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Review Article

Effectiveness of mindfulness-based interventions for reducing stress and burnout among psychiatric nurses: a narrative review

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Abstract: Psychiatric nursing can involve patient agitation, emotional labor, and difficult ethical situations, which are prone to nurse burnout and job-related stresses. Mindfulness-based interventions (MBIs), such as mindfulness-based stress reduction (MBSR) and acceptance and commitment therapy (ACT), could help alleviate such challenges. This narrative review brings together qualitative and quantitative research to examine the description of MBIs concerning aspects of stress, burnout and resilience in psychiatric nurses. Across clinical and cultural contexts, longer and more structured mindfulness programs - especially those shaped around local expectations - show clearer reductions in burnout dimensions. Shorter programs, single-session workshops, or online-only formats offer more limited benefits, and improvement often doesn't last long. Also, the MBSR is linked to better attentional control and greater emotional awareness, while ACT is associated with increased psychological flexibility and coping that reflects personal values - effects that seem especially meaningful in collectivist or spiritually influenced settings. Even so, findings on personal accomplishment and longer-term resilience are mixed because many studies rely on small samples, short follow-up, or weaker study designs. Even with these limitations, the literature suggests that integrating MBIs into organizational practices - through strategies such as protected time, managerial support, and culturally adapted materials - may help strengthen psychiatric nurses' well-being and foster more sustainable mental-healthcare environments. Research using stronger comparative designs is needed to explore how demographic and cultural factors influence the reach and relevance of MBIs for psychiatric nurses.

Keywords: Mindfulness, resilience, nursing, psychiatric, burnout, stress

Introduction

Psychiatric nursing ranks as one of the most psychologically challenging specialties [1]. This category of healthcare experts often deals with patient agitation, suicide attempts, unpredictable patient behavior, and high emotional labor, against the background of an already short-staffed and psychologically challenging environment [2]. In a multicenter survey on psychiatric nurses conducted in China, 73.69% of the nurses reported having moderate to severe emotional anxiety, 76.75% scored high on depersonalization, and 98.80% scored high on a reduced sense of personal accomplishment (PA), indicating high levels of stress affect this population [3]. In another study, 36.36% of psychiatric nurses reported mild to severe burnout, while another 5.79% reported severe burnout [4].

In addition to the burnout, other contributing factors also increase the susceptibility of psychiatric nurses to violence and ethical problems [5]. More than 65% of psychiatric nurses have reported instances of violence, which could be emotional, verbal, and/or physical [6]. These, when accompanied by ethical problems such as dealing with compulsory admissions and frequent attempts at suicide, result in emotionally demanding work conditions, thereby increasing the possibility of burnout [7].

According to Maslach and Jackson, burnout is the result of chronic tiredness, depersonalization (DP), and feeling ineffectiveness. Never-

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theless, burnout has also been associated with numerous instances of medical errors, along with adverse impacts on patient and therapeutic involvement, and elevated employee turnover. These factors underscore the point that burnout, which begins as employee fatigue, significantly impacts patient care [8].

For many people, the presence of such significant stress makes it important to find effective means of intervention that can protect against negative impacts. Some of the most effective of these are mindfulness-based interventions (MBIs). These are formally structured programs that focus on the use of mindfulness meditation, body consciousness, and yoga to promote attention to the present and alleviate psychological symptoms [9]. Mindfulness-based stress reduction (MBSR) and mindfulness-based cognitive therapy (MBCT) are the most widely investigated approaches of MBI [10].

Findings from research conducted on nursing professionals suggest that MBIs are effective for alleviating the effects of stress, fatigue related to the profession, and improving the psychological well-being of participants [11]. Many existing research efforts, despite their contributions, tend to either include diverse groups of nursing professionals, contain small populations, use dissimilar MBI programs, and often lack follow-through [11, 12].

Although promising findings have been reported, little research has focused on psychiatric nurses as a specialized subgroup. The unique occupational risks faced by nurses may affect the estimate and process of MBI efficacy. Lacking specialized evidence, it is also unclear to what extent the needs of the high-risk subgroup can be met by MBIs [5, 13-15].

As such, the objectives of the present narrative review are to provide an overview of the available literature regarding MBIs for psychiatric nurses and their use as tools for decreasing stress and burnout. This work seeks to address the gaps and provide an applicable guide for the creation of mindfulness programs that are adapted for the needs of psychiatric nursing, thus ensuring the mental well-being of nurses and the quality of their performance.

Methods

This narrative review examines what is currently known about the effect of different MBIs including the well-established protocols MBSR, MBCT and ACT, as well as briefer or digitally delivered approaches on stress, burnout and resilience in psychiatric nursing. In this context, to identify the relevant studies published from 2000 to 2024, we applied sensitive search strategies in various multinational and regional databases such as PubMed, Web of Science, Scopus, Embase, CNKI and SinoMed. The search term combinations were based on common keywords relating to mindfulness, psychiatric nursing, stress, burnout, and resilience. Also, the reference lists of key papers were screened. Studies were eligible if they studied psychiatric nurses specifically or included them within wider mental-health staff samples. The review focused on those studies that described the delivery of MBIs and their impact on stress, burnout and resilience.

This review relied on an intentionally wide range of sources, including basic experimental and observational research, qualitative research, and research that had roots in standard clinical practices. Studies that did not include nursing professionals and/or that had none of the key psychological outcomes were excluded. At first, the articles were filtered for appropriateness and, if necessary, investigated in depth. Information regarding study design, environment, research participants, intervention characteristics, reflective elements, and key findings was taken out and presented in the narrative method. In light of the fact that there was considerable heterogeneity present between the research that had been incorporated, statistical combination and the assigning of quality scores were not performed. This study focused instead on important factors like the culture, intervention duration and delivery format, and professionals involved that had an influence on the interaction and experience of the mental-health professionals regarding MBIs.

Impact of MBIs on stress reduction

MBIs have consistently demonstrated their potential to alleviate stress among psychiatric nurses, although the extent of their effectiveness often varies based on factors such as the clinical setting, program duration, and method of implementation. In China, for instance, Yang et al. (2018) investigated the effects of an MBSR program involving 100 psychiatric nurses from three major hospitals. Their results

showed a significant reduction in stress levels, accompanied by noticeable improvements in overall psychological well-being [16]. Similar programs in both India and amongst psychiatric nurses indicate the same trends: the scores for stress went down and early signs of favorable changes in burnout were observed, but the main emphasis of the review was still on stress reduction [17].

Research also reflect findings in the Middle East. In the Razi Psychiatric Center, Iran, there was an RCT on 70 psychiatric nurses participating in an eight-session ACT. Those in the intervention group reported a reduction in perceived stress and psychological flexibility compared to controls [18]. Similar outcomes have been observed elsewhere. In Kazakhstan, 45 psychiatric nurses participated in a four-week, group-based mindfulness program, which led to substantial and statistically meaningful reductions in stress, as measured by validated assessment tools [19] (**Table 1**).

Taken together, these findings highlight a consistent global trend: across different countries, program structures, and study designs, MBIs provide psychiatric nurses with a practical and effective means of managing the demands and pressures of their work. Although the strength of evidence varies somewhat across studies, the overarching conclusion remains clear-mindfulness training plays a valuable role in supporting the emotional resilience and psychological health of nurses in high-stress psychiatric settings.

Effectiveness of MBIs on burnout dimensions

Generally, burnout dimensions for psychiatric nurses are understood to be emotional exhaustion (EE), DP, and decreased perception of PA. These factors often recur as the themes of research into the effectiveness of MBIs for mental health care professionals. In one study performed in the US, 62 inpatient psychiatric nurses, participating in an MBSR eight-week program, experienced reduction levels of EE and DP, and a modest increase of PA [20]. In the secondary, smaller-scale study, the delivery of an MBSR one-day BREATHE experience for community mental health care professionals, including the psychiatric nurses, again produced the reduction levels of EE and DP, but the stability of the PA levels was lacking [21]. Also, it appears that factors of PA often react less to the mindfulness sessions themselves and are much more affected by larger system considerations, such as employee complements, feeling valued for the effort given, and work environment [22].

Some research conducted in China offers additional insight into the above trend. In one major study involving 132 psychiatric nurses, the use of the MBSR program delivered through smartphones significantly decreased burnout symptoms for all three subscales [23]. In nearly the same manner, 96 additional nurses completed an eight-week face-to-face program with the same effects [24]. In the third study that utilized the mindfulness-based decompression strategy for 120 nurses, symptoms of EE and DP were alleviated, and there were corresponding increments in PA [25].

In the rest of the world, the findings were less predictable. For example, for 78 psychiatric nurses who participated in a mindfulness-based stress self-help (MBSS) two-day workshop, the short-term outcome was an encouraging reduction in both EE and DP. These, however, were not maintained, and the follow-up evaluation indicated that the burnout levels were again increasing, mainly due to the decrease in the scores of PA [26].

Some additional information regarding this topic can be gleaned from several small-scale quality improvement projects that took place in the US. In one such study, the intervention involved the use of basic mindfulness techniques such as breath, meditation, and body scan, which were conducted for a period of four weeks. Although some levels of reduction experienced were concerning EE, there were no significant statistical findings regarding DP and PA [27]. In comparison, the eight-week mindfulness program built around dialectical behavior therapy (DBT) skills showed clear promise for the ten psychiatric nurses who participated in the pilot study. A longer, twelve-week version led to a similar pattern of improvement, with most of the eight nurses completing at least three-quarters of the sessions and reporting drops in EE and DP along with a boost in PA. Even so, the very small group sizes ($N \leq 10$) mean that these results should be interpreted cautiously [28, 29] (**Table 2**).

Table 1. Characteristics of studies examining the impact of MBIs on stress reduction among psychiatric nurses

Study Reference (Author, Year, Country)	Study Design	Objective	Sample Size	Setting (Hospital, Clinic, etc.)	Intervention Details (Type, Duration, Frequency)	Outcome Measures	Main Findings
Yang et al., 2018, China	RCT (pre-post with control group)	To examine the effect of MBSR therapy on work stress, anxiety, depression, & mental health among psychiatric nurses	100 psychiatric nurses	Three large hospitals in Hunan Province (First, Second, & Fourth Xiangya Hospitals, Central South University, China)	MBSR program (8 weekly sessions) at nurse stations: relaxation with music, body scan, mindfulness breathing, meditation, group discussion; guided by trained psychologists/nursing faculty	SCL-90; SDS; SAS; NSS	IG vs CG: ↓SCL-90 (136.7→119.6), ↓SDS (45.8→35.4), ↓SAS (44.8→36.4), ↓NSS (83.9→68.2) (all P<.001). MBSR→ ↓stress, anxiety, depression & ↑overall mental health in MHNs.
Poluboiartsev et al., 2023, Kazakhstan	RCT	To evaluate the validity & effectiveness of MBSR in reducing stress, depression, anxiety & preventing burnout	50 psychiatric nurses	Three psychiatric medical institutions, Republic of Kazakhstan	MBSR program (Nov 2022-Feb 2023): relaxation with music, conscious breathing, meditation, guided imagery, peer discussion; conducted under supervision of certified instructor, in a dedicated hospital setting	SCL-90; SDS; NSS	IG: ↓SCL-90 (136.7→119.6), ↓SDS (45.8→35.4), ↓NSS (83.9→68.2) (all P<.001); CG ns. MBSR ↓stress, anxiety, depression & burnout in MHNs
Radhakrishnan et al., 2019, India	Pre-experimental one-group (pretest-posttest design, MSc Thesis)	To evaluate the effectiveness of MBSR on reducing stress perception & burnout among psychiatric nurses	60 psychiatric nurses	Selected hospitals in Bangalore, Karnataka, India	MBSR program (4 weeks); demonstration + teaching of mindfulness (breath awareness, meditation, body awareness); instructed to practice 1 hr/day individually; researcher-led training sessions	CSIS, Burnout measures	↓high stress (14.9%→0%); ↑low stress (36%→53%); ↓stress & burnout post-intervention (P=0.032); no links with demographics.
Zarvijani et al., 2021, Iran	RCT (pre-post design)	To investigate the impact of ACT on perceived stress & psychological flexibility of psychiatric nurses	70 psychiatric nurses	Razi Psychiatric Center, Tehran, Iran (largest psychiatric hospital in Middle East)	ACT program (8 sessions, 2 h each), based on Hayes' ACT model; conducted by trained ACT therapist	PSS, AAQ-II; measures psychological flexibility	IG: ↓stress (P=0.002) & ↑PF (P=0.001) vs CG; demographics (age, gender, education, work duration) ns. ACT→ ↓stress & ↑PF in MHNs

Abbreviations; ↑, Increase; ↓, Decrease; IG; intervention group, CG; control group, MBIs; Mind-fulness-Based Interventions, MBSR; mindfulness-based stress reduction, RCT; randomized con-trolled trial, SCL-90; Symptom Checklist-90, SDS; Self-Rating Depression Scale, SAS; Self-Rating Anxiety Scale, NSS; Nurses' Stress Rating Scale, CSIS; Cohen Stress Inventory Scale, ACT; Acceptance & Commitment Therapy, PSS; Perceived Stress Scale, AAQ-II; Acceptance & Action Questionnaire-II.

Table 2. Summary of studies investigating the effects of MBIs on burnout dimensions among psychiatric nurses

Study Reference (Author, Year, Country)	Study Design	Objective	Sample Size	Setting (Hospital, Clinic, etc.)	Intervention Details (Type, Duration, Frequency)	Outcome Measures	Main Findings
Edwards et al., 2015, US	DNP capstone project; systems-change program (pre-post design)	To determine whether an MBSR program reduces perceived stress and burnout	10 Psychiatric nurses	Locked psychiatric dementia units, long-term care & hospital settings	MBSR program (2 week, 3 h sessions/week): mindfulness meditation, Hatha yoga, body scan, relaxation training, self-awareness, coping strategies; integrated into staff development/continuing education	MBI-HSS subscales (EE, DP; PA); stress perception ratings	↓EE & DP, ↑PA; ↓overall stress & burnout in MHNs; program feasible & beneficial for well-being & care quality
Luan et al., 2023, China	RCT	To examine the effect of self-service mindfulness stress relief training on resilience & job burnout	64 psychiatric nurses	The Third Hospital of Daqing City, Heilongjiang, China	Self-service MBSR training (8 weeks) delivered via WeChat/QQ: audio + electronic materials: body scan, mindful breathing, sitting & lying meditation, yoga, informal practices (daily life awareness, event journaling, communication awareness)	FFMQ; CD-RISC; MBI-HSS	Baseline: high burnout (↑EE, ↑DP, ↓PA). Week 8: IG ↑mindfulness (FFMQ), ↑resilience (CD-RISC), ↑PA, ↓EE & DP (MBI-HSS) vs CG (all $p<0.05$); Self-service MBSR→ ↑resilience & ↓burnout in MHNs
Yan et al., 2018, China	RCT	To evaluate the effect of group mindfulness therapy on psychological resilience & job burnout	65 psychiatric nurses	Psychiatric specialty hospital (grassroots level), Sichuan Province, China	Group mindfulness therapy (10 weeks, once weekly, 90-120 min/session): body scan, 12-min breathing space, mindfulness meditation, walking meditation, group sharing	CD-RISC; MBI-HSS	IG: ↑resilience (esp. self-improvement, $p<0.001$), ↓EE, ↓DP, ↑PA (all $p<0.05$) vs CG; Group mindfulness therapy→ ↑resilience & ↓burnout in MHNs
Yang et al., 2022, China	RCT	To investigate the effect of mindfulness-based decompression therapy on resilience & burnout in	98 psychiatric nurses	Large psychiatric hospital, China	Mindfulness-based decompression therapy: 8 weeks: weekly: 90-min/sessions (guided meditation, mindful breathing, body scan, group reflection)	CD-RISC; MBI-HSS (EE, DP, PA)	IG: ↑resilience (CD-RISC total & subscales, $P<0.01$), ↓EE, ↓DP, ↑PA (all $p<0.05$) vs CG; MBI decompression→ ↑resilience & ↓burnout in MHNs
Wu et al., 2021, China	RCT	To evaluate the effect of a short MBSS training course on job burnout & anxiety	56 psychiatric nurses	Beijing Huilongguan Hospital, China	MBSS program: 2-day intensive on-site training (6 h/day) + 1 month guided self-practice (10-15 min/day with WeChat audio guidance & check-ins): raisin exercise, body scan, walking meditation, sitting meditation, stretching, stress awareness, applying mindfulness in daily life	MAAS; MBI (EE, DP, PA); DASS-21	IG: ↑MAAS; ↓MBI total/subscales & ↓DASS-anxiety post-2d training & 1-mo FU (all $P<0.01$); Short MBSS→ ↓burnout & anxiety, ↑mindfulness in MHNs

Ubom al., 2024, US	DNP project; (pretest-posttest QI design)	To evaluate the effectiveness of MBSR on stress & burnout	10 psychiatric nurses	Psychiatric inpatient hospital, Southern California	MBSR program (≤30 min; practice ~10 min, ≥3×/day): deep breathing, meditation, yoga, body scan, prayer, music therapy, muscle stretching; delivered as educational sessions + individual practice	MBI-HSS; PSS-10	↓EE (3.31→1.49, p<0.001), ↓DP trend (1.60→0.74, P=0.083); ↓stress slight (ns); PA (ns) (4.06→5.04, P=0.059); deep breathing most used; MBSR feasible & ↓ burnout in MHNs
Wampole al., 2018, US	DSW mixed-method exploratory pilot study	To examine burnout among inpatient psychiatric nurses & assess feasibility/effectiveness of a mindfulness-based psycho-educational intervention	50 psychiatric nurses	York Hospital, Pennsylvania (63-bed acute inpatient psychiatric facility)	Mindfulness-based psychoeducational program integrated within trauma-informed care: mindfulness skills: attention to present, emotion regulation, distress tolerance (30 min/session; ~10 min practice as needed)	MBI (EE, DP, PA); qualitative feedback	Mindfulness feasible & beneficial: ↓EE, ↓DP, ↑PA; ↑attunement, interpersonal effectiveness & counter-transference management; ↓burnout & ↑patient safety
Wampole al., 2020, US	Pilot study, mixed-method, (pre-post with qualitative feedback)	To examine burnout among psychiatric nurses & evaluate feasibility/usefulness of a social work-led MBI	8 psychiatric nurses	63-bed inpatient psychiatric facility, Pennsylvania	12-week DBT-based mindfulness program (weekly 1 h sessions) led by a social worker, covering core mindfulness, emotion regulation, distress tolerance, & Interpersonal effectiveness; skills included radical acceptance, mindfulness of thoughts/emotions, & non-judgmental awareness	MBI-HSS (EE, DP, PA); open-ended qualitative surveys (pre/post)	Quantitative: minimal, ns; qualitative: ↑stress management, ↑emotional awareness, ↓ patient judgment, ↑peer connection; barriers: low attendance (off-shifts, workload); intervention feasible & perceived useful despite limited quantitative effects
Salyers et al., 2011, US	Pilot study, (pre-post design: AAB within-subjects design)	To test feasibility & preliminary outcomes of a one-day retreat (*BREATHE*) intervention	84 mental health professionals (including MHNs)	Community mental health center (training held at local hotel)	One-day (6 h) retreat workshop: mindfulness & contemplative practices: breathing & visualization exercises, body scan, values clarification, boundary setting, relapse prevention planning	MBI: (EE, DP, PA); job diagnostic survey (job satisfaction); turnover intention items; consumer optimism scale	After 6w: ↓EE & DP (P<0.01); PA, job satisfaction & turnover intentions: ns; ↑consumer optimism (P<0.05); 91% rated training helpful, feasible & acceptable; ↓burnout & ↑staff attitudes

Abbreviations; ↑, Increase; ↓, Decrease; DNP; Doctor of Nursing Practice, MBI-HSS; Maslach Burnout Inventory-Human Services Survey, FFMQ; Five Facet Mindfulness Questionnaire, CD-RISC; Connor-Davidson Resilience Scale, MBSS; mindfulness-based stress self-help, MAAS; Mindful Attention Awareness Scale, DASS-21; Depression Anxiety Stress Scale-21, DSW; Doctoral dissertation, EE; Emotional Exhaustion, DP; Depersonalization, PA; Personal Accomplishment, qualitative feedback; qualitative feedback.

Overall, the studies point to a clear pattern: mindfulness-based programs reliably ease EE and DP in psychiatric nurses, although improvements in PA vary. Longer, structured programs produce steadier results than brief workshops, underscoring the value of sustained practice in addressing burnout.

Strengthening resilience and coping through MBIs

Resilience and coping processes are subsequently viewed as significant outcome factors for MBIs conducted using psychiatric nurses. Resilience indicates the degree to which the nurse can actually function under negative pressures, and the coping capacity often serves as the secondary factor, showing the nurse's method of dealing with everyday situations [30]. This can be observed through an eight-week MBSR study conducted in Iran, which involved 72 psychiatric nurses and was shown to increase work-related well-being and empathy, which are most often considered the most significant factors for effective coping and, therefore, for the development of resilience [31]. Results were supported in China as well. In a six-week MBSR intervention conducted using smartphones for 132 psychiatric nurses, there were measurable increases based on the Connor-Davidson Resilience Scale (CD-RISC) [23]. Similar results were observed for the mindfulness program conducted for 96 psychiatric nurses, as well as for the eight-week decompression technique conducted for 120 nurses [24, 25].

Briefer interventions again offer additional information. In an intervention study conducted on 60 psychiatric nurses, the guided self-help mindfulness program for four weeks indicated concurrent improvement for both resilience and burnout symptoms [32]. In another quasi-experimental study, an intervention was conducted in 80 psychiatric nurses. Results depicted significant improvement for overall well-being, improved sleep, and elevated self-esteem, which are often considered indicators of improvement for coping and resilience [33].

Qualitative research from Australia provides even greater depth. In focus groups with psychiatric nurses, the authors found that there was a strong link between well-being and the concept of resilience, but the levels of the latter were significantly lower for younger and less experienced staff members [34]. In later research, the authors conducted interviews and discovered that the following were important tools for building the necessary resilience for improved well-being for the nurses: MBIs, Yoga, support networks and self-practice [35] (**Table 3**).

Overall, the evidence points to a clear pattern: MBIs reliably boost resilience and improve the coping skills psychiatric nurses need to manage the emotional and practical demands of their work. These gains appear across different program formats and study designs, highlighting the consistent value of mindfulness in supporting this workforce.

Qualitative insights into the effects of MBIs

An important aspect of qualitative research is that it provides contextual background information that casts light on the experiences that psychiatric nurses share after participating in MBIs. In the US, there was an evaluation of the impact of MBSR performed on 16 behavioral health staff, which included psychiatric nurses. This study carried out the program for a period of four weeks. The staff were satisfied with the program, as it gave them the capacity to slow down during patient interactions, improve attention, and decrease their perception of stress. They were happy to learn that the process of mindfulness becomes embedded into their natural routines rather than just the intervention [36]. In addition, the focus groups that involved 20 psychiatric nurses were satisfied, as they observed that the strategy of mindfulness was an effective and flexible tool that the professionals could use to deal with the emotional demands that came with the psychiatric work [37]. In Australia, research conducted that involved 25 psychiatric nurses supported the fact that emotion regulation, the presence of support networks, and self-practices enhanced the development of resilience [35].

More information on the topic is derived from research aimed at training. In the US, 18 psychiatric nurses engaged with mindfulness-based psychoeducation as part of a trauma-informed curriculum, and their results show greater clarity regarding stress management, improved self-awareness, and improved colleague relationships [28]. Similar results were

Table 3. Characteristics of studies on the impact of MBIs on resilience & coping capacity among psychiatric nurses

Study Reference (Author, Year, Country)	Study Design	Objective	Sample Size	Setting (Hospital, Clinic, etc.)	Intervention Details (Type, Duration, Frequency)	Outcome Measures	Main Findings
Fatemi et al., 2024, Iran	RCT (before-after design)	To examine the effects of a MBSR program on WWB & empathy levels	80 psychiatric ward nurses	Ibn-e-Sina Psychiatric Hospital, Mashhad University of Medical Sciences, Iran	MBSR program (8 weekly, 2 h/sessions): formal meditation, body scan, mindful yoga, mindful breathing, mindful eating; homework: 45 min/day, 6 days/week, with WhatsApp guidance	Eudaimonic WWB Scale [51]; clinical IRI index [52]	↑WWB vs CG (P=0.01), esp. intrapersonal (P=0.006); ↑empathy & perspective-taking (P=0.01); UPR (ns); supports MBSR as feasible to ↑well-being & empathy in MHNs
Wang et al., 2023, China	RCT	To evaluate the effect of a guided self-help MBI on psychological resilience & job burnout	118 psychiatric nurses	Third Hospital of Daqing, Heilongjiang Province, China	Guided self-help MBI (8 weeks) via WeChat; weekly audio (20-30 min) & text modules covering mindfulness principles & practices (body scan, breathing meditation, mindful walking, emotional management)	FFMQ; CD-RISC; MBI-HSS	After 8w IG: ↑FFMQ, ↑resilience (CD-RISC), ↓burnout (MBI-HSS) vs CG ($p<0.05$); ↓burnout correlated with ↑resilience ($r=-0.762$, $P<0.001$). Guided self-help MBI feasible, effective & convenient for MHNs
Yuan et al., 2021, China	RCT	To examine whether group mindfulness decompression training can improve subjective well-being, sleep quality, & self-esteem in psychiatric nurses, & test self-esteem as a mediator	151 psychiatric nurses	Nanjing Medical University Affiliated Brain Hospital, China	Group mindfulness decompression Training (8 sessions, 1 h/week): mindfulness of raisin exercise, body scan, thought/emotion awareness, breathing meditation, 3-min breathing space, interpersonal mindfulness, loving-kindness, review & application to daily life, led by trained mindfulness instructors	FFMQ; RSES; SWBS; PSQI	IG: ↑mindfulness, ↑self-esteem, ↑well-being, ↓PSQI vs CG (all $p<0.001$). ↑mindfulness correlated with ↑self-esteem, ↑well-being & ↓PSQI; mediation: ↑self-esteem partially mediated links between ↑mindfulness & ↑well-being/↓PSQI
Foster et al., 2023, Australia	Interpretive narrative qualitative study (phase of mixed-methods project)	To explore MHNs' stories of resilience in practice & identify resilience resources they draw on when managing challenging workplace situations	12 MHNs	Inpatient, community, hospital, & correctional health settings, Victoria, Australia	Semi-structured narrative telephone interviews (30-60 min), storytelling approach; participants purposively sampled based on high CBI & WRI scores	CBI, WRI	Four themes: ↑professional self-care, ↑supportive relationships, ↑learning/self-care, ↑positive solutions; MHNs showed resilience & grace under pressure; organizational support needed via team culture, supervision & reflection
Foster et al., 2019, Australia	Descriptive correlational, cross-sectional survey	To describe MHNs' workplace stressors, psychological well-being, workplace resilience & caring behaviors; explore relationships between these factors	498 MHNs	Public mental health services across Victoria (community, inpatient, aged, forensic, etc.)	No intervention (survey-based study): participants completed a 94-item online survey; data collection over 3 months in 2018	RPWB (18-item, 6 subscales), WRI (23-item; affective/behavioral/cognitive), CBI-24 (24-item, 4 subscales), free-text workplace stressors	Top stressors: org service (37%), consumer/carer (28%) aggression, role (25%), colleague (10%). Well-being mode-high (82.3/108); resilience mod (3.1-3.3/5); Resilience ↑with well-being ($r=0.31$-0.55), ns with caring; ↓in <40y & <5y MHNs → need resilience/well-being programs

Abbreviations; ↑, Increase; ↓, WWB; workplace well-being, IRI; Interpersonal Reactivity Index, PSQI; Pittsburgh Sleep Quality Index, RSES; Rosenberg Self-Esteem Scale, SWBS; Subjective Well-Being Scale, MHNs; Mental Health Nurses, CBI; Caring Behaviours Inventory, WRI; Workplace Resilience Inventory, RPWB; Ryff's Psychological Well-Being.

observed in 32 psychiatric nursing students who were enrolled in an interpersonal mindfulness program that last for four weeks, located in Thailand [38] (**Table 4**). In light of the above research, one clear trend exists. MBIs seem to provide a far more reliable means for psychiatric nurses and nursing students to control their emotions, gain focus in caring for themselves, and develop perspective on how to interact with people. However, it must be kept in mind that many of the above programs involved a small number of participants and took place in very specialized settings.

Discussion

This study utilizes information from several qualitative and quantitative studies to examine the impact of different kinds of MBIs on the well-being of psychiatric nurses (**Figure 1**). The examined research, in line with earlier studies, points to a broadly consistent pattern [39]. MBIs reduce stress, improve critical components of burnout, namely EE and DP, and increase the nurses' resilience and ability to cope. The extent and sustainability of such impacts are dependent on the specific mindfulness practice, underpinning theory, time, and cultural acceptability [40]. Examination of the interplay between the various layers aids in understanding why some contexts present greater improvements than others.

A predominant issue regards the matters of influence which the cultural surroundings could exert on MBIs delivery and reception. In collectivist societies, such as China and Kazakhstan, multi-session group interventions conducted either face-to-face and/or online are proven to improve stress and burnout and increase resilience. Given the mix of mindfulness practice, discussions, and support, it is not surprising that such initiatives resonate well with cultural perceptions of interconnections and shared responsibilities, further boosting MBIs' beneficial influence, which is apparent, particularly when examining literature developed within the Kazakhstani context.

In contrast, within more individualistic cultures, such as the US, the structure and design of MBIs are more apt to include time-efficient, condensed workshops and small-scale quality improvement projects [41]. These result in sharp declines on measures of EE and DP, but mixed gains on measures of PA, and most benefits are lost over time. The structure of these programs often mirrors a more individualistic expectation that people should manage things on their own. However, since ongoing practice isn't consistently supported, the benefits tend to fade over time, especially when it comes to managing emotions and the pressures of work.

Further patterns and observations are revealed by studies conducted in Iran and India, which show ACT and MBSR-based interventions effectively increasing individual measures of psychological flexibility and well-being [42-44]. This suggests that themes like acceptance, meaning, and personal values may resonate naturally with the reflective spiritual traditions that shape the cultural backgrounds of the nurses. Taken together, it is clear that the cultural narratives of the participants have a great influence on mindfulness and the procedures used.

Psychological and biological factors also play a role in shaping how these processes unfold. Mindfulness helps nurses stay centered, notice their emotional reactions, think with more flexibility, and hold back before responding. These abilities are especially valuable in psychiatric settings, where patients' needs can shift suddenly and emotionally or ethically challenging situations are part of everyday work. As nurses are able to monitor their internal responses without becoming fixated on them, they start becoming less engaged in the self-reinforcing cycles of rumination and affective overinvestment, which often underlie problems of burnout [45]. ACT-based interventions are working to enhance such an impact by reducing avoidance and increasing responses aligned with value, which benefits nurses dealing with situations of moral and/or coercion-based disturbances [46, 47].

Although the psychiatric and nursing studies cited above did not examine biological markers, work in other areas of health care has indicated the ability of MBIs to affect the hypothalamic-pituitary-adrenal (HPA) axis and other systems involved with stress, reflected by decreases in resting and stimulated cortisol output, improvements in heart rate variability, increased parasympathetic activity, and decreases in chronic hyperarousal [48, 49]. In the psychiatric context, where chronic alertness, exposure to violence, and chronic emotional labor are com-

Table 4. Summary of qualitative evidence on the effects of MBIs among psychiatric nurses

Study Reference (Author, Year, Country)	Study Design	Objective	Sample Size	Setting (Hospital, Clinic, etc.)	Intervention Details (Type, Duration, Frequency)	Outcome Measures	Main Findings
Brady et al., 2012, US	Descriptive study (one-group pre-/post-test)	To examine the impact of a MBSR program on stress, burnout, mindfulness, presence, patient satisfaction, & safety	16 behavioral health staff (psychiatric nurses, social workers, mental health technologists, psychiatrists, therapists, coordinators)	Inpatient Behavioral Health Unit, large Midwestern hospital (35 beds)	4-week MBSR program (1 h/week classes): formal meditation (sitting, walking, lying), informal mindfulness practices, homework (30 min/day), diaries, group discussions	MHPSS; MBI; TMS; SOSS; patient satisfaction survey; patient safety event reports	↓stress (MHPSS 53.6→39.6, P<0.01); ↑mindfulness (TMS 25.5→32.8, P<.01); ↑self-acceptance, self-care & presence (SOSS, P<0.05); ↓burnout (ns); ↑patient satisfaction; ↓safety events 38% (32→20)
Rush et al., 2018, US	DNP project, formative program evaluation (pre-post feasibility)	To implement & evaluate a brief mindfulness program to reduce stress & burnout	22 psychiatric nurses	Three locked inpatient psychiatric units, Southeastern US hospital	Four-week online mindfulness program: Langer-based modules: novelty seeking, engagement, flexibility, novelty producing (~30 min/week, Google sites delivery)	Feasibility survey (Likert items on knowledge, skills, attitudes, feasibility); focus group discussion	90.6% found platform feasible; 91% planned integration; nurses practiced ~4 d/wk. Focus group: no major barriers; facilitators = brevity, reminders, accessibility; suggestion = 1-page skill sheet
Yagi et al., 2023, Thailand	Quasi-experimental controlled pilot study, mixed-methods (pre–post)	To examine effects of embedding a brief interpersonal mindfulness program	31 psychiatric nurses	Psychiatric nursing practicum, Ramathibodi School of Nursing, Mahidol University, Bangkok	Brief interpersonal mindfulness: insight dialogue: pause, relax, open, trust emergence, listen deeply, speak the truth); 4 daily practices (2-5 min meditations + 20-25 min day/group inquiry, ~90 min/day × 4 weeks)	FFMQ-T; qualitative focus group interviews	IG: ↑ mindfulness (overall; observing, describing, non-reacting; P<0.05; d large); ↑ acting w/ awareness (small); qualitative: initial challenges; ↑ mindfulness; intrapersonal gains (↓ anxiety/anger, ↑ happiness); interpersonal gains (↑ openness, empathy, active listening).

Abbreviations; ↑, Increase; ↓, Decrease; MHPSS; Mental Health Professionals Stress Scale, MBI; Maslach Burnout Inventory, TMS; Toronto Mindfulness Scale, SOSS; Sense of Self Scale, FFMQ-T; Five Facet Mindfulness Questionnaire - Thai version.

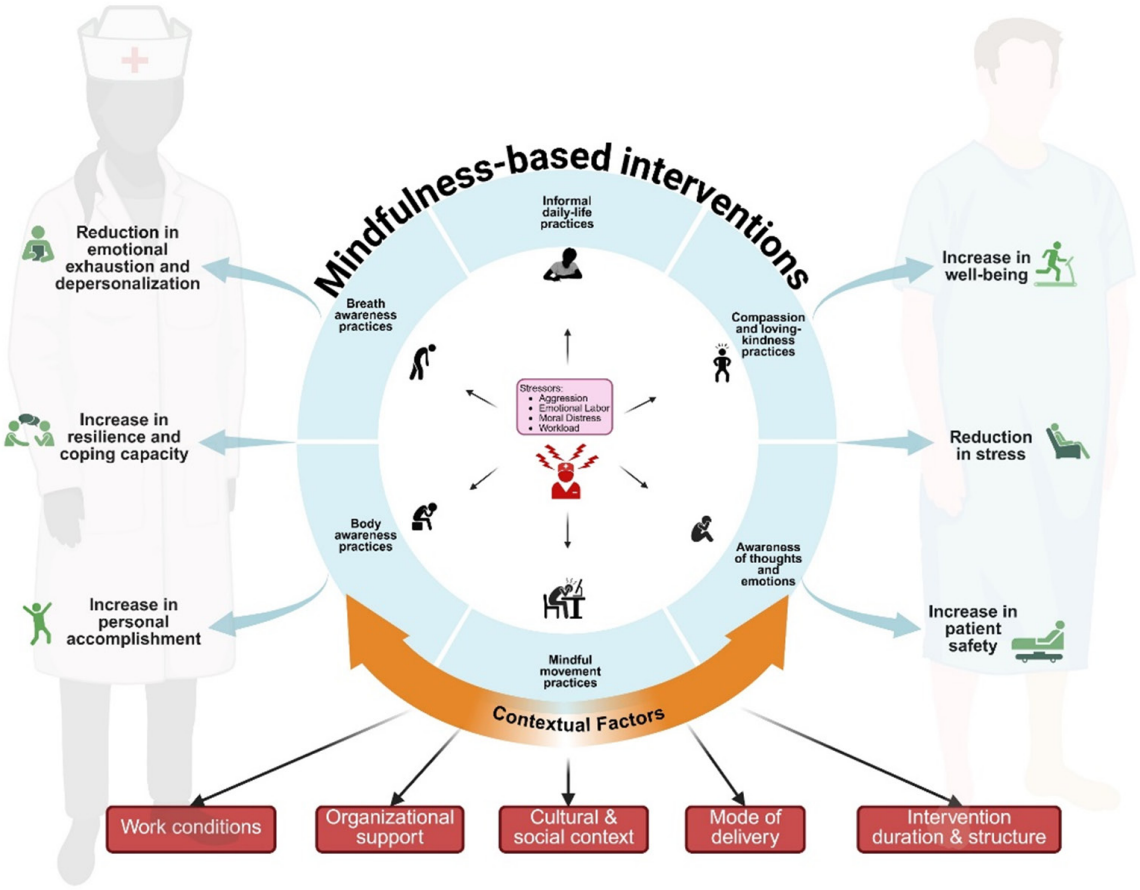

Figure 1. Framework of mindfulness-based interventions (MBIs) buffering stress-related effects in psychiatric nurses.

mon, such biomedical changes provide a mechanism, albeit a plausible one, for decreases in stress and emotional exhaustion. Coupling understanding of the psychology with what is known about biology suggests a more complete, integrated understanding of mindfulness and changes in stress reactivity. Another aspect of relevance to such work is the interpersonal context within which such interventions take place. Various qualitative studies have found regular mindfulness group work to improve empathy, understanding of relationship processes, and team building. Nursing professionals often view mindfulness activities as some of the only times when discussions about work-related pressures are encouraged, and some burden is lifted and feelings are understood. These processes work to prevent DP by reducing the emotional distance and promoting sustainable patient relationships. With increased colleague bonding, teamwork improves, which is a very important spin-off, particularly within psychiatric wards, where shared teamwork is essential to collective and individual nurse safety and support.

An important consideration evident within the literature is the contrast between MBIs with an individualized focus and those supported by the wider, more organizational context. Brief interventions, such as retreats, workshops, and unguided activities, often rest largely on individual nurses, who are already overwhelmed [22]. Although temporarily relieving stress, interventions may not have long-lasting beneficial effects on either resilience and/or a perception of professional accomplishment. In specific circumstances, on the other hand, mindfulness could increase attention to stress but are often incapable of dealing effectively with it.

In contrast to shorter interventions, MBSR on a multi-week cycle, when supported by the orga-

nization, is more likely to result in sustained and broad benefits when compared to shorter interventions. When facilities carve out time for such interventions, it translates to the importance of employee well-being, which is a factor associated with increased employee morale and retention. The long-term benefits are also well known and include decreases in burnout, which are associated with diminished errors and increased employee retention. In light of the reviewed literature, MBIs are clearly beneficial to psychiatric nurses, and more so when conducted on a long-term basis incorporating practice and shared reflection moments. All depicted models show a proven decrease in levels of stress, EE, and DP, and improvement in resilience and coping. Yet the mixed outcomes for PA show that organizational climate and structural support remain key factors that mindfulness alone cannot resolve.

The present study is currently limited by small and single-site samples, mixed variables, limited information gathered on biomarkers, and shortened follow-up durations, so the findings of the narrative review are, by definition, exploratory. Further studies should contrast individualist and collectivist cultures, utilize mixed methods designs incorporating individual, biological, and interpersonal variables, and assess multilevel interventions, combining individual mindfulness training and organizational improvements such as adequate staff and functional supervision and mindfulness-based management. The addition of markers such as cortisol, heart rate variability, and other indicators of the HPA-axis system further clarifies the neurological basis behind the stress-reduction effects of MBIs on psychiatric institution care workers [48-50].

In sum, psychiatric nurses are faced with chronic sources of emotional, ethical, and organizational stress that undermine their well-being and, by extension, the sustainability of their work. MBIs, with their broad spectrum of influences including, but not limited to, the psychological, interpersonal, and biological aspects, could powerfully supplement a culturally attuned plan to improve resilience and prevent burnout among mental health professionals.

Conclusion and future perspectives

In conclusion, the current available data, despite the fact that it remains preliminary and diverse, appears to suggest the promise of MBIs, specifically structured and culture-adapted variants such as MBSR and ACT, for the reduction of stress, promotion of resilience, and prevention and management of burnout for psychiatric nurses. In an effort to further support the introduction of such programs, future research appears to specifically benefit from implementing broad comparative trials that are designed to utilize both subjective and objective measures for evaluation and follow-up. There would also appear to be significant importance for exploring the influence of demographics and culture.

Disclosure of conflict of interest

None.

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