO No españoles	996,6	911,9	1.908,5

Nota: PAO = Población activa ocupada

La tabla 2 muestra los valores de población activa ocupada correspondientes al año 2015 detallados por país de origen del trabajador y por sexo. Hay que destacar los altos valores de trabajadores de Ucrania (37.235), en el grupo de Europa. En el grupo de países de África el grupo más numeroso es el de Marruecos (195.342), seguido por Senegal (22.577). De los países de América, que principalmente pertenecen a América del Sur, el grupo mayoritario de trabajadores corresponde a Ecuador (69.854) seguido de Bolivia (56.474) y Colombia (52.529). Del grupo de países de Asia el grupo más numeroso es, con gran diferencia, el de China (92.652). La última columna de la tabla muestra la cantidad de trabajadores ocupados hombres, por cada mujer trabajadora ocupada y estos datos arrojan diferencias significativas $F(3,34) = 5.16$, $p = .005$, $\eta^2 = 0.31$. Estas diferencias se aprecian entre África y Europa ($p = .018$), y entre África y América ($p = .020$), siendo en África donde la proporción de hombres trabajadores es significativamente mayor que las mujeres, en comparación con el resto. La figura 1 muestra la proporción de trabajadores por continente y sexo destacando que los trabajadores de África son mayoritariamente hombres, mientras que entre los trabajadores de América predominan las mujeres.

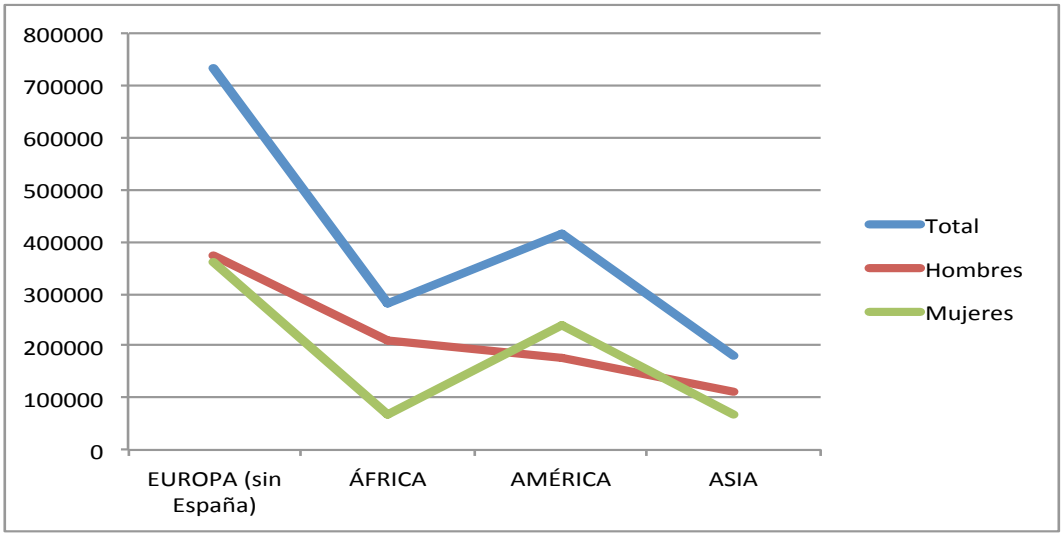

Figura 1. Relación de trabajadores extranjeros por continente y sexo.

Tabla 2. PAO por país y sexo. año 2015.

	Total	Hombres	Mujeres	Nº de Hombres ocupados por cada mujer ocupada
España	**15.957.600**	**8.763.700**	**7.193.900**	**1,22**
EUROPA (sin España)	**732.278**	**373.273**	**359.005**	**1,04**
UE-28 (sin España)	662.752	347.320	315.432	1,10
Moldavia	7.174	3.232	3.942	0,82
Rusia	15.885	3.700	12.185	0,30
Ucrania	37.235	14.196	23.039	0,62
Resto de Europa	9.232	4.825	4.407	1,09
ÁFRICA	**280.117**	**212.235**	**67.882**	**3,13**
Argelia	10.073	8.233	1.840	4,47
Camerún	1.361	879	482	1,83
Gambia	6.252	5.590	662	8,44
Ghana	6.231	5.535	696	7,95
Guinea Bissau	2.448	2.010	438	4,59
Guinea (Conakry)	3.107	2.599	508	5,12
Guinea Ecuatorial	1.726	586	1.140	0,51
Mali	12.862	12.243	619	19,78
Marruecos	195.542	142.562	52.980	2,69
Mauritania	2.461	2.294	167	13,74
Nigeria	7.472	4.826	2.646	1,82
Senegal	22.577	19.753	2.824	7,00
Resto de África	8005	5125	2.880	1,78
AMÉRICA	**413.408**	**175.722**	**237.686**	**0,74**
Argentina	28.598	15.611	12.987	1,20
Bolivia	56.474	19.767	36.707	0,54
Brasil	21.096	7.071	14.025	0,50
Chile	8.768	4.570	4.198	1,09
Colombia	52.529	24.299	28.230	0,86
Cuba	16.361	7.992	8.369	0,95
Ecuador	69.854	37.523	32.331	1,16
Estados Unidos	7.042	3.380	3.662	0,92
México	6.303	2.911	3.392	0,86
Nicaragua	9.097	1.434	7.663	0,19
Paraguay	33.112	7.682	25.430	0,30
Perú	31.773	15.344	16.429	0,93
Rep. Dominicana	23.983	9.810	14.173	0,69
Uruguay	10.873	5.811	5.062	1,15
Venezuela	15.884	7.134	8.750	0,82
Resto de América	21.663	5.383	16.280	0,33
ASIA	**178.948**	**111.758**	**67.190**	**1,66**
Armenia	3.720	1.737	1.983	0,88
Bangladesh	5.504	5.000	504	9,92

China, Rep. Popular	92.652	50.880	41.772	1,22
Filipinas	18.537	6.984	11.553	0,60
Georgia	4.399	1.664	2.735	0,61
India	15.317	12.669	2.648	4,78
Pakistán	27.601	26.055	1.546	16,85
Resto de Asia	11218	6769	4.449	1,52

Nota: PAO = Población activa operativa
Fuente: Ministerio de Empleo y Seguridad Social (2017).

Análisis de datos

Para la descripción de la accidentabilidad se combinan dos tipos de análisis: a) la distribución de los accidentes de cada zona geográfica y país en relación con el total de accidentes y b) la distribución de accidentes de cada zona y país en relación con la PAO. El análisis se realiza según las categorías tipo de accidente (jornada, itinere), la gravedad (leves, graves), el sexo (hombres, mujeres), la edad (< de 25 años, de 25 a 44 años y > de 44 años) y el sector productivo (agricultura, industria, construcción y servicios). Se ha considerado la clasificación por zona geográfica de origen del trabajador (España, Europa sin España, África, América y Asia). Se muestran los porcentajes que representan la cantidad de accidentes de cada categoría en relación al total de accidentes según la zona geográfica. Hay que notar que la clasificación por sexo, edad y sector se ha realizado tomando en cuenta los accidentes en jornada. Cuando la distribución de los accidentes se realiza en función de la PAO de cada zona geográfica y país, esta medida equivale al índice de incidencia propuesto por la OIT (1998). En este caso, se muestran los datos del porcentaje total de accidentes en relación a la PAO. También se muestra el efecto de los accidentes, medido como cantidad de jornadas de baja, por cada trabajador activo ocupado.

Para el análisis de las características culturales se seleccionaron primero los países con mayor y con menor porcentaje de accidentes. Para ello, tomando en cuenta el

porcentaje de accidentes en relación a la PAO, se eligieron los países por encima y por debajo de una desviación estándar con respecto a la media. Después, para la elaboración de los perfiles culturales de los países seleccionados, se tuvieron en cuenta los percentiles 33 y 66 de las puntuaciones de cada dimensión cultural en cada país. Esto permitió clasificar a los países en cada dimensión cultural en bajo, medio o alto según estuvieran por debajo del percentil 33, entre el percentil 33 y 66 y por encima del percentil 66 respectivamente.

Para probar la relación entre las dimensiones culturales y las diferencias en accidentabilidad entre países se realizaron análisis de correlación y de regresión. En los análisis de regresión se consideraron como variables consecuentes el porcentaje general de accidentes en relación a la PAO, así como el porcentaje de accidentes en cada sector productivo. Esto permite comparar los resultados y ver si los hallazgos son consistentes. Como variable de control se utilizó la variable *dummy* sexo (0 = mujer, 1 = hombre), a partir de los datos sobre población activa ocupada en función del sexo. Como variables predictores se introdujeron en la ecuación de regresión las dimensiones culturales. Puesto que el número de países (casos) considerados en la regresión es de 39 y las variables predictores son 6, los análisis de regresión se realizaron mediante muestreo bootstrap (*bias-corrected and accelerated*), con el fin de evitar sesgos de muestreo y que los resultados fueran más robustos.

Resultados

El número total de accidentes de trabajo registrados en el año 2015 fue de 529.248. Para comparar el número de accidentes por país se calculó el porcentaje de accidentes ocurridos en relación con la PAO de cada país. Según esto, la media de accidentes está en el 3.03 por ciento de la PAO (DT = 1.21, CI 95% = 2.66, 3.39). La

figura 2 muestra el porcentaje de accidentes de trabajadores españoles y extranjeros en relación con el número de trabajadores activos ocupados. Como puede apreciarse, los trabajadores de África y de América se accidentan más que los trabajadores españoles, y éstos más que los del resto de Europa, y los de Asia. Estas diferencias son significativas $F(4,39) = 5.67$, $p = .001$, $\eta^2 = .37$. Los análisis *post hoc* del ANOVA señalan que estas diferencias significativas se dan entre África y España ($p = .002$), África y Europa ($p = .001$) y entre África y Asia ($p = .001$). Un análisis detallado por país (Figura 3) muestra, sin embargo, que son los trabajadores ecuatorianos los que más accidentes tienen (5.79 % de su PAO), seguidos por los de Marruecos y de Colombia. España se sitúa en la media del grupo analizado. Los países cuyos trabajadores se accidentan menos son Estados Unidos y China.

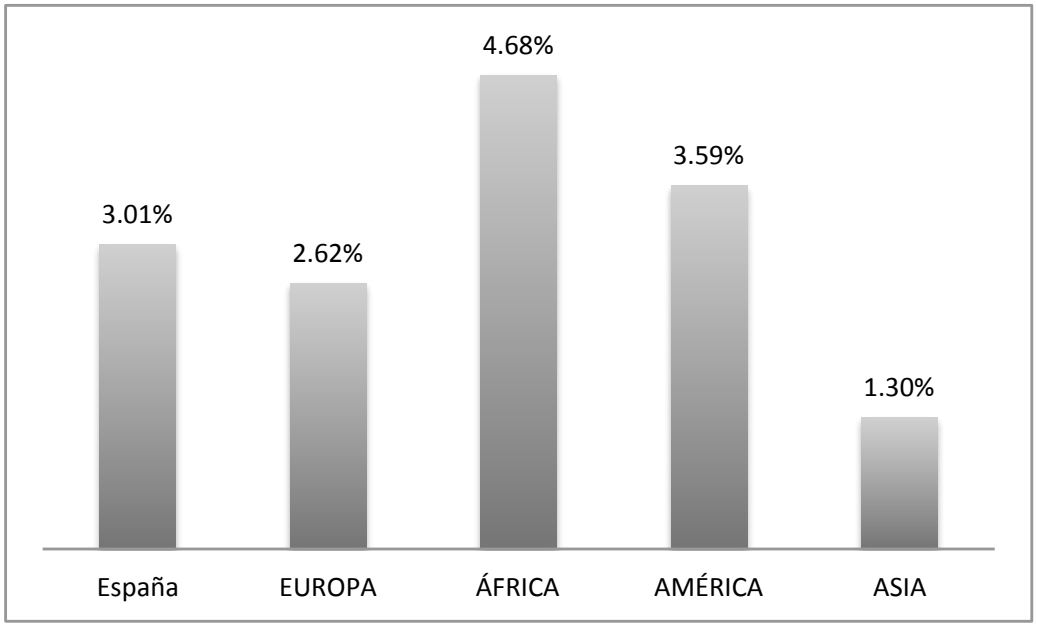

Figura 2. Porcentaje de accidentes de trabajadores en relación con la población ocupada por continente. Los datos de Europa no incluyen a España.

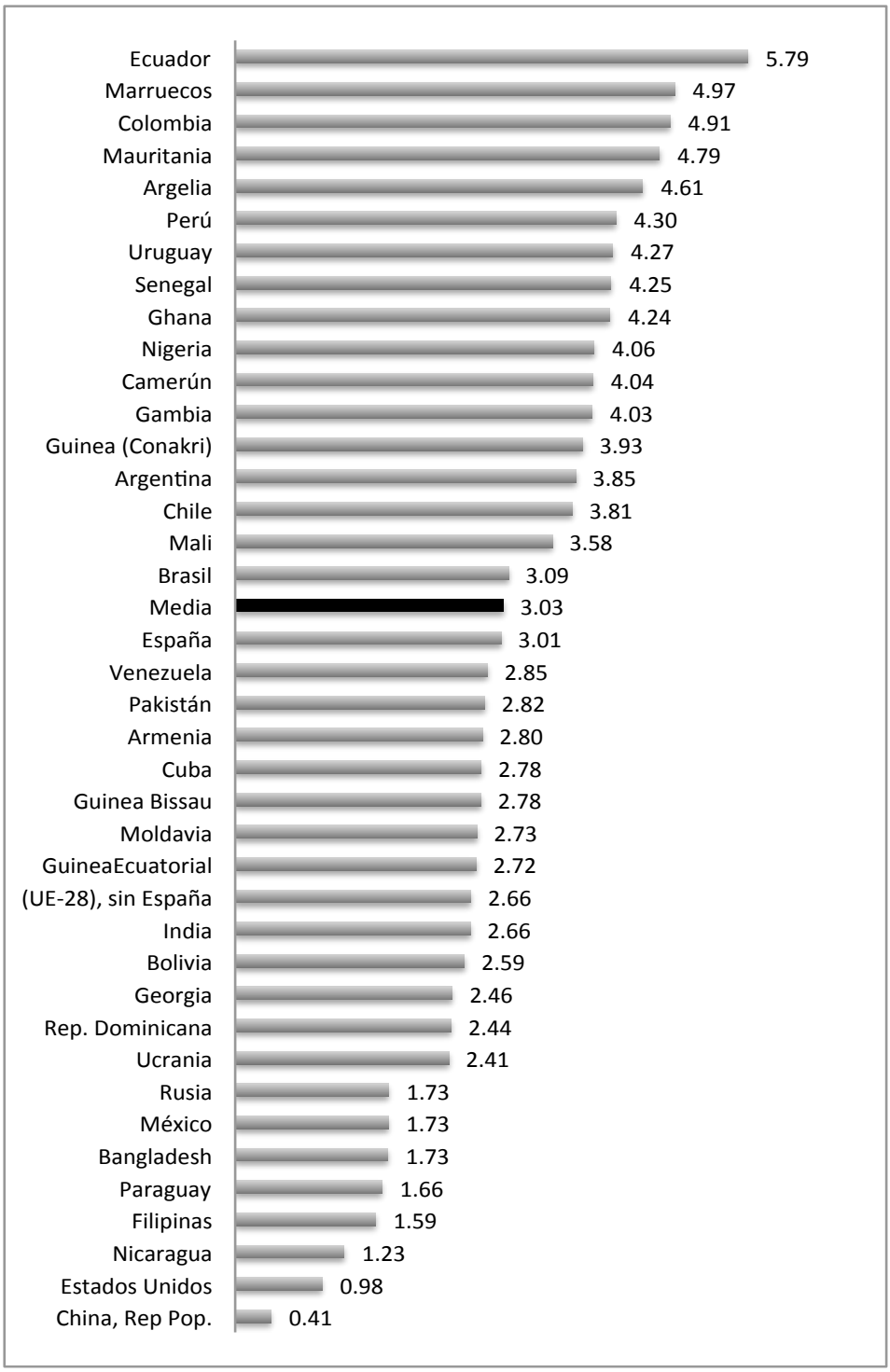

Figura 3. Porcentaje de accidentes en relación con la PAO, por país de origen.

La tabla 3 muestra el total de accidentes según el tipo y la gravedad, clasificados por la zona geográfica de origen del trabajador. Hay que notar que los accidentes *in itinere* equivalen al 10.4% de los accidentes que se producen en cada zona geográfica.

Las pruebas de diferencias de medias resultaron significativas. Para los *accidentes en jornada* $F(4,39) = 5.88$, $p = .001$, $\eta^2 = .38$, las diferencias están entre los trabajadores africanos respecto de los españoles, los europeos y los asiáticos, siendo mayor en los africanos. Para los accidentes *in itinere* $F(4,39) = 5.17$, $p = .001$, $\eta^2 = .35$, las diferencias están entre los españoles y americanos respecto de los otros tres grupos, siendo mayor en los españoles y americanos. En cuanto a la gravedad, más del 98% de los accidentes ocurridos son leves. El resto son graves o mortales. El 10.37% de los accidentes leves se producen *in itinere*, mientras que el 17.12% de los accidentes graves o mortales son *in itinere*. Estos datos sugieren que aunque los accidentes *in itinere* son menores en número, sin embargo su gravedad es casi dos veces mayor que la gravedad de los accidentes en jornada. Con respecto a las diferencias entre zonas geográficaen función de la gravedad y de la PAO de cada zona, los resultados muestran diferencias significativas entre los países de África respecto de España, Europa y Asia en accidentes leves $F(4,39) = 4.98$, $p = .002$, $\eta^2 = .34$. También hay diferencias significativas entre los países de África y los de América en accidentes graves $F(4,39) = 3.03$, $p = .029$, $\eta^2 = .24$. En todos los casos la mayor cantidad de accidentes (tanto leves como graves) se produce entre los trabajadores de países africanos.

Tabla 3. Total de accidentes según tipo y gravedad por zona de origen del trabajador

		Tipo		Gravedad	
	Total	Jornada (%)	Itinere (%)	Leves (%)	Graves (%)
España	479.781	413.373 (86)	66.408 (14)	475.210 (99)	4.571 (1)
Europa	19.181	17.369 (91)	1.812 (9)	18.949 (99)	232 (1)
África	13.104	12.078 (92)	1.026 (8)	12.998 (99)	106 (1)
América	14.823	13.058 (88)	1.765 (12)	14.731 (99)	92 (1)
Asia	2.327	2.115 (91)	212 (9)	2.292 (98)	35 (2)

Nota: Entre paréntesis el porcentaje correspondiente al número de accidentes en la categoría respecto al total de accidentes en jornada para cada zona de origen del trabajador.

A nivel individual destacan, con los mayores porcentajes de accidentes en jornada en relación a su PAO, en los países africanos los trabajadores de Marruecos (4.57%), Mauritania (4.47%) y Argelia (4.34%), y entre los países americanos los trabajadores de Ecuador (5.20%) y Colombia (4.29%). Y los mayores porcentajes de accidentes leves se dan entre los trabajadores de Marruecos (4.93%), Mauritania (4.71%), Argelia (4.57%), Ecuador (5.76%) y Colombia (4.48%). El porcentaje mayor de accidentes graves está en trabajadores de Mauritania y Mali (0.08%).

La tabla 4 muestra el total de accidentes en jornada según el sexo de los accidentados. En general, los hombres se accidentan aproximadamente 2.5 veces más que las mujeres, tanto en relación con el número total de accidentes, como en relación a la PAO de cada zona geográfica (la PAO por sexo se muestra en la tabla 3). En los trabajadores hombres las diferencias son significativas $F(4,39) = 2.80$, $p = .039$, $\eta^2 = .22$ entre el grupo de africanos y el resto. En cuanto al grupo de trabajadoras mujeres, las diferencias son

también significativas $F(4,39) = 7.66$, $p < .001$, $\eta^2 = .44$, entre las trabajadoras asiáticas y el resto. Hay que destacar que a pesar de que la PAO de mujeres africanas es la menor de todos los colectivos, sin embargo, el porcentaje de accidentes es el mayor. A nivel de país en relación con su PAO, en cuanto a los trabajadores hombres, los que mayor porcentaje de accidentes tienen son los de Camerún (5.57%), Marruecos (5.28%), Colombia (5.91%), Ecuador (6.65%) y Perú (5.13%). Con respecto a las mujeres, las trabajadoras de Guinea (2.95%), Nigeria (2.83%), Colombia (2.90%) y Ecuador (3.52%).

Tabla 4. Total de accidentes en jornada según el sexo

	Hombres			Mujeres		
	Accidentes	% total accidentes	% sobre PAO	Accidentes	% total accidentes	% sobre PAO
España	284.390	68,80	3,25	128.983	31,20	1,79
Europa	12.594	65,26	3,21	4.775	34,74	1,15
África	10.334	86,34	4,17	1.744	13,66	2,22
América	8.423	60,85	3,91	4.635	39,15	1,78
Asia	1.861	83,96	2,58	254	16,04	0,74

De acuerdo a los grupos de edad la tabla 5 muestra el número de accidentes por grupo y el porcentaje de cada grupo respecto al total de accidentes de cada zona geográfica. En todas las zonas, el grupo con mayor cantidad de accidentes es el correspondiente a trabajadores de entre 25 a 44 años. En el grupo de 16 a 24 años, los países con mayor porcentaje de accidentes son Bangladesh (16.30%), India (13.10%) y

Guinea Bissau (13.11%). En el grupo de trabajadores de entre 25 a 44 años, los países con mayor porcentaje de accidentes son Nigeria (84.56%) y Mali (80.89%). Por último, en el grupo de trabajadores mayores de 44 años, los países con mayor porcentaje de accidentes son España (40.88%), Ucrania (36.67%) y Chile (36.24%).

Tabla 5. Accidentes de españoles y extranjeros en relación con los grupos de edad.

	TOTAL	De 16 a 24 años		De 25 a 44 años		Más de 44 años	
		Nº Accidentes	%	Nº Accidentes	%	Nº Accidentes	%
España	413.373	24.740	5,98	219.661	53,14	168.972	40,88
Europa	17.369	1.449	8,34	11.456	65,96	4.464	25,70
África	12.078	795	6,58	8.775	72,65	2.508	20,77
América	13.058	1.020	7,81	8.980	68,77	3.058	23,42
Asia	2.115	198	9,36	1.382	65,34	535	25,30

Con respecto al sector productivo, la tabla 6 muestra el total de accidentes por sector productivo y zona geográfica. Se puede apreciar que, a excepción de los trabajadores de la zona geográfica de África que tienen más porcentaje de accidentes en agricultura, en el resto de zonas más del 50% de los accidentes se producen en el sector servicios.

Tabla 6. Total de accidentes en jornada según el sector productivo

	Agrario	Industria	Construcción	Servicios
España	24.565 (6)	88.106 (21)	42.785 (10)	257.917 (62)
Europa	2.827 (16)	3.118 (18)	2.647 (15)	8.777 (51)
África	3.574 (30)	2.008 (17)	1.500 (12)	4.996 (41)
América	1.347 (10)	1.355 (10)	1.622 (12)	8.734 (67)
Asia	260 (12)	332 (16)	254 (12)	1.269 (60)

Nota: Entre paréntesis el porcentaje correspondiente al número de accidentes en la categoría respecto al total de accidentes en jornada para cada zona de origen del trabajador.

Sin embargo, esto no quiere decir que el sector servicios sea el más peligroso. Para ello hay que comparar el número de accidentes con la PAO de cada zona. La figura 4 muestra el porcentaje de accidentes en relación a la PAO, donde se observa que el sector más peligroso es el de la construcción, seguido de la industria. El sector menos peligroso es el de servicios a pesar de que, como se ha visto, es en el que más accidentes se producen. Según las zonas geográficas, se encuentran diferencias significativas en agricultura $F(3,34) = 4.50$, $p = .009$, $\eta^2 = .28$, entre África y América. También hay diferencias significativas en la construcción $F(3,34) = 6.80$, $p = .001$, $\eta^2 = .38$ entre África con Europa, África con España y entre África y Asia. En servicios $F(3,34) = 10.20$, $p < .001$, $\eta^2 = .47$ entre África y todas las demás zonas geográficas.

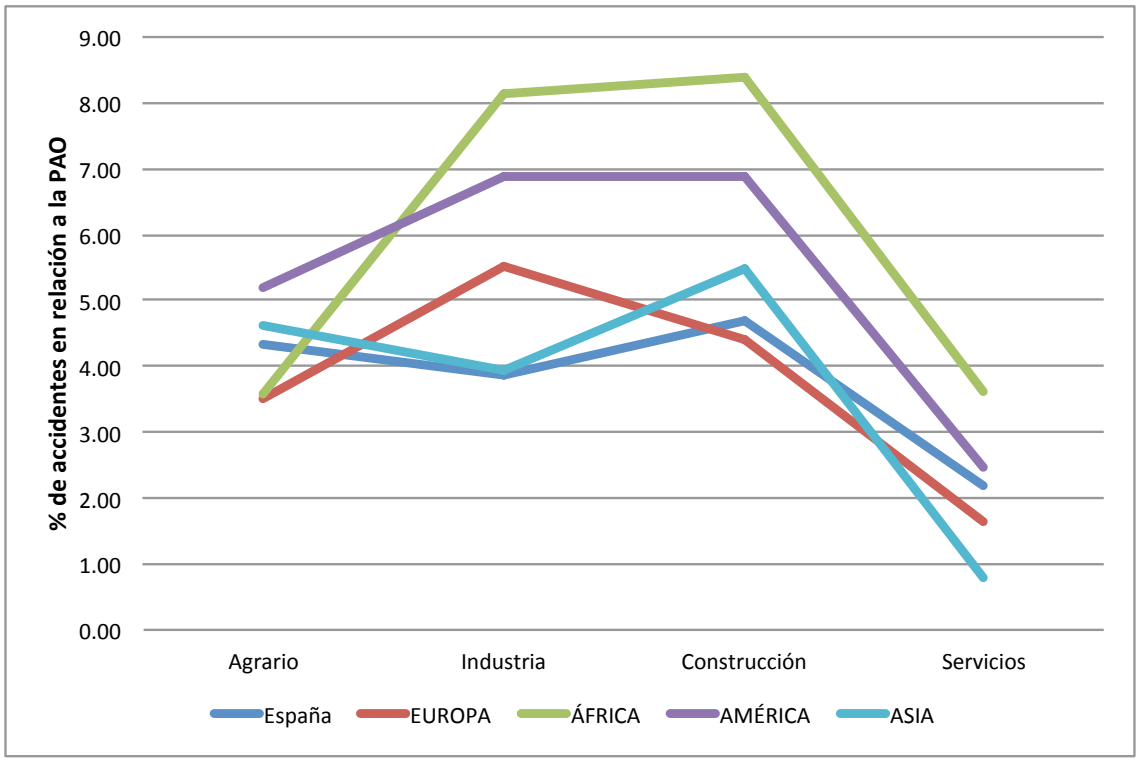

Figura 4. Accidentes de españoles y extranjeros según el sector productivo. Porcentajes.

Desde el punto de vista de los países, los que mayor porcentaje de accidentes tienen, en relación a su PAO en agricultura, son Venezuela (8.47%), México (8.33%) y Uruguay (7.32%). En industria son Guinea Ecuatorial (9.68%), Colombia (9.31) y Mauritania (9.29). En la construcción son Mauritania (14.05%), Guinea Bissau (12.57%) y Senegal (9.79%). Por último, en el sector servicios son Mali (4.94%), Ghana (4.51%) y Ecuador (4.36).

Finalmente, en cuanto a las *jornadas no trabajadas,* como consecuencia de los accidentes y contabilizadas como días naturales que transcurren desde la fecha de la baja médica hasta la fecha del alta, ambas incluidas, los resultados indican que el promedio general de jornadas no trabajadas por trabajador activo ocupado es de 0.85 días (DT = 0.38, CI 95% = 0.72, 0.95). Las diferencias entre las zonas de origen de los trabajadores es significativa $F(4,39) = 4.87$, $p = .003$, $\eta^2 = .33$. Estas diferencias se dan entre los trabajadores africanos y los trabajadores de países americanos y asiáticos, siendo mayores en los africanos. La figura 5 muestra el detalle del promedio de jornadas no trabajadas por trabajador activo, clasificados por zona de origen. A nivel de país, los trabajadores de países africanos, y más específicamente los de Camerún (1.81 jornadas), Argelia (1.53 jornadas) y Marruecos (1.42 jornadas), son los que, en promedio, registran más días de baja médica por accidente y persona ocupada.

Todos estos resultados descriptivos aportan evidencia para aceptar la primera hipótesis que establecía la existencia de diferencias significativas en la incidencia de accidentes entre los trabajadores según el país de origen.

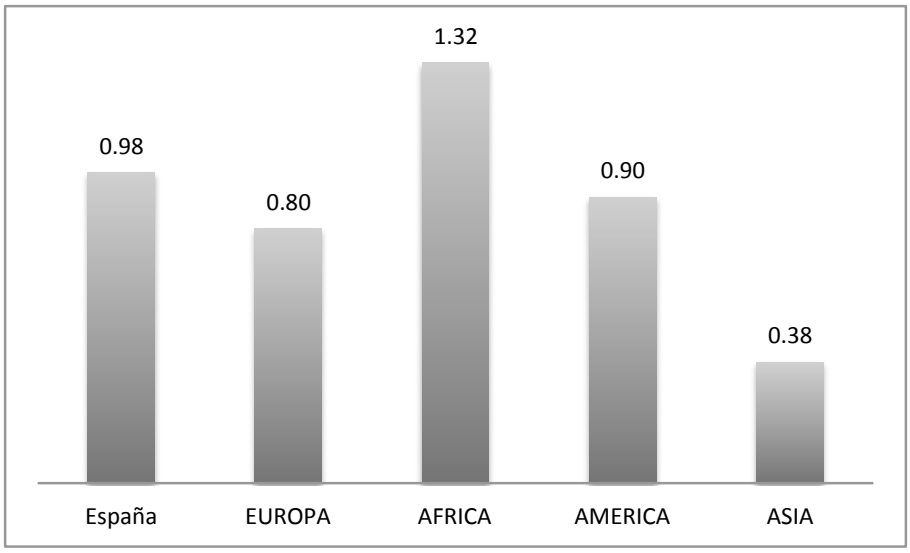

Figura 5. Promedio de días de baja por accidente y trabajador activo según zona de origen

Para probar si las características culturales de los países están relacionadas con el número de accidentes se realizaron análisis en dos pasos. El primer paso consiste en comparar los *perfiles culturales* de los trabajadores de países con puntuaciones por encima y por debajo de una desviación estándar de la media de accidentes. De esta forma se identifican las características culturales que tiene el grupo con alto porcentaje de accidentes y que no tiene el grupo con bajo porcentaje de accidentes. Para ello se transformó a puntuaciones *z* los valores del promedio de accidentes por país. Así, los países con puntuaciones *z* superiores a 1 corresponden a los países con alto porcentaje de accidentes y los países con puntuaciones *z* inferiores a -1 corresponden a los países con bajo porcentaje de accidentes. Después, se calcularon los percentiles 33 y 66 de las puntuaciones de los valores culturales de Hofstede, de acuerdo a las puntuaciones del grupo de países considerados. Con estos cálculos se puede determinar si un país puntúa bajo, medio o alto en un determinado valor, posibilitando establecer perfiles culturales de los países.

Los resultados (ver tabla 7) muestran que los países con alto porcentaje de accidentes coinciden en valores medios en *evitación de la incertidumbre* y valores bajos en *orientación a largo plazo*. También parecen tener valores medio-altos en *distancia de poder* y en *masculinidad*. Por su parte, los países con bajo porcentaje de accidentes no coinciden con estos perfiles culturales.

Tabla 7. Perfiles culturales de los países con alto y bajo porcentaje de accidentes

	Individualismo	Distancia de poder	Evitación de la incertidumbre*	Masculinidad	Orientación a largo plazo*
Países con alto porcentaje de accidentes					
Ecuador	Bajo	Alto	Medio	Alto	Bajo
Marruecos	Alto	Medio	Medio	Medio	Bajo
Colombia	Bajo	Medio	Medio	Alto	Bajo
Mauritania	Alto	Medio	Medio	Medio	Bajo
Argelia	Alto	Medio	Medio	Medio	Bajo
Países con bajo porcentaje de accidentes					
Bangladesh	Medio	Alto	Medio	Alto	Alto
México	Medio	Alto	Alto	Alto	Medio
Rusia	Alto	Alto	Alto	Bajo	Alto
Paraguay	Alto	Bajo	Medio	Medio	Medio
Filipinas	Medio	Alto	Bajo	Alto	Medio
Nicaragua	Medio	Alto	Bajo	Bajo	Medio
Estados Unidos	Alto	Bajo	Bajo	Alto	Medio
China	Medio	Alto	Bajo	Alto	Alto

* Indica la característica cultural en la que todos los países con alto porcentaje de accidentes coinciden.

El segundo paso consistió en realizar los análisis de correlación y regresión lineal múltiple para comprobar la capacidad predictiva de las características culturales identificadas. Los resultados de las correlaciones (tabla 8) indican que los hombres se

accidentan menos que las mujeres en agricultura (r = -.33, p = .04), pero más en la construcción (r = .42, p< .01) y en servicios (r = .44, p< .01). Respecto de las dimensiones culturales, la *orientación a largo plazo* está relacionada negativamente con los accidentes en general (r = -.60, p< .01) y con los accidentes en todos los sectores productivos (r = -.46, p< .01 para la industria; r = -.48, p< .01 para la construcción; r = -.62, p< .01 para servicios), menos en la agricultura. Concretamente en este sector, la *evitación de la incertidumbre* sí se relaciona positivamente con los accidentes (r = .39, p = .02).

Tabla 8. Correlaciones entre los accidentes y las dimensiones culturales

		1	2	3	4	5	6	7	8	9	10
1	Sexo	-									
2	Total de accidentes	.23	-								
3	Acc. en Agricultura	-.33*	.21	-							
4	Acc. en Industria	.15	.69**	.14	-						
5	Acc. en Construcción	.42**	.63**	.10	.63**	-					
6	Acc. en Servicios	.44**	.89**	.02	.52**	.66**	-				
7	Individualismo	-.19	-.24	-.26	-.26	-.17	-.27	-			
8	Distancia de poder	-.07	-.12	-.10	.05	-.19	-.07	-.50**	-		
9	Evitación de la incertidumbre	-.27	.18	.39*	-.03	-.08	.04	.02	-.11	-	
10	Masculinidad	.01	-.13	.26	-.15	-.02	-.09	.13	-.15	-.44**	-
11	Orientación a largo plazo	-.07	-.60**	-.17	-.46**	-.48**	-.62**	.16	.17	.13	-.20

* p< .05, ** p< .01. Nota: Sexo (0 = Mujer, 1 = Hombre); Total de accidentes = total de accidentes en relación a la PAO; La escala de puntuación de las dimensiones culturales va de 0 a 100

En relación a los análisis de regresión los resultados muestran que, analizando los accidentes de forma general, los hombres tienen un mayor número de accidentes (β = 1.13, p < .01), explicando un 20% de la varianza, F(1,38) = 10.30, p< .01. También resultaron significativas la *evitación de la incertidumbre* (β = 0.03, p < .01) y la *orientación a largo plazo* (β = -0.04, p < .001) en la dirección esperada, y aumentando la varianza explicada al 56%. Respecto a los accidentes en la agricultura F(6,32) = 5.87, p< .001, la *evitación de la incertidumbre* (β = 0.07, p < .001), la *masculinidad* (β = 0.10,

$p < .01$) y el *individualismo* ($\beta = -0.05$, $p < .01$) contribuyen en la dirección esperada y explican un 43% de la varianza En el análisis de los accidentes en la industria $F(6,32) = 2.60$, $p = .04$, solamente resultó significativa la *orientación a largo plazo* ($\beta = -0.06$, $p < .01$), también en la dirección esperada y explicando un 20% de la varianza. Para los accidentes en la construcción $F(6,32) = 2.96$, $p = .02$, resultaron significativas tanto el sexo ($\beta = 1.94$, $p = .03$) en el primer paso de la regresión como la *orientación a largo plazo* en el segundo paso ($\beta = -0.06$, $p = .01$), explicando una varianza total del 24% . Por último, los resultados del sector servicios son muy similares a los del total de accidentes, ya que este sector acumula la mayor cantidad del total de accidentes. Así, el sexo resultó significativo ($\beta = 1.17$, $p < .01$) con un 25% de varianza explicada, mientras que la *evitación de la incertidumbre* ($\beta = 0.02$, $p = .03$) y la *orientación a largo plazo* ($\beta = -0.04$, $p < .001$) contribuyen significativamente con un incremento de la varianza del 30%.

Estos resultados aportan suficiente evidencia para: aceptar la hipótesis 2 (relación negativa y significativa entre el *individualismo* y el número de accidentes), pero solo en el sector de la agricultura; la hipótesis 4 (relación positiva y significativa entre la *evitación de la incertidumbre* y el número de accidentes), en los accidentes de forma general, y en los sectores de agricultura y servicios; la hipótesis 5 (relación positiva entre *masculinidad* y número de accidentes), solo en el sector agrícola; y la hipótesis 6 (relación negativa entre la *orientación a largo plazo* y el número de accidentes), en los accidentes de forma general, y en todos los sectores productivos, menos en el agrícola. Sin embargo, no se ha encontrado evidencia para aceptar la hipótesis 3 (relación positiva entre la *distancia de poder* y el número de accidentes).

Tabla 9. Resultados del análisis de regresión para explicar la prevalencia de accidentes en función de las dimensiones culturales

	Total accidentes		Agricultura		Industria		Construcción		Servicios	
	I	II	I	II	I	II	I	II	I	II
(Constante)	2.5***	1.40	4.46***	-1.95	5.61***	8.86	4.85***	11.79***	1.75***	1.44
Género	1.13**	1.33**	-0.75	-0.14	1.03	0.86	1.94*	1.51	1.17**	1.26***
Ind.		-0.01		-0.05**		-0.02		-0.03		-0.01
D P		0.01		-0.03		0.02		-0.04		0.01
E I		0.03**		0.07***		0.01		0.00		0.02*
Mas.		-0.01		0.10**		-0.04		-0.03		-0.01
OLP		-0.04***		-0.01		-0.06**		-0.06*		-0.04***
R2 (Adj.)	.20	.56	.01	.43	.03	.20	.10	.24	.25	.55
Δ R2	.20**	.36***	.01	.42***	.03	.17*	.10*	.14*	.25**	.30**

* p< .05, ** p< .01, *** p< .001. Nota: Ind. = Individualismo; D P = Distancia de poder; E I = Evitación de la incertidumbre; Mas. = Masculinidad; OLP = Orientación a largo plazo.

Discusión

Los accidentes de trabajo son una lacra social que genera enorme sufrimiento a las víctimas y cuantiosas pérdidas económicas. La dificultad de estudiar este tema, por numerosas razones, hace que los intentos resulten relevantes. Además, si este problema se analiza desde la perspectiva de la emigración se añade complejidad, pero también relevancia social. En ese sentido, este artículo ha tenido un doble objetivo. Primero, describir las cifras de accidentabilidad de los trabajadores españoles y extranjeros en el año 2015 y analizar algunos datos y diferencias importantes. Segundo, estudiar si las características culturales de los países de procedencia de los trabajadores, siguiendo la clasificación de Hofstede, pueden ayudar a explicar este problema. Como se ha visto, la investigación sobre las características culturales y los accidentes es escasa, pero encuentra resultados interesantes. Este estudio avanza respecto a los realizados, al analizar la influencia de las dimensiones culturales y considerar además los diferentes sectores productivos en los que trabajan los emigrantes en España, con el objetivo de ser más precisos e intentar reducir el peso de otras variables que pueden estar relacionadas, como la precariedad laboral, más asociada al sector.

De acuerdo con nuestros resultados podemos afirmar que hay diferencias significativas en la cantidad de accidentes, tanto de forma general como por sector productivo, en función del país de origen del trabajador, quedando probada la primera hipótesis, sin embargo, como se ve la respuesta no es tan simple como parecería. Agrupando los trabajadores según su continente de procedencia son los trabajadores de origen africano los que tienen más accidentes, en general, tanto respecto a los trabajadores españoles y como al resto de continentes (en relación a su PAO). Sin embargo, los trabajadores de países asiáticos tienen significativamente menos accidentes que el resto de trabajadores, incluso que los trabajadores españoles. Esta conclusión se mantiene al hacer el análisis en función de la gravedad de los accidentes (leves / graves) y del sexo de los accidentados (hombres / mujeres).

Otro hallazgo interesante respecto a la accidentabilidad es que más de la mitad de los accidentes contabilizados se localizan en el *sector servicios*, a pesar de que otros sectores como la *construcción* o la *industria* son considerados más peligrosos. Esto puede explicarse porque el sector servicios es el que mayor población activa ocupada tiene en España y, por eso, es lógico que registre más accidentes, en general. Además, como no suele considerarse un sector especialmente peligroso, es posible que tampoco se dé la prevención necesaria. Sin embargo, en relación a la PAO de cada sector sigue siendo la construcción el sector más peligroso, como ya habían señalado informes previos (INSHT, 2008; Ministerio de Empleo y Seguridad Social, 2016a).

Las *jornadas de trabajo perdidas* por causa de la baja médica por accidente equivalen en promedio a 0.85 días por accidente. Es decir, por cada trabajador activo ocupado se pierde el 0.85 de una jornada de trabajo (casi toda la jornada) por causa de los accidentes. Este número aumenta hasta 1.5 jornadas entre los trabajadores argelinos y hasta 1.81 jornadas entre los de origen camerunés, mientras que en los trabajadores

chinos el promedio de jornadas perdidas por cada trabajador ocupado desciende hasta 0.13 jornadas. El dato para los trabajadores españoles está en 0.98 jornadas, esto es un poco más alto que el promedio. Es decir, los trabajadores de origen africano se accidentan más y los accidentes son de mayor gravedad. Estos datos coinciden con los últimos estudios oficiales (INSHT, 2008) y muestran que, a pesar del cambio de circunstancias económicas y sociales, la tendencia no se ha corregido.

Una vez analizada la situación, nuestro segundo objetivo fue probar si estas diferencias estaban relacionadas con las características culturales de los países de procedencia de los trabajadores. Los resultados señalan que el *perfil de los países con mayor porcentaje de accidentes* se caracteriza, principalmente, por valores medios en *evitación de la incertidumbre* y valores bajos en *orientación a largo plazo*. Los resultados de los análisis de correlación y regresión apoyan y confirman este perfil de tal manera que, cuanto mayor es el nivel de *evitación de la incertidumbre* (Hipótesis 4) y menor el nivel de *orientación a largo plazo* (Hipótesis 6), mayor es el número de accidentes.

En las sociedades con baja *evitación de la incertidumbre* las personas tienden a asumir riesgos más fácilmente y a sentir relativa seguridad, lo que puede favorecer la ocurrencia de accidentes al creer que "a mí no me va a pasar". Estos resultados coinciden con lo encontrado en estudios previos (Gaygisiz 2009; Infortunio, 2006) sin embargo, difieren de los obtenidos por Renier y Gidon (2013) en su análisis de los accidentes fatales en población de países europeos. Es probable que, la menor variabilidad de las puntuaciones, al tratarse de un solo continente, explique la falta de coincidencia.

Por su parte, la puntuación baja en *orientación a largo plazo* caracterizada por estabilidad emocional y carácter tranquilo, por una menor planificación y también

menos prevención de las consecuencias se ha planteado que puede estar relacionada también con la accidentabilidad, aunque no hemos encontrado estudios similares para contrastar este dato. En este sentido, nuestros resultados son novedosos y explican la relación entre esta dimensión cultural y el número de accidentes, en los diferentes sectores productivos, a excepción del agrícola, por lo que se debe seguir analizando.

Respecto al resto de dimensiones culturales analizadas, sólo se muestran vinculadas a la accidentabilidad cuando se ponen en relación, de nuevo, con el sector productivo. Es en la agricultura dónde el *individualismo* muestra relaciones significativas, coincidiendo con la hipótesis planteada (hipótesis 2). Según la investigación revisada, a medida que aumenta el *individualismo* la comunicación grupal puede deteriorarse y la orientación al grupo debilitarse lo que puede ir en perjuicio de la adopción de medidas de seguridad (Starren, Hornixk y Luijters, 2013), e influir positivamente en la accidentabilidad (p. ej. Gaygisiz, 2009, Renier y Gidon, 2013). Por último, la *masculinidad* resultó también significativa únicamente en el sector agrícola y, en la misma dirección que la reportada por Gaygisiz (2009), de tal forma que, a mayor *masculinidad*, mayor también el número de accidentes (hipótesis 3). Sin embargo, otros autores no encuentran esta relación, por ejemplo, Infortunio (2006) o Renier y Gidon, (2013). Que nuestros resultados se circunscriban al sector agrícola puede explicar las diferencias. Por último, en contra de lo esperado, la *distancia de poder* (hipótesis 3) no resultó significativa ni para los accidentes en general, ni para ningún sector de producción. No obstante, esta dimensión no ha dado resultados concluyentes hasta ahora, pues unos estudios reportan efectos positivos (Renier y Gidon, 2013), y otros negativos (Reader et al., 2015), por tanto, hay que seguir analizando su influencia y en qué condiciones es más probable que aparezca. Por ejemplo, los trabajadores de culturas con *alta distancia de poder* es más probable que acepten las instrucciones de sus

superiores, sin embargo, también es probable que, en ocasiones no cuestionar estas instrucciones suponga un riesgo.

Como era de esperar aparecen diferencias en accidentabilidad respecto a la variable sexo, especialmente en el sector de la construcción y de los servicios, lo que está relacionada con el mayor número de hombres en estos sectores. En nuestro caso se ha considerado variable de control para poder separar su efecto, del resto de variables consideradas. Sin embargo, y como se sabe, la *feminización* y *masculinización* de ciertos sectores productivos es un hecho que requiere un abordaje específico, y así se refleja también en este estudio.

Aunque creemos que nuestros resultados son interesantes deben ser tomados, con precaución, como la mayor parte de investigación realizada en este ámbito. En primer lugar, como se ha dicho, la investigación en temas de seguridad y dimensiones culturales es escasa y los estudios no son concluyentes, sobre todo, por la diferente forma de abordar el problema de los distintos investigadores. Por ejemplo, aunque la mayor parte de la investigación utiliza la clasificación de Hofstede, hay otras propuestas (p. ej. GLOBE), lo que añade dificultad a la comparación de los resultados. En segundo lugar, la consideración más importante es que los resultados no son aplicables a nivel individual, pues las diferencias culturales se basan en valores grupales promedio que reflejan sólo tendencias generales que no tendrían valor para las personas consideradas individualmente (Guldenmund y col., 2013). Sin embargo, dan indicaciones útiles respecto a la forma de pensar y actuar de diferentes grupos (Taras et al., 2011), y por eso conviene considerarlas, como se hace en otros ámbitos de investigación. No hacerlo es un error y supone además añadir prejuicios a este ámbito y someter al colectivo de inmigrantes una doble discriminación.

Nuestro estudio tiene también algunas limitaciones. La primera es que, como en otros estudios (p. ej. Reniers y Gidron, 2013), se asume que todos los miembros de un mismo país tienen valores culturales similares, lo que se ha puesto en cuestión (Drenth y Groenendijk, 1998) e indica la necesidad de contrastar esta información en futuros estudios. La segunda es su alcance, pues solo se han considerado los datos del último año en que hay cifras, 2015. Incluir diferentes años simultáneamente puede ayudar a establecer una tendencia en la evolución, incremento o decremento, de los accidentes por país y probar con mayor solidez la hipótesis de la explicación cultural planteada. No obstante, hay que destacar primero, que los datos de este estudio corresponden a cifras oficiales y además que, para evitar el sesgo del muestreo los análisis realizados incluyen correcciones estadísticas (*bootstrap bias-corrected and accelerated)* que aportan robustez a nuestros resultados.

No obstante, en futuros estudios, deberían completarse con otro tipo de datos que reflejen la realidad que no aparece en las cifras oficiales. Se sabe que muchos accidentes no llegan a registrarse, incluso entre población autóctona. Si a esto se añaden los posibles problemas relacionados con la situación legal de la población emigrante y su dedicación a la economía *informal* o *sumergida* (Guldenmund y col., 2013) se entiende que hace falta un abordaje más completo con información personal (a través de cuestionarios, entrevistas, etc.), tanto de los propios trabajadores, como de otros implicados (empleadores, expertos, sindicatos, etc.).

Creemos que nuestros resultados tienen una gran importancia desde un punto de vista teórico, pero fundamentalmente aplicado. La conclusión general es que los programas de prevención de accidentes de trabajo deben tener en cuenta las características culturales de los países de origen de trabajadores, pues van a influir en su forma de percibir y actuar en materia de seguridad. La identificación de riesgos o

peligros en el trabajo, la forma de comunicarse o la adopción de las medidas de seguridad, son aspectos que pueden estar influidos por las diferencias culturales y que hay que atender en cualquier programa de prevención. Aunque las características culturales están profundamente arraigadas en las personas, no quiere decir que no puedan ser objeto de intervención. Como se hace en otros ámbitos, por ejemplo, en *comunicación intercultural*, los programas de formación pueden ayudar a las empresas a mejorar sus sistemas de gestión en general, y de reducción de la siniestralidad laboral, en particular. Considerar el papel de las dimensiones culturales no implica que se descarten otras variables, quiere decir que aquellas no se deben descartar por prejuicios o falta de tradición. Las diferencias culturales se deben analizar desde la perspectiva de la gestión de la diversidad y del hecho de que los contextos de trabajo requieren de programas de intervención que armonicen las diferencias entre sus miembros. Se calcula que en 2060 uno de cada tres trabajadores de la UE será extranjero (o descendiente de extranjeros) y este tema adquiere por tanto especial relevancia (European Agency for Safety and Health at Work, 2013).

Desde un punto de vista aplicado, los datos obtenidos permiten hacer algunas recomendaciones en el diseño de programas de prevención:

- Los datos de los *perfiles culturales* identificados con mayor riesgo de accidentarse, así como los datos de los extranjeros más vulnerables, deben ayudar a seleccionar los grupos que requieren intervenciones más urgentes. Concretamente y según nuestros datos, los que muestran valores medios en *evitación de la incertidumbre*, valores bajos en *orientación a largo plazo* y medio-altos en *distancia de poder* y en *masculinidad*.

- Respecto a los sectores productivos incidir sobre todo en agricultura y servicios, pues son los que más se podrían beneficiar de una aproximación preventiva basada en la atención a las dimensiones culturales.
- La atención a las diferencias culturales debe plantearse desde la perspectiva de la *gestión de la diversidad* y del hecho de que los contextos de trabajo requieren de programas de intervención amplios que ayuden a armonizar las diferencias entre todos sus empleados. Así, fomentar la formación con metodologías apropiadas, la participación y estilos de liderazgo más adecuados a esta realidad se revelan, como aspectos fundamentales.

Conclusión

Este estudio ha probado, como se planteó, que los trabajadores extranjeros se accidentan más pero también que, cuándo las cifras se desglosan, esta respuesta no siempre es afirmativa y requiere de explicaciones detalladas que reflejen la complejidad del problema. En ese sentido, considerar los sectores productivos en los que trabajan, y ponerlos en relación con las diferencias culturales de sus países de procedencia, nos ha permitido obtener información muy interesante y que hay que conocer. Integrar esta información en los programas de prevención y promoción de la salud y de reducción de la siniestralidad laboral, queda ahora como una prioridad para las administraciones públicas y las empresas. De no ser así, se estará sometiendo a este colectivo a una *doble discriminación* que puede generar graves consecuencias, tanto económicas como sociales, que hay que evitar.

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CONCLUSIONES GENERALES

CONCLUSIONES GENERALES

En esta sección se recogen las conclusiones que se desprenden de los diferentes estudios que componen este documento y que se agrupan en conclusiones teóricas, metodológicas y de aplicación práctica. Aclarar que solamente se recogen las conclusiones principales ya que, las relacionadas con los objetivos planteados en esta tesis se ha realizado amplia y detalladamente en cada uno de los capítulos anteriores.

Conclusiones a nivel teórico

1º. La intensidad media del burnout se estima entre baja y moderada.

Uno de los principales hallazgos de esta Tesis es que la intensidad media del burnout encontrada es entre baja y moderada. En una escala de 0 a 100, donde 100 es el máximo de intensidad, los valores de agotamiento están entre 33 y 40, y los de cinismo entre 25 y 29, mientras que la intensidad de la realización personal está entre 73 y 80. Estos valores se mantienen tanto entre docentes como entre otro tipo de ocupaciones, y en todos los países analizados. Estos resultados coinciden con los de otro meta-análisis (Fischer y Boer, 2011). No hemos encontrado ningún país, entre los incluidos en los estudios, que simultáneamente puntúe alto en agotamiento y cinismo y bajo en realización personal.

De aquí se pueden extraer dos importantes conclusiones. La primera es que el fenómeno del burnout está cada vez está más extendido y se puede considerar un fenómeno global, como ya algunos autores habían señalado (Schaufeli et al., 2008) ya que se encuentra en todos los países estudiados. La segunda, y creo más importante, es que este fenómeno, entendido como concepto multidimensional (que incluye agotamiento, cinismo y falta de realización personal como síntomas del mismo

síndrome) y en poblaciones no clínicas, no presenta niveles de intensidad alarmantes, a excepción, como es lógico de algunos casos aislados. Esto significa, desde el punto de vista práctico, que hay que invertir en programas preventivos mejor que en correctivos. Los primeros evitan que el problema se produzca, se amplifique o se haga más grave, mientras que los segundos actúan sobre un problema ya patente, y con el agravante de tener que reparar los daños producidos. Teniendo en cuenta que el riesgo de las enfermedades psicosociales que se producen en entornos laborales es cada vez mayor, el burnout constituye una amenaza que debe tenerse en cuenta y que deben prevenirse. Concretamente y respecto al burnout en maestros, dado su papel esencial en la sociedad del conocimiento actual, el estudio del burnout se convierte en un tema central para la investigación que debe ser analizado, también desde una perspectiva transcultural. No obstante, y como se ha visto, esta investigación debe realizarse con cautela, siguiendo criterios metodológicos rigurosos y teniendo en cuenta las diferencias entre países, tanto a nivel de puntuaciones normativas, como de diferencias culturales.

2º. Hay variabilidad en burnout entre los países.

Otro hallazgo importante de nuestro estudio es que, aunque los niveles de intensidad del burnout son bajos o moderados, hay variabilidad entre los países. Entre los países de América Latina esta variabilidad se da sólo en agotamiento, pero no en cinismo y realización personal, y se explica a nivel individual por factores organizacionales como la ocupación. Los profesionales más agotados son los de servicios (militares, policías, servicios sociales, conductores), seguidos de los maestros y, por último, los profesionales de la medicina (médicos y enfermeras). A nivel de país se explica por factores culturales como el idioma o el grado de individualismo. En el resto de países estudiados, y para muestras de docentes, la variación se da en las tres

dimensiones del síndrome y se explica principalmente a nivel de país, por las diferentes demandas que los sistemas educativos de cada país, y por la dimensión cultural *gender egalitarianism*.

3º. Las variables contextuales tienen mayor poder predictivo que las personales.

Aunque algunas investigaciones (Purvanova y Muros, 2010) han encontrado que las mujeres puntúan más alto en agotamiento emocional y los hombres en despersonalización estos resultados no son concluyentes ya que estudios posteriores han encontrado resultados diferentes (Ju, Lan, Li, Feng y You, 2015; Zaidi, Wajid y Zaidi, 2011). Según nuestros resultados, las variables demográficas sexo, edad o experiencia no resultaron significativas. Esto está en línea con lo señalado por investigaciones previas (Taras, Steel y Kirkman, 2011) de que el poder predictor de variables demográficas (como la edad, la experiencia, el género, el nivel de educación o la raza) es menor que el de los valores contextuales y culturales. Por ejemplo, en el capítulo 2, el nivel de estudio (primaria / secundaria) y el tipo de institución (pública / privada), que son variables de tipo organizacional, y el tipo de afrontamiento (enfocado en la acción / enfocado en la emoción), que es una variable de tipo cultural ya que depende de los patrones culturales de cada sociedad como expone Kuo (2011), explican el burnout mejor que el sexo, la edad o la experiencia.

4º. Las dimensiones culturales pueden predecir el burnout.

Toda la literatura revisada indica la influencia de la cultura y las dimensiones culturales sobre la salud, tanto a nivel mental como físico (accidentabilidad), sin embargo, la investigación sobre burnout y accidentes laborales es escasa. Nuestro trabajo ha permitido aportar evidencias en esa línea. Las características culturales

nacionales están relacionadas con las diferencias en la forma de entender el afrontamiento, el burnout, y la accidentabilidad laboral. Más aún, la cultura nacional es un predictor fiable de estos resultados hasta el punto de que el efecto del país puede explicar entre un 33 y un 40% de la variación del burnout y entre un 14 y un 36% de los accidentes.

En nuestro trabajo hemos encontrado que niveles altos en individualismo y evitación de la incertidumbre y bajos en distancia de poder están asociados con mayores puntuaciones en burnout, mientras que altos niveles de colectivismo se asocian con menos burnout. También encontramos que el lenguaje, como expresión de la cultura (relativismo lingüístico), puede explicar de forma significativa la variación del agotamiento. Específicamente los países de habla portuguesa están 12 veces más agotados que los de habla española y, en los países Latinoamericanos, el individualismo tiene un efecto positivo, aunque marginal, sobre el agotamiento. Así mismo, la variable *gender egalitarianism* tiene efectos curvilíneos en relación con el burnout, de forma que puntuaciones extremas en esta variable están relacionadas con mayores niveles de burnout.

5º. Otros predictores del burnout: demandas educativas y tipos de afrontamiento

Las pruebas nacionales de aprendizaje, como expresión de las demandas de los sistemas educativos nacionales, están relacionadas con un mayor cinismo y una menor realización personal, y tienen un efecto curvilíneo sobre el agotamiento. Según nuestros resultados. Además del impacto beneficioso que las pruebas nacionales de aprendizaje pueden tener sobre la calidad de la educación, también se debe considerar su impacto sobre la salud de los docentes, en tanto que pueden estar relacionadas con un aumento

del burnout. Sin embargo, el comportamiento curvilíneo de esta variable indica que un número moderado de evaluaciones anuales de aprendizaje (en torno a dos) es más beneficioso que realizar muy pocas o excesivas, un resultado que creemos muy interesante.

En cuanto a las estrategias de afrontamiento, nuestros resultados han mostrado que el afrontamiento centrado en la acción tiene un efecto beneficioso directo sobre la salud hasta un punto en el que ya no produce ningún efecto significativo, en línea con el modelo vitamínico de Warr (2013). Por su parte, el afrontamiento emocional es útil hasta un punto en el que sus efectos comienzan a ser dañinos. También hemos observado que la combinación de las estrategias de afrontamiento de acción y emoción tiene efectos significativos, pero debe tenerse en cuenta que el uso excesivo de afrontamiento emocional puede terminar cancelando los efectos beneficiosos del afrontamiento centrado en la acción. Es decir, aunque centrarse directamente en el problema o estresor, tiene buenos resultados para combatir el estrés, sin embargo, su uso prolongado puede causar problemas, sin embargo, el uso combinado de la acción y la emoción puede ayudar al sujeto a recuperarse. No obstante, si el uso del afrontamiento enfocado en la emoción es alto, sus efectos serían perjudiciales. Además, hay que tener en cuenta la influencia cultural pues, para algunas culturas, el afrontamiento más directo puede no ser la mejor estrategia, por ejemplo, para los países más colectivistas el afrontamiento evasivo o de evitación puede funcionar mejor que el directo (Beltrán, 2006). De todas formas, parece claro que estos dos tipos de estrategias de afrontamiento nunca actúan independientemente el uno sin el otro, sino de una manera combinada y adaptativa (Lazarus, 2000; Weiss, Duke y Sullivan, 2014).

También los estilos de afrontamiento varían en función de la cultura. Los países más colectivistas utilizan con mayor frecuencia las estrategias basadas en la emoción. El

efecto del afrontamiento emocional sobre el burnout, especialmente si tiene un alto contenido de apoyo social, puede ser diferente dependiendo del nivel de individualismo / colectivismo del país estudiado. En países más individualistas el afrontamiento centrado en la emoción está positivamente relacionado con el burnout (más agotamiento y cinismo y menos realización personal), mientras que, en países más colectivistas, esta relación es negativa.

6º. Hay diferencias en el número de accidentes según el país de origen del trabajador y se pueden predecir con las dimensiones culturales.

Nuestros resultados han mostrado que hay diferencias significativas en la cantidad de accidentes, tanto de forma general como por sector productivo, en función del país de origen del trabajador. Así, los trabajadores de origen africano tienen más accidentes, en general, en relación a su población activa operativa, y sus accidentes suelen ser de mayor gravedad que la del resto de trabajadores de otros países. Estos datos coinciden con los últimos estudios oficiales (INSHT, 2008) y muestran que, a pesar del cambio de circunstancias económicas y sociales, la tendencia no se ha corregido. Sin embargo, los trabajadores de países asiáticos tienen significativamente menos accidentes que el resto de trabajadores, incluso que los trabajadores españoles. Esta conclusión se mantiene al hacer el análisis en función de la gravedad de los accidentes (leves / graves) y del sexo de los accidentados (hombres / mujeres).

En relación al sector productivo, más de la mitad de los accidentes contabilizados se localizan en el *sector servicios*, pudiéndose explicar porque el sector servicios es el que mayor población activa ocupada tiene en España, y además, como no suele considerarse un sector especialmente peligroso, es posible que tampoco se dé la

prevención necesaria. Sin embargo, en relación a la población activa ocupada de cada sector es la construcción el sector más peligroso.

Nuestros resultados también indican que el perfil de los países con mayor porcentaje de accidentes se caracteriza, principalmente, por valores medios en evitación de la incertidumbre y valores bajos en orientación a largo plazo. Estas dimensiones pueden explicar hasta un 36% de la varianza de los accidentes. El resto de dimensiones culturales analizadas, sólo se muestran vinculadas a la accidentabilidad cuando se ponen en relación con el sector productivo. Por ejemplo, en la agricultura el individualismo y la masculinidad, son los valores culturales que se asocian con los accidentes.

Conclusiones a nivel metodológico

1º. El análisis de relaciones no lineales entre las variables puede ayudar a comprender mejor ciertos fenómenos.

Nuestros resultados han mostrado que el empleo de técnicas de análisis no lineal puede ser muy útil para explicar la relación entre algunas variables, más aun teniendo en cuenta la naturaleza dinámica, compleja y adaptativa de los fenómenos organizacionales que son el objeto de estudio de la psicología organizacional. En el capítulo 3 principalmente se evidencia cómo los modelos curvilíneos pueden explicar un porcentaje de varianza mayor que los modelos lineales.

2º. El análisis multinivel ayuda a comprender la influencia del contexto sobre el afrontamiento, el burnout y la accidentabilidad laboral.

El análisis multinivel es una técnica compleja pero muy útil cuando se analizan sociedades. La influencia de factores contextuales (como la cultura), comunes a los miembros de una comunidad, influyen a nivel individual, y esta influencia debe tenerse

en cuenta. Como hemos demostrado en nuestros estudios de los capítulos 4 y 5, las variaciones *entre* países pueden explicar un porcentaje significativo de la variación *intra* país.

3º. El empleo de meta análisis ayuda a estimar el tamaño del efecto del burnout.

Con respecto al burnout, la metodología empleada para evaluar su intensidad y prevalencia puede derivar en resultados muy variados de unos estudios a otros, resultando en conclusiones sobre el síndrome a veces poco concluyentes. Los meta-análisis realizados en los capítulos 4 y 5 han permitido estandarizar una gran variedad de resultados de múltiples estudios, proporcionando una medida del burnout (tamaño de efecto) más nivelada. Más aún, el capítulo 5 proporciona una medida media del burnout de los países de Latino América que puede ser considerada como punto de corte normativo para la región, ante la ausencia de otras medidas de referencia.

4º. En psicología organizacional, el uso de técnicas tomadas de otras disciplinas puede resultar útil.

La distancia cultural es una forma de operacionalizar la diferencia cultural entre países que ha sido utilizada con éxito en disciplinas como los negocios internacionales, la gestión de expatriados o en relación con el aprendizaje y la movilidad. En nuestro trabajo se aportan evidencias de que también puede ser útil en psicología organizacional, y en los estudios cross-culturales, para comparar las diferencias entre culturas y sociedades.

Conclusiones para la aplicación práctica

1º. Necesidad de planes de prevención sobre el burnout.

El burnout es un problema de salud global, que debe ser prevenido. Esta prevención debe ser inmediata tomando en cuenta algunos aspectos importantes como el aumento acelerado de los riesgos psicosociales en los lugares de trabajo, o el aumento de las profesiones técnicas y de servicio en detrimento de las manuales, cada vez más automatizadas. Además, las acciones preventivas suponen un ahorro respecto de las acciones correctivas, es decir, cuando el problema ya ha ocurrido.

2º. Importancia de incluir variables contextuales en la intervención sobre el burnout y sobre los accidentes laborales.

En los planes de intervención deben tenerse en cuenta las características culturales nacionales y organizacionales ya que, lo que en unas culturas se considera una buena estrategia, puede que no lo sea en otras culturas. Por ejemplo, en nuestro trabajo, hemos encontrado que la cultura, y en particular algunas dimensiones culturales como el igualitarismo de género, tienen un efecto directo y curvilíneo sobre las dimensiones del burnout, así como un efecto moderador que varía de un país a otro. En este sentido, y para que los planes de prevención sean más efectivos deben tener en cuenta la distribución de roles de género en cada país, prestando especial atención en aquellos lugares donde la diversidad de roles de género sea mayor. Así mismo, los programas de prevención de accidentes de trabajo deben considerar las características culturales de los países de origen de trabajadores, pues van a influir en su forma de percibir y actuar en materia de seguridad. Las diferencias culturales se deben analizar desde la perspectiva de la gestión de la diversidad y del hecho de que los contextos de trabajo requieren de programas de intervención que armonicen las diferencias entre sus miembros.

3º Formación en competencias interculturales.

Es de suma importancia para los profesionales de la salud comprender las diferencias culturales, así como el tener competencias de comunicación intercultural que ayudarán enormemente en las relaciones interculturales relacionadas con la salud y la enfermedad. La formación en este tipo de competencias se hace cada vez más necesario en el mundo globalizado y donde la movilidad de grupos numerosos por motivos de conflicto geopolítico o económico es creciente.

4º. Puntos de corte de referencia del burnout para América Latina.

El nivel de intensidad encontrado en nuestros resultados puede establecerse como un punto de corte de la región de América Latina que permitirá a los profesionales diagnosticar a quienes sufren de agotamiento y quién debe ser tratado médicamente. A nivel organizativo, mucho más importante desde el punto de vista de la psicología organizacional, el punto de corte puede ser como el semáforo que indicará cuándo deben activarse acciones preventivas o correctivas teniendo en cuenta las características ambientales y culturales de cada organización y país.

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