



THE MINDFUL ETHICAL PRACTICE AND RESILIENCE ACADEMY: SUSTAINABILITY OF IMPACT

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Background Nurses face many ethical challenges, placing them at risk for moral distress and burnout and challenging their ability to provide safe, high-quality patient care. Little is known about the sustainability of interventions to address this problem.

Objective To determine the long-term impact on acute care nurses of a 6-session experiential educational program called the Mindful Ethical Practice and Resilience Academy (MEPRA).

Methods MEPRA includes facilitated discussion, role play, guided mindfulness and reflective practices, case studies, and high-fidelity simulation training to improve nurses' skills in mindfulness, resilience, and competence in confronting ethical challenges. A prospective, longitudinal study was conducted on the impact of the MEPRA curriculum at 2 hospitals in a large academic medical system. The study involved surveys of 245 nurses at baseline, immediately after the intervention, and 3 and 6 months after the intervention.

Results The results of the intervention were generally sustained for months afterward. The most robust improvements were in ethical confidence, moral competence, resilience, work engagement, mindfulness, emotional exhaustion, depression, and anger. Some outcomes were not improved immediately after the intervention but were significantly improved at 3 months, including anxiety and empathy. Depersonalization and turnover intentions were initially reduced, but these improvements were not sustained at 6 months.

Conclusions Many MEPRA results were sustained at 3 and 6 months after conclusion of the initial foundational program. Some outcomes such as depersonalization and turnover intentions may benefit from boosters of the intervention or efforts to supplement the training by making organizational changes to the work environment. (*American Journal of Critical Care*. 2023;32:184-194)

Correction: This article was corrected on May 16, 2023, to correct an error in the penultimate paragraph of the Results on page 188.

CE 1.0 Hour

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The volume and intensity of ethical concerns expressed by nurses have increased exponentially during the COVID-19 pandemic,¹⁻³ contributing to worsening physical, psychological, and moral well-being among members of this profession.²⁻⁴ Ethical concerns have included allocation of scarce resources, personal and family exposure risks, insufficient respect for dying patients, and harm to patients.¹⁻⁴

In response to these various types of moral adversity, nurses are experiencing moral suffering including moral stress, distress, and injury.⁵ Moral distress among nurses is correlated with burnout; undermines well-being, performance, and job engagement; can negatively influence patient safety and quality outcomes; erodes teamwork; and threatens the organization's bottom line.⁶⁻⁹ The existence of gaps in nurses' confidence and competence in addressing ethical concerns in a sustainable way predated the COVID-19 pandemic and takes on greater significance as the pandemic continues in a prolonged, chronic stage.^{2,7}

Health care organizations are exploring ways to support the integrity and well-being of nurses by implementing programs that have a sustainable impact. Successful change initiatives address an urgent issue or issues, are targeted and strategic, are collaborative, and are evaluated and sustained.¹⁰ Although general strategies to identify the sources of decreased nurse well-being may also be useful in addressing the moral suffering associated with unresolved ethical challenges, targeted primary prevention interventions aimed at the unique ethical aspects of clinical care are urgently needed.⁷ A variety of interventions have been described to address ethical challenges, improve communication, and build ethical skills among nurses.¹¹⁻¹³ Unfortunately, these have often

been one-time programs that have not been systematically evaluated or have not been accompanied by efforts to sustain the gains that were made; both of these elements are essential to effective interventions to improve employee well-being.^{14,15} Although these programs are well-intentioned, if they are not effective and sustained, they have the potential to ignite cynicism and backlash from the people they are supposed to serve.

The Mindful Ethical Practice and Resilience Academy (MEPRA) is a 24-hour experiential and discovery learning curriculum developed to cultivate skills in mindfulness, ethical competence, and resilience among nurses.¹⁶ Previously we evaluated the effectiveness of the MEPRA curriculum from before to immediately after the intervention.¹⁶ The intervention was found to be effective in improving primary outcomes of mindfulness, resilience, and ethical confidence and competence and also improved secondary outcomes, increasing work engagement and decreasing depression, anger, and turnover intentions.¹⁶ The purpose of the current study was to examine whether the effects of MEPRA were sustained 3 and 6 months after completion of the intervention.

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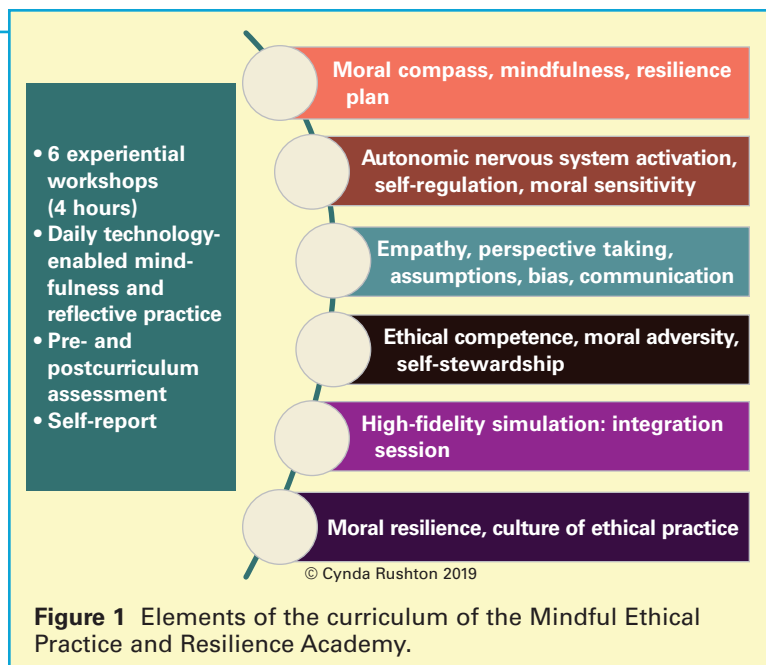
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Methods

MEPRA was developed, implemented, and evaluated through an academic/practice partnership to address moral adversity by cultivating skills of mindfulness, ethical competence, and resilience among front-line nurses.¹⁶ The content of the 24-hour, 6-session MEPRA foundational curriculum is shown in Figure 1. The curriculum was developed by experts in nursing, bioethics, education, communication, mindfulness, simulation, and evaluation. It draws on social learning theory, experiential and discovery learning practices, and high-fidelity simulation.¹⁶ Methods used in the sessions included facilitated discussion, role play, guided mindfulness and reflective practices,



embodied movement, case analysis, videos, simulation, and a breakthrough project initiative. The conceptual framework for MEPRA was adapted from previous work addressing moral distress,^{17,18} scholarship in moral resilience,⁵ and a targeted literature review. Additional details of the curriculum have been provided elsewhere.¹⁶

The MEPRA curriculum was delivered to nurses working in a variety of roles and settings in 2 acute care hospitals within a large academic medical system.¹⁶ The longitudinal impact of the curriculum was measured by administering surveys to participants at baseline, immediately after the intervention, and at 3 and 6 months after conclusion of the intervention.¹⁶ Nurses practicing in diverse clinical areas were recruited through email and short in-person educational sessions. Online survey software (Qualtrics)

was used, and data collected included demographics and scores on several validated tools specific to program outcomes. An electronic link to the survey was emailed to participants before and immediately after delivery of the curriculum and at 3 and 6 months after completion of the program.

Reminders were sent weekly, and whenever practical, the study team visited the clinical units of participants in person to encourage survey completion. All study procedures were approved by the Johns Hopkins University institutional review board.

This innovative program addresses moral adversity by cultivating skills of mindfulness, ethical competence, and resilience among frontline nurses.

Measures

The following measures were used at all time points: Perceived Ethical Confidence Scale,¹⁹ Moral Competence Questionnaire,²⁰ Brief Resilience Scale,²¹ Ilfield Psychiatric Symptom Index measures of depression, anxiety, anger, and cognitive disturbance,²² work engagement,²³ Mindful Attention Awareness Scale,²⁴ Multidimensional Emotional Empathy Scale,²⁵ single-item turnover intentions,²⁶ 2-item burnout screening scale (emotional exhaustion and depersonalization),^{27,28} Moral Distress Thermometer,²⁹ and Moral Sensitivity Questionnaire.³⁰ Descriptions of the measures are provided in Figure 2.

Statistical Analysis

Analyses were conducted using SPSS, version 27.0, using generalized estimating equations (GEEs) to test for differences in change over time.³¹ All measures were evaluated at 4 time points: baseline, immediately after the intervention, 3 months after the intervention, and 6 months after the intervention. All available data were included in analyses. In GEE analysis, missing data cases are not dropped in computation of estimates.³¹ Before our main analyses, we examined the difference in demographic variables at baseline between participants who had data collected at all 4 time points and participants who missed 1 or more time points for data collection. The only significant difference was in age, which was included as a covariate in the final analyses. In a previous analysis, we found differences between the 2 hospitals participating in the study in marital status, shift worked, and race/ethnicity.¹⁶ These variables were included as covariates in the GEE analysis.

Results

From 2016 to 2019, 249 nurses participated in the foundational MEPRA curriculum. Only 245 completed the majority of the baseline survey. Of the participants, 88.9% were female; 68.3% were White, 11.1% were Asian/Pacific Islander, and 9.0% were Black; and the average age was 33 years. The majority of participants (91.8%) worked full time, and 46.6% worked rotating 12-hour day and night shifts. Although 95.5% of participants reported that they encountered ethical situations at work, only 15.1% had previously received formal ethics training. Detailed demographics are presented in Table 1.

Preliminary analyses using 1-way analysis of variance compared participants who had data collected at all 4 time points with participants who missed 1 or more time points for data collection (Table 2). We divided participants into 4 groups: 119

Measure	Description	Immediately after MEPRA	Sustained at 3 months	Sustained at 6 months
Perceived Ethical Confidence Scale ¹⁹	The score is computed as the mean of 3 items on a scale of 1 (very low) to 5 (very high). The α coefficient was 0.77.	✓	✓	✓
Moral Competence Questionnaire ²⁰	The score is computed as the mean of 3 items measured on a scale ranging from 1 (strongly disagree) to 5 (strongly agree). The α coefficient was 0.83.	✓	✓	✓
Brief Resilience Scale ²¹	The score is computed as the mean of 6 items, 3 of which are reverse scores. The scale of the items ranges from 1 (strongly disagree) to 5 (strongly agree). The α coefficient was 0.88.	✓	✓	✓
Work engagement ²³	This scale ranges from 0 (never) to 6 (every day). The α coefficient was 0.86.	✓	✓	✓
Mindful Attention Awareness Scale ²⁴	This validated 15-item scale assesses the state of attention and awareness of what is occurring in the present moment (a core component of mindfulness). Items are rated on a scale ranging from 1 (almost always) to 6 (almost never). The α coefficient was 0.89.	✓	✓	✓
Ilfield Psychiatric Symptom Index ²²	This validated survey measures psychiatric symptoms. The tool includes 29 items measuring negative mood, which are rated from 0 (never) to 3 (very often), and 4 subscales measuring anger, depression, anxiety, and cognitive disturbance. The score was computed as the mean of all items, and each subscale was transformed to a scale of 0 to 100. The α coefficient was 0.81.			
	Anger (4 items, $\alpha=0.79$)	✓	✓	✓
	Depression (10 items, $\alpha=0.81$)	✓	✓	✓
	Anxiety (11 items, $\alpha=0.83$)	—	✓	✓
	Cognitive disturbance (4 items, $\alpha=0.83$)	—	✓	✓
Single item: turnover intentions (modified) ²⁶	A 1-item question measured turnover intentions: "In the past week, I have seriously thought about looking for a new job." The score ranged from 0 (strongly disagree) to 5 (strongly agree).	✓	✓	—
2-Item burnout questions ^{27,28}	Two items derived from subscales of the Maslach Burnout Inventory focused on emotional exhaustion and depersonalization measured on a scale ranging from 0 (never) to 6 (every day). The α coefficient was 0.69.	—	—	—
	Emotional exhaustion	✓	✓	✓
	Depersonalization	—	✓	—
Multidimensional Emotional Empathy Scale ²⁵	The score is computed as the mean of 30 items measured on a scale of 1 (strongly disagree) to 5 (strongly agree). The α coefficient was 0.85.	—	✓	—
Moral Sensitivity Questionnaire ³⁰	The score is obtained by calculating the mean of 9 items measured on a scale of 1 (completely disagree) to 6 (completely agree). The α coefficient was 0.56.	—	—	—
Moral Distress Thermometer ²⁹	This tool is a visual analog scale ranging from 0 (none) to 10 (worst possible) that measures moral distress in the work environment.	—	—	—

Figure 2 Summary of measures and results after the Mindful Ethical Practice and Resilience Academy (MEPRA) intervention. Check mark indicates significant change at $P < .05$; dash indicates no significant change at $P < .05$. Detailed survey information can be found in Rushton et al.¹⁶

Table 1
Demographic characteristics by sample^a

Characteristic	No. of nurses	Mean (SD)
Age, y (range, 22-67 y)	244	33.18 (10.38)
Regularity of ethical situations score ^b	237	5.33 (2.19)
Characteristic	No. (%) of nurses	
Female (n=244)	217 (88.9)	
Race/ethnicity (n=243)		
White	166	(68.3)
Asian/Pacific Islander	27	(11.1)
Black	18	(7.4)
Hispanic/Latino	12	(4.9)
African native	4	(1.6)
Native/American Indian	3	(1.2)
Other	13	(5.3)
Marital status (n=245)		
Single	135	(55.1)
Married	101	(41.2)
Divorced or separated	9	(3.6)
Employment (n=244)		
Full-time	224	(91.8)
Part-time/as needed	20	(8.2)
Shift (n=245)		
Day	92	(37.6)
Night	41	(16.7)
Both equally/other	112	(45.7)
Encountered ethical situation (n=245)	234 (95.5)	
Previous ethical program participation (n=245)	37 (15.1)	

^aNo. of nurses varies depending on how many responded to each question.

^bRegularity of ethical situations is rated from 0 (never) to 10 (all the time).

MEPRA had sustainable impact on key variables at 3 and 6 months after the initial program.

participants completed all 4 time points, 64 participants completed only baseline and immediately after the program, 51 participants completed all but 6

months, and 11 participants completed all but 3 months. The only significant difference between these 4 groups was in age; those who completed only baseline and immediately after the program were significantly

younger than those in the other groups. To address this difference, age was added as a covariate in the main analyses.

We previously reported that immediately after program completion, participants showed improvements in mindfulness, ethical confidence, ethical competence, work engagement, and resilience.¹⁶ Using GEE analyses, we found sustained improvements at both the 3- and 6-month time points for most measures: Perceived Ethical Confidence Scale, Moral Competence Questionnaire, Brief Resilience

Scale, work engagement, burnout as measured by emotional exhaustion, Ilfield Psychiatric Symptom Index: depression and anger, and Mindful Attention Awareness Scale (Table 3). Participants had significantly lower turnover intention scores after the intervention, which were sustained at 3 months. Turnover intention scores were higher at 6 months but not as high as at baseline.

The Multidimensional Emotional Empathy Scale is a measure of emotional empathy on a scale of 1 to 5. Using GEE analysis, we found that participants' scores improved marginally immediately after the intervention, further improved at 3 months, and regressed at 6 months. There was no significant difference in burnout, as measured by depersonalization, at the time point immediately after the intervention; scores decreased significantly at 3 months, but the improvements were not sustained at 6 months. The Ilfield Psychiatric Symptom Index measured 4 domains: anxiety, depression, anger, and cognitive disturbance. Scores for anxiety and cognitive disturbance showed no difference immediately after the intervention but significant improvement at both the 3-month and 6-month time points. Depression and anger scores improved significantly at all time points.

The Moral Distress Thermometer measures moral distress using a scale from 0 (none) to 10 (high). Using GEE analysis, we found that scores were low at baseline and remained low, with no significant changes over time. The Moral Sensitivity Questionnaire measured moral decision-making on a scale of 1 to 6, with higher scores indicating increased difficulty in moral decision-making. The baseline score was 4.38, with no significant difference over time. A summary of the changes in scores on the various measures over time is shown in Figure 2.

Discussion

Nurses working in diverse clinical settings are experiencing moral adversity and ethical challenges in their work setting. In our sample, 95.5% reported confronting ethical challenges in their workplace. Studies have repeatedly demonstrated that when ethical issues are not addressed, various forms of moral suffering, including moral distress and moral injury, ensue.³²⁻³⁴ Our findings indicate that MEPRA was effective and that most improvements were sustained 3 and 6 months after conclusion of the foundational program. The most robust effects of the intervention were improvements in ethical confidence, moral competence, resilience, work engagement, mindfulness, burnout as measured by emotional exhaustion, anger, and

Table 2
Comparison of participant demographics by attrition group

Characteristic	No. (%) of participants ^a								P
	n ^b	Baseline and post ^c only	n ^b	Baseline, post, and 3 months, not 6 months	n ^b	Baseline, post, and 6 months, not 3 months	n ^b	All time points completed	
Age, mean (SD), y	63	30.08 (9.52)	51	34.65 (10.73)	11	32.45 (11.52)	119	34.27 (10.34)	.04
Regularity of ethical situation, ^d mean (SD)	59	5.66 (2.05)	50	5.16 (2.11)	11	4.55 (2.38)	117	5.30 (2.27)	.38
Female sex	63	52 (82.5)	51	48 (94.1)	11	9 (81.8)	118	108 (91.5)	.14
Race/ethnicity	63		51		11		118		.47
White		46 (73.0)		37 (72.5)		7 (63.6)		76 (64.4)	
Asian/Pacific Islander		3 (4.8)		3 (5.9)		1 (9.1)		20 (16.9)	
Black		7 (11.1)		5 (9.8)		1 (9.1)		5 (4.2)	
Hispanic/Latino		2 (3.2)		4 (7.8)		1 (9.1)		5 (4.2)	
African native		1 (1.6)		1 (2.0)		0 (0.0)		2 (1.7)	
Native/American Indian		0 (0.0)		0 (0.0)		0 (0.0)		3 (2.5)	
Other		4 (6.3)		1 (2.0)		1 (9.1)		7 (5.9)	
Marital status	64		51		11		119		.59
Single		40 (62.5)		30 (58.8)		5 (45.5)		60 (50.4)	
Married		21 (32.8)		20 (39.2)		6 (54.5)		54 (45.4)	
Divorced or separated		3 (4.7)		1 (2.0)		0 (0.0)		5 (4.2)	
Full-time employment	63	58 (92.1)	51	48 (94.1)	11	8 (72.7)	119	110 (92.4)	.12
Shift	64		51		11		119		.11
Day		20 (31.3)		26 (51.0)		6 (54.5)		40 (33.6)	
Night		8 (12.5)		6 (11.8)		2 (18.2)		25 (21.0)	
Both equally/other		36 (56.3)		19 (37.3)		3 (27.3)		54 (45.4)	
Encountered ethical situation	64	60 (93.8)	51	50 (98.0)	11	11 (100.0)	119	113 (95.0)	.61
Ethical program participation	64	7 (10.9)	51	8 (15.7)	11	2 (18.2)	119	20 (16.8)	.75

^a Unless otherwise indicated.

^b Numbers in this column reflect pairwise deletion. Not all participants are included; only those who responded to the specific questions presented in the table are included in the analysis using generalized estimating equations.

^c "Post" indicates immediately after the intervention.

^d Regularity of ethical situations is rated from 0 (never) to 10 (all the time).

depression. Turnover intentions were significantly decreased from baseline to immediately after the intervention, and these changes were sustained at 3 months but not at 6 months.

Some of the outcomes, namely scores on the Ilfield Psychiatric Symptom Index subscales of anxiety and cognitive disturbance, showed no significant differences immediately after the intervention but significant improvements from baseline at 3 and 6 months. These findings suggest that some effects of the curriculum may take time to manifest. Participants may need time to apply the principles and skills learned in the day-to-day work setting and gain confidence in their ability to handle ethically challenging situations. Similarly, burnout as measured by depersonalization and empathy scores were unchanged from baseline to immediately after the program but were improved at 3 months; however, the improvements were not sustained at 6 months. Moral distress scores remained low.

Although a measure of *moral* resilience had not been developed when MEPRAs was initiated, improvements in overall resilience were sustained. Since the initiation of MEPRAs, moral resilience has been confirmed to be a distinct category of resilience.³⁵ Moral resilience has been shown to be a protective strategy when nurses experience moral distress or moral injury.³⁴⁻³⁷ In a study examining the relationship among moral resilience, moral injury, and organizational effectiveness in nurses, for every 1-unit increase in moral resilience, moral injury symptom scores decreased by 1.14 points.³⁷ Components of moral resilience include personal and relational integrity, moral efficacy—the confidence and competence to address ethical concerns in ways that embody integrity—self-regulation and self-awareness, buoyancy to respond mindfully to ethical

Ninety-six percent of nurses reported confronting ethical challenges in the workplace.

Table 3
Changes in instrument scores over time,
from baseline through 6 months^a

Instrument/timing	Estimated mean (SE)	<i>P</i> ^b
Perceived Ethical Confidence Scale (n=242)		
Baseline	3.49 (0.07)	
Post ^c	3.95 (0.07)	<.001
3 months	4.00 (0.07)	<.001
6 months	3.88 (0.08)	<.001
Moral Competence Questionnaire (n=242)		
Baseline	3.48 (0.11)	
Post	3.91 (0.11)	<.001
3 months	3.95 (0.13)	<.001
6 months	3.99 (0.13)	<.001
Brief Resilience Scale (n=242)		
Baseline	3.35 (0.10)	
Post	3.62 (0.10)	<.001
3 months	3.54 (0.10)	<.001
6 months	3.50 (0.10)	<.001
Ilfield Psychiatric Symptom Index: depression (n=242)		
Baseline	27.38 (1.82)	
Post	23.85 (1.78)	<.001
3 months	21.13 (1.84)	<.001
6 months	21.97 (1.84)	<.001
Ilfield Psychiatric Symptom Index: anger (n=242)		
Baseline	34.42 (1.89)	
Post	30.10 (1.81)	<.001
3 months	28.75 (2.00)	<.001
6 months	29.11 (2.08)	<.001
Work engagement (n=242)		
Baseline	4.80 (0.14)	
Post	5.12 (0.14)	<.001
3 months	5.01 (0.14)	<.001
6 months	5.01 (0.14)	<.001
Mindful Attention Awareness Scale (n=242)		
Baseline	3.79 (0.10)	
Post	3.93 (0.11)	.009
3 months	4.08 (0.10)	<.001
6 months	4.03 (0.11)	<.001
Multidimensional Emotional Empathy Scale (n=242)		
Baseline	3.86 (0.05)	
Post	3.91 (0.05)	.08
3 months	3.79 (0.05)	.01
6 months	3.80 (0.06)	.06
Turnover intentions (n=242)		
Baseline	2.79 (0.15)	
Post	2.48 (0.15)	.005
3 months	2.43 (0.16)	.001
6 months	2.67 (0.17)	.35
Ilfield Psychiatric Symptom Index: anxiety (n=242)		
Baseline	23.00 (1.29)	
Post	22.51 (1.35)	.63
3 months	18.08 (1.28)	<.001
6 months	18.50 (1.40)	<.001

Continued

challenges, and self-stewardship to invest in one's own well-being.^{35,38} Thus, using a moral resilience scale may allow more specific interpretation of the results of interventions.

Sustaining results of any intervention is challenging. Although most of the impacts of the MEPRA intervention were sustained, some of the improvements were not sustained at the same level throughout the study period (namely, the depersonalization subscale of burnout, empathy, and turnover intentions). Beyond the foundational curriculum, the MEPRA program includes communities of practice meetings and annual retreats. Although these are opportunities to reinforce foundational content, build community, and apply program teachings to clinical practice, our finding that changes in depersonalization and turnover intentions were not sustained at 6 months suggests a need for more robust booster sessions to help solidify initial progress. The contribution of these ancillary parts of the MEPRA program to the overall results of this study is unknown. The fact that some of the initial progress was not sustained raises the challenge of controlling for the impact of the complex and rapidly changing environments in which nurses practice on key variables of interest. Burnout and turnover intentions are affected by a complex set of workplace factors including workload, workplace resources and support, and individual nurses' coping skills and resources.³⁹ It is plausible that improvements in these variables would be facilitated by a multipronged approach combining MEPRA with structural changes to the workplace such as reduced workload. Another study indicated that higher moral resilience scores combined with improved organizational effectiveness are associated with lower moral injury scores.³⁷ These findings provide evidence that a program with a multipronged design that includes primary, secondary, and tertiary interventions may have a more sustained impact.

As far as we know, MEPRA is the first program to integrate this unique combination of elements to address the complex moral and ethical issues confronted by nurses at the point of care. A systematic review of interventions to mitigate moral distress identified MEPRA as the only program to combine education and mindfulness.¹⁴ This review also described MEPRA as 1 of 2 robust educational interventions.¹⁴ The other intervention, Clinical Ethics Residency for Nurses, is a 98-hour program designed to increase knowledge, skills, and competencies in clinical ethics. The program is proposed to mitigate moral distress by enhancing nurses' ability to bring about change but does not measure moral distress.

It uses lectures, classroom discussions, simulations, and a clinical practicum to teach clinical ethics and train nurses to apply this knowledge in their workplace.¹² The program developers have not reported results beyond an initial pre- and postcurriculum evaluation. In a study to determine an early action ethics protocol intervention in 6 intensive care units, nurses and physicians were surveyed at baseline, 3 months, and 6 months to examine moral distress, ethics self-efficacy, and ethical climate.⁴⁰ The intervention involved a team approach to daily ethics assessments and early interventions. Over time, nurses' moral distress scores and frequency of moral distress decreased significantly, while ethics self-efficacy scores and ethical climate improved.⁴⁰

Among 3 recent reviews of moral distress interventions,^{14,41,42} only 1 other mindfulness-based intervention was identified. A 6-week mindfulness program was offered to nurses working on an inpatient hematology/oncology unit, as one component of a "bundle of mindfulness interventions."⁴³ The authors reported that attendance at these sessions ranged from 1 to 8 nurses. Other components of this intervention included critical debriefing, establishment of a work-life balance committee, and yoga classes.⁴³ Another intervention¹¹ included mindfulness reminders through cell phone applications as part of a "moral resiliency bundle" to address moral distress but did not specify whether any mindfulness training or resources were provided. A quality improvement project involving hospital clinical nurses examined the impact of 60-minute monthly sessions that included guided meditation and open discussion sessions to decrease moral distress.¹³ The findings were not statistically significant, but the authors concluded that the intervention improved camaraderie and coping skills among nurses.

Few studies of interventions for moral distress use longitudinal data to demonstrate sustained improvements among health care workers. Among studies that measured outcomes at multiple time points, the second follow-up assessment ranged from 2 weeks⁴⁴ to 2 months after the intervention.⁴⁵ One study measured outcomes of an ongoing intervention involving weekly meetings every 2 months for 1 year.⁴⁶ A Nurse Education and Support Team coaching model was evaluated for 18 months to determine feasibility of the model and satisfaction of nurses experiencing ethical concerns.⁴⁷

Taken together, these findings offer a promising path forward in strengthening the skills, tools, and resources that nurses already possess to address moral

Table 3
Continued

Instrument/timing	Estimated mean (SE)	P ^b
Ilfield Psychiatric Symptom Index: cognitive disturbance (n=242)		
Baseline	36.29 (2.62)	
Post	34.09 (2.56)	.12
3 months	31.35 (2.52)	<.001
6 months	31.67 (2.63)	.003
Burnout		
Emotional exhaustion (n=242)		
Baseline	3.89 (0.21)	
Post	3.69 (0.20)	.03
3 months	3.64 (0.21)	.005
6 months	3.65 (0.21)	.02
Depersonalization (n=242)		
Baseline	3.28 (0.16)	
Post	3.23 (0.17)	.60
3 months	3.05 (0.18)	.04
6 months	3.18 (0.17)	.38
Moral Distress Thermometer (n=240)		
Baseline	3.64 (0.29)	
Post	3.60 (0.27)	.83
3 months	3.36 (0.30)	.16
6 months	3.41 (0.33)	.33
Moral Sensitivity Questionnaire (n=242)		
Baseline	4.38 (0.06)	
Post	4.43 (0.06)	.23
3 months	4.39 (0.06)	.82
6 months	4.39 (0.07)	.87

^a Covariates included age, race, marital status, and shift. Differences in the numbers of respondents reflect missing data on one or more variables by the analysis using generalized estimating equations.

^b Compared with baseline score.

^c "Post" indicates immediately after the intervention.

adversity. Future refinement of the MEPRA program could focus on primary and secondary prevention strategies to amplify components of moral resilience as resources to enable nurses to meet the inevitable ethical challenges that arise in clinical practice. Future studies should address the impact of the MEPRA program in postpandemic environments, where solidarity within a clinical unit and continuity of nurse staffing have been disrupted, and the impact of different content delivery systems (eg, in-person delivery vs self-directed and immersive modules) on program outcomes. We postulate that the relational and social connections that develop within each foundational program cohort and within the broader MEPRA community are strengthened by other program elements including retreats, communities of practice, and unit-based champions. Further investigation is needed to understand the relationships among

Measuring moral resilience may target key aspects of primary, secondary, and tertiary interventions.

these components and their combined impact. Also required is further refinement of outcome measures, including measures of the ethical practice environment and moral resilience, and the development of “train the trainer” programs to scale delivery of content.

Limitations

Studies involving repeated measures for 6 months are historically difficult to sustain. To limit attrition, we sent weekly email reminders to participants encouraging them to complete the follow-up surveys and also made in-person visits to clinical units to reinforce this message. Because of organizational constraints, it was not feasible to include a control group in the study. It is not possible to rule out the impact of multiple survey completions on the results. Investigators conducting future studies may consider incorporating an experimental research design.

In addition, a global measure of resilience may not be sufficiently sensitive to detect the moral dimension of resilience. When this program was initiated, there was no validated measure of moral resilience. Since then, the Rushton Moral Resilience Scale has been validated in clinicians representing various professions; this instrument offers a more precise measure of the moral dimension of resilience.³⁵ Measures such as the 2-question burnout scale and the Moral Distress Thermometer are better suited as screening tools than as secondary outcome measures to evaluate the impact of interventions.

The current delivery method of MEPRA is labor-intensive and requires ongoing leadership investments of time and funding to sustain it beyond the initial foundational program. Institutions that adopt MEPRA must take a long view of the program and consider the high costs of nurse turnover compared with the relatively small investment involved in developing a robust and sustainable program. Organizations can demonstrate their commitment to frontline nurses by offering programs such as MEPRA with paid time during the workday to participate in various elements of the program and by creating unit-based opportunities to share and practice skills developed through program participation.

Conclusion

Collaborative academic/practice partnerships are essential to create multifaceted experiential programs that support nurses’ ability to effectively address ethical challenges that arise in the clinical setting. MEPRA is effective in improving key outcomes that are important in cultivating nurses’ moral efficacy, mindfulness, and resilience and in sustaining

these improvements over time. Given the current threats to the nursing workforce, programs such as MEPRA offer organizations targeted interventions to address moral adversity and ethical challenges that are ever present in the acute care setting. Investments in sustainable programs such as MEPRA can enhance nurses’ resilience, improve burnout, increase work engagement, and improve staff retention. Because ethical issues involve values that may be contested or in conflict, programs must feature a multipronged design that includes primary, secondary, and tertiary interventions. Such efforts should be coupled with systemic interventions designed to detect and counter the modifiable patterns in health care organizations that contribute to moral suffering of nurses.

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SEE ALSO

For more about ethical challenges, visit the *AACN Advanced Critical Care* website, www.aacnconline.org, and read the article by McGeehan and Rushton, “Ethical Challenges and Implications of Deactivating Mechanical Circulatory Support for Patients With Preserved Cognitive Function” (Fall 2022).

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2. Discuss the impact of the MEPRA program on key outcomes.
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