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Effects of Digital Mental Health Screening Alone and With the Online MINDBODYSTRONG CBT-Based Program on Burnout, Depression, Anxiety, Healthy Behaviors, and Suicidal Ideation in at-Risk Nurses at 3- and 6-Months Post-Intervention: An RCT

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ABSTRACT

Background: Burnout and mental distress among nurses are global public health epidemics that adversely affect nurse well-being and healthcare quality. Evidence-based, scalable mental health interventions are urgently needed.

Aims: To evaluate the 3- and 6-month outcomes of a randomized controlled trial (RCT) comparing a psychologically safe, digital mental health screening and referral program alone versus the same screening and referral program combined with the video-based online MINDBODYSTRONG (MBS) cognitive behavioral therapy (CBT)-based skills-building program among nurses at risk for mental distress.

Methods: 501 nurses were recruited from professional organizations and healthcare systems across the United States by email and randomized to either mental health screening and referral (standard care) or standard care plus the MBS cognitive behavioral skills-building intervention (the intervention). All study activities were conducted remotely. Follow-up surveys administered at 3- and 6-months assessed anxiety, depression, suicidal ideation, burnout, healthy lifestyle beliefs, and healthy lifestyle behaviors using valid and reliable scales.

Results: Compared with the screening and referral only group, participants in the intervention group had greater reductions in anxiety and depression and significantly greater increases in healthy lifestyle beliefs and behaviors at 3 and 6 months post-intervention. After controlling baseline risk, the intervention group had a lower risk of suicidal ideation than the screening and referral group at 3 months (relative risk ratio [RRR]=0.717; 95% CI: 0.320–1.606) and 6 months (RRR=0.329; 95% CI: 0.101–1.072). The intervention group also had a significantly lower risk of burnout at 6 months (RRR: 0.698, 95% CI: 0.528, 0.929, $p=0.012$). Nurses who completed more MBS sessions had less suicidal ideation at 6 months and those who completed more MBS skills-building activities had less burnout at 3 and 6 months.

Linking Action to Evidence: Integrating psychologically safe mental health screening combined with the scalable online CBT-based intervention, MBS, can produce sustained improvements in burnout, mental health symptoms, including suicidality, and healthy lifestyle beliefs and behaviors among nurses experiencing mental distress.

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1 | Background and Significance

Burnout and mental distress among nurses represent critical public health and workforce crises. In 2022, the U.S. Surgeon General issued a national advisory warning of escalating mental health challenges across the healthcare workforce, with nurses among the most affected groups (Office of the Surgeon General 2022). Burnout in nurses has been associated with adverse outcomes, including diminished psychological well-being, compromised patient safety, increased medical errors, turnover, and rising organizational costs (Garcia et al. 2019; Li et al. 2024; Melnyk et al. 2018). Of particular concern, burnout, anxiety, and depression are strongly linked to elevated suicide risk among healthcare professionals, with female nurses experiencing higher suicide mortality than the general population (Davidson et al. 2024; Melnyk et al. 2025).

Even prior to the COVID-19 pandemic, nurses reported higher levels of stress, anxiety, and depression than most other professional groups, with these conditions worsening during the pandemic and remaining elevated (Azam et al. 2017; Wells 2024). Unfortunately, nurses often do not seek formal mental healthcare due to persistent stigma, confidentiality concerns, and fears of professional consequences, such as losing their licenses (Melnik et al. 2023). These barriers highlight the need for psychologically safe approaches that identify distress early while minimizing perceived risk.

Confidential mental health screening programs, such as the American Foundation for Suicide Prevention's Interactive Screening Program (ISP), have emerged as a promising strategy. The ISP is a web-based platform that enables participants to anonymously assess mental health and engage in asynchronous dialogue with trained therapists (Mortali and Moutier 2018). Across multiple studies involving healthcare workers, ISP has consistently identified high levels of untreated depression, anxiety, burnout, and suicidal ideation (Zisook et al. 2016; Davidson et al. 2018; Accardi et al. 2020). However, screening alone does not address the underlying drivers of distress or build protective resiliency skills.

MINDBODYSTRONG (MBS) is a facilitator-led cognitive behavioral skills-building (CBSB) program. It has a strong evidence base among nurses and the healthcare workforce demonstrating reductions in stress, anxiety, and depression, and improvements in healthy lifestyle beliefs, behaviors, and job satisfaction (Hoying et al. 2023; Price et al. 2023; Sampson et al. 2019, 2020). Digitizing MBS as an online video-based program offers an opportunity to expand reach while preserving intervention fidelity and empowering nurses (Denecke et al. 2022). To date, no randomized controlled trial (RCT) has evaluated whether adding a digital CBSB intervention to confidential screening and referral improves outcomes beyond screening alone among distressed nurses.

1.1 | Purpose/Aims

This study aimed to evaluate the 3- and 6-month effects of a RCT comparing screening and referral alone versus combined

with a digitized video-based version of the MBS program in nurses experiencing mental distress on mental health, suicidal ideation, burnout, healthy lifestyle beliefs, and healthy lifestyle behaviors.

2 | Methods and Justification

2.1 | Ethical Issues and Approval

Institutional review board approval was received. Participants completed an electronic informed consent process prior to any study procedures. The protocol for this RCT was previously published (Melnik et al. 2024).

2.2 | Study Design

A two-arm single blind RCT was used to assess the efficacy of ISP plus referral into treatment versus standard care combined with digitalized MBS. Randomization was developed by a statistician blinded to recruitment and eligibility determination using SAS statistical software and input into REDCap. Permuted block randomization with varying block sizes of 2 or 4 was used; nurses were randomly assigned 1:1 to the ISP alone or standard care combined with MBS. Research staff were blind to the randomization scheme; arm assignment became known only after baseline data collection and random assignment were complete. The study counselor remained blind to the intervention throughout the study and could not identify study arm through the ISP platform. Follow-up surveys were sent at 8-week, 3-month, and 6-month intervals from the date of baseline survey completion for participants assigned to the ISP alone. MBS participants who completed at least one session were sent 8-week surveys at either the date of MBS completion or if they did not progress in the program for at least 3 weeks. 3- and 6-month surveys were sent based on the date of the 8-week survey.

2.3 | Setting

This RCT was conducted online, with supplemental telephone interaction by the intervention facilitator and therapist. The study operated out of a large, public land grant university in the Midwestern United States. Recruitment occurred on a rolling basis from September 2023 to December 2024. All 6-month surveys were completed by October 2025.

2.4 | Sample, Recruitment, & Eligibility

A random sample of 20,280 nurses associated with the American Nurses Association Healthy Nurse, Healthy Nation initiative was invited to participate by email. To address low recruitment, convenience samples were added to reach minimum sample size. One professional organization in Florida and five health systems distributed across the United States sent email invitations to over 26,000 nurses.

Eligibility criteria required participants to be licensed nurses, aged 18 years or older, with moderate to high risk of mental distress (Melnik et al. 2024). All participants received \$20 for completion of baseline and 8-week surveys and \$30 incentives for follow-up survey completion. In addition, ISP screening and referral was provided for all respondents. After completion of each follow-up survey, participants received emails reiterating available resources for support. For those with elevated anxiety or depression scores, these emails also contained links to return to the ISP and the opportunity to interact with the study therapist.

2.5 | Procedures & Interventions

2.5.1 | Standard Care (mISP + Referral)

The ISP is customizable with standardized questions required for tier scoring. In this study, demographic questions were modified, and nurse-specific resources were included; this modification is hereafter referred to as mISP.

Scoring and tier stratification are automated, with results made immediately available to the therapist via the mISP platform. Licensed therapist response time differed by designation: Tier 1 was responded to within 24 h, Tier 2 within 36 h, and Tier 3 within 48 h.

Interaction with the therapist was participant-driven, anonymously available through the mISP platform or by phone. Assistance accessing additional resources, including safety planning, 988 (suicide crisis hotline), employee assistance programs, navigation of insurance benefits, and local treatment referrals was available.

2.5.2 | Intervention (mISP + MBS)

The intervention arm provided both the mISP + referral as well as the MBS program, which is based upon cognitive behavioral therapy and all of its key skills (Beck et al. 1979). For this study, MBS was adapted as an asynchronous digital video-based version of the CBSB program described above, with an 8th optional session on coping strategies for PTSD. Content for the MBS sessions is listed in Table 1. Participants received weekly session reminder emails, with an optional additional text message. Telephone interactions with a MBS-trained facilitator reviewed content at baseline, Week 3, and Week 5. Skills-building activities (SBA) followed each module to reinforce content and help participants apply the program's key concepts to their daily lives.

2.5.3 | Intervention Fidelity

Both arms featured digital automation, enhancing delivery consistency. Facilitated check-ins were scripted and provided by two experienced MBS facilitators. One licensed counselor responded to all participants.

TABLE 1 | MINDBODYSTRONG learning module topics by week.

	Topic (length of video-based module in minutes)
Week 1	Thinking, Feeling, and Behaving (20 min)
Week 2	Self-Esteem and Positive Thinking/Self-Talk (11 min)
Week 3	Stress and Coping (18 min)
Week 4	Problem Solving & Setting Goals (10 min)
Week 5	Dealing with your Emotions in Healthy Ways through Positive Thinking and Effective Communication (15 min)
Week 6	Coping with Stressful Situations and Valuable Sleep (9 min)
Week 7	Pulling it All Together for a Healthy YOU! (9 min)
Week 8 (optional)	Post-Traumatic Stress Disorder (16 min)

2.5.4 | Outcome Measures

Outcome measures were previously published in the study's protocol (Melnik et al. 2024). See Table 2 below for a synopsis of the outcomes and instruments used.

2.5.5 | Skills-Building Activities

Frequency of SBA completion was self-reported by participants at the 8-week follow-up. A Likert-type response scale was used: Yes, I completed all of them; Yes, I completed most of them; Yes, I completed some of them; No, I only completed one or two; and No, I was not able to complete them.

2.5.6 | Harms

Potential harms in this study were minimal. While participant confidentiality was treated as an utmost priority, identification of risk status may carry psychological burdens. Additionally, the study provided only crisis hotline information and mental health resources, not therapist sessions, which were disclosed in the consent.

2.5.7 | Sample Size

A power analysis was conducted to determine the required sample size to detect a medium effect size ($d=0.5$) for the between-group comparisons (mISP + referral or +MBS) on the outcome changes from baseline. After accounting for an expected 30% attrition rate and Bonferroni adjustment for multiple testing (seven outcomes

TABLE 2 | Study outcomes with measures.

Outcome	Measure	Cronbach's Alpha	References
Demographics	Age, gender, race, ethnicity, marital status, shift length	Not applicable	Not applicable
Burnout	Single-item valid burnout question Score range = 1 (no symptoms of burnout) to 5 (completely burned out)	Not Applicable AUC = 0.93	Dolan et al. (2015)
Suicidal Ideation	Item 9, PHQ-9 Score range = 0 (not at all) to 3 (most or all the time)	Not applicable	Na et al. (2018)
Depression without Suicidality	PHQ-8 Score range = 0–24 ≥ 5 = mild to severe depression	0.89	Kroenke et al. (2009)
Anxiety	GAD-7 Score range = 0–21 ≥ 5 = mild to severe anxiety	Above 0.85	Löwe et al. (2008)
Post-Traumatic Stress Disorder	PC-PTSD-5 Score range = 0–5 ≥ 3 = probable PTSD	Not Applicable AUC + = 0.941	Prins et al. (2016)
Healthy Lifestyle Beliefs	Personal Beliefs Scale Score range = 10–50 Higher scores indicate higher beliefs	Above 0.80	Melnyk et al. (2021)
Healthy Lifestyle Behaviors	Healthy Lifestyle Behaviors Scale Score range = 16–80 Higher scores indicate higher healthy lifestyle behaviors	0.80 and above	Melnyk et al. (2013)

Note: For statistical analysis, burnout was considered positive for score ≥ 3, suicidal ideation for score ≥ 1, other measures treated as continuous variables.

Abbreviations: AUC, area under the curve, measures overall diagnostic accuracy where 0.8–0.9 is considered excellent accuracy; GAD-7, Generalized Anxiety Disorder-7; PC-PTSD-5, The Primary Care PTSD Screen for DSM-5; PHQ-8, Patient Health Questionnaire-8; PHQ-9, Patient Health Questionnaire-9.

and between-group comparisons at three follow-up time points per outcome) to maintain a study-wide Type I error rate of 5%, a prior power analysis suggested that at least 364 nurses were required to ensure an analytical sample size of 254.

2.6 | Statistical Analysis

The analysis included 329 participants who completed any follow-up surveys through 6 month follow-up. An intent-to-treat analysis was conducted. Descriptive statistics were used to summarize sample characteristics, stratified by study arm. Generalized estimation equation (GEE) models were used to estimate value between groups (mISP + referral or mISP + MBS) on the change of outcome at 3 and 6 months from baseline (i.e., intervention effects), adjusting for unbalanced age between the two groups. The GEE models produce marginal effects estimates with robust standard errors, correcting for within-subject clustering from longitudinal data. In the GEE models, we used identity link for outcomes with normal distribution (GAD-7, PSS-8, PTSD-5, healthy lifestyle behavior, and health lifestyle belief scores) and log link for outcomes with Poisson distribution (prevalence of suicide ideation and burnout).

Descriptive statistics were used to summarize the intervention adherence on number of MBS sessions completed and frequency

of practicing SBA. Data from 131 respondents in the mISP + MBS group was analyzed to explore possible dose effects of intervention adherence. We dichotomized the MBS and SBA completion into two groups (high versus low) since the completion of MBS and SBA data was right-skewed. The high dose MBS was defined as those who completed 6–7 sessions ($n = 103$, vs. $n = 28$ in low dose) and high dose SBA was defined as completion of most or all SBA ($n = 82$, vs. $n = 59$ in low dose). The same GEE models described above were used to estimate the effects of intervention adherence (or dose effects) on the outcomes by comparing high vs. low adherence groups. We used SAS 9.4 for all the analysis. All tests were two-sided with a significance level of 0.05.

3 | Results

329 participants responded to any follow-up surveys during the 6-month study period. Respondents in the mISP + MBS group were slightly older than those in the mISP + referral group (mean age: 44.4 vs. 41.5, $p = 0.03$). The majority were non-Hispanic whites (>80%) and had a bachelor's or higher degree (>80%). About half of the participants were currently married (~60%), had no children under 18 living in the home (50%–60%), were staff nurses (58%), and worked 12+ hour shifts (~40%). The two groups were comparable on all the characteristics, except age.

Table 3 presents the effects of the intervention versus standard care on the continuous outcomes. Compared to mISP + referral, participants in the mISP + MBS program had a greater reduction in mean GAD-7 and PSS-8 scores and a greater increase in mean healthy lifestyle belief and behavior scores at 3 and 6 months post-baseline. The intervention effects at 3 and 6 months were small ($|d| = 0.06$ – 0.35).

Table 4 presents the effects of mISP + referral versus mISP + MBS on the dichotomous outcomes. The percentage of participants having suicidal ideation was reduced in both groups over time. After controlling baseline risk, the mISP + MBS group had a lower risk of having suicidal ideation than the mISP + referral group with a relative risk ratio [RRR] of 0.717 (95% CI: 0.320, 1.606) at 3 months and 0.329 (95% CI: 0.101, 1.072) at 6 months. However, the effects did not reach statistical significance. After controlling baseline risk, the mISP + MBS group had a significantly lower risk of having burnout at 6 months (RRR: 0.698, 95% CI: 0.528, 0.929, $p = 0.012$) than the mISP + referral group.

Among the 131 mISP + MBS group who responded to any follow-up surveys, 93 (71.0%) completed all 7 MBS sessions, 103 (78.6%) completed 6+ sessions, and 110 (84.0%) completed 5+ sessions. We also analyzed participants' SBA completion. Among the 131 mISP + MBS group respondents, 49 (37.4%) completed

all SBAs, 33 (25.2%) completed most SBAs, 22 (16.8%) completed some, 4 (3.1%) completed only 1–2 SBAs, and 23 (17.6%) did not complete any SBAs.

No statistically significant dose effects were found for any continuous outcomes. Table 5 presents dose effect estimates of MBS (6–7 vs. ≤ 5 sessions) and SBA (most/all vs. none to some) on suicidal ideation and burnout. After controlling baseline risk, those who completed 6–7 MBS sessions had a lower risk of having suicidal ideation at 6 months (RRR: 0.333, 95% CI: 0.049, 2.270), although it did not reach statistical significance. After adjusting for baseline risk, the high-dose SBA group had a lower risk of having burnout with RRR of 0.679 (95% CI: 0.457, 1.009) at 3 months and 0.743 (95% CI: 0.458, 1.206) at 6 months. Dose effects on other outcomes are presented in Table S1.

4 | Discussion

This RCT provides important evidence that combining the mISP with the online video-based MINDBODYSTRONG program yields meaningful, long-term improvements in mental health and well-being among nurses beyond screening and referral alone. Importantly, the standard care condition in this study

TABLE 3 | Intervention effects on outcomes at 3 and 6 months.

	mISP + Referral (standard care)			mISP + MBS (intervention)			Intervention effect (between group change from baseline)				
	N	Mean	SD	N	Mean	SD	Mean diff	95% CI	d	p	
GAD-7											
Baseline	191	8.92	5.47	130	8.02	4.88	—	—	—	—	—
3 months	157	6.87	4.89	101	5.48	4.56	−0.29	−1.49	0.90	−0.06	0.628
6 months	156	6.22	4.38	103	4.50	4.10	−0.68	−1.93	0.56	−0.14	0.282
PHQ-8											
Baseline	198	8.71	5.62	131	7.88	5.37	—	—	—	—	—
3 months	158	6.53	4.91	104	4.72	4.68	−0.71	−1.79	0.38	−0.16	0.201
6 months	157	6.16	4.05	108	4.35	3.98	−1.08	−2.24	0.08	−0.23	0.067
PTSD-5											
Baseline	196	1.67	1.92	127	1.19	1.56	—	—	—	—	—
3 months	155	0.94	1.56	102	0.86	1.40	0.51	0.11	0.92	0.31	0.014
6 months	156	1.11	1.62	108	0.84	1.43	0.13	−0.31	0.57	0.07	0.550
Healthy lifestyle behaviors											
Baseline	192	53.30	9.94	117	53.56	9.25	—	—	—	—	—
3 months	151	56.10	9.67	95	58.94	8.68	2.47	0.62	4.32	0.35	0.009
6 months	149	56.79	9.29	102	59.25	9.19	1.55	−0.33	3.43	0.21	0.106
Healthy lifestyle beliefs											
Baseline	193	35.36	6.15	129	35.72	6.12	—	—	—	—	—
3 months	151	38.14	5.19	100	39.69	4.79	1.27	−0.04	2.59	0.24	0.058
6 months	153	38.42	5.84	106	40.42	4.93	1.81	0.47	3.15	0.34	0.008

TABLE 4 | Intervention effects at 3 and 6 months on suicidal ideation and burnout.

	mISP + Referral (standard care)		mISP + MBS (intervention)		Intervention effect (change from baseline, mISP + MBS vs mISP + Referral)			
	<i>N</i>	% Positive	<i>N</i>	% Positive	Relative risk ratio	95% CI		<i>p</i>
<i>Suicidal ideation</i>								
Baseline	196	16.3	131	13.7	—	—	—	—
3 months	157	10.2	104	5.8	0.717	0.320	1.606	0.419
6 months	157	8.3	108	2.8	0.329	0.101	1.072	0.065
<i>Burnout</i>								
Baseline	196	66.8	130	66.2	—	—	—	—
3 months	157	47.8	104	48.1	0.979	0.761	1.258	0.867
6 months	157	52.9	108	37.0	0.698	0.528	0.923	0.012

TABLE 5 | Effects of intervention adherence (dose effect) on suicidal ideation and burnout.

	mISP + MBS, N of MBS sessions completed				MBS dose effect (change from baseline, completed 6–7 vs. ≤ 5 sessions)			
	6–7 sessions		≤ 5 sessions		Relative risk ratio	95% CI	p	
	N	% Positive	N	% Positive				
Suicidal ideation								
Baseline	103	14.6	28	10.7	—	—	—	—
3 months	87	5.7	17	5.9	1.399	0.237	8.274	0.711
6 months	90	2.2	18	5.6	0.333	0.049	2.270	0.262
Burnout								
Baseline	102	64.7	28	71.4	—	—	—	—
3 months	87	47.1	17	52.9	1.178	0.652	2.128	0.586
6 months	90	36.7	18	38.9	1.108	0.516	2.381	0.792
	mISP + MBS, SBA completed				SBA dose effect (change from baseline, completed most/all vs. none/some)			
	Most/All		None/Some		Relative risk ratio	95% CI	p	
	N	% Positive	N	% Positive				
Suicidal ideation								
Baseline	82	14.6	49	12.2	—	—	—	—
3 months	70	7.1	34	2.9	2.355	0.375	14.792	0.361
6 months	68	2.9	40	2.5	1.028	0.118	8.967	0.980
Burnout								
Baseline	81	61.7	49	73.5	—	—	—	—
3 months	70	37.1	34	70.6	0.679	0.457	1.009	0.055
6 months	68	27.9	40	52.5	0.743	0.458	1.206	0.229

consisted of ISP screening with support, rather than screening alone, which has demonstrated effectiveness in identifying distressed individuals and facilitating connection to services (Zisook et al. 2024). This distinction is meaningful, as evidence suggests that workplace mental health screening is unlikely to

improve outcomes unless paired with structured pathways to care (Strudwick et al. 2023). Although effect sizes on the continuous outcomes were small, the pattern, durability, and clinical meaningfulness of the findings support the added value of integrating psychologically safe screening and referral programs

with a CBSB intervention, Even small effect sizes can translate into substantial population-level impact (Carey et al. 2023; Davis et al. 2021).

In this RCT, the intervention arm had greater sustained reductions in anxiety and depression up to 6-months post-intervention. Further, the intervention group's scores for anxiety fell to below the cut-off score of 5 at 6 months, indicating minimal or no significant anxiety symptoms. For depression, the intervention group's scores fell to below the cut-off score of 5 at both 3 and 6 months, indicating minimal or no significant depressive symptoms, which was not the case for the standard care group whose mean scores still met the criteria for both anxiety and depression. This pattern is consistent with prior evidence in support of brief, manualized CBT/CBSB interventions in nurses and the healthcare workforce (Hoying et al. 2023; Sampson et al. 2019). Although not all change-from-baseline comparisons between groups remained statistically significant at later follow-ups, cross-sectional differences persisted and demonstrated consistent small-to-moderate effects favoring the intervention group. These findings suggest that MBS accelerated early symptom improvement and maintained that advantage over time, rather than producing progressively widening group differences. The absence of consistent PTSD effects may reflect the limits of generalized CBSB when trauma-specific symptoms are present.

Healthy lifestyle beliefs and behaviors demonstrated improvements across the follow-up timepoints, suggesting that CBSB resulted in internalized cognitive shifts and behavioral changes that persisted over time. Contemporary belief-behavior models note that beliefs influence action when they are meaningfully connected to behavioral goals and repeatedly enacted over time, representing a plausible mechanism through which MBS promotes longer-term resilience (Granados Samayoa and Albarracín 2025).

Although rates of suicidal ideation declined in both groups, one of the most clinically important findings was the reduction in suicidal ideation in the mISP + MBS group to 2.8% at 6 months versus 8.3% in the standard care group. Although the differences did not reach statistical significance between the groups, the relative risk ratios favored the intervention, particularly at the 6-month follow-up. Given the elevated risk of suicide among nurses, these findings suggest that integrating the CBSB MBS program with screening and referral may add a downstream reduction in suicidal ideation, an outcome of profound importance even when statistical significance is not found.

Intervention participants had a clinically meaningful and statistically significant 30% lower risk of burnout compared with those receiving mISP + referral at 6-month follow-up. Additionally, exploratory analyses revealed that participants who practiced most or all of the SBAs had substantially greater reductions in burnout over time compared with those who practiced fewer activities, suggesting that mastery and application instead of just session participation is key for positive outcomes in the MINDBODYSTRONG program. Because research has established the association between burnout and patient safety as well as turnover, these findings highlight the system-level

benefits of embedding evidence-based mental health and well-being programs into workplace settings. The return on investment for healthcare systems to integrate workplace mental health interventions is 507% due to reduced emergency department visits, lower medical and prescription costs, and fewer disability claims (CompPsych 2026).

4.1 | Strengths and Limitations

A major strength of this study is that it employed an RCT design with 6-month post-intervention follow-up. Limitations included measures that were self-reported, which can introduce bias. The sample also lacked heterogeneity in terms of race/ethnicity; however, it closely resembled the national nursing workforce (Smiley et al. 2025). Further, combining random and convenience samples limits generalizability. Finally, suicidal ideation was measured using question 9 on the PHQ-9, which may reduce specificity and positive predictive value compared with other tools (Na et al. 2018).

5 | Conclusion

Overall, findings from this RCT indicate that the digital MBS CBSB intervention, when paired with psychologically safe screening, can produce durable improvements in burnout and mental health symptoms, including suicidality, healthy lifestyle beliefs, and healthy lifestyle behaviors among distressed nurses. Reduced suicidal ideation highlights its potential life-saving impact. The persistence of positive effects through 6 months supports the practical relevance of this approach within healthcare workforce initiatives.

5.1 | Implications for Future Research

Future research should explore additional strategies to engage CBSB participants early on with an emphasis on completion of the skills-building activities that follow each MBS session. Although the facilitator delivered a manualized format of MBS has been found to produce similar positive outcomes with other members of the healthcare team besides nurses (Hoying et al. 2023), evaluation of this digitized intervention with inter-professional healthcare team members would be beneficial.

5.2 | Linking Evidence to Action

- Burnout, depression, anxiety, and suicide are public health epidemics in the nursing and healthcare workforce.
- Compared to screening and referral alone, the combination of mental health screening, referral, and the MINDBODYSTRONG digitized video-based CBSB intervention reduced burnout, depression, anxiety, and suicidal ideation as well as improved healthy lifestyle beliefs and behaviors through 6 months post-intervention.
- Incorporating psychologically safe mental health screening and referral with evidence-based CBSB programs, such as MBS, is an important component of system-level shifts to

improve mental health and burnout in nurses; doing so can yield a substantial return on and value of investment.

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Conflicts of Interest

Dr. Bernadette Mazurek Melnyk is the creator of the MIND BODYSTRONG program and has a company entitled COPE2Thrive LLC, which disseminates the original and other adapted versions of this program entitled Creating Opportunities for Personal Empowerment (COPE). The remaining authors declare no competing interest.

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section. **Figure S1:** CONSORT Participant Flow Diagram. **Table S1:** Effects of intervention adherence (dose effect) on anxiety, depression, PTSD, healthy lifestyle behaviors and healthy lifestyle beliefs.