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Mindfulness for the Mental Health of Working Women: How Effective Is It and What Are the Challenges

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Abstract. *The mental health of working women is a critical issue within the context of increasing dual burdens of work and domestic responsibilities. Mindfulness interventions have been proposed as an effective approach to enhancing psychological well-being. The objectives was to examine the effectiveness of mindfulness interventions on the mental health of working women, identify implementation challenges, and formulate recommendations for future research. This study is a systematic literature review (SLR) of 14 quantitative and qualitative studies published in indexed journals. Quality assessment was conducted using the JADAD Score, JBI Checklist, and MMAT according to the study design. Out of 2,400 articles identified through Scopus and Google Scholar databases, 14 articles met the inclusion criteria and were analyzed in this review. These studies employed various methodological designs, including RCTs (n=6), quasi-experimental (n=5), and observational or cross-sectional studies (n=3). Based on the assessment of effectiveness, mindfulness interventions were classified as highly effective (n=6), moderately effective (n=5), and less effective (n=3), depending on intervention protocol, intensity of participation, and institutional support. Structured protocol-based mindfulness interventions with facilitators (MBSR, MBCT, MAC) demonstrated the highest effectiveness compared to self-guided or trait-based interventions. The majority of studies indicated that protocol-based mindfulness interventions such as MBSR and MBCT effectively reduced stress, burnout, and anxiety, and enhanced self-compassion and psychological well-being. Main barriers included time constraints, participant retention, and methodological limitations. Mindfulness interventions are a promising strategy to support the mental health of working women.*

Keywords*: Mindfulness; effectiveness; mental health; working women; barriers.*

INTRODUCTION

The mental health of working women has become a crucial issue, along with the increasing participation of women in both global and national labor markets. Globally, female labor

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force participation has shown an upward trend between 2020 and 2024 (International Lapor Organization, 2023). In Indonesia, data from the World Bank indicate an increase in female labor force participation from 51.36% in 2020 to a projected 53.22% in 2024 (United Nations Economic and Social Commission for Asia and The Pacific, 2025). Data from the Central Statistics Agency (BPS) also show an increase, with female participation reaching 55.41% in February 2024 (BPS, 2024) and even approximately 60.18% in 2023 (BPS, 2023). Although female labor force participation is increasing, wage gaps and limitations in leadership positions remain significant challenges in the workplace (UN Women, 2024).

Beyond quantitative disparities, working women also face substantial dual-role challenges, such as managing professional work demands while simultaneously fulfilling domestic responsibilities like child and family care, especially among married women with children. Studies indicate that these dual roles increase the risk of mental health disorders among working women, with reports that 64% of working mothers experience clinical anxiety due to role conflict (Althammer et al., 2021). This work–family conflict negatively impacts their quality of life and psychological well-being, particularly when inadequate social support and organizational policies (Pérez et al., 2022). These conditions are exacerbated by social and cultural norms that still expect women to focus more on household matters, thereby limiting their opportunities for professional development (International Lapor Organization, 2023). In addition to dual-role burdens and workplace challenges affecting women's mental health, ethical risks in implementing mental health research within workplace settings also warrant careful consideration. Nurissama and Basrowi (2025) identified several potential ethical concerns, including breaches of confidentiality, coercion by supervisors, and conflicting interests between organizational goals and the well-being of employees (Nurissama & Basrowi, 2025). These risks underscore the importance of designing mindfulness and other psychosocial interventions with strong ethical safeguards, particularly in workplace cultures with rigid hierarchies or inadequate mental health awareness. In this context, mindfulness-based interventions have emerged as effective approaches to managing psychological stress and improving the mental well-being of working women. Mindfulness is defined as full awareness and non-judgmental acceptance of present experiences (Basrowi et al., 2024).

Mindfulness is "the awareness that emerges through paying attention on purpose, in the present moment, and non-judgmentally" (Jankowski & Holas, 2020). Therapeutic forms include Mindfulness-Based Stress Reduction (MBSR), which involves meditation, body scan, and yoga to reduce stress; Mindfulness-Based Cognitive Therapy (MBCT), a combination of cognitive therapy and mindfulness exercises to prevent depression relapse; and Mindful Self-Compassion (MSC), which involves training in self-acceptance and empathy to counter internal criticism. These practices train individuals to non-reactively accept thoughts, emotions, and bodily sensations, thereby reducing stress responses and enhancing emotional regulation (Lin et al., 2024).

Empirical studies have demonstrated that mindfulness interventions significantly reduce stress levels and emotional exhaustion in workplace settings. A meta-analysis by Bartlett et al. (2019) reported that mindfulness interventions reduced stress symptoms by 29% with a medium effect size ($d = 0.48$; $p < 0.001$) and decreased emotional exhaustion by 24% among working women (Vonderlin et al., 2020). Other studies have shown that 4–6 week mindfulness training can significantly improve quality of life and reduce depressive symptoms in women with dual roles ($p < 0.05$) (Pérez et al., 2022). Nevertheless, the effectiveness of mindfulness is not without implementation challenges, particularly within the cultural and work contexts of women in developing countries. Barriers such as lack of time, organizational support, and social stigma often diminish the success of these intervention (Kuyken et al., 2016). Therefore, a systematic review

integrating empirical evidence from various studies is required to comprehensively evaluate the effectiveness and identify challenges in implementing mindfulness among working women (Mohebi et al., 2021).

This study has advantages because it employs a systematic review method that compiles and evaluates data from multiple studies, specifically emphasizing female workers. This approach provides a more contextual synthesis of information, unlike previous research that tends to be limited or has not deeply emphasized gender-based distinctions. Most previous studies have focused on general worker populations or specific professions such as healthcare workers, without explicitly addressing the experiences of working women who face dual-role burdens and complex gender dynamics (Fida et al., 2023).

Differences between previous studies and the current study include the limited literature concerning the impact of mindfulness on the mental health of working women, particularly in the context of work–home conflict and dual roles. For instance, a study by Walsh et al. (2025) and showed that daily mindfulness reduced work–home conflict among women in leadership positions, but this study focused specifically on women in leadership roles and did not generalize to all working women across sectors and job levels (Walsh et al., 2025). Most other workplace mindfulness studies still emphasize psychological outcomes (stress, burnout, well-being), but rarely explore the barriers, challenges, and adaptation needs of mindfulness interventions for working women (Bowles et al., 2022).

A study in by Lin et al. (2024), involving female nurses, highlighted the importance of work–life balance and workplace spirituality as mediators of mindfulness benefits. However, its focus remains limited to the healthcare profession and has not addressed implementation challenges in other sectors or among working women in general (Lin et al., 2024). There is also a gap in evaluating the effectiveness of various forms and models of mindfulness interventions adapted for the specific needs of working women. Several previous studies also acknowledge substantial variation in mindfulness-based intervention (MBI) protocols, in terms of duration, content, and delivery format (online/offline, individual/group). There has not been a comprehensive review of the most effective intervention models for working women with diverse backgrounds, cultures, and workload (Fida et al., 2023; Ong et al., 2024). Moreover, most existing meta-analyses and systematic reviews have not specifically integrated quantitative and qualitative data regarding effectiveness and the challenges of implementing mindfulness for working women. Prior studies tend to focus on positive outcomes and have not emphasized barriers such as stigma, time constraints, lack of organizational support, and the need for intervention customization to suit the characteristics of working women in developing countries (Marotta et al., 2022).

Therefore, this study aims to examine the effectiveness of mindfulness interventions on the mental health of working women, identify implementation challenges, and provide recommendations for future research. By conducting a Systematic Literature Review (SLR), this study will evaluate mindfulness interventions applied to working women and identify research gaps that remain unaddressed in the current literature. The findings of this study are expected to provide significant scientific contributions and practical implications for developing more effective intervention programs to support the mental well-being of working women across various industrial sectors, particularly in countries with similar conditions.

METHOD

The literature review conducted in this study follows a systematic literature review (SLR) approach. The SLR process is divided into three main phases: planning, conducting, and reporting.

Phase 1 – Planning:

The researchers initiated the planning phase by formulating research questions and conducting a literature search and extraction using the PICOS analysis framework (Population, Intervention, Comparison, Outcome, and Study).

Table 1.
Article Selection Strategy Using PICOS

Criteria	Description
P (Patient, Population, or Problem)	Employed women
I (Intervention)	Meditation, MBSR courses, mindfulness training, and mindfulness interventions.
C (Comparison or Control)	Cognitive behavioral therapy (CBT), alternative interventions, control groups, no intervention, or stress management interventions
O (Outcome)	Levels of stress, anxiety, mental health, and burnout
S (Study design)	Observational, quasi-experimental, or randomized controlled trial (RCT) research

Phase 2 – Conducting:

This phase included the following steps: defining keywords based on the PICOS criteria, setting inclusion and exclusion criteria, conducting a literature search, screening, and analyzing data with the aid of Covidence as a systematic review management tool.

Table 2.
Inclusion and Exclusion Criteria

Inclusion Criteria
1. Studies discussing mindfulness interventions.
2. Populations consisting of working mothers or female workers in general.
3. Studies assessing the effectiveness of mindfulness on mental health (e.g., stress, anxiety, burnout, psychological well-being).
4. Quantitative studies (RCT, experimental studies, meta-analyses, longitudinal studies).
5. Qualitative studies (if providing in-depth insight into implementation challenges).
6. Studies from any country published in English.
7. Research conducted in the last five years (2020-2025).
Exclusion Criteria
Studies without empirical data (e.g., opinion pieces, editorials, or commentaries) and literature review papers were excluded.
Article Identification Flow:
1. Records identified from Scopus and Google Scholar: 2400
2. Records removed before screening: Duplicate articles (n = 621)
3. Records screened: 1779
4. Records excluded based on title and abstract: 1738
5. Full-text articles assessed: 41
6. Full-text articles excluded: Not mindfulness intervention (n = 6), not open access (n = 3), wrong population (n = 6), irrelevant outcomes (n = 6), incorrect study design (n = 6)
7. Studies included in the review: 14

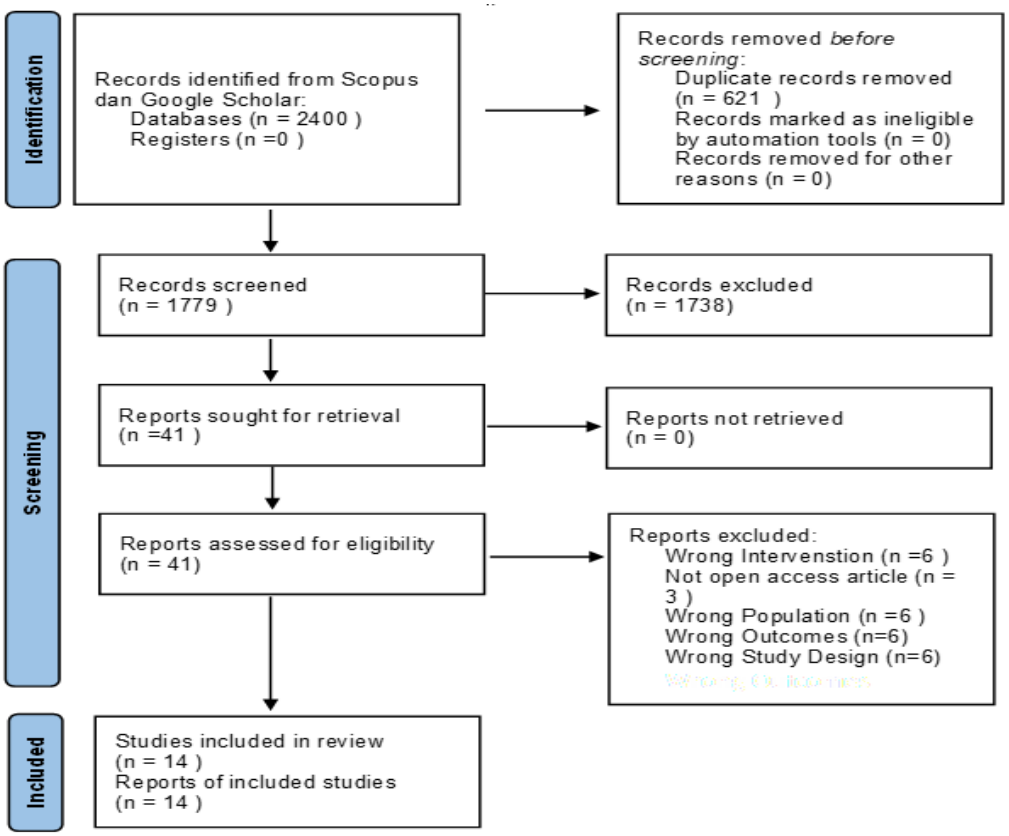

Figure 1
PRISMA Flow Diagram for Study Selection and Inclusion

Phase 3 – Reporting:

The reporting phase involved compiling and analyzing the findings to identify study characteristics and evaluate the effectiveness based on the research objectives. The synthesis was presented through a data extraction table and a table evaluating the effectiveness of mindfulness interventions (Table 4 and Table 5).

Data extraction illustrated study characteristics, while the effectiveness table assessed the level of effectiveness of each mindfulness intervention. The researchers used an evidence-based evaluation framework adapted from the Cochrane Handbook for Systematic Reviews, PRISMA guidelines, and psychological intervention methodology literature (Goldberg et al., 2022; Harbour et al., 2022; Higgins et al., 2020; Kuyken et al., 2022)

Table 3.
Criteria of Effectiveness Classification

Criteria	Effectiveness Classification
Study Design	Based on evidence hierarchy (Harbour & Miller, 2001): RCTs carry the highest weight, followed by pre-post with control, and pre-post without control.
Statistical Significance	Interventions are effective if they produce significant changes ($p < 0.05$) in primary outcomes.
Effect Size	According to Cohen's d classification (1988), $d \geq 0.5$ is medium and $d \geq 0.8$ is large.

Criteria	Effectiveness Classification
Effect Durability (Follow-up)	Effects lasting ≥1 month post-intervention are considered stronger.
Retention and Adherence	Low drop-out rates and high adherence support more reliable effectiveness.
Outcome Consistency	More effective if showing positive impacts across multiple domains (psychological, cognitive, relational).
Replication and External Validity	Interventions with consistent results in international literature (e.g., MBSR, MBCT) receive more substantial support for effectiveness.

RESULTS AND DISCUSSION

The study selection process began with identifying 2,400 articles from Scopus (n=1200) and Google Scholar (n=1200). After removing 621 duplicates, 1,779 articles remained. Screening of titles and abstracts led to excluding 1,738 articles due to irrelevance, lack of mindfulness interventions, or not focusing on working women. This result left 41 articles for full-text review. 27 of these were excluded due to the absence of mindfulness interventions (n = 6), restricted access (n = 3), irrelevant populations (n = 6), unsuitable outcomes (n = 6), non-eligible study designs (n = 6), and download issues (n = 3). Ultimately, 14 studies were included. Quality appraisal was conducted using the JADAD Score, JBI Checklist, and MMAT based on study design to ensure methodological rigor and minimize bias.

Table 4.
Synthesis Grid of Reviewed Studies

Country	Author (Year)	Research Design	Population	Sample Size	Participant Characteristics	Duration	Intervention Details
Germany	Nübold et al. (2020)	Cross-sectional + RCT	Leaders & followers	209 dyads (Study 1); 173 days (Study 2)	Leaders avg. 43.2 yrs, 30.1% female	10–20 min/day for 30 days	Headspace app;
	Althammer et al. (2021)	RCT + Diary (longitudinal)	Employees	190 (1,798 diary entries)	75% female		
Italy	Marotta et al. (2022)	Quasi-experimental	Health professionals	50 intervention; 28 control	Avg. 44.4 yrs, 84% female	8 weeks	MBSR; face-to-face;
	D'Antoni et al. (2022)	Quasi-longitudinal (no control)	Female teachers	66	Avg. 51.5 yrs, 100% female	8 weeks	MOM (hybrid);
	Fabbro et al. (2020)	Experimental with waitlist	Female teachers	39 (19 exp., 20 control)	All female	8 weeks	MOM; face-to-face + self-practice;
China	Lin et al. (2024)	Cross-sectional	Hospital nurses	303	22–55 yrs, 81.85% female	3-week online self-guided training	Trait mindfulness only
	Liu et al. (2022)	RCT	Hospital doctors	91 (46 intervention, 45 control)	Avg. 39.7 yrs, 59% female	8 weeks	Mindfulness meditation;
	Mäkinen et al. (2024)	Pre-post (no control)	ED nurses	128 registered; 49 active users	Majority <45 yrs, 84% female	6 weeks 6 classes	MBSR + MBCT + app;

Country	Author (Year)	Research Design	Population	Sample Size	Participant Characteristics	Duration	Intervention Details
Brazil	Gherardi-Donato et al. (2023)	Pre-post (uncontrolled)	Brazilian nurses	77 (44 completed)	Avg. 37.3 yrs, 93.2% female	8 weeks	Online MBSR;
Spain	Pérez et al. (2022)	RCT	Geriatric nurses	74 (39 exp., 35 control)	Avg. 37 yrs, 89.6% female	6 weeks	Online MBSR + MBCT;
Other	López-Castro et al. (2023)	RCT	University workers	30 (15 intervention, 15 control)	28–45 yrs, 73% female	8 weeks	Mindfulness program;
	Ducar et al. (2020)	One-arm pilot	EMT personnel	15 (11 completed)	Mostly male, 80%	8 weeks	MHP + retreat;
	Mohebi et al. (2021)	RCT with active control	Elite female athletes	40 (20 MAC, 20 control)	Avg. 22.2 yrs, all female	7 sessions + self-practice; 7 weeks	MAC intervention;
	Bowles et al. (2022)	Cross-sectional	Global meditators	1,668	Avg. 45.4 yrs, 69.9% female	lifetime practice	Trait mindfulness

A total of 14 articles were identified in this review, comprising a variety of research designs including randomized controlled trials (RCTs), quasi-experimental studies, pre-post studies, and cross-sectional surveys. These studies involved diverse professional populations such as nurses, doctors, teachers, university employees, and athletes. They utilized various mindfulness interventions in format, duration, and delivery medium. Most of the research articles come from China and Italy. The majority of studies (n=10) explicitly implemented structured mindfulness interventions such as Mindfulness-Based Stress Reduction (MBSR), Mindfulness-Oriented Meditation (MOM), and Mindfulness–Acceptance–Commitment (MAC). Intervention durations typically ranged from 6 to 8 weeks, with several studies including follow-ups extending up to 3 months post-intervention. Of the 10 experimental studies, nearly all reported significant reductions in negative psychological variables such as stress, burnout, depression, anxiety, and compassion fatigue. In addition, improvements were observed in mindfulness traits, self-compassion, resilience, and work-life balance. For example, a study by Gherardi-Donato et al. (2023) found a 41% reduction in stress and a 38% reduction in anxiety following an online MBSR program for Brazilian nurses (Teixeira et al., 2024). Similar findings were reported by (Pérez et al., 2022), who noted reductions in burnout and compassion fatigue among geriatric nurses following an online MBSR+MBCT intervention (Pérez et al., 2022).

Studies by Mäkinen et al. (2024) and Liu et al. (2022) demonstrated the impact of mindfulness on professional well-being and workplace safety culture among healthcare workers (Mäkinen et al., 2024). In Liu et al.'s (2022) study, adverse events dropped by 32% following an 8-week mindfulness meditation intervention. Likewise, Althammer et al. (2021) found that a 3-week self-guided mindfulness training improved psychological detachment and satisfaction with work-life balance, with more potent effects among participants who preferred integrated role boundaries (Althammer et al., 2021; Yang et al., 2023).

Additionally, observational studies such as those by Lin et al. (2024)and Bowles et al. (2022) highlighted the natural influence of trait mindfulness. Bowles' study showed a dose-response relationship between lifetime hours of meditation and psychological well-being, with a plateau effect after 500 hours of practice. Some studies also highlighted moderating variables such as

resilience level, as in (D'Antoni et al., 2022), where mindfulness had a greater effect on participants with low resilience. (Mohebi et al., 2021)added a sports context perspective, demonstrating that MAC training improved grit and self-compassion among elite female athletes (Bowles et al., 2022; D'Antoni et al., 2022; Mohebi et al., 2021)

In general, all studies supported the effectiveness of mindfulness interventions in enhancing indicators of mental health and psychological well-being across clinical, educational, and workplace contexts. The following section presents a comparative table summarizing the effectiveness assessment of different intervention types based on the effect sizes.

Table 5.
Items of the Multidimensional Lust Measurement Model

Author (Year)	Outcome	Effect Size (d)	Effectivity (≥0,5)
Nübold et al. (2019)	Authentic leadership	~0.50	Effective
Godara et al. (2024)	Anxiety	0.55–0.65	Effective
	Resilience	~0.50–0.60	Effective
	Depression	~0.40	Less effective
Matiz et al. (2020)	Depression	0.55–0.63	Effective
	Well-being	0.55–0.60	Effective
	Anxiety	~0.35–0.45	Less effective
	Empathy	<0.5	Less effective
Mäkinen et al. (2024)	Stress	0.55–0.70	Effective
	Burnout	~0.60	Effective
	Well-being	~0.50	Effective
Lin et al. (2024)	Work-life balance	– (R^2 ~0.30)	Not counted
Gherardi-Donato et al. (2023)	Stress	0.60–0.70	Effective
	Anxiety	0.65–0.80	Effective
	Depression	~0.50	Effective
	Mindfulness level	~0.55	Effective
Marotta et al. (2022)	Stress	0.55–0.60	Effective
	Burnout	0.60–0.65	Effective
	Well-being	~0.50	Effective (borderline)
	Fear of COVID	~0.45	Less effective
Pérez et al. (2022)	Compassion fatigue	~0.60	Effective
	Burnout	0.55–0.70	Effective
Liu et al. (2022)	Mindfulness level	0.60–0.70	Effective
	Patient safety culture	~0.65	Effective
	Safety competency	0.70–0.75	Effective
	Adverse events	~0.50	Effective
Bowles et al. (2022)	Well-being (≤500h practice)	0.55–0.60	Effective
Althammer et al. (2021)	Work-life balance	0.50–0.55	Effective
	Well-being	~0.40–0.45	Less effective

Effectiveness of Mindfulness in Enhancing Mental Health

This systematic review highlights the effectiveness of mindfulness interventions in improving working women's mental health by analyzing 14 studies published in reputable and well-indexed journals. Most of the reviewed studies demonstrated that mindfulness interventions consistently

led to significant reductions in stress, burnout, anxiety, and depression, along with improvements in psychological well-being, self-compassion, and mindfulness traits (Gherardi-Donato, Gimenez, et al., 2023; Mäkinen et al., 2024; Pérez et al., 2022). For instance, an eight-week online Mindfulness-Based Stress Reduction (MBSR) program for nurses in Brazil reported a 41% reduction in stress, 38% in anxiety, and 35% in depression (Gherardi-Donato, Díaz-Serrano, et al., 2023).
Structured protocol-based interventions such as MBSR and Mindfulness-Based Cognitive Therapy (MBCT) yielded more stable and consistent results than self-directed or trait-based mindfulness approaches. A randomized experimental study by Mohebi et al. (2021) applying the Mindfulness–Acceptance–Commitment (MAC) approach to elite female athletes showed significant increases in self-compassion and grit, with effects sustained four weeks post-intervention. It indicates that mindfulness is relevant in clinical and high-performance environments (Althammer et al., 2021; Mohebi et al., 2021)

Barriers and Challenges in Mindfulness Research

A literature analysis of 14 articles indicates that the significant barriers to mindfulness research are predominantly methodological (Table 6). 28.6% of studies (4 articles) relied on cross-sectional designs and self-report instruments, making them prone to perceptual and survivorship bias. The following most common barriers are the absence of control groups, short intervention duration, and limited generalizability of findings—each reported in 21.4% of the studies (3 articles). Similarly, high drop-out rates and low participant retention were also identified in 21.4% of the publications, highlighting difficulties in sustaining intervention participation. Additional barriers include administrative burdens and data collection challenges, such as diary completion, using hair samples (14.3% of studies), and limitations related to small sample sizes (7.1% of studies).
In terms of challenges, more diverse patterns emerge. Four categories of challenges were each reported by 14.3% of the studies, namely: difficulties in demonstrating the long-term effects of mindfulness interventions, the heterogeneity of interventions and practice goals, the limited generalizability of findings across organizational or sectoral contexts, and implementation issues such as integrating mindfulness programs into shift-based work schedules or adapting protocols for field settings. Less frequently reported challenges include the need for cross-cultural instrument validation (7.1%) and the difficulty of estimating retrospective practice hours (7.1%).

Overall, the findings suggest that methodological bias and the sustainability of interventions represent the most significant barriers, whereas the most frequently reported challenges concern long-term effectiveness, heterogeneity of interventions, generalizability, and practical integration into workplace systems. Therefore, future mindfulness research agendas should prioritize strengthening experimental designs, diversifying cultural and organizational contexts, and developing innovative retention strategies.

Table 6.
Summary of Barriers and Challenges in Mindfulness Research

No	Author (Year)	Barriers	Challenges
1	Bowles et al. (2022)	Cross-sectional design, self-report bias, survivorship bias, no causal control, dominance of high-income countries	Retrospective estimation of practice hours, variation in practice goals, measurement of practice quality, and selection bias in app users
2	Nübold et al. (2020)	Limited generalizability (Germany), short intervention duration, self-report, and no exploration of long-term effects	Potential self-report bias, mindfulness detached from an ethical context, and long-term effects remain unknown.

No	Author (Year)	Barriers	Challenges
3	Mäkinen et al. (2024)	No control group, voluntary participation, potential self-selection bias	Unable to distinguish intervention effects from time/context effects, limited generalizability to other hospitals
4	Marotta et al. (2022)	Not reported	Not reported
5	Lin et al. (2024)	Not an intervention study	Not an intervention study
6	Althammer et al. (2021)	High drop-out rate (51% in intervention group, 33% in control group)	Self-selection bias, burden of diary completion
7	Liu et al. (2022)	Homogeneous sample	Need to validate the instrument in the Chinese cultural context
8	Gherardi-Donato et al. (2023)	Drop-out rate of 30.8%	Integration with shift-work schedules
9	López-Castro et al. (2023)	Hair sample collection	Participant retention
10	Ducar et al. (2020)	Small sample size	Adaptation of the protocol for field workers
11	Pérez et al. (2022)	Limited generalizability to the public sector; heterogeneity of mindfulness interventions in the literature	Heterogeneity of intervention types; lack of independent replication; variation in organizational contexts
12	D'Antoni et al. (2022)	Not reported	Not reported
13	Fabbro, A. et al. (2020)	Not reported	Not reported
14	Mohebi et al. (2021)	Not reported	Not reported

Recommendations for Future Research on Mindfulness for Working Women

Although most studies reported positive results, methodological design and implementation context strongly influence mindfulness interventions. Some studies, such as that by Mäkinen et al. (2024), used pre-post designs without control groups, which hinders firm causal conclusions. Beyond the lack of control groups, several studies highlighted other methodological recommendations to strengthen causal inference and intervention effectiveness. These include the need for longitudinal designs with follow-up beyond three months, stronger institutional support to integrate mindfulness into workplace systems, and retention strategies such as booster sessions and app-based reminders to maintain engagement. Such approaches would help to address attrition bias and ensure that intervention benefits are sustained over time.

Additionally, the success of programs depends on the intensity and engagement of participants. In Mäkinen's study, only 38% of participants were classified as "active users" of the mindfulness app; low engagement was attributed to heavy workloads and shift schedules in healthcare settings, limited interactivity of the self-guided app compared to facilitator-led sessions, and challenges in maintaining intrinsic motivation for regular mindfulness practice. These findings emphasize the importance of designing flexible, interactive, and context-sensitive delivery models to enhance participant adherence, and significant changes were found only in this subgroup (Mäkinen et al., 2024).

Recurring implementation challenges include logistical and participation barriers. Busy work schedules, particularly in healthcare and education, hinder the consistent integration of mindfulness practices (Althammer et al., 2021; Gherardi-Donato, Gimenez, et al., 2023). High drop-out rates—such as 30% reported in Gherardi-Donato et al. (2023)—further indicate that intervention sustainability remains a significant obstacle. Moreover, many studies show that voluntary participation can lead to self-selection bias, where only those already interested in or aware of mindfulness are likely to join (Mäkinen et al., 2024; Paruzel-Czachura & Kocur, 2023).

In this context, future research should develop adaptive intervention models that reflect the realities of working women. These should include flexible schedules (asynchronous delivery), technology integration (e.g., mobile apps), and structural support from employers. Long-term evaluations (follow-up ≥ 3 months) should also become standard, as most current studies assess outcomes only immediately post-intervention. Additionally, cultural validation and content customization for specific female populations across occupational sectors are critical to ensuring the generalizability of results (Chen et al., 2021; Lopez et al., 2023). Overall, mindfulness interventions show strong potential as promotive and preventive strategies for supporting the mental health of working women. However, to ensure sustainable and inclusive effectiveness, rigorous methodology, contextual adaptation, and robust retention strategies are essential (Marotta et al., 2022).

Legal Development of Mindfulness

This study affirms the importance of integrating mindfulness into labor policies as mental health protection for working mothers. A normative approach supports recognizing mental health rights as part of workers' rights (International Lapor Organization, 2023). Practically, regulations are needed to mandate mental health programs in the workplace, in line with revisions to Law No. 13 of 2003 through Law No. 6 of 2023, which established Government Regulation in Lieu of Law No. 2 of 2022 and repealed Law No. 11 of 2020 (Adiratna et al., 2022). This regulation provides for psychosocial facilities for female workers. Conceptually, this study supports a progressive legal approach based on human-centered regulation to ensure justice and non-discriminatory protection in the workplace. These findings could encourage the drafting of bills or special regulations requiring mindfulness training, psychological counseling, and mental recovery time in companies with a significant number of female workers (United Nations Economic and Social Commission for Asia and The Pacific, 2025).

Contributions to Public Health and Gender Equity

This systematic literature review provides important implications not only for occupational psychology but also for public health. It helps identify which mindfulness interventions are most effective for improving working women's mental health and the barriers and challenges reported in previous studies, thus serving as a reference for formulating more precise future research agendas. Ultimately, this supports the development of impactful mindfulness interventions that can strengthen the psychological capacity of working women (Mahmoudi et al., 2024).

By enhancing psychological capacity, mindfulness interventions can reduce psychosocial burdens and mental health costs in the workforce. This result aligns with the Sustainable Development Goals (SDGs) 3 and 5: improving mental health and promoting gender equality in the workplace (Greeson et al., 2024).

CONCLUSION

This systematic review confirms that mindfulness interventions are significantly effective in improving the mental health of working women, particularly in reducing stress, burnout, and anxiety, and enhancing psychological well-being and self-compassion. The most effective interventions identified were structured, protocol-based approaches such as MBSR and Mindfulness-Based Cognitive Therapy (MBCT).

The implementation challenges identified include time constraints, logistical barriers, low participant retention, and methodological limitations such as a lack of control groups and participant selection bias. Based on these findings, future research should prioritize flexible, culturally contextualized, and workplace-specific interventions, supported by long-term evaluations.

This study thus provides a significant scientific contribution by expanding the understanding of mindfulness effectiveness and laying the groundwork for more adaptive and broadly impactful interventions to support the mental well-being of working women across sectors and cultures.

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