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Effectiveness of acupressure on sleep disturbance in patients with breast cancer: A mini review of randomized controlled trials

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Abstract:
Sleep disturbance is one of the most persistent and distressing symptoms in patients with breast cancer, yet safe non-pharmacological options remain underused. This mini review synthesized randomized controlled trials (RCTs) on the effectiveness and safety of acupressure for sleep disturbance in this population. PubMed, the Cochrane Library, ScienceDirect, and Google Scholar were searched for English-language RCTs published between January 2015 and August 2025 that tested body acupressure, self-acupressure, or auricular acupressure, alone or combined with acupuncture, in women with breast cancer. Of 4,567 records identified, eight RCTs (759 participants) from the United States, mainland China, Hong Kong, South Korea, and Iran were included and synthesized narratively. Seven trials reported better subjective sleep quality or lower insomnia severity in the acupressure group than in the control group, with the most consistent benefits for auricular point acupressure and relaxing self-acupressure. Objective sleep parameters improved in two of four trials using actigraphy or wearable devices, and the only large sham-controlled trial found no between-group difference in its primary insomnia outcome. Adverse events were mild and transient. Acupressure appears to be a safe, low-cost, and feasible adjunct for improving perceived sleep quality in women with breast cancer, although larger sham-controlled trials are needed.

Keywords:
acupressure; auricular acupressure; breast neoplasms; insomnia; sleep quality

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INTRODUCTION

Breast cancer is the most frequently diagnosed cancer among women worldwide, with approximately 2.3 million new cases and 666,000 deaths estimated in 2022 (Bray et al., 2024). Improvements in early detection and multimodal treatment mean that a growing number of women now live for many years after diagnosis. For these women, the quality of survival matters as much as its length, and symptoms that persist during and after treatment have become a central concern of oncology nursing and midwifery care.

Sleep disturbance is among the most common and enduring of these symptoms. Insomnia comorbid with cancer frequently begins around diagnosis and active treatment and, in a substantial proportion of patients, persists for many months rather than resolving spontaneously (Savard et al., 2011). Chemotherapy, corticosteroids used as premedication, treatment-induced menopause

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and hot flashes, pain, and the psychological burden of the diagnosis all contribute to difficulty initiating and maintaining sleep (Garland et al., 2017; Zhang et al., 2021). In women receiving chemotherapy, sleep disturbance clusters with cancer-related fatigue, and the two symptoms tend to reinforce each other over successive treatment cycles (Fox et al., 2020). Poor sleep is also closely associated with anxiety and depression among breast cancer survivors (Cho & Hwang, 2021), and chronic sleep loss disturbs inflammatory and immune regulation, which may in turn affect long-term health (Irwin, 2015).

Despite this burden, sleep problems are often under-recognized in routine cancer care. Hypnotic medications offer short-term relief but carry risks of daytime sedation, dependence, falls, and interactions with anticancer drugs. Cognitive behavioral therapy for insomnia is effective, but it requires trained therapists and several structured sessions, which limits access in many settings (Garland et al., 2019). Consequently, there is a clear need for simple, safe, and inexpensive interventions that nurses and midwives can teach and that patients can continue at home.

Acupressure is one such option. Derived from traditional East Asian medicine, it applies manual pressure, rather than needles, to specific acupoints on the body or the ear (Mehta et al., 2017). Body acupressure can be delivered by a practitioner or self-administered after brief training, whereas auricular acupressure uses seeds or small magnetic pellets taped to ear points that patients press several times a day. Earlier work in general populations has suggested that acupressure may improve insomnia, although trial quality was variable (Yeung et al., 2012). In oncology, integrative practice guidelines recognize acupressure as a low-risk complementary approach for symptom management (Greenlee et al., 2017).

Several reviews have examined related questions. Wang et al. (2021) pooled trials of auricular acupressure across cancer types, and two recent meta-analyses focused specifically on auricular acupressure in breast cancer (Huang et al., 2025; Xin et al., 2024). These reviews reported favorable effects on subjective sleep quality but were dominated by small Chinese-language trials in which auricular acupressure was combined with herbal medicine, hypnotics, or nursing care, making it difficult to isolate its specific contribution. They also did not consider body or self-administered acupressure, which is arguably the most transferable form for nurse-led programs. A concise, clinically oriented synthesis that brings together different acupressure modalities, distinguishes subjective from objective sleep outcomes, and summarizes safety is therefore still lacking.

An important distinction in evaluating acupressure is whether improvements extend beyond patients' perceptions of sleep. Patient-reported measures capture the experience of insomnia and its impact on daily functioning, whereas objective measures, such as actigraphy or polysomnography, assess different aspects of sleep patterns. These outcomes may not change in parallel, and improvements in subjective sleep quality do not necessarily indicate changes in sleep architecture. Comparisons with sham procedures are also important because attention, therapeutic interaction, and expectations may contribute to observed benefits. Considering these differences can help determine the clinical relevance of reported effects and avoid overstating the effectiveness of acupressure.

The potential value of acupressure also depends on its feasibility and safety in routine supportive cancer care. Self-administered techniques may reduce reliance on specialist-delivered treatment and allow patients to incorporate symptom management into daily routines. However,

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differences in treatment protocols, adherence, intervention duration, and patient characteristics may influence outcomes. Safety also requires consideration of treatment-related complications, including skin sensitivity and thrombocytopenia. A synthesis that examines effectiveness alongside tolerability, delivery methods, and methodological limitations can therefore provide more practical guidance for nurses and midwives considering acupressure as a complementary option for sleep disturbance in women with breast cancer. This mini review aimed to synthesize evidence from randomized controlled trials on the effectiveness and safety of acupressure-based interventions for sleep disturbance in patients with breast cancer, and to identify implications for nursing and midwifery practice and for future research.

METHODS

This study was a mini review of randomized controlled trials (RCTs) conducted as a narrative synthesis. Reporting followed the applicable items of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 statement (Page et al., 2021). Eligibility was defined using the PICOS framework. Participants were adult women with breast cancer at any stage of treatment or survivorship. Interventions were acupressure-based, including body acupressure delivered by a practitioner, self-administered acupressure, and auricular (ear) point acupressure, used alone or combined with acupuncture. Comparators included usual care, sham acupressure, wait-list control, health or sleep hygiene education, or another active intervention. Studies had to report at least one sleep outcome, such as the Pittsburgh Sleep Quality Index (PSQI), the Insomnia Severity Index (ISI), actigraphy or wearable-device sleep parameters, sleep diaries, or a symptom-cluster score with a sleep component. Only RCTs published in English in peer-reviewed journals between January 2015 and August 2025 with available full text were included. Studies of other populations (for example, ovarian cancer or postpartum women), acupuncture without an acupressure component, study protocols, conference abstracts, and reviews were excluded.

PubMed, the Cochrane Library, ScienceDirect (Elsevier), and Google Scholar were searched. The core search string was: ("acupressure" OR "auricular acupressure" OR "auricular point acupressure" OR "self-acupressure" OR "acupoint") AND ("sleep" OR "insomnia" OR "sleep quality" OR "sleep disturbance") AND ("breast cancer" OR "breast neoplasms"), adapted to the syntax of each database. The reference lists of relevant reviews (Huang et al., 2025; Wang et al., 2021; Xin et al., 2024) were also hand-searched. After duplicate removal, titles and abstracts were screened against the eligibility criteria, followed by full-text assessment. Two reviewers independently performed screening, and disagreements were resolved through discussion. Data were extracted using a standardized form covering author and year, country, participants, design, intervention protocol, comparator, sleep outcome measures, main findings, and adverse events.

Features relevant to risk of bias were appraised with reference to the domains of the Cochrane Risk of Bias 2 (RoB 2) tool, namely randomization, deviations from intended interventions, missing outcome data, outcome measurement, and selective reporting (Sterne et al., 2019). Attention was paid to the type of comparator, blinding, sample size, attrition, and the use of objective sleep measures. Because interventions, comparators, and outcome measures differed

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substantially across trials, a meta-analysis was deemed inappropriate. Findings were therefore synthesized narratively and grouped by acupressure modality.

RESULTS

The database searches identified 4,567 records (PubMed, n = 13; Cochrane Library, n = 11; ScienceDirect, n = 3; Google Scholar, n = 4,540). After removing duplicates and screening titles, abstracts, and full texts, eight RCTs met the eligibility criteria (Table 1). The trials were published between 2016 and 2023 and were conducted in the United States (n = 2), mainland China (n = 2), Hong Kong (n = 2), South Korea (n = 1), and Iran (n = 1). In total, 759 participants were randomized, with sample sizes ranging from 30 to 288.

Three trials tested auricular point acupressure alone (Wang et al., 2022; Yeh et al., 2016; Yoon & Park, 2019), three tested body or self-administered acupressure (Li et al., 2023; Nourizadeh et al., 2022; Zick et al., 2016), and two tested electroacupunctures combined with auricular acupressure (Zhang et al., 2021, 2023). Four trials used a sham comparator, while the others used usual care, a waitlist, sleep hygiene education, or aerobic exercise. Intervention periods ranged from 3 to 18 weeks. The PSQI was the most frequently used outcome (six trials), and four trials also used actigraphy or a wearable device to measure sleep objectively.

Table 1. Characteristics of the included randomized controlled trials (n = 8)

No	Author (Year)	Country	Participants	Study Design	Intervention vs Comparator	Instrument	Main Findings
1	Yeh et al. (2016)	United States	31 women with breast cancer reporting pain, fatigue, and disturbed sleep	Pilot RCT, sham-controlled	Auricular point acupressure (APA), weekly sessions for 4 weeks vs sham APA	Self-reported symptom ratings	Sleep disturbance decreased by about 31% in the APA group, more than in the sham group; retention 88% vs 73%.
2	Zick et al. (2016)	United States	288 breast cancer survivors (stage 0–III) with persistent fatigue	Phase III, single-blind, three-arm RCT	Daily self-administered relaxing or stimulating acupressure for 6 weeks vs usual care	PSQI; Brief Fatigue Inventory	Relaxing acupressure improved PSQI vs usual care at week 6 but not at week 10; stimulating acupressure had no significant sleep effect.
3	Yoon & Park (2019)	South Korea	46 women with stage I–III breast cancer receiving chemotherapy (ISI ≥ 8)	Single-blind, sham-controlled RCT	Auricular acupressure (Shenmen, heart, anterior lobe, occiput), 1 min daily, 6 days/week for 6 weeks vs sham helix points	PSQI; Fitbit; IL-6, TNF-α, cortisol, CRP	Subjective sleep quality improved; no between-group difference in Fitbit sleep parameters; IL-6 and TNF-α differed between groups.

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No	Author (Year)	Country	Participants	Study Design	Intervention vs Comparator	Instrument	Main Findings
4	Zhang et al. (2021)	Hong Kong	30 women with chemotherapy-associated insomnia	Pilot RCT, assessor-blinded, wait-list controlled	Electroacupuncture plus auricular acupressure, twice weekly for 6 weeks vs wait-list with routine care	ISI; PSQI; sleep diary; actigraphy; HADS; FACT-B	ISI reduced by 2.9 points more than control ($p = .014$); PSQI ($p = .012$), diary total sleep time, depression, and quality of life improved; actigraphy unchanged.
5	Nourizadeh et al. (2022)	Iran	99 breast cancer survivors with sleep disorders	Three-arm RCT	Self-acupressure (3 days/week) or aerobic exercise (3 times/week) for 8 weeks vs routine care	PSQI	Both acupressure and exercise reduced PSQI scores compared with routine care; no significant difference between acupressure and exercise.
6	Wang et al. (2022)	China	76 women receiving chemotherapy with PSQI > 7 (68 analysed)	RCT, three hospitals	Adaptive APA with magnetic pellets, 3 min four times daily for 3 weeks plus sleep hygiene education vs education alone	PSQI; Actiwatch; FACT-B	Lower PSQI (7.59 vs 9.91; $p < .001$), shorter sleep onset latency, higher sleep efficiency (85.4% vs 78.8%), and longer total sleep time.
7	Li et al. (2023)	China	51 breast cancer survivors with the fatigue–sleep disturbance–depression cluster	Phase II, three-arm RCT	Daily self-administered true somatic acupressure vs sham acupressure for 7 weeks vs usual care	Symptom-cluster scores (fatigue, sleep, depression)	Significant group-by-time effects on the symptom cluster and depression; no adverse events; adherence needed improvement.
8	Zhang et al. (2023)	Hong Kong	138 women with chemotherapy-associated insomnia	Assessor- and participant-blinded, sham-controlled RCT	Electroacupuncture plus auricular acupressure, 15 sessions over 18 weeks vs sham electroacupuncture plus sham auricular pressure	ISI; PSQI; Actiwatch; sleep diary; HADS; FACT-B	No between-group difference in ISI at week 6 (MD −0.4; $p = .609$) or PSQI; better sleep onset latency, total sleep time, sleep efficiency, anxiety, and quality of life; hypnotic cessation 56.5% vs 14.3%.

Note: APA = auricular point acupressure; CRP = C-reactive protein; FACT-B = Functional Assessment of Cancer Therapy–Breast; HADS = Hospital Anxiety and Depression Scale; IL-6 = interleukin-6; ISI = Insomnia Severity Index; MD = mean difference; PSQI = Pittsburgh Sleep Quality Index; RCT = randomized controlled trial; TNF-α = tumor necrosis factor-alpha.

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All three trials of auricular point acupressure reported improvements in subjective sleep. In the largest of these, adaptive auricular acupressure combined with sleep hygiene education produced lower PSQI scores than education alone, together with shorter sleep onset latency, higher sleep efficiency, and longer total sleep time on actigraphy (Wang et al., 2022). Yoon and Park (2019) found that 6 weeks of auricular acupressure during chemotherapy improved perceived sleep quality compared with sham pressure, but no differences were detected in sleep parameters recorded by a wrist-worn device. The pilot trial by Yeh et al. (2016) showed a 31% reduction in sleep disturbance, which was larger than the change in the sham group.

In the largest trial in this review, relaxing self-acupressure, practiced daily for 6 weeks, improved PSQI scores compared with usual care, whereas stimulating self-acupressure did not; the sleep benefit was no longer significant 4 weeks after the intervention ended (Zick et al., 2016). Nourizadeh et al. (2022) reported that self-acupressure and aerobic exercise reduced sleep disturbance to a similar extent, and both were superior to routine care. Li et al. (2023) showed that daily somatic self-acupressure produced significant improvements in the fatigue–sleep disturbance–depression symptom cluster compared with sham and usual care.

Findings for the combined approach differed by comparator. Against a wait-list, the combination reduced insomnia severity and PSQI scores and improved depression and quality of life (Zhang et al., 2021). In the larger sham-controlled trial, insomnia severity and PSQI scores improved markedly in both groups, with no significant between-group difference in the primary outcome. However, the active group showed greater improvements in objectively measured sleep onset latency and in diary-based total sleep time and sleep efficiency, and more participants were able to stop sleeping medication (Zhang et al., 2023). Table 2 summarizes the evidence by modality.

Table 2. Summary of sleep outcomes and safety by acupressure modality

Modality	Trials	N	Typical protocol	Subjective sleep outcomes	Objective sleep outcomes	Reported adverse events
Auricular point acupressure alone	Yeh et al. (2016); Yoon & Park (2019); Wang et al. (2022)	153	Seeds or magnetic pellets on 3–7 ear points (commonly Shenmen and Heart), pressed 1–3 min up to four times daily for 3–6 weeks	Improved in 3 of 3 trials	Improved in 1 of 2 trials (actigraphy yes; Fitbit no)	Ear pressure ulcers, local pain, mild nausea; all transient
Body or self-administered acupressure	Zick et al. (2016); Nourizadeh et al. (2022); Li et al. (2023)	438	Self-administered after training, daily or three times weekly for 6–8 weeks; relaxing acupoints	Improved in 3 of 3 trials; effect faded after stopping in one trial	Not assessed	Bruising at acupoints (one withdrawal)
Electroacupuncture plus auricular acupressure	Zhang et al. (2021, 2023)	168	Twice weekly sessions for 6 weeks (with maintenance to 18 weeks in one trial); ear points pressed between sessions	Improved vs wait-list; no difference vs sham	Improved in 1 of 2 trials (sleep onset latency)	Bruising, auricular skin allergy, mild needle pain

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No serious treatment-related adverse events were reported. Minor events included bruising at acupoints, auricular skin irritation or allergy, small ear pressure ulcers that healed within 5 days, transient local pain, and mild nausea (Wang et al., 2022; Zhang et al., 2021, 2023; Zick et al., 2016). Retention was generally acceptable, although adherence to home self-pressing was rarely systematically monitored and identified as an area for improvement (Li et al., 2023).

DISCUSSION

This mini review found that acupressure-based interventions generally improve perceived sleep quality in women with breast cancer. Seven of the eight trials reported a favorable effect on at least one subjective sleep outcome, and the interventions were consistently well tolerated. The evidence is less consistent for objective sleep measures and, in comparison, with sham procedures. Taken together, the findings suggest that acupressure is a promising, low-risk supportive intervention, but that part of its benefit may come from non-specific effects such as attention, expectation, and relaxation.

The results for auricular point acupressure agree with recent meta-analyses. Wang et al. (2021) reported a mean PSQI reduction of almost four points across cancer populations, and two later meta-analyses restricted to breast cancer reached similar conclusions, with Huang et al. (2025) estimating a mean difference of about −3.4 points across 15 trials and rating the evidence as moderate; Xin et al. (2024) reached a comparable conclusion. Our review also finds this direction of effect in English-language trials with clearer control conditions, rather than only in trials where auricular acupressure was administered alongside herbal medicine or hypnotics. At the same time, the divergent findings of Wang et al. (2022) and Yoon and Park (2019) show that improvements in patients' perceived sleep do not always translate into measurable changes in sleep architecture. Differences in device type, treatment duration, and baseline severity probably explain part of this discrepancy, but the possibility that acupressure acts mainly on the subjective experience of sleep should be acknowledged.

The sham-controlled trial by Zhang et al. (2023) is the most rigorous study in this review and deserves particular attention. Both groups improved substantially, so the primary comparison was not significant. Strong sham responses are common in acupuncture and acupressure research because sham procedures still involve touch, attention, and a structured self-care ritual. Even so, the active group showed a shorter objective sleep-onset latency and a much higher rate of hypnotic cessation. For clinical practice, a safe intervention that helps patients sleep better and reduce reliance on hypnotics may be valuable even when its specific effect over sham is modest. Similar comparative evidence exists for needle-based stimulation: electroacupuncture was more effective than gabapentin for sleep in survivors with hot flashes (Garland et al., 2017) and produced meaningful improvements in insomnia, although cognitive behavioral therapy remained more effective overall (Garland et al., 2019).

Self-administered acupressure is particularly relevant to nursing and midwifery practice. Zick et al. (2016) showed that relaxing acupressure improved sleep whereas stimulating acupressure did not, suggesting that point selection matters and that protocols should be chosen to match the target symptom. The loss of benefit after the intervention ended also implies that acupressure should be

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viewed as a continuing self-care skill rather than a short course of treatment. Comparable improvements to aerobic exercise (Nourizadeh et al., 2022) offer an alternative for women who are too fatigued, in pain, or limited by lymphoedema to exercise. Evidence from other cancer populations supports this approach: self-acupressure eased the insomnia–depression–anxiety cluster in patients undergoing chemotherapy (Hoang et al., 2022) and combining acupressure with mindfulness-based stress reduction improved sleep quality in breast cancer patients with insomnia (Liu et al., 2022).

Effective self-care depends on good teaching. Structured nursing education has been shown to reduce anxiety in patients starting chemotherapy (Azkiya et al., 2024), and the same educational role can be used to teach acupoint location, pressure technique, frequency, and safety checks. Simple teaching materials, return demonstrations, and short follow-up calls or digital reminders may improve adherence, which was weak or unmeasured in several trials (Li et al., 2023; Wang et al., 2022). Because acupressure requires no special equipment beyond inexpensive seeds or pellets, it is well suited to resource-limited settings such as many hospitals and community health services in Indonesia.

Several mechanisms may explain the observed effects. Stimulation of acupoints and auricular areas innervated by vagus nerve branches may shift autonomic balance towards parasympathetic activity, thereby reducing pre-sleep arousal. Acupuncture has been reported to increase nocturnal melatonin secretion and reduce anxiety in people with insomnia (Spence et al., 2004). Yoon and Park (2019) observed differences in IL-6 and TNF-α between groups, which is consistent with the close two-way relationship between sleep and inflammation (Irwin, 2015). In addition, the improvements in fatigue, depression, and anxiety seen in several trials (Li et al., 2023; Zhang et al., 2021, 2023; Zick et al., 2016) indicate that acupressure may act on a cluster of related symptoms rather than on sleep alone, which fits the known co-occurrence of these symptoms in breast cancer (Cho & Hwang, 2021; Fox et al., 2020).

Safety findings were reassuring. Reported adverse events were minor and resolved quickly; only one participant across all trials withdrew due to an adverse event. Nevertheless, practical precautions are needed. Patients receiving chemotherapy may have thrombocytopenia or fragile skin, which increases the risk of bruising and pressure injuries. Ear pellets should be checked regularly and removed if irritation develops. Pressure on the arm affected by lymph node dissection should be applied with caution. Within these limits, acupressure fits the integrative oncology principle of using low-risk complementary therapies alongside, not instead of, standard care (Greenlee et al., 2017).

These findings have direct implications for practice. Sleep should be assessed routinely with brief validated tools such as the PSQI or ISI at diagnosis, during treatment, and in survivorship, because insomnia often becomes persistent if left untreated (Savard et al., 2011). For women with mild to moderate sleep disturbance, nurses and midwives can offer acupressure as part of a stepped-care package that also includes sleep hygiene education, physical activity, and referral for cognitive behavioral therapy for insomnia when needed. Patients should be informed that benefits are most likely for perceived sleep quality and that regular practice is required to maintain them.

Another consideration is the need to individualize acupressure according to patients' symptoms, treatment stage, and physical condition. Sleep disturbance in breast cancer may be

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influenced by pain, hot flashes, anxiety, treatment-related fatigue, and medication use. Acupressure may therefore be most useful when incorporated into an individualized supportive care plan rather than delivered as a stand-alone intervention. Nurses can assess contributing symptoms, teach appropriate techniques, monitor tolerance, and evaluate changes in sleep quality during follow-up. Patients with persistent insomnia or substantial daytime impairment should receive further assessment and referral for evidence-based treatment. This approach positions acupressure as an accessible complementary option while maintaining the priority of identifying and managing underlying causes of sleep disturbance.

The evidence base has several limitations. Most trials were small pilot or phase II studies, and only one large trial used a double sham control with blinding of both participants and assessors. Acupoint prescriptions, pressure dose, and intervention length varied widely, and few trials followed participants after the intervention ended. Most studies were conducted in East Asia, which may limit transferability to other cultural settings. This review also has limitations. It included only English-language publications, which may have excluded relevant Chinese- and Korean-language trials, and the heterogeneity of interventions precluded meta-analysis. The large volume of Google Scholar results may have been screened less exhaustively than the specialist databases, and publication bias cannot be excluded.

Interpretation of the current evidence should also account for differences in intervention fidelity and outcome measurement. Variations in acupoint selection, pressure intensity, treatment frequency, adherence, and comparator conditions make it difficult to determine which components contribute most to improvement. Future trials should report these elements transparently and distinguish the effects of auricular acupressure from those of body acupressure. Measuring adherence alongside validated patient-reported outcomes and objective sleep indicators would help clarify whether improvements reflect sustained changes in sleep or short-term perceived benefits. Such methodological consistency would strengthen comparisons across studies and support the development of reproducible protocols for clinical practice.

Future studies should use adequately powered, sham-controlled designs with blinded outcome assessment, standardized and well-reported acupoint protocols, and both subjective and objective sleep measures. Longer follow-up is needed to determine whether benefits persist and how much ongoing practice is required. Trials in Southeast Asian populations, including Indonesia, and studies of nurse- or midwife-led delivery models, cost-effectiveness, and patient experience would help translate this evidence into routine care.

CONCLUSION

Acupressure, including auricular point acupressure, self-administered body acupressure, and auricular acupressure combined with electroacupuncture, can improve perceived sleep quality and reduce insomnia severity in women with breast cancer, with only mild and transient adverse events. Its effects on objective sleep parameters and its specific benefit over sham procedures remain uncertain. Acupressure can therefore be recommended as a safe, low-cost, nurse- or midwife-taught adjunct to standard sleep care for women with breast cancer, while larger, rigorously blinded trials are conducted.

REFERENCES

Azkiya, M. W., Ardiana, A., & Afandi, A. T. (2024). Pengaruh edukasi terhadap kecemasan pasien kanker kolorektal pada kemoterapi pertama kali: Studi kasus. *Jurnal Keperawatan Profesional (KEPO), 5*(1), 122–129. https://doi.org/10.36590/kepo.v5i1.934

Bray, F., Laversanne, M., Sung, H., Ferlay, J., Siegel, R. L., Soerjomataram, I., & Jemal, A. (2024). Global cancer statistics 2022: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: A Cancer Journal for Clinicians, 74*(3), 229–263. https://doi.org/10.3322/caac.21834

Cho, O. H., & Hwang, K. H. (2021). Association between sleep quality, anxiety and depression among Korean breast cancer survivors. *Nursing Open, 8*(3), 1030–1037. https://doi.org/10.1002/nop2.710

Fox, R. S., Ancoli-Israel, S., Roesch, S. C., Merz, E. L., Mills, S. D., Wells, K. J., Sadler, G. R., & Malcarne, V. L. (2020). Sleep disturbance and cancer-related fatigue symptom cluster in breast cancer patients undergoing chemotherapy. *Supportive Care in Cancer, 28*(2), 845–855. https://doi.org/10.1007/s00520-019-04834-w

Garland, S. N., Xie, S. X., DuHamel, K., Bao, T., Li, Q., Barg, F. K., Song, S., Kantoff, P., Gehrman, P., & Mao, J. J. (2019). Acupuncture versus cognitive behavioral therapy for insomnia in cancer survivors: A randomized clinical trial. *Journal of the National Cancer Institute, 111*(12), 1323–1331. https://doi.org/10.1093/jnci/djz050

Garland, S. N., Xie, S. X., Li, Q., Seluzicki, C., Basal, C., & Mao, J. J. (2017). Comparative effectiveness of electro-acupuncture versus gabapentin for sleep disturbances in breast cancer survivors with hot flashes: A randomized trial. *Menopause, 24*(5), 517–523. https://doi.org/10.1097/GME.0000000000000779

Greenlee, H., DuPont-Reyes, M. J., Balneaves, L. G., Carlson, L. E., Cohen, M. R., Deng, G., Johnson, J. A., Mumber, M., Seely, D., Zick, S. M., Boyce, L. M., & Tripathy, D. (2017). Clinical practice guidelines on the evidence-based use of integrative therapies during and after breast cancer treatment. *CA: A Cancer Journal for Clinicians, 67*(3), 194–232. https://doi.org/10.3322/caac.21397

Hoang, H. T. X., Molassiotis, A., Chan, C. W., Vu, A. H., & Bui, P. T. (2022). Pilot randomized sham-controlled trial of self-acupressure to manage the symptom cluster of insomnia, depression, and anxiety in cancer patients undergoing chemotherapy. *Sleep and Breathing, 26*(1), 445–456. https://doi.org/10.1007/s11325-021-02370-8

Huang, X.-R., Xu, M., Xu, Y., Wang, S.-J., & Ni, F.-L. (2025). Auricular acupressure for insomnia in women with breast cancer: A systematic review and meta-analysis of randomized controlled trials. *Medicine, 104*(7), e41498. https://doi.org/10.1097/MD.0000000000041498

Irwin, M. R. (2015). Why sleep is important for health: A psychoneuroimmunology perspective. *Annual Review of Psychology, 66*, 143–172. https://doi.org/10.1146/annurev-psych-010213-115205

Li, M.-Y., Kwok, S. W. H., Tan, J.-Y., Bressington, D., Liu, X.-L., Wang, T., & Chen, S.-L. (2023). Somatic acupressure for the fatigue-sleep disturbance-depression symptom cluster in breast cancer survivors: A phase II randomized controlled trial. *European Journal of Oncology Nursing, 66*, 102380. https://doi.org/10.1016/j.ejon.2023.102380

Liu, Q., Wang, C., Wang, Y., Xu, W., Zhan, C., Wu, J., & Hu, R. (2022). Mindfulness-based stress reduction with acupressure for sleep quality in breast cancer patients with insomnia undergoing chemotherapy: A randomized controlled trial. *European Journal of Oncology Nursing, 61*, 102219. https://doi.org/10.1016/j.ejon.2022.102219

Mehta, P., Dhapte, V., Kadam, S., & Dhapte, V. (2017). Contemporary acupressure therapy: Adroit cure for painless recovery of therapeutic ailments. *Journal of Traditional and Complementary Medicine, 7*(2), 251–263. https://doi.org/10.1016/j.jtcme.2016.06.004

Nourizadeh, R., Khanipour, S., Zamiri, R. E., Mehrnoush, V., Shekari, M., & Hakimi, S. (2022). A comparison of the effects of self-acupressure and aerobic exercises on sleep disorders of breast cancer survivors: A controlled randomized clinical trial. *Medical Acupuncture, 34*(2), 131–136. https://doi.org/10.1089/acu.2020.1515

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ, 372*, n71. https://doi.org/10.1136/bmj.n71

Savard, J., Ivers, H., Villa, J., Caplette-Gingras, A., & Morin, C. M. (2011). Natural course of insomnia comorbid with cancer: An 18-month longitudinal study. *Journal of Clinical Oncology, 29*(26), 3580–3586. https://doi.org/10.1200/JCO.2010.33.2247

Spence, D. W., Kayumov, L., Chen, A., Lowe, A., Jain, U., Katzman, M. A., Shen, J., Perelman, B., & Shapiro, C. M. (2004). Acupuncture increases nocturnal melatonin secretion and reduces insomnia and anxiety: A preliminary report. *The Journal of Neuropsychiatry and Clinical Neurosciences, 16*(1), 19–28. https://doi.org/10.1176/jnp.16.1.19

Sterne, J. A. C., Savović, J., Page, M. J., Elbers, R. G., Blencowe, N. S., Boutron, I., Cates, C. J., Cheng, H.-Y., Corbett, M. S., Eldridge, S. M., Emberson, J. R., Hernán, M. A., Hopewell, S., Hróbjartsson, A., Junqueira, D. R., Jüni, P., Kirkham, J. J., Lasserson, T., Li, T., … Higgins, J. P. T. (2019). RoB 2: A revised tool for assessing risk of bias in randomised trials. *BMJ, 366*, l4898. https://doi.org/10.1136/bmj.l4898

Wang, Y., Li, X., Ji, X., Wu, J., Li, J., Zheng, W., Wu, C., Huang, L., Geng, Z., & Zhou, J. (2022). Adaptive auricular point acupressure for sleep disturbance in women with breast cancer: A randomized controlled trial. *Evidence-Based Complementary and Alternative Medicine, 2022*, 8637386. https://doi.org/10.1155/2022/8637386

Wang, Y., Zhang, J., Jin, Y., & Zhang, Q. (2021). Auricular acupressure therapy for patients with cancer with sleep disturbance: A systematic review and meta-analysis. *Evidence-Based Complementary and Alternative Medicine, 2021*, 3996101. https://doi.org/10.1155/2021/3996101

Xin, D., Cui, L., Wang, L., Zhang, Q., Chen, X., Shi, Y., Zhu, W., Xu, N., Li, W., & Wang, Y. (2024). Effect of auricular acupressure on sleep quality in breast cancer patients: A systematic review and meta-analysis of randomized controlled trials. *Complementary Therapies in Clinical Practice, 57*, 101876. https://doi.org/10.1016/j.ctcp.2024.101876

Yeh, C. H., Chien, L.-C., Lin, W\.-C., Bovbjerg, D. H., & van Londen, G. J. (2016). Pilot randomized controlled trial of auricular point acupressure to manage symptom clusters of pain, fatigue, and disturbed sleep in breast cancer patients. *Cancer Nursing, 39*(5), 402–410. https://doi.org/10.1097/NCC.0000000000000303

Yeung, W\.-F., Chung, K.-F., Poon, M. M.-K., Ho, F. Y.-Y., Zhang, S.-P., Zhang, Z.-J., Ziea, E. T.-C., & Wong, V. T. (2012). Acupressure, reflexology, and auricular acupressure for insomnia: A systematic review of randomized controlled trials. *Sleep Medicine, 13*(8), 971–984. https://doi.org/10.1016/j.sleep.2012.06.003

Yoon, H. G., & Park, H. (2019). The effect of auricular acupressure on sleep in breast cancer patients undergoing chemotherapy: A single-blind, randomized controlled trial. *Applied Nursing Research, 48*, 45–51. https://doi.org/10.1016/j.apnr.2019.05.009

Zhang, J., Qin, Z., So, T. H., Chang, T. Y., Yang, S., Chen, H., Yeung, W. F., Chung, K. F., Chan, P. Y., Huang, Y., Xu, S., Chiang, C. Y., Lao, L., & Zhang, Z. J. (2023). Acupuncture for chemotherapy-associated insomnia in breast cancer patients: An assessor-participant blinded, randomized, sham-controlled trial. *Breast Cancer Research, 25*(1), 49. https://doi.org/10.1186/s13058-023-01645-0

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e-ISSN: 3164-8835; p-ISSN: 3164-8827

Zhang, J., Qin, Z., So, T. H., Chen, H., Lam, W. L., Yam, L. L., Chan, P. Y., Lao, L., & Zhang, Z. J. (2021). Electroacupuncture plus auricular acupressure for chemotherapy-associated insomnia in breast cancer patients: A pilot randomized controlled trial. *Integrative Cancer Therapies, 20*, 15347354211019103. https://doi.org/10.1177/15347354211019103

Zick, S. M., Sen, A., Wyatt, G. K., Murphy, S. L., Arnedt, J. T., & Harris, R. E. (2016). Investigation of 2 types of self-administered acupressure for persistent cancer-related fatigue in breast cancer survivors: A randomized clinical trial. *JAMA Oncology, 2*(11), 1470–1476. https://doi.org/10.1001/jamaoncol.2016.1867