

Supplemental Electronic Material 4

Supplemental electronic material 4. Exploratory factor analysis.

All respondent data (n = 1065) were used for this analysis, as we were testing the internal structure of the MMD-HP-SPA itself rather than testing against other variables. Using the eigenvalue criterion of >1.0, four factors were identified and tested using principal components extraction and varimax rotation. The best fit indices were obtained by a four-factor model. Overall, the factors extracted explained 60% of the model variance. Specifically, factor 1 accounted for 18% of the total variance, factor 2 for 16%, factor 3 and 4 for 16% and 10% of the total variance, respectively. Root causes of MD can be at patient, team, or system levels and some root causes may operate at multiple levels. Taking this into account, each author separately coded the MMD-HP-SPA items based on whether an item was at one or more of these three levels. Interrater agreement was 92%. A particular pattern emerged when these codes were applied to the items in each factor (Supplemental Table 1). Factor 1 was composed of mainly patient-level root causes and factor 2 represented clinical root causes at the system level. Factors 3 and 4 were primarily team-level root causes, but a differentiation was noted between these two factors. Root causes in factor 3 appear to be connected with witnessing unethical behaviors and breakdowns in the team's interactions with patients and families. On the other hand, root causes in factor 4 involved situations in which a team member's integrity could be jeopardized within a team, such as feeling unsafe or bullied or fearing retribution for speaking up.

Supplemental Table 1. Exploratory Factor Analysis of the Spanish Version of the Measure of Moral Distress for Health Care Professionals (MMD-HP-SPA).

Item number	Item	Factor			
		1	2	3	4
2	Follow the family's insistence to continue aggressive treatment even though I believe it is not in the best interest of the patient	0.76	0.24	0.23	0.13
3	Feel pressured to order or carry out orders for what I consider to be unnecessary or inappropriate tests and treatments	0.75	0.24	0.28	0.18
5	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	0.75	0.34	0.26	0.19

8	Participate in care that causes unnecessary suffering or does not adequately relieve pain or symptoms	0.66	0.17	0.30	0.27
1	Witness healthcare providers giving “false hope” to a patient or family	0.59	0.33	0.33	-0.13
10	Follow a physician's or family member's request not to discuss the patient's prognosis with the patient/family	0.54	0.22	0.22	0.31
13	Be required to work with other healthcare team members who are not as competent as patient care requires	0.45	0.33	0.34	0.27
22	Be required to work with abusive patients/family members who are compromising quality of care	0.42	0.34	0.19	0.36
17	Experience compromised patient care due to lack of resources/equipment/bed capacity	0.29	0.77	0.20	0.19
18	Experience lack of administrative action or support for a problem that is compromising patient care	0.22	0.75	0.35	0.09
19	Have excessive documentation requirements that compromise patient care	0.21	0.69	0.32	0.11
16	Be required to care for more patients than I can safely care for	0.39	0.65	0.16	0.28
23	Feel required to overemphasize tasks and productivity or quality measures at the expense of patient care	0.16	0.60	0.32	0.26
4	Be unable to provide optimal care due to pressures from administrators or insurers to reduce costs	0.24	0.58	0.09	0.31
9	Watch patient care suffer because of a lack of provider continuity	0.48	0.54	0.28	0.17
6	Be pressured to avoid taking action when I learn that a physician, nurse, or other team colleague has made a medical error and does not report it	0.16	0.22	0.66	0.09
15	Feel pressured to ignore situations in which patients have not been given adequate information to ensure informed consent	0.22	0.28	0.63	0.18
11	Witness a violation of a standard of practice or a code of ethics and not feel sufficiently supported to report the violation	0.24	0.23	0.62	0.21
26	Participate on a team that gives inconsistent messages to a patient/family	0.47	0.19	0.58	0.22
12	Participate in care that I do not agree with, but do so because of fears of litigation	0.25	0.16	0.55	0.10
24	Be required to care for patients who have unclear or inconsistent treatment plans or who lack goals of care	0.44	0.32	0.53	0.21
27	Work with team members who do not treat vulnerable or stigmatized patients with dignity and respect	0.27	0.17	0.50	0.42
14	Witness low quality of patient care due to poor team communication	0.43	0.21	0.49	0.31
25	Work within power hierarchies in teams, units, and my institution that compromise patient care	0.25	0.33	0.46	0.41
21	Feel unsafe/bullied amongst my own colleagues	0.03	0.15	0.40	0.71

20	Fear retribution if I speak up	0.20	0.27	0.33	0.65
7	Be required to care for patients whom I do not feel qualified to care for	0.36	0.29	-0.01	0.65