

Five Minutes a Day

A Systematic Review of Brief (≤ 5 -Minute) Breathing Practices

Dr Atul Aswani; Mumbai Psychiatrist and trained as a Results Coach
22 September 2026



KEY NUMBER

6

6 Verified controlled datasets met the ≤ 5 -minute, non-clinical, adult filter. They cannot be pooled. A single number would be a costume, not a result.

Five Minutes a Day

A Systematic Review of Brief (≤ 5 -Minute) Breathing Practices

Balban 2023 reported five minutes of cyclic sighing beat mindfulness. What does the pooled evidence on micro-dose breathwork say?

there is no honest pool yet. There is a pattern.

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INDEXING TITLE

Brief (≤ 5 -minute) breathing practices and acute stress: a systematic review

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01

Abstract

Working adults do not have a spare half-hour. They have five minutes between meetings, and they want to know whether that sliver does anything. This PRISMA-2020 systematic review asked how large the effect of breathing practices of five minutes or less is on stress and mood, acutely and after daily practice. A quantitative meta-analysis is not yet possible: six eligible controlled datasets (approximate unique $n = 340$) were found for 2010–2026, but designs, comparators and time-frames were too heterogeneous to pool under a random-effects model without inventing a number the data do not support.

The clearest four-week signal remains Balban and colleagues (2023): 108 non-clinical adults practised five minutes a day for 28 days. All arms, including mindfulness, improved state anxiety. Breathwork, especially cyclic sighing, produced a larger daily rise in positive affect (about +1.91 versus +1.22 points) and a larger fall in resting respiratory rate. One-minute cyclic sighing and box breathing, delivered in real threat moments, also cut state anxiety versus a passive control in a 2026 field pilot. A first laboratory session of slow-paced breathing can raise perceived stress in novices, which is the opposite of the brochure and matters for onboarding.

Certainty is low to moderate for acute subjective calming, low for a four-week mood advantage over mindfulness, and absent for Indian working adults at this exact dose. No completed CTRI trial of isolated ≤ 5 -minute breathing in non-clinical professionals was identified. The practical reading for an Indian workplace programme is modest and useful: five minutes is a countable rep, not a miracle; the first minute appears to carry much of the acute feel; daily practice for four weeks is the only duration with a head-to-head trial against mindfulness; and local evidence still needs to be built.

Keywords: *brief breathing; cyclic sighing; box breathing; extended exhale; micro-dose; stress; mood; systematic review; India.*

02

Key findings box

KEY FINDINGS

Five numbers that survive contact with the data

6

Verified controlled datasets met the ≤ 5 -minute, non-clinical, adult filter. They cannot be pooled. A single number would be a costume, not a result.

**+1.91 vs
+1.22**

Daily points on a positive-affect scale: Balban's 28-day, five-minute comparison of breathwork against equal-time mindfulness in 108 adults. Cyclic sighing led the mood and respiratory-rate change.

~1 minute

Enough, in a 2026 just-in-time field pilot ($n = 47$), for both cyclic sighing and box breathing to beat a passive control on state anxiety (partially standardised coefficients near -1.0).

0

Completed Indian trials at this exact dose. The India gap is not a footnote. It is the missing cell in the table.

d = 0.92

The contrary lab finding: a first five-minute slow-paced session raised perceived stress versus rest in 61 novices. The first rep can feel like work. That is data, not failure.

03

Definition block

DEFINITION

A brief breathing practice, in this paper, is a countable, instructed pattern of inhale, optional hold, and exhale lasting five minutes or less in a single sitting. The pattern is deliberate. It is not “notice the breath and let it be.” Cyclic sighing is two nasal inhales — a full one, then a short top-up — followed by a long mouth exhale, repeated. Box breathing is four equal sides: in, hold, out, hold. Extended-exhale or slow-paced breathing usually means about six breaths a minute with the out-breath longer than the in-breath, classically four seconds in and six seconds out.

These are techniques and reps. They are not a diagnosis, not a medicine, and not a substitute for clinical care. Think of them as a minimum viable product for the autonomic system: small batch, short runtime, inspect the loss function after each epoch. Mid-afternoon, a sales manager in Andheri reads a curt client email. Her jaw is tight and her thumbs are already typing. She puts the phone face down: two nasal inhales, one long exhale, again. The thought–feeling–body loop breaks before it writes the afternoon. There is a little space now, so the reply can be chosen rather than fired. On a rougher day the same rep sits in a quick-reset kit beside cold water on the face and a brisk climb up the stairs. Calm rarely comes from matching the noise. It comes from something small and quiet, repeated.

04

Introduction

A project lead in Hyderabad walks into her first meeting before the tea arrives. The seventh WhatsApp group is already typing. By 4 p.m. her shoulders are up near her ears and she has read the same spreadsheet row twice. Her body has been running a background process called vigilance since morning, and nobody scheduled a defrag. Then someone tells her to “try yoga,” which in practice means a 60-minute class across town, a mat she does not own, and a Monday that never comes.

That is not laziness. That is product-market fit. The class needs a hall, a teacher and a free evening. She has a few minutes between the stand-up and the client call. A practice that fits there wins.

Balban, Huberman, Spiegel and colleagues published the study that made five minutes feel scientific rather than sentimental. In a remote randomised trial, daily five-minute structured breathing — especially cyclic sighing — improved mood more than five minutes of mindfulness, and slowed resting respiratory rate more as well. The paper travelled faster than most academic objects. It became a reel, a thread, a slide in a wellness deck. The question it actually settled is narrower than the internet heard: in young, mostly American adults, for 28 days, against an active mindfulness control, a five-minute exhale-heavy pattern looked better on positive affect and breathing rate.

That is a good question. It is not the only question.

A prior meta-analysis of breathwork of any duration found a small-to-medium effect on self-reported stress (Hedges $g = -0.35$; 12 trials; 785 adults). Session lengths in that literature run from minutes to the better part of an hour. A separate implementation review found that effective breathing practices tended to avoid sessions shorter than five minutes. So the micro-dose sits on a

fault line. One famous trial says five minutes is enough to beat mindfulness on mood. A broader map says five minutes is the floor, not the sweet spot. Nobody had pooled the ≤ 5 -minute slice.

Why does that slice matter in India? Because the scarce resource is not belief. Indian professionals already believe breath matters. The scarce resource is calendar time, privacy, and a script that works in a cubicle without looking like a retreat. EmotionApp's wager is that emotional fitness can be sold the way strength is sold: as reps, not as a personality transplant. Five minutes is the unit that can survive a commute, a stand-up, and a mother-in-law video call.

A nervous-system rep is a daily portion, not a warehouse. An analyst on the morning local does her five minutes standing between Dadar and Bandra, one hand on the overhead strap. It is not the long Sunday session she keeps promising herself. It is today's rep, and today's rep is the one that builds the habit. One honest five-minute practice, done today, beats a heroic plan for next month. Machine-learning people already know the analogue. You do not always need a giant batch. A micro-batch with a sane learning rate can move the weights. Overfit the Stanford sample, though, and your model fails on Mumbai traffic. Regularise. Test out of distribution. That is this paper's job.

Research question, restated: How large is the effect of breathing practices of five minutes or less on stress and mood, acutely and after daily practice, in non-clinical adults?

Pre-specified stance: if fewer than five comparable trials exist, do not pool. Report the narrative. A null, a gap, and a single good trial are all publishable. A fake forest plot is not.

05

Methods

Eligibility

Population. Adults, non-clinical. Student and working samples were allowed. Samples defined by a current psychiatric or medical diagnosis were excluded.

Intervention. An isolated breathing exercise of five minutes or less per session: cyclic sighing, box breathing, extended-exhale or slow-paced breathing at or near six breaths per minute, or close variants. Multi-component yoga packages, chanting-plus-breath programmes, and any session longer than five minutes were excluded, even if a five-minute fragment sat inside a longer class.

Comparator. Any control: rest, passive wait, mindfulness, mind-wandering, reading, or no-instruction.

Outcomes. State anxiety or stress; mood or affect; physiological arousal (respiratory rate, heart rate, heart-rate variability).

Design and years. Randomised or otherwise controlled trials, 2010–2026. Single-arm pre–post studies were described only as context and were not treated as eligible.

Language and setting. Any country, any delivery language. India-resident evidence was sought explicitly.

Information sources and search

Sources: PubMed, PsycINFO, Scopus, Web of Science, Google Scholar, CTRI (India), ClinicalTrials.gov, OSF preprints. Searches were run in September 2026. Citation chasing from Balban 2023, Fincham 2023 and Bentley 2023 supplemented the database hits.

This writing team did not have two independent paid screeners and a locked prospective log. Counts below are therefore labelled as search-reconstructed. That is a limitation, not a decoration.

Search strings

PubMed

("breathing exercises"[MeSH] OR breathwork[tiab] OR "cyclic sighing"[tiab] OR "box breathing"[tiab] OR "paced breathing"[tiab] OR "slow breathing"[tiab] OR "slow-paced breathing"[tiab] OR "diaphragmatic breathing"[tiab] OR "extended exhale"[tiab] OR sigh[tiab]) AND (brief[tiab] OR "five minute*[tiab] OR "5-min*[tiab] OR "5 min*[tiab] OR "one minute"[tiab] OR "1-min*[tiab]) AND (randomi*[tiab] OR "controlled trial"[tiab] OR RCT[tiab]) AND (stress[tiab] OR anxiety[tiab] OR mood[tiab] OR affect[tiab] OR arousal[tiab]) AND ("2010/01/01"[Date - Publication] : "2026/12/31"[Date - Publication])*

Google Scholar

(breathing OR "cyclic sighing" OR "box breathing" OR "slow-paced breathing") AND (brief OR "five minute" OR "5-min" OR "5 minutes" OR "one minute") AND (randomized OR randomised OR RCT) AND (stress OR anxiety OR mood) after:2009

Scopus

TITLE-ABS-KEY((breathing OR breathwork OR "cyclic sighing" OR "box breathing") AND (brief OR "five minute" OR "5-min") AND (randomi)) AND (stress OR anxiety OR mood)) AND PUBYEAR > 2009*

Web of Science

TS=((breathing OR "cyclic sighing" OR "box breathing") AND (brief OR "five minute" OR "5-min*")) AND randomi* AND (stress OR anxiety OR mood) Timespan=2010-2026*

PsycINFO

(breathing exercises OR breathwork OR cyclic sighing OR box breathing OR slow-paced breathing) AND (brief OR five minute OR 5-min OR one minute) AND (randomi OR RCT) AND (stress OR anxiety OR mood). Limits: 2010–2026, adulthood.*

ClinicalTrials.gov

breathing OR "cyclic sighing" OR "box breathing" / Interventional / Adult / 01/01/2010–22/09/2026 / stress OR anxiety OR mood

CTRI

breathing OR pranayama OR "box breathing" OR breathwork / stress OR anxiety

OSF preprints

"cyclic sighing" OR "box breathing" OR "5-minute breathing" RCT

Selection and extraction

Records were screened against the ≤ 5 -minute session rule first. This single filter removed the majority of otherwise relevant breathwork trials, including high-ventilation protocols of about 20 minutes and most pranayama packages of 15–30 minutes. Extraction fields, pre-specified: first author, year, DOI, n, design, country, language of delivery, dose in sessions and minutes, delivery channel, guidance, outcome measure, time-points, and any statistic from which an effect size could be computed.

Studies that could not be pinned to a DOI or official registry page were marked UNVERIFIED and kept out of the eligible set. Trials with ambiguous session length (including two 2025 “brief slow-paced breathing” papers whose abstracts never state the minutes) were marked AMBIGUOUS and were not counted as eligible.

Analysis plan

The pre-specified quantitative plan was a random-effects model (REML), Hedges g with 95% confidence interval, I^2 , τ^2 , a 95% prediction interval, Egger’s test, trim-and-fill, leave-one-out sensitivity, RoB 2, and GRADE. Pre-specified moderators were technique (cyclic sighing versus box versus extended exhale) and single session versus daily practice for two weeks or more.

Fallback, triggered. Fewer than five trials shared a comparable design, dose, comparator and outcome. Pooling would have mixed a 28-day remote trial against mindfulness with a 69-second field prompt against a blank screen. That is not a meta-analysis. It is a smoothie. We therefore deliver a systematic review with narrative synthesis and do not report a pooled g , an effect-per-minute, or a four-week pooled g . Those quotable outputs are listed as not estimable rather than invented.

Risk of bias was judged with RoB 2 domains, qualitatively, because raw item-level data were not re-coded by two blinded raters. Certainty was discussed in GRADE language (high, moderate, low, very low) at the level of narrative claims, not at the level of a pooled estimate that does not exist.

06

Results

**PRISMA 2020 flow
(search-reconstructed)**

Prior reviews give the scale of the parent literature. Fincham and colleagues identified 1,325 records to February 2022 and kept 12 RCTs for a stress meta-analysis of breathwork at any dose. Bentley and colleagues screened 2,904 unique articles and kept 58 breathing trials of mixed duration.

Our tighter filter (session ≤ 5 minutes, non-clinical adults, controlled design, 2010–2026, isolated breathing) sits inside that haystack. Across PubMed, Scholar, Scopus/WoS-style queries, trial registers and citation chasing, we estimate:

Stage	Count (reconstructed)	Note
Records identified across sources	~1,600–2,200	Includes register hits and citation chasing
Unique after de-duplication	~1,200–1,500	Overlap with Fincham and Bentley is large
Title/abstract screened as potentially brief	~350–500	Most hits were longer yoga or mixed mindfulness
Full texts inspected	~70–90	Session length was the main killer
Excluded at full text	Majority	Session >5 min; clinical sample; no control; protocol only; duration unverified
Eligible controlled datasets	6	Balban 2023; Riedl 2026; Bamert 2026; Conlon 2022; Schlatter 2022; Iwabe 2025
Context-only (not eligible)	Several	Magnon 2021 single-arm; You 2021 contrary finding kept in narrative; Pilcher 2025 duration unverified; NCT07621042 no results

Two independent reviewers were not available. Treat the counts as honest reconstruction, not as a Cochrane log.

Study-characteristics table

Study	Country	Design	n	Technique / dose	Channel	Control
Balban 2023	USA, remote	4-arm RCT, 28 days	108	Sigh / box / hypervent; 5 min × 28 d	Video + text + wearable	Mindfulness, 5 min
Riedl 2026	Germany	Within-person JIT field	47	Cyclic sighing; box; ~70 s / ~69 s	App prompt in threat	Passive wait
Bamert 2026	Switzerland	Micro-randomised, 4 days	67	SPB 6 bpm, 4.5/5.5 s; 5 min	Phone pacer	No-exercise times
Conlon 2022	UK	3-arm RCT, single session	67	Diaphragmatic 6 bpm; 5 min	Lab, instructed	12 bpm paced; no instruction
Schlatter 2022	France	3-arm RCT, single session	34	4 s in / 6 s out ± biofeedback; 5 min	Lab, pre-simulation	Read laboratory results
Iwabe 2025	Japan	Within-subjects, single	17	SPB 4 s / 6 s; 5 min	Lab	Resting breathing

Delivery language, where reported, was the majority language of the lab (English, German, French, Japanese). None delivered in an Indian language. None sampled Indian working professionals as the target population.

What each eligible trial actually found**Balban 2023 — the four-week anchor**

One hundred and eight adults without moderate-to-severe psychiatric or medical illness were randomised to cyclic sighing ($n = 30$), box breathing ($n = 21$), cyclic hyperventilation with retention ($n = 33$), or mindfulness ($n = 24$). Each practised five minutes a day for 28 days, remotely, with instructional video and daily reminders. Mean days completed were about 20 for breathwork and 18 for mindfulness. Daily change in positive affect was +1.91 (SD 3.38) across breathwork and +1.22 (SD 2.34) for mindfulness. Cyclic sighing was +1.89 (SD 3.76) and differed from mindfulness at $p < 0.05$. Daily change in state anxiety was -3.03 (SD 3.83) for breathwork and -3.95 (SD 4.16) for mindfulness; the between-group contrast was not significant. Respiratory rate fell more with breathwork than mindfulness, and more with cyclic sighing than mindfulness ($p < 0.05$). Resting heart rate and heart-rate variability did not change group-wise. Adherence predicted larger mood slopes. The trial was registered retrospectively (NCT05304000).

Read that slowly, because the internet did not. Five minutes a day improved anxiety in every arm, including sitting still and watching the forehead. Breathwork won on positive mood and on how slowly people breathed at rest. It did not win a unique trophy on state anxiety. That is a feature of an active-control design, not a scandal.

Riedl 2026 — the one-minute field test

Forty-seven German students, mostly women, triggered a prompt when they felt under threat. They then did about one minute of cyclic sighing, about one minute of box breathing, or nothing. Minutes later, both breathing patterns beat the blank control on state anxiety (cyclic sighing $b = -0.73$, SE 0.10; box $b =$

–0.80, SE 0.09; both $p < 0.001$; partially standardised coefficients –0.98 and –1.07). The two patterns did not differ from each other. Box breathing also cut inhibition errors, more so in people with higher trait anxiety. Both patterns slowed reaction time a little. So the first minute calms. It does not turn you into a fighter pilot.

Bamert, Rink and Inauen 2026 — five minutes in daily life

Sixty-seven moderately stressed students were micro-randomised over four days to five minutes of guided six-breaths-a-minute practice or to control times (804 observations). Per-protocol, perceived stress was lower after the breathing prompt than after control times. Intention-to-treat was weaker. Heart-rate variability rose during and after the exercise relative to the minutes before it, but did not clearly beat control times. People who experienced the pattern as “natural” got more subjective benefit. Translation: the technique works better when it does not feel like a foreign language.

Conlon 2022 — five minutes before a skilled task

Sixty-seven UK students (40 women; mean age 20.17) were randomised to five minutes of six-breaths-a-minute diaphragmatic breathing, five minutes of twelve-breaths-a-minute pacing, or no instruction, then completed a pressurised pistol-shooting task. Cognitive anxiety fell in the slow-diaphragmatic arm. Heart rate did not play along. Shooting performance barely moved. A five-minute downshift can change the story the mind is telling. It does not automatically change the scoreboard.

Schlatter 2022 — five minutes before a high-fidelity simulation

Thirty-four French anaesthesia residents got five minutes of 4/6 breathing, the same pattern plus cardiac biofeedback, or five minutes of reading laboratory results, then ran a stressful simulation. Breathing arms reported lower stress and higher relaxation than the reading control, and scored 7–8% higher on blinded performance ratings. This is a workplace-adjacent sample — tired professionals about to be watched — which is closer to an Indian office than a first-year psychology pool, even if Lyon is not Lower Parel.

Iwabe 2025 — five minutes versus resting breathing

Seventeen healthy Japanese adults did five minutes of 4/6 breathing and five minutes of resting breathing in counterbalanced sessions. State anxiety was lower after slow-paced breathing (Cohen’s $d = -1.46$ post-task; $d = -1.25$ after aversive pictures), with a mid-frontal EEG shift in the direction usually read as approach and less withdrawal. The effect sizes look cinematic. The sample is a short film. Treat as a directional signal, not a precision estimate.

Forest-plot data table No forest plot is presented. The cells a forest plot needs — a common outcome, a common contrast, and extractable g with standard error for five or more like-with-like trials — are not available.

Study	Contrast	Outcome	Statistic as published
Balban 2023	Breathwork vs mindfulness, 28 d	Daily positive affect	+1.91 vs +1.22; sighing $p < 0.05$ vs MM
Balban 2023	Breathwork vs mindfulness, 28 d	Daily state anxiety	-3.03 vs -3.95; between-group ns
Riedl 2026	1-min sighing vs passive	State anxiety	$b = -0.73$; std $\beta \approx -0.98$
Riedl 2026	1-min box vs passive	State anxiety	$b = -0.80$; std $\beta \approx -1.07$
Bamert 2026	5-min SPB vs control times	Perceived stress	Per-protocol lower; ITT weaker
Iwabe 2025	5-min SB vs rest breathing	State anxiety	$d = -1.46$ ($n = 17$; unstable)
Schlatter 2022	5-min 4/6 vs reading	Stress rating	$p = 0.029$
Conlon 2022	5-min 6 bpm vs controls	Cognitive anxiety	Reduced in diaphragmatic arm

Effect per minute: not estimable. Single-session versus four-week g: not estimable as a pooled contrast. Anyone selling “0.XX per minute” from this literature is doing marketing, not analysis.

Moderator table (narrative)

Moderator	What the eligible set can say
Technique	Cyclic sighing led mood and respiratory-rate change in the only four-week head-to-head. In the one-minute field pilot, sighing and box were statistically tied on anxiety. Extended-exhale 4/6 patterns helped in lab and simulation samples. No trial at this dose ranked all three techniques with adequate per-arm power.
Single session vs ≥ 2 weeks daily	Acute 1–5 minute sessions move state anxiety and stress ratings versus passive or weak controls, with one important lab contradiction. Four-week daily practice has one RCT: breathwork $\geq$ mindfulness on anxiety, breathwork $>$ mindfulness on positive affect and respiratory rate.
Delivery channel	Video + text (Balban), app prompt (Riedl, Bamert), live lab instruction (Conlon, Schlatter, Iwabe). No WhatsApp-first, multilingual Indian delivery has been trialled at this dose.
Guidance	Human-recorded video or live instruction in most trials. Bentley’s broader review associated human-guided training with effectiveness. That association is not proven inside the ≤ 5 -minute slice.

The finding that ruins the brochure

You, Laborde and colleagues (2021) ran 61 adults through five minutes of six-cycles-per-minute breathing and five minutes of rest. Cardiac vagal activity rose during the breathing, as physiology textbooks predict. Perceived stress and arousal went up after the breathing, and valence went less positive (stress contrast about $d = 0.92$ versus rest). The authors blamed dyspnea and the fact that novices had not yet acclimatised.

This is the first-epoch problem in machine learning. Early loss can spike while the weights are still learning the representation. Picture a new joiner in Gurugram trying slow-paced breathing at her desk for the first time. Holding the pace feels odd, her chest feels tight, and her mind files the strangeness under “threat.” One awkward drill is not a reason to drop the practice; the tightness is part of learning a skill before it becomes automatic. For a coaching programme,

the implication is operational: warn people that rep one may feel effortful. If you promise instant bliss, you have overfit the highlight reel of Balban's four-week slope and underfit day one.

Context studies (not eligible, still informative)

Magnon, Dutheil and Vallet (2021) gave 47 young and older adults one five-minute deep-and-slow session (four seconds in, six out). State anxiety fell in both age bands (young 28.60 to 24.46; older 24.89 to 22.18). High-frequency heart-rate-variability power rose, more in older adults. There was no concurrent control arm, so the study cannot carry a causal claim in this review. It can say: a five-minute extended exhale is not only a student toy.

Fincham's 2023 any-dose meta-analysis remains the best quantitative backdrop: stress $g = -0.35$ (95% CI -0.55 to -0.14), anxiety $g = -0.32$, depression $g = -0.40$, with moderate risk of bias in most trials. That is the effect of breathwork as a family, not of the five-minute dose.

Bentley's 2023 implementation review found that effective practices tended to avoid fast-only pacing and sessions under five minutes, and to include human-guided training, multiple sessions, or long-term practice. Five minutes is therefore both the celebrity dose and, in that map, the lower edge of the effective band. Both things can be true if "effective" in Bentley meant a binary significant-or-not across mixed designs, while Balban measured a slope against an active control.

You and colleagues (2021, dose-response) compared 5, 10, 15 and 20 minutes of six-cycle breathing against a no-breathing control in 59 adults. During the exercise, vagal change versus control was large at every duration (about $d = 1.1$ to 1.3) and did not grow with extra minutes. Five minutes was not inferior to twenty for that physiological marker. That is the closest thing this slice has to an effect-per-minute test, and it argues against stretching the session just because the calendar has room.

A four-arm Spanish-language protocol (NCT07621042) is testing daily five-minute box breathing, cyclic sighing and two mindfulness variants over 28 days. Results were not posted as of this search. It is the replication the field needs. It is not evidence yet.

Heterogeneity

Qualitative heterogeneity is high. Time-on-task ranges from 69 seconds to 5 minutes times 28 days. Controls range from a blank phone screen to mindfulness to reading blood results. Outcomes range from a two-item anxiety slip to a full positive-affect scale to a wearable respiratory rate. Samples are students, residents, or mixed remote adults, almost all in high-income countries. I^2 is not computed because there is no pool. If someone pooled anyway, I^2 would be a confession, not a statistic.

Publication bias

Egger's test and trim-and-fill were not run. The visible literature is still a small club of positive or mixed trials plus one awkward novice-stress finding. File-drawer risk is real. The Balban paper is open-access and famous, which raises the odds that similar null four-week trials would struggle to find a stage. We cannot quantify that. We can refuse to pretend we did.

Risk-of-bias summary

Study	D1 Random.	D2 Deviations	D3 Missing	D4 Measurement	Overall
Balban 2023	Some concerns	Some concerns	Some concerns	Some (self-report); lower for wearable	Some concerns
Riedl 2026	Some concerns	Some concerns	Some concerns	Some (self-report)	Some concerns
Bamert 2026	Some concerns	Some concerns	Some (PP vs ITT)	Some concerns	Some concerns
Conlon 2022	Some concerns	Some concerns	Some concerns	Some concerns	Some concerns
Schlatter 2022	Some concerns	Some concerns	Some concerns	Perf. blinded; stress not	Some concerns
Iwabe 2025	Some concerns	Some concerns	Some concerns	Some concerns	Some / high for precision

Balban in more detail, because it is the paper everyone quotes. Sequence generation was remote but thinly described. Arms were unbalanced (21 box versus 33 hyperventilation). Participants knew what they were doing; you cannot blind a sigh from a box. Adherence was self-started and incomplete. Physiological n was smaller than randomised n. Self-report scales were completed by people who had just performed the ritual they believed in. Wearable respiratory rate is the least flattering and therefore the most interesting win. Retrospective registration is a demerit, not a hanging offence. Active mindfulness control is a credit. Per-arm samples are too small for a confident technique league table. Overall: some concerns. Do not treat it as settled. Do not ignore it either.

GRADE table (narrative claims, not a pooled estimate)

Claim	Certainty	Why
A single 1–5 minute instructed breathing pattern reduces state anxiety or stress versus a passive or weak control, acutely	Low to moderate	Directionally consistent in Riedl, Schlatter, Conlon, Iwabe; contradicted on perceived stress by You 2021; small samples; unblinded ratings
Daily 5-minute cyclic sighing for 4 weeks improves positive affect more than 5-minute mindfulness	Low	Single RCT; some-concerns RoB; young remote US sample
Daily 5-minute breathwork for 4 weeks reduces state anxiety more than 5-minute mindfulness	Low (unsupported as superiority)	Same RCT; both arms improved; between-group difference ns
Daily 5-minute cyclic sighing for 4 weeks reduces resting respiratory rate more than mindfulness	Low	Same RCT; wearable outcome is a strength; unreplicated
Effect per minute is a stable quantity	Very low / not estimable	No designed dose-response on subjective stress; You 2021 found 5 = 10 = 15 = 20 min for vagal change during the exercise
Findings generalise to Indian working adults using WhatsApp in Indian languages	Very low / absent	Zero eligible trials from India at this dose

07

Discussion

What the number means

There is no pooled number. That sentence is the result.

What the literature does mean is smaller and sharper.

Five minutes is not magic. It is a duration that busy adults will actually attempt. In the only month-long randomised comparison at that exact daily dose, structured breathing and mindfulness both took the edge off state anxiety. Breathing, especially the long-exhale cyclic sigh, added a little more brightness to mood and slowed the resting breath. One minute of either cyclic sighing or box breathing, fired at the moment of threat, beat doing nothing. A first supervised slow-paced session can feel worse before it feels better. Physiological vagal markers often move during the exercise even when the mood story is mixed.

If you squint, you can see a dose story without inventing a per-minute slope. The first minute does a lot of the acute subjective work. Stretching the same pattern from five minutes to twenty does not clearly buy more vagal change in the one laboratory dose-response we have. Four weeks of daily five-minute reps may buy a slower resting respiratory rate and a better mood slope than four weeks of equal-time mindfulness. That is not “breathing is better than meditation.” That is “controlling the breath for five minutes a day, for a month, left a physiological fingerprint that watching the forehead did not.”

Picture a team lead in Chennai just before a review with a client who is angry about a missed deadline. The storm is real. She does not argue herself calm. She sits on a stairwell step and runs one minute of long exhales. The meeting is still hard, but she walks in breathing slower and chooses her first sentence instead of blurting it. The lesson is not that weather is fake. The lesson is that a short, deliberate act can change the state from which you meet the weather. Interrupt the cascade early. When the mind is too loud to reason with, change the body first. You do not have to win the argument with anxiety; you need enough space to choose the next email. Entrepreneurs would say: ship the minimum viable downshift every day, then inspect retention.

The machine-learning analogy keeps this paper honest. Balban is a well-instrumented training run on a particular distribution: English-speaking, remote, young-adult, pandemic-era, Stanford-adjacent. Deploy that checkpoint on an Indian workplace — Hindi, Tamil, Marathi; heat; hierarchy; family-phone-in-the-same-room — and you are doing zero-shot transfer. Sometimes zero-shot works. Often it wants fine-tuning. Fine-tuning is a trial. We do not have that trial.

Limitations

The search was comprehensive in intent and reconstructed in its flow counts. Dual independent screening was not performed. Session length is poorly reported in this field; two otherwise relevant 2025 trials had to sit in the ambiguous bin because “brief” is not a number. Eligible samples are small and

drawn from high-income, mostly student or remote-adult populations. Outcomes are mostly unblinded self-report. Balban used an active control, which is scientifically virtuous and makes superiority on anxiety hard to show. Physiological measures disagree with each other: respiratory rate moved in Balban, heart-rate variability often moves during a session and then fades, heart rate is usually unimpressed. Expectancy is not controlled by a convincing sham. India is missing. Publication bias cannot be tested. We did not re-analyse raw data, so we refused to mint a Hedges g from incomplete summary tables.

A limitation that looks like a virtue: the fallback rule. It cost us a punchy pooled number. It saved us from laundering incomparable designs into one decimal place.

What this means for an Indian workplace programme

BOX

A 150-word brief for the people who actually have to run the programme

Five minutes is a viable rep. One minute is a viable emergency rep. Sell neither as a cure. Script day one around the You 2021 finding: “The first sessions may feel tight, odd or effortful. That is your body adjusting, not proof it doesn’t work.” Monday’s breathless analyst then knows what it was. Prefer an exhale-heavy pattern for mood and a slower resting breath; keep box breathing when structure matters more than softness. Deliver it where the day lives: a WhatsApp nudge in Marathi, 23 languages, India-resident data. The trials never did, and convenience is part of the mechanism. Count ticked days, not calm. Put a human hand-off behind the AI coach for anyone whose distress is clinical; this review is about non-clinical emotional fitness. Fund, or demand, an Indian randomised test of the same five-minute dose against an equal-time control. Until then, you are translating, not replicating.

Research gaps, naming the India gap explicitly

The India gap is simple to say and expensive to leave open. There is no completed CTRI-registered, isolated, ≤ 5 -minute breathing trial in non-clinical working adults. Indian breath research is real and often rigorous. It is also, at the doses we could verify, a different product: 15–30 minute pranayama blocks, yoga-centre samples, medical students before a speech task, clinical wards. Those papers cannot answer a product question about a five-minute WhatsApp rep between two stand-ups.

Other gaps sit beside it. There is no adequately powered technique league table at this dose. There is no sham that matches ritual and expectancy without changing the breath. There is no pre-registered four-week replication of Balban in a non-student, non-US workforce. There is no dose-response on subjective

stress that contrasts one, three and five minutes inside the same people. There is no long follow-up after the month ends. There is almost no data on people over 40, on shift workers, or on women doing the second shift at home. NCT07621042 may close the replication gap in Spanish-speaking students. It will not close Mumbai.

The entrepreneurial reading of a gap is not despair. It is a roadmap. The minimum viable study is not glamorous: Indian professionals, five minutes, cyclic sighing versus box versus an equal-time non-breathing control, WhatsApp delivery, state stress and mood at day 1 and day 28, a wearable or phone-based respiratory proxy if the budget allows, CTRI registration on day zero. Until someone runs it, every Indian workplace programme at this dose is a well-intentioned generalisation.

08

FAQ

Q1 Does five minutes of breathing actually reduce stress?

Sometimes. In the best four-week trial, five daily minutes cut state anxiety about as much as five minutes of mindfulness, and lifted mood a bit more. In field pilots, about one minute beat doing nothing. A first lab session can feel more stressful, not less. So: useful rep, not a guarantee. One number to keep: 5 minutes.

Q2 Is cyclic sighing better than box breathing?

Over 28 days, cyclic sighing led the mood and breathing-rate change in one trial. In a one-minute real-life pilot, the two patterns tied on anxiety. Pick sighing when you want a longer exhale. Pick box when you want four even sides your mind can hold. One number to keep: 28 days.

Q3 How many trials did you pool?

None. Six eligible controlled datasets exist. They do not share a design cleanly enough to pool. Anyone quoting a single pooled g for this exact dose is ahead of the data. One number to keep: 0 pooled trials.

Q4 Will this work for Indian office workers?

We do not know from trials. Zero eligible studies used Indian working adults, Indian languages, or WhatsApp-first delivery at this dose. The mechanism does not hold a passport. The context does. One number to keep: 0 Indian trials.

Q5 What should I do tomorrow morning?

Sit. Five minutes. Two inhales through the nose, long exhale through the mouth. Repeat. Expect day one to feel slightly awkward. Count the streak, not the bliss. If distress is heavy or persistent, speak to a clinician; this is a practice, not care. One number to keep: 1 first rep.

09

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NOTE

EmotionApp is a non-clinical emotional-fitness coaching platform. This paper describes practices, techniques and coaching. It is not therapy, treatment, diagnosis or medical advice.

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SAFETY NOTE

If you are in distress, please contact a qualified professional or Tele-MANAS on 14416.