

## Validation and psychometric properties of the Spanish version of the Measure of Moral Distress for Health Care Professionals (MMD-HP-SPA)



### Validación y propiedades psicométricas de la versión en español de la medida de desasosiego moral para profesionales sanitarios (MMD-HP-SPA)

Dear Editor,

Moral distress (MD) is the psychological consequence that occurs when healthcare professionals (HCPs) cannot carry on what they believe is the ethically correct action.<sup>1</sup> This serious problem threatens the integrity not only of HCPs but of healthcare organizations as well. MD has been associated with risk of burnout, employee attrition, propensity to leave a position and decreased quality of care.<sup>2–6</sup>

In order to precise and study MD, valid and reliable tools to measure its impact are needed.<sup>5</sup> In this sense Epstein et al., in 2019, developed and validated the most recent instrument to explore MD.<sup>7</sup> The Measure of Moral Distress for Healthcare Professionals (MMD-HP) is a 27-item scale that captures the five key components of MD directly and indirectly: complicity in wrongdoing, lack of voice, wrongdoing associated with professional (not personal) values, repeated experiences, and three levels of etiologies (patient, unit, system). This tool is a self-administered questionnaire, the 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 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. Write-in items are not included in the composite score. In the original study, the MMD-HP had an excellent reliability, with Cronbach's  $\alpha$  ranging from 0.90 to 0.93, depending on professional group.<sup>7</sup>

To the best of our knowledge, no prior instruments to measure MD has been validated in Spanish. Therefore, as part of the *Desasosiego Moral en la Unidad de Cuidados Intensivos* (DEMOUCI) research project, we aim to develop and validate the Spanish version of the MMD-HP (MMD-HP-SPA) (Appendix B). Firstly, a structured 10-step cultural adaptation and translation process<sup>8</sup> was carried out as it follows:

- Step 1 involved preparation by the researchers working with the instrument developer. Written permissions to use the MMD-HP was obtained from Prof. Ann B. Hamric, who developed this tool (written permissions received by e-mail in August 2019).

- Step 2 was the initial forward translation of the MMD-HP from English to Spanish provided by two bilingual expert researchers who work in ICU.
- Step 3 was ensuring that this translation was appropriate for the Spanish critical care setting.
- Step 4 was back translation from Spanish to English by two professional translators who can understand and speak both languages (English and Spanish), and who had not seen the original scales.
- Step 5, the authors compared the back translation of the scales with the original scales in order to verify the equivalence in terms of grammar between the two versions.
- Step 6, harmonization included reaching consensus among the research team.
- Step 7, the scales were then pilot tested on two physicians and three nurses to resolve ambiguous expressions that could lead to item misunderstanding. A supporting text was included in order to collect any doubts that could be raised with any question regarding comprehension and writing, and to prove the overall assessment of the questionnaire by the HCPs.
- Step 8 was to analyze the results of the pilot test and to complete the translation by the research team.
- Step 9 was to edit the questionnaires.
- Step 10 is the final report of the research team.

Afterwards, we conducted a cross-sectional study across Spanish ICUs. The study population included intensivists and critical care nurses directly involved in critically ill patient care. The questionnaire was electronically distributed via *Sociedad Española de Medicina Intensiva, Crítica y Unidades Coronarias* (SEMICYUC), *Sociedad Galega de Medicina Intensiva y Unidades Coronarias* (SOGAMIUC), *Sociedad Española de Enfermería Intensiva y Unidades Coronarias* (SEEIUC), and *Sociedad Española de Cuidados Intensivos Pediátricos* (SECIP) mailing lists. A total of 1065 HCPs, 608 critical care nurses and 457 intensivists, completed the questionnaire between October and December 2019.

Cronbach's  $\alpha$  computations suggested good reliability of the MMD-HP-SPA for the overall sample (Cronbach's  $\alpha = 0.97$ ) and for each provider group; nurse Cronbach's  $\alpha = 0.97$  and physician Cronbach's  $\alpha = 0.94$ . Item-to-item correlations and changes in alpha calculations if particular items were deleted were evaluated and no problematic items were identified. In addition, ordinal alpha calculation also showed good reliability of the MMD-HP-SPA for the overall sample (ordinal alpha = 0.98) and for each provider group; nurse ordinal alpha = 0.98 and physician ordinal alpha = 0.98. To evaluate construct validity, we tested four hypotheses. Each hypothesis is supported by previous studies. First, we hypothesized that physicians would have lower levels of MD than nurses.<sup>5,7,9</sup> Second, we hypothesized that healthcare professionals who were considering leaving their position due to MD would have higher MMD-HP-SPA scores than those not considering leaving. Third, based on previous studies,<sup>5</sup> we hypothesized that higher MMD-HP scores would be associated with poorer provider perceptions of their Unit's ethical climate. Finally, we hypothesized that the MMD-HP-SPA would have a three-level structure (patient, team, and system), reflective of the levels of MD identified from MD consultation.<sup>10</sup> The MMD-HP-SPA proved to be a valid instru-

ment to measure MD as three of the four validity hypotheses were supported.

In conclusion, the MMD-HP-SPA is a valid and reliable instrument that will assist in the assessment of specific MD root causes. We hope it can be of help for future studies in ICUs located both in Spain and Latin-American countries in order to target interventions for particular units, teams, and professionals.

## 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.

## Authors' contributions

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

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## Conflict of interest

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

## Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at [doi:10.1016/j.medin.2021.03.002](https://doi.org/10.1016/j.medin.2021.03.002).

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