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ORIGINAL ARTICLE

Moral distress among healthcare professionals working in intensive care units in Spain

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KEYWORDS
Critical care;
Intensive care units;
Critical care nursing;
Moral distress;
Ethical climate

Abstract
Objective: To assess moral distress (MD) among Spanish critical care healthcare professionals (HCPs).
Design: Cross-sectional, prospective study.
Setting: ICUs in Spain.
Participants: HCPs currently working in Spanish ICUs.
Interventions: A 55-item questionnaire was electronically distributed.
Main variables: The questionnaire included work-related and socio-demographic characteristics, the Spanish version of the Measure of Moral Distress for Health Care Professionals (MMD-HP-SPA), and the Hospital Ethical Climate Survey (HECS).
Results: In total, 1065 intensive care providers completed the questionnaire. Three out of four validity hypotheses were supported. MD was significantly higher for physicians (80, IQR 40–135) than for nurses (61, IQR 35–133, $p = 0.026$). MD was significantly higher for those clinicians considering leaving their position (78, IQR 46–163 *vs.* 61, IQR 32–117; $p < 0.001$). The MMD-HP-SPA was inversely correlated with the HECS ($r = -0.277$, $p < 0.001$). An exploratory factor analysis revealed a four-factor structure, evidencing the patient, team, and system levels of MD.

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Conclusions: In the study sample, Spanish intensivists report higher MD than nurses. Strategies to improve ICU ethical climate and to correct other related factors in order to mitigate MD at a patient, team, and system level should be implemented. Both groups of HCPs manifest a relevant intention to leave their position due to MD. Further studies are needed to determine the extent to which MD influences their desire to leave the job.

PALABRAS CLAVE
Cuidados intensivos;
Unidad de cuidados intensivos;
Enfermería de cuidados intensivos;
Desasosiego moral;
Clima ético

Desasosiego moral entre los profesionales sanitarios que trabajan en unidades de cuidados intensivos en España

Resumen
Objetivo: Evaluar el desasosiego moral (DM) entre los profesionales sanitarios que trabajan en UCI en España.
Diseño: Estudio prospectivo transversal.
Ámbito: UCI en España.
Participantes: Profesionales sanitarios que actualmente trabajan en UCI españolas.
Intervenciones: Se distribuyó electrónicamente un cuestionario de 55 ítems.
Variables principales: El cuestionario incluía características sociodemográficas y laborales, la versión en español de la *Medida de desasosiego moral para profesionales sanitarios* (MMD-HP-SPA) y la *Encuesta de clima ético hospitalario* (HECS).
Resultados: En total 1.065 profesionales sanitarios de cuidados intensivos completaron el cuestionario. Tres de 4 hipótesis de validez fueron apoyadas. El DM fue significativamente mayor entre los médicos (80, IQR 40-135) que entre las enfermeras (61, IQR 35-133, $p = 0{,}026$). El DM fue significativamente más alto para aquellos médicos que estaban considerando dejar su puesto de trabajo (78, IQR 46-163 vs. 61, IQR 32-117; $p < 0{,}001$). El MMD-HP-SPA se correlacionó inversamente con el HECS ($r = -0{,}277$, $p < 0{,}001$). Un análisis factorial exploratorio reveló una estructura de 4 factores, evidenciando los niveles de paciente, equipo y sistema del DM.
Conclusiones: En este estudio los intensivistas refirieron niveles de DM más altos que las enfermeras. Se deben implementar estrategias para mejorar el clima ético en las UCI y corregir otros factores relacionados con el fin de mitigar el DM en lo que atañe al paciente, al equipo y al sistema. Ambos grupos de profesionales manifestaron una intención relevante de abandonar su puesto de trabajo debido al DM. Se necesitan más estudios para determinar en qué medida el DM influye sobre su deseo de abandonar su puesto de trabajo.

Introduction

Intensive care units (ICUs) are highly specialized facilities where advanced and technologically sophisticated medical care is provided. Despite that, caring for critically ill patients is a stressful and emotionally demanding job due to high patient morbidity and mortality, regular confrontations with ethical challenges, and a tension-charged atmosphere.[1–4] Sometimes, healthcare professionals (HCPs) may feel helpless, unable to provide care according to their own belief system, and therefore prone to develop moral distress (MD).[2,4,5]

MD has been described as a challenge that arises when one knows the right thing to do, medically or ethically, but institutional and/or external constraints make it nearly impossible to pursue the right course of action.[5] Particularly in ICU, MD occur when HCPs have frequent exposure to patient care situations and/or to professional environments where they believe they are doing something ethically wrong, but they lack the ability to change the situation.[3,4,6,7]

Originally studied in nurses, this phenomenon is now understood to be a serious problem generalizable to other disciplines at hospitals, threatening the integrity of HCPs and healthcare systems as well.[3,4,6,8] In fact, it compromises care both at a personal (as a root cause of burnout and employee attrition) and at a system (decreased quality of care) level.[9]

Valid and reliable instruments to measure MD are needed to explore its impact in order to develop effective interventions.[10] Furthermore, conditions and factors that contribute to increase MD should be studied at local level as socio-demographic and health system characteristics are heterogeneous between countries.

The Moral Distress Scale (MDS) was the first available measure of MD.[11,12] Afterwards, the MDS was shortened and revised to be applicable to all HCPs, the MDS-Revised (MDS-R).[4,9,13–15] Recent studies have revealed additional root

causes of MD not captured by the MDS-R.[8,10,16] In this sense, Epstein et al.[17] carried out a comprehensive review about MD and developed and validated the Measure of Moral Distress for Healthcare Professionals (MMD-HP – Supplemental electronic material 1). It captures the five key components of MD: complicity in wrongdoing, lack of voice, wrongdoing associated with professional (not personal) values, repeated experiences, and three levels of root causes (patient, unit, system). In addition, the six versions of the MDS-R were condensed into one standard instrument, so it can be usable by all HCPs in adult and pediatric critical care settings.

To our knowledge, no prior studies have evaluated MD among Spanish-speaking HCPs. Therefore, after having tested the reliability and validity of the Spanish version of the MMD-HP (MMD-HP-SPA),[18] the aims of this study are to measure MD levels in Spanish ICU HCPs, and to explore the potential relationship between MD, demographic factors, and ICU ethical climate.

Methods

We conducted a cross-sectional study in all Spanish ICUs. The study population included HCPs directly involved in critically ill patient care. We developed a 55-item questionnaire that included work-related and socio-demographic characteristics, the MMD-HP-SPA to investigate MD, and the Spanish shortened version of Olson's Hospital Ethical Climate Scale (HECS)[13,19] to assess workplace ethical climate. Prior to use, a structured 10-step translation process was followed[18] adhering to the international principles of good practice[20] for translation and cultural adaptation of patient-reported outcomes. The questionnaire was electronically distributed via the *Spanish Society of Intensive and Critical Care Medicine and Coronary Units* (SEMICYUC), the *Galician Society of Intensive and Critical Care Medicine and Coronary Units* (SOGAMIUC), the *Spanish Society of Intensive Care Nursing and Coronary Units* (SEEIUC), and the *Spanish Society of Paediatric Intensive Care* (SECIP) mailing lists. Participation was on a voluntary anonymous basis. Information on the study was included in a cover letter accompanying each survey; informed consent was assumed by return of completed survey. Data collection took place between October and December 2019. The study was conducted in accordance with the 2013 amended Declaration of Helsinki. The local Research Ethics Committee approved the study (ref. CAEIG 2019/471).

Sociodemographic characteristics

Participants were asked to provide work-related and socio-demographic information regarding their age, gender, marital status, offspring, educational level, profession, years in profession, years of experience in the ICU, hospital bed size, type of ICU, and health care model (public or private financing).

Moral distress assessment instrument

MD was evaluated using the MMD-HP-SPA (Supplemental electronic material 2). The MMD-HP-SPA achieved good reliability for the overall sample ($\alpha = 0.97$) and for each provider group; nurse ($\alpha = 0.97$), and physician ($\alpha = 0.94$).[18] The validation strategy is described in a previous article.[18] The MMD-HP-SPA is a 27-item questionnaire that measures MD in specific situations. Participants rate each item on a Likert scale for how often it occurs in their practice (frequency: 0 = never, 4 = very frequently) and for how distressing it is when it occurs (distress: 0 = none, 4 = very distressing). The frequency score (f) is multiplied by the distress score (d) to create a composite score (''$f \times d$,'' range 0–16) for each item. These composite item scores are summed to create an overall MMD-HP-SPA score (range 0–432), with higher scores indicating higher levels of MD. Additionally, two open boxes were created for respondents to add other situations that cause MD in their particular practice in order to gain further data on root causes. Furthermore, two additional dichotomous questions were asked to study intention to leave the job: (a) *Have you ever left or considered leaving a clinical position due to moral distress?* (b) *Are you considering leaving your position now due to moral distress?* Write-in items are not included in the composite score.

Ethical climate assessment instrument

Ethical climate has been defined as the organizational practices and conditions that promote ethical discussions, deliberation about courses of action and shared decisions with ethical content.[13,18] Ethical climate was assessed by means of the Spanish adaptation of the Hospital Ethical Climate Survey–short version (HECS) (Supplemental electronic material 3), a 14-item Likert scale instrument with a score range from 14 to 70, with higher scores indicating a more positive ethical climate. Parallel versions for nurses and physicians were constructed.

Statistical analysis

Firstly, a descriptive analysis was performed. Categorical variables were expressed with frequencies and percentages. Continuous variables were expressed with mean and standard deviation, or median and interquartile range, depending on their adjustment to a normal distribution (Kolmogorov–Smirnov test with Lilliefors correction). Comparisons between groups were analyzed using either Mann–Whitney test or Kruskal–Wallis test in case of variables with more than two factors. An exploratory factor analysis was undertaken to describe the underlying structure of the MMD-HP. Factor extraction was done utilizing a principal component analysis (PCA) to assess the number of factors. The factors determined using the PCA were then rotated using varimax rotation option to allow for correlation between the factors. Finally, a multivariate hierarchical regression was constructed to analyze relationships between socio-demographic characteristics and MMD-HP scores, and to analyze the relationship between MD and unit's ethical climate. Analysis was performed using R statistic software (version 3.5.2),[21] and for all analyses a p-value < 0.05 was considered to be statistically significant.

Table 1 Sociodemographic characteristics of participants and moral distress levels.

Characteristics	Participants*n* = 1065 (%)	MMD-HP-SPAMedian (IQR)
Gender		
Female	809 (76.0)	66.0 (38–134)
Male	256 (24.0)	75.5 (36–137)
Age (years)‡		
<35	311 (29.2)	73.0 (40–150)*
35–50	516 (48.4)	65.5 (34–128)*
>50	238 (22.4)	73.0 (39–129)*
Marital status‡		
Single	420 (39.4)	69.5 (40–140)
Married/cohabiting	577 (54.2)	66.0 (35–132)
Separate/divorced/widow	68 (6.4)	78.5 (35–110)
Offspring		
Yes	598 (56.2)	66.0 (35–122)**
No	467 (43.8)	71.0 (41–149)**
PhD		
Yes	118 (11.1)	76.5 (39–121)
No	947 (88.9)	67.0 (37–135)
Position‡		
Registered nurse	570 (53.5)	60.0 (35–132)***
Nursing supervisor	38 (3.6)	74.5 (36–130)***
Attending physician	338 (31.7)	90.0 (44–142)***
Resident physician	51 (4.8)	56.0 (33–119)***
Head physician	68 (6.4)	73.5 (33–104)***
Appointment		
Permanent worker	570 (53.5)	68.0 (36–125)
Casual worker	495 (46.5)	69.0 (38–150)
Years in profession‡		
≤10	291 (27.3)	66.0 (40–147)
11–20	382 (35.8)	68.0 (36–135)
>20	392 (36.9)	70.0 (36–130)
Years of experience in the ICU‡		
≤10	451 (42.3)	66.0 (38–139)
11–20	354 (33.2)	68.0 (35–130)
>20	260 (24.5)	74.5 (39–134)
Hospital bed size‡		
<200	105 (9.9)	66.0 (35–125)
200–500	349 (32.8)	66.0 (34–139)
>500	611 (57.3)	70.0 (39–132)
ICU type‡		
Mixed	629 (59.1)	68.0 (36–139)
Medical	74 (6.9)	59.5 (37–159)
Surgical	69 (6.5)	70.0 (42–116)
Cardiac/Coronary	51 (4.8)	58.0 (28–91)
Neuroscience/Trauma	45 (4.2)	67.0 (39–159)
Paediatric	197 (18.5)	76.0 (41–129)
Number of ICU beds‡		
1–10	299 (28.1)	75.0 (37–139)
11–20	475 (44.6)	64.0 (36–127)
>20	291 (27.3)	72.0 (38–146)
Teaching unit		
Yes	864 (81.1)	70.0 (38–132)
No	201 (18.9)	62.0 (35–138)
Health system model		
Public financing	981 (92.1)	70.0 (38–135)*
Private financing	84 (7.9)	55.5 (33–112)*

Abbreviations: IQR = interquartile range; ICU = intensive care unit; MMD-HP-SPA = Spanish version of the Measure of Moral Distress for Health Care Professionals.

Data are expressed as the number (%) or median (interquartile range). *p*-Values calculated by Mann–Whitney *U* test (‡Kruskal–Wallis test). Statistically significant difference between groups:

* $0.01 < p < 0.05$.

** $0.001 < p < 0.01$.

*** $p < 0.001$.

Table 2 Differences between nurse and physician moral distress and perceptions of ethical climate.

Participants	MMD-HP-SPA Median (IQR), max–min	HECS-SF Median (IQR), max–min
All	68 (38–134), 2–359	43 (34–52), 14–70
Nurse	61 (35–133), 2–359	41 (33–59), 14–70
Physician	80 (40–135), 3–352[a]	47 (37–53), 14–70

Abbreviations: MMD-HP-SPA = Spanish version of the Measure of Moral Distress for Health Care Professionals; HECS-SF = Hospital Ethical Climate Survey–short form; IQR = Interquartile range.
Data are expressed as median (interquartile range).
[a] Nurse *vs.* physician mean difference = 19, $p = 0.026$.

Results

A total of 1065 HCPs completed the questionnaire, 608 nurses (57.1%) and 457 physicians (42.9%). Participants' sociodemographic characteristics are reported in Table 1.

Validity of the MMD-HP-SPA

Construct validity was evaluated through hypothesis testing. First, the median MMD-HP-SPA score was 68 (IQR, 38–134). We observed significantly higher MMD-HP-SPA scores in physicians compared to nurses (Table 2). Attending physicians were the HCPs with the highest levels of MD (Table 1). Second, MMD-HP-SPA scores were significantly higher for participants currently considering leaving their position due to MD (390, 36.6%) than for those not considering leaving it (588, 55.2%) [60.5 (IQR 31.7–117.0) *vs.* 77.5 (IQR 46.0–163.0), $p < 0.001$]. Among nurses, 38.7% claimed to have considered leaving their job due to MD, and 9.7% had actually left a position. Regarding the intensivists, 33.9% had considered leaving a position, and 6.8% had left their job because of MD. Third, MD was inversely correlated with ethical climate ($r = -0.277$, $p < 0.001$). Finally, we conducted an exploratory factor analysis that revealed a four-factor structure of the MMD-HP-SPA, evidencing the patient, team or unit, and system levels of MD (Supplemental electronic material 4).

Ranking root causes of moral distress

Situations reported as causing the highest MD were ranked for each provider group (Table 3). Although ''concern about patients' suffering due to a lack of provider continuity'' and ''to be required to care for more patients than one can safely care for'' were the most highly ranked issues among all participants, clear disagreement between physicians and nurses have been observed for other topics. In particular, the situation that caused the highest MD for nurses was ''to continue to provide aggressive treatment to a patient near to death when no one will decide to withdraw it''. Nurses reported higher scores on patient-level root causes than physicians, whereas physicians exhibited higher scores on system-level root causes than nurses (Table 3).

MMD-HP-SPA scores differed significantly by age, offspring, job position, and health system model (Table 1). Those HCPs < 35 years or > 50 years of age, without offspring, and working in the public health system reported significantly higher levels of MD. Hierarchical multiple regression analysis showed that age, years of experience in the ICU and HECS were significant predictors of MMD-HP scores (Table 4).

Discussion

In the past decades, numerous treatments and technological advances have resulted in improved ICU survival, but interventions to improve patient and family-centered care have not kept pace.[22–24] In addition, these advances have sometimes led to futile aggressive treatments. The feeling of inappropriateness about some aspects of critical care can further development of MD among ICU staff.[9] Previous research in different health sectors found that this feeling has negative consequences for HCPs, teams and health systems.[3,8,25]

In view of the above, it is crucial to have valid and reliable tools to explore the causes of MD among HCPs in order to design effective interventions.[10] After a comprehensive review, Epstein et al.[17] developed the newest instrument for measuring MD. The MMD-HP captures the five key components of MD: complicity in wrongdoing, lack of voice, wrongdoing associated with professional (not personal) values, repeated experiences, and three levels of root causes (patient, unit, system). In order to use this tool to assess MD among HCPs working in ICU in Spain, we translated and validated the MMD-HP-SPA.[18] Our findings show that the MMD-HP-SPA is a valid and reliable instrument to measure MD among Spanish critical care staff. In consequence, we consider that this tool can be used in future studies on MD to be performed both in Spanish and Latin-American ICUs.

In this study, MD was present in all HCPs groups (median MMD-HP-SPA score of 68). Although previous studies expressed MMD-HP scores in means and the comparison between means and medians is not advisable, our MMD-HP-SPA scores are relatively lower than those reported in the previous studies that used the MMD-HP questionnaire, both conducted in North America.[17,26] This difference may reflect the specifics of ICU environment, the hospitals organization, or the type of healthcare system. In Spain most ICUs are part of public hospitals, many of them affiliated to Universities, with complex and hierarchical structures.

Our results are somewhat inconsistent with previously reported data when assessing the differences between nurses and intensivists. We have observed that MD was higher for physicians than nurses. On the contrary, in most previous studies using the MDS-R[4,9,14] and the MMD-HP,[17] MD was higher for nurses than physicians. This phenomenon

Table 3 Most common sources of moral distress reported by nurses and physicians.

Situation	All		Nurses		Physicians	
	MMD-HP-SPAMean (SD)	Rank	MMD-HP-SPAMean (SD)	Rank	MMD-HP-SPAMean (SD)	Rank
Watch patient care suffer because of a lack of provider continuity	5.52 (4.80)	1	5.18 (4.69)	3	5.98 (4.90)	1
Be required to care for more patients than I can safely care for	5.29 (4.88)	2	5.21 (4.89)	2	5.39 (4.87)	3
Continue to provide aggressive treatment for a person who is most likely to die regardless of this treatment when no one will make a decision to withdraw it	5.28 (4.43)	3	5.66 (4.73)	1	4.79 (3.96)	6
Experience compromised patient care due to lack of resources/equipment/bed capacity	4.89 (4.69)	4	4.39 (4.59)	6	5.56 (4.74)	2
Follow the family's insistence to continue aggressive treatment even though I believe it is not in the best interest of the patient	4.39 (3.87)	5	4.52 (4.14)	5	4.22 (3.47)	7
Feel pressured to order or carry out orders for what I consider to be unnecessary or inappropriate tests and treatments	4.36 (3.95)	6	4.62 (4.14)	4	4.00 (3.67)	10
Experience lack of administrative action or support for a problem that is compromising patient care	4.34 (4.60)	7	3.70 (4.37)	10	5.19 (4.78)	5
Have excessive documentation requirements that compromise patient care	4.30 (4.56)	8	3.50 (4.16)	12	5.37 (4.83)	4
Witness low quality of patient care due to poor team communication	4.19 (4.11)	9	4.26 (4.19)	7	4.10 (2.85)	9
Be required to work with other healthcare team members who are not as competent as patient care requires	3.99 (4.07)	10	4.15 (4.18)	8	3.77 (3.93)	11

Abbreviations: MMD-HP-SPA = Spanish version of the Measure of Moral Distress for Health Care Professionals; SD = Standard deviation.

Table 4 Hierarchical regression analysis (standardized coefficients).

	(1)	(2)	(3)	(4)
Gender[a]	−0.009	−0.015	−0.012	−0.034
Age[b]				
30–50	−0.098*	−0.042	−0.087	−0.124**
>50	−0.053	−0.007	−0.075	−0.099
Offspring[c]		−0.084*	−0.091*	−0.065
Years of experience in the ICU[d]				
10–20			0.059	0.073
>20			0.087	0.107*
HECs				−0.283***
Adjusted R^2	0.003	0.007	0.008	0.086

[a] Reference = Male.
[b] Reference = < 30.
[c] Reference = No.
[d] Reference = < 10.
p-Values:
* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.

has been thought to be due to nurses' consistent presence at the bedside, where many patient-level root causes occur.[4,6,9,10,27] In looking at the responses to the MMD-HP-SPA items in our study, we noted an interesting pattern emerging. Our results indicate that system-level root causes, particularly those related to patient's suffering due to lack of provider continuity and to be required to care for more patients than one can safely care for, are among the most morally distressing for all HCPs, especially physicians. In addition, three of the top-ranked root causes, excessive documentation, lack of resources, and lack of administrative action, were newly added to the MMD-HP[17] and are related also to system-level problems. Epstein et al.[17] already noted a smaller difference in MD levels than was expected using the new MMD-HP. They suggested that with the addition of new items related to system-level root causes this questionnaire may apply more broadly to all HCPs, not only those at the bedside. Accordingly, our findings highlight the substantial contribution of system-level root causes to MD. Thus, they must be taken into account when designing specific interventions to different professional groups.

MD has several potential negative consequences. One of the most studied is the association between MD and the propensity to leave a position. It is relevant that nearly half of intensivists (40.7%) and nurses (48.4%) considered to leave or left their job in the past because of MD. Additionally, almost 40% of participants are currently thinking about leaving their position. Our results are slightly higher than those from recent studies in critical care settings from the US[17] and Canada,[26] where 20% and 13.8% of participants were currently considering leaving their position, respectively. Also, Druwé et al.,[8] in a study with emergency medicine physicians from 24 different countries, found that 33.8% of participants were thinking of leaving their position due to MD. To leave a job when working in ICU is a matter of concern, since HCPs working experience in the ICU is essential to manage both standard and complex patients. MD may accelerate the staff turnover and may be associated with suboptimal quality of care.[6,10,28] Despite the significant difference in MD levels between physicians and nurses in our study, it should be noted that the prevalence of intention to leave a position is quite similar between groups. This fact could be attributed to the differences in specialization in critical care between nurses and physicians. In Spain, Intensive Care Medicine is a primary specialty for physicians, whereas Critical Care Nursing is not recognized as a nursing specialty. This situation allows nurses to find other alternative jobs easily.

We have observed that both extremes in age (young and senior HCPs) report higher MD levels. Accordingly, some previous studies have reported higher MD levels with increasing years of experience.[4] By contrast, Austin et al.[29] did not correlate the number of years working in health care to higher MD. They suggested that it may be due to conditioning to the workplace environment over time or feeling more content the closer one gets to retirement. We consider that MD in junior staff might be related to lack of experience and, in some cases, to premature burnout. In the case of mean age HCPs, those with MD could be more prone to quit their job and therefore this age category become less represented in MD surveys.

In line with other authors, we consider that there is a clear need to design and implement strategies to reduce and prevent MD and other contributors to burnout.[25,29,30] The first step should be to acknowledge the problem and measure its impact,[17,26] this is a pending task in Spain yet. Targeting high-risk areas or groups may yield substantial benefit. Units and teams may differ in which root causes are most problematic.[17,31] Some authors have proposed to counteract MD and its burnout consequences by enhancing the ethical climate in ICUs.[32] It was suggested that this could avoid disrupting the continuity of care due to increased

absenteeism.[9] In this sense, a good ethical climate may be essential.[13,19] In our study, HECS scores were inversely correlated with MMD-HP-SPA scores, which supports the validity of the Spanish version of the MMD-HP.

In the current situation, we consider that future studies should be carry out to explore the impact of COVID-19 pandemic on MD among ICU HCPs. Also, to study the complex dynamic interplay between associated factors, considering a range of baseline and time-varying potential confounders, in order to try to answer the causal questions and to obtain clue to counteract the MD problem.

Our study has some limitations to be considered. First, our results reflect subjective perceptions of participants. These perceptions could differ from the entire contacted population of HCPs. Second, we have no information about the exact number of HCPs who received the questionnaire to calculate the response rates across centres so the findings may be biased and difficult to generalize. Third, we lack detailed information on potentially relevant characteristics of participants (psychological trait, level of knowledge and experience, participation in ethics or quality-of-care committees, etc.). Finally, the study design precludes conclusions about causal associations between MD, ethical climate perception and the analyzed factors.

Conclusions

The MMD-HP-SPA is a valid and reliable instrument to assess specific MD root causes that can be used as a diagnostic tool to target interventions for particular units, teams, and professionals. In the study sample, Spanish intensivists report higher MD than nurses. Strategies are needed and should be implemented in order to mitigate MD and prevent burnout in HCPs. Both groups of HCPs manifest a relevant intention to leave their position due to MD. Further studies are needed to determine the extent to which MD influences their desire to leave the job.

Authors' contribution

ERR, MCI, PVB, and MMR wrote and prepared the manuscript. AEG and ABH performed statistical analysis. MSRC and ARN supervised and approved the final version of the manuscript.

Ethics approval and consent to participate

The local Research Ethics Committee approved the study (ref. CAEIG 2019/471). Participation was on a voluntary anonymous basis and informed consent was assumed by return of completed survey.

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Conflict of interest

The authors have no conflict of interest to declare regarding this article.

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Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at doi:10.1016/j.medin.2021.06.004.

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