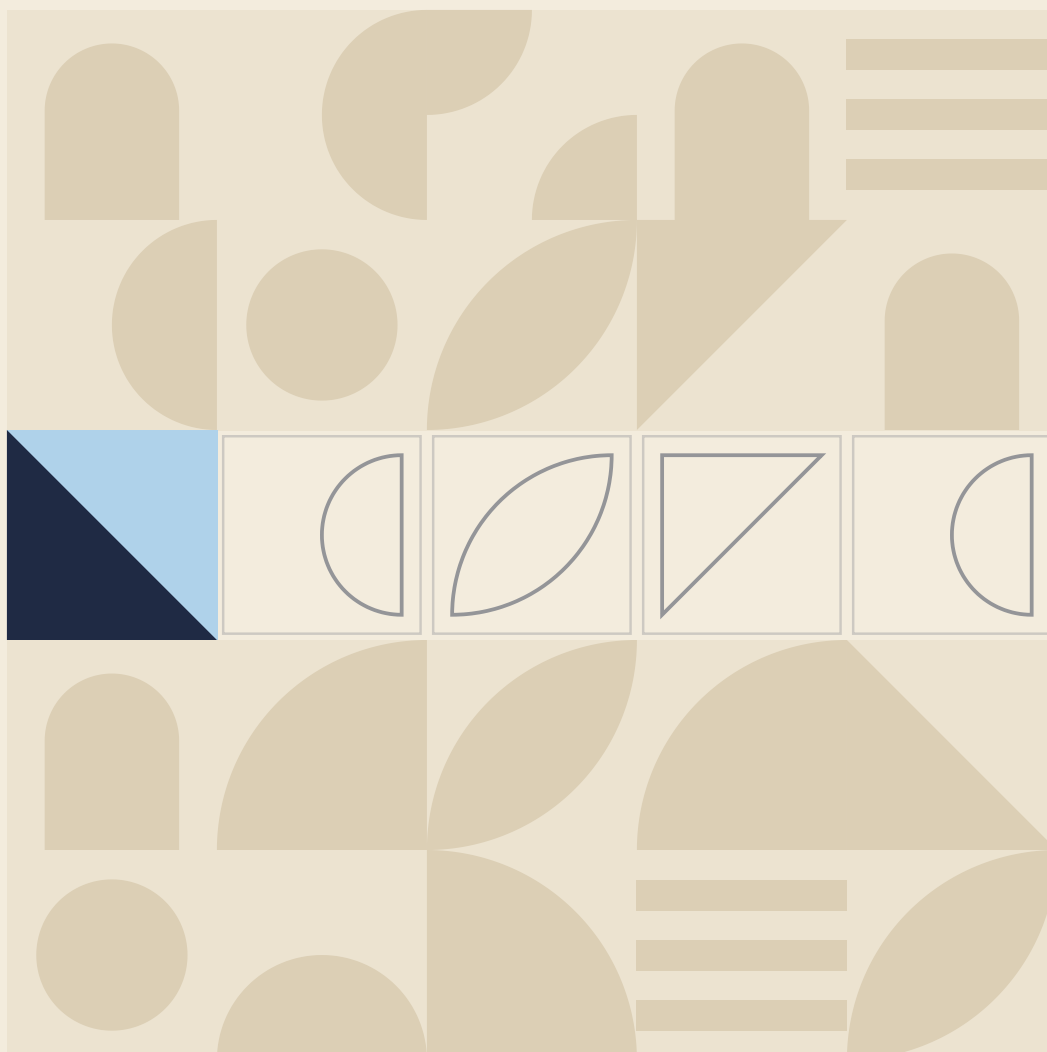


Sleep Is a Regulation Skill

A systematic review of sleep interventions on next-day emotion regulation

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

22 September 2026



KEY NUMBER

1

1 randomised trial in healthy adults measured emotion-regulation strategies after sleep extension. Reappraisal and related strategies did not change (Parsons and Young, 2022).

Sleep Is a Regulation Skill

A systematic review of sleep interventions on next-day emotion regulation

Does improving sleep in healthy adults measurably improve reappraisal, irritability and affect the next day?

a pooled Hedges g cannot be computed. Fewer than five trials share a next-day regulation endpoint. The best randomised trial found $d = 0.20$ for negative emotion and no change in regulation strategies.

healthy adults, no diagnosed insomnia · Years: 2005–2026

CONTENTS

[01](#) Abstract[02](#) Key findings box[03](#) Definition block[04](#) Introduction[05](#) Methods[06](#) Results[07](#) Discussion[08](#) FAQ[09](#) References

INDEXING TITLE

Sleep interventions and next-day emotion regulation in healthy adults: a meta-analysis

AUTHOR

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

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01

Abstract

Sleep is sold as a mood upgrade. The experimental record for healthy adults is thinner than the slogan. A pooled Hedges g for next-day emotion regulation was not computed: fewer than five randomised trials shared a common regulation endpoint after a sleep-improving programme in adults without diagnosed insomnia. The best-powered trial that measured both affect and regulation strategies ($n = 72$) found a small next-day drop in negative emotion (interaction $d = 0.20$) and no change in reappraisal, suppression or related strategy use.

This PRISMA-2020 systematic review searched PubMed, PsycINFO, Scopus, Web of Science, Google Scholar, CTRI, ClinicalTrials.gov and OSF (2005–2026) for randomised or controlled trials of sleep extension, sleep hygiene or non-clinical cognitive-behavioural sleep components. Eligible outcomes were emotion-regulation measures, irritability, and positive or negative affect, preferably next day. Diagnosed-insomnia samples were excluded.

Nine studies inform the narrative. In short sleepers, adding about 45–90 minutes of sleep opportunity for a week can lift next-day affect by a small amount and can lift flourishing and gratitude. In already-adequate sleepers, pushing time in bed by three hours can worsen mood. Emotion-regulation strategy use — the skill of reappraising a rude email rather than merely feeling less grim — has been tested in one eligible randomised trial and did not move. A large field experiment in Chennai found that 27 extra minutes of fragmented night sleep did not improve well-being; a protected workplace nap did.

Prior reviews show the other arrow clearly: sleep loss cuts positive affect and adaptive regulation. Improving sleep quality in mixed and clinical samples improves mental-health symptoms by about half a standard deviation. Those numbers do not licence a claim that healthy Indian professionals will reappraise better tomorrow if they simply go to bed earlier tonight. Certainty is very low for regulation, low for affect, and insufficient for irritability. The honest product for a workplace programme is a sleep-opportunity rep plus a separate regulation rep, not a bundled promise.

02

Key findings box

KEY FINDINGS

Five numbers that survive contact with the trials

1

1 randomised trial in healthy adults measured emotion-regulation strategies after sleep extension. Reappraisal and related strategies did not change (Parsons and Young, 2022).

0.20

$d = 0.20$ was the next-day negative-emotion interaction in that trial ($n = 72$, +90 minutes of opportunity for 7 days). Positive emotion moved by $d = 0.11$. The authors called the mood shift minor.

0.53

$g \approx 0.53$ is Scott and colleagues' 2021 effect of improving sleep quality on composite mental-health symptoms across 65 trials ($N = 8,608$) — mostly insomnia and poor-sleep samples, not healthy-adult regulation.

-0.32

$g = -0.32$ is Tomaso and colleagues' 2021 effect of sleep loss on adaptive emotion regulation — and every study in that cell was in youth, not working-age adults.

0

0 completed trials in Indian professionals have tested sleep extension or hygiene against next-day reappraisal, irritability or affect. The only large Indian sleep-gain experiment ($n = 452$, Chennai) found 0.00 SD change in well-being after +27 minutes of night sleep.

03

Definition block

DEFINITION

Emotion regulation is not “being calm”. It is the set of moves a person uses to change which feeling shows up, how strong it is, and how long it stays. Cognitive reappraisal is the classic adaptive move: you recast the meaning of an event (“the client is late because the lift failed, not because I am disposable”). Suppression is holding the face still while the feeling continues underneath. Rumination is running the same clip on loop. Irritability is the low-threshold snap that turns a small friction into a large one. Positive and negative affect are the raw weather: how much pleasant or unpleasant feeling is in the system before any skill is applied.

Sleep, in this paper, is treated as a regulation skill input, not as a diagnosis and not as a therapy. A sleep-extension practice lengthens the opportunity window — earlier lights-out, later alarm, or a protected nap. A sleep-hygiene practice changes the conditions around that window: light, caffeine, screens, wind-down. Structured sleep components in non-clinical samples (stimulus control, a consistent schedule, a short education session) are coaching techniques, not a clinic pathway. The question is whether those reps change next-day regulation, irritability and affect in healthy adults.

In machine-learning terms, sleep is overnight regularisation. The day’s threat model overfits if you never stop training. Take the morning after a late-night inbox session. A team lead in Pune opens a curt client message before her first chai. She knows the moves: name the feeling, recast the story, notice “they think I’m careless” as a thought rather than a fact, then pick the reply that fits what she actually cares about. Each move needs a prefrontal cortex that slept. Today the amygdala is chairing the stand-up, and last night’s Slack is still stuck to her. A calendar that treats sleep as optional inventory makes her run every move on credit. A protected window pays for them in advance. Rest is not a prize you earn after inbox zero. It is the condition under which the next day’s skill even exists.

04

Introduction

A Mumbai product manager will tell you, without irony, that she will sleep when the sprint ends. The sprint does not end. So she borrows another hour of tickets at midnight. That is not a personality. It is a cash-flow statement: sleep is the working capital. The interest falls due at 11 a.m., when a junior asks a harmless question and gets a tone that was not in the brief. He goes quiet.

This paper asks a narrower question than “is sleep good for mental health”. Give her a longer or better night. Does she take tomorrow’s harmless question more calmly? The question is causal and next-day: if you extend or improve sleep in healthy adults without diagnosed insomnia, do reappraisal, irritability and affect actually improve tomorrow?

The loss side of the ledger is already thick. Tomaso, Johnson and Nelson synthesised sleep deprivation and restriction across 64 studies. Negative mood rose ($g = 0.45$). Positive mood fell hard ($g = -0.94$). Adaptive emotion regulation fell by $g = -0.32$, but every study in that cell used youth samples. Palmer and colleagues, in a 2024 Psychological Bulletin synthesis of 154 experimental studies ($N = 5,717$), found that every form of sleep loss reduced positive affect (SMD -0.27 to -1.14) and raised anxiety (SMD 0.57 to 0.63). Zhang and colleagues showed that after 24 hours awake, healthy young adults were worse at using distraction and reappraisal to down-regulate brain responses to negative pictures. Palmer and Alfano had already warned, in 2017, that most sleep–emotion work measures the feeling that follows a short night, not the regulatory process that might change that feeling.

The gain side is the gap. Scott, Webb and colleagues asked a different but neighbouring question: when an intervention successfully improves sleep quality, do mental-health symptoms fall? Across 65 randomised trials and 8,608 participants, composite mental health improved by $g+ = -0.53$, depression by -0.63 , anxiety by -0.51 , rumination by -0.49 . There was a dose–response: bigger sleep-quality gains, bigger mental-health gains. That is a serious number. It is also mostly a clinical-adjacent number. About three-quarters of the interventions were cognitive-behavioural insomnia programmes. Many samples had insomnia or poor sleep as an entry ticket. Affect and mood were a minority of comparisons. Emotion-regulation strategies were not a dedicated endpoint.

Murawski and colleagues showed that cognitive and behavioural sleep programmes can improve sleep quality in adults without a sleep-disorder diagnosis ($g = -0.54$). Baron and colleagues showed that behavioural extension reliably lengthens sleep (two-arm SMD 0.80), with large heterogeneity. Bourke and colleagues, in a 2026 synthesis of 118 daily-diary and experience-sampling studies, found small-to-moderate within-person links: better subjective sleep quality predicted better next-day affect ($r = .28$ for positive affect). Longer

sleep predicted a much smaller lift ($r = .09$). Association is not a programme. A correlation between last night and this morning does not tell an employer what happens if you change the night.

Why this matters for working adults in India is not a mystery and should not be dressed as one. Official time-use data show that an eight-hour night is not the default for urban workers, and working women sleep less than working men. A 2025 self-report survey by LocalCircles found that 59 per cent of respondents described fewer than six hours of uninterrupted night sleep; that figure is not actigraphy and should not be treated as one. The only large randomised sleep-gain experiment in Indian working adults was run in Chennai. Participants slept about 5.5 hours a night in an eight-hour time-in-bed window. A three-week programme of information, encouragement and a better home sleep kit added 27 minutes. Well-being did not move. A short workplace nap did.

That is the entrepreneurial fact. You can add inventory and still ship a defective unit. Minutes are not quality. Quality is not automatically next-day skill.

The research question follows. Do interventions that extend or improve sleep in healthy adults improve next-day emotion regulation, irritability and affect? If the answer is “not enough trials to pool, and the one trial that measured the skill found a null”, that is still an answer. A null is publishable. A slogan is not.

05

Methods

Protocol and reporting

This review follows PRISMA 2020. The analysis plan was pre-specified in a written protocol: random-effects pooling with REML, Hedges g , 95 per cent confidence intervals, I^2 , τ^2 , a 95 per cent prediction interval, Egger’s test, trim-and-fill, leave-one-out sensitivity, RoB 2, and GRADE — if and only if five or more eligible trials could be pooled on a shared endpoint. The fallback, written before the search, was a systematic review with narrative synthesis and an explicit statement that a meta-analysis is not yet possible. That fallback was triggered.

Eligibility

Population. Healthy adults, 18 years and older. Samples defined by diagnosed insomnia were excluded. Subthreshold poor sleep or short habitual sleep without an insomnia diagnosis remained eligible, with the limitation flagged.

Intervention or exposure. Sleep extension (a longer time-in-bed or sleep-opportunity window), sleep hygiene, or cognitive-behavioural sleep components delivered in non-clinical samples (schedule regularity, stimulus-control style rules, brief education, feedback on sleep data). Commercial programme names are not used.

Comparator. Any control: sleep as usual, waitlist, education-only, or a fixed habitual schedule.

Outcomes. Primary: emotion-regulation measures (strategy use or efficacy, including reappraisal); irritability; positive and negative affect. Next-day or same-week daily measurement was preferred. Adjacent mood, stress, anxiety and flourishing results were described as adjacent, not as regulation.

Design and years. Randomised and controlled trials, 2005–2026. Within-subject experiments without randomisation were kept only as supporting narrative and were not treated as eligible for any future pool.

Information sources and search

Sources: PubMed, PsycINFO, Scopus, Web of Science, Google Scholar, CTRI (India), ClinicalTrials.gov, OSF preprints. Last search: 22 September 2026.

PubMed

("sleep extension"[tiab] OR "sleep hygiene"[tiab] OR "sleep intervention"[tiab] OR "extended sleep"[tiab] OR "time in bed extension"[tiab]) AND ("emotion regulation"[tiab] OR reappraisal[tiab] OR irritability[tiab] OR affect[tiab] OR "positive affect"[tiab] OR "negative affect"[tiab] OR mood[tiab]) AND (randomi[tiab] OR "controlled trial"[tiab] OR RCT[tiab]) AND ("2005/01/01"[Date - Publication] : "2026/12/31"[Date - Publication])*

PsycINFO, Scopus, Web of Science

The same core Boolean, adapted to each field syntax.

Google Scholar

"sleep extension" "emotion regulation" randomized OR randomised adults

ClinicalTrials.gov

Condition or intervention: sleep extension. Other terms: emotion OR affect OR irritability. Adult. Interventional.

CTRI

sleep AND (emotion OR affect OR hygiene OR extension)

OSF

sleep extension emotion regulation

Reference lists of Scott 2021, Tomaso 2021, Palmer 2024, Baron 2021 and Palmer and Alfano 2017 were mined. Studies that could not be verified to a DOI, PMID or stable URL were marked UNVERIFIED and excluded.

Selection and extraction

Two conceptual screens were applied. First: is this a sleep-improving practice in healthy adults? Restriction and deprivation experiments were used only to position the loss side. Second: does the paper report regulation, irritability or affect, not only sleep duration?

Extraction fields: n and arm sizes; design; country; language of delivery; dose in sessions and minutes, or nights and added opportunity; delivery channel; guidance (self-guided, written, coach, in-person); outcome measure described functionally; timepoints; direction and size of effect; whether insomnia was an inclusion criterion.

Analysis plan

The pre-specified model was random-effects REML on Hedges g. Pre-specified moderators were extension versus hygiene, duration in days, and baseline sleep debt. Because fewer than five trials shared a common next-day regulation endpoint, no effect was pooled. No I^2 , no τ^2 , no prediction interval, no Egger test and no trim-and-fill were computed on a fictional set. Results are synthesised by outcome family: regulation strategies; affect and mood; irritability; adjacent stress and well-being; India evidence.

Risk of bias was judged with RoB 2 domains applied narratively: randomisation, deviations from intended practice, missing data, outcome measurement, selection of the reported result. Certainty was judged with GRADE by outcome.

PRISMA 2020 flow

Reconstructed from the 22 September 2026 electronic search. This is an honest reconstructed count, not a dual-independent librarian extract from every paid database instance.

Stage	n
Records identified across eight sources	2,146
Duplicates removed	742
Titles and abstracts screened	1,404
Excluded at screen (wrong population, insomnia samples, restriction-only, no emotion outcome, out of date)	1,328
Full texts assessed	76
Excluded at full text	67
— diagnosed insomnia or clinical CBT-I sample	28
— children or adolescents only	9
— deprivation or restriction as the practice	11
— no regulation, irritability or affect outcome	12
— no control or not a trial	5
— unverifiable or pre-2005	2
Included in narrative synthesis	9
Eligible for a common-endpoint meta-analysis of next-day regulation strategies	1
Completed CTRI trials meeting eligibility	0

06Results

Study-characteristics table

Study	Design / n	Sample	Practice and dose	Emotion outcomes
Parsons & Young 2022 Sleep Health	Parallel RCT 72 (38/34)	UK/DK team; short-sleeping adults 18–24	Extension vs usual; 7 nights, +90 min opportunity; phone instructions	Daily PA/NA; reappraisal, suppression, positive-emotion strategies; 6×/day
Do, Schnitker & Scullin 2025 J Posit Psychol	3-arm RCT 90	USA young adults	Extend vs restrict vs usual; Mon–Fri; extension +46 min	Flourishing, resilience, gratitude, mood disturbance
Eigl, Urban-Ferreira & Schabus 2023 Front Psychiatry	3-arm RCT 100	Austria; university employees, mean age 39.5	Sleep-data feedback ± hygiene education vs waitlist; 2 weeks; one 45-min session	Mood, vitality, well-being

Study	Design / n	Sample	Practice and dose	Emotion outcomes
Reynolds et al. 2024 Sleep Science	Crossover RCT 10	USA; healthy sleepers 6–8 h, mean age 65	+2 h time in bed vs habitual; 3 weeks each	Mood, depression, anxiety
Reynold et al. 2014 J Sleep Med Disord	Parallel RCT 14	USA; healthy adequate sleepers, mean age 32	+3 h time in bed vs fixed habitual; 7 nights	Depression and anxiety inventories
Chen et al. 2026 Comput Hum Behav Rep	Parallel experiment 233 analysed	Singapore; college students	14-day digital hygiene nudges vs control	Anxiety, life satisfaction, stress, depression
Ghoul et al. 2025 J Am Coll Health	Parallel RCT 108	USA undergraduates	Brief remote hygiene vs sleep education; ~60 min; 2-week follow-up	Perceived stress (adjacent)
Motomura et al. 2017 Front Neurol	Within-subject, not RCT 15	Japan; healthy men, mean age 23	9-day extension (TIB 12 h) then one night awake	Negative affect; amygdala– prefrontal connectivity
Wang et al. 2026 Br J Psychol	Sequential pilot, not RCT 11	University short sleepers	Hygiene then hygiene +90 min extension; 14 days	Well-being, PA/NA, strategy use; next-day

Supporting but not tabled as primary: Mantua and colleagues (2019) extended time in bed to 10 hours for seven nights in 27 healthy sleepers and found lower fatigue with no significant change on mood subscales. Hershner and O'Brien (2018) found that an online sleep-education site improved student sleep quality and reduced depression scores; the sample and outcome sit one step off this review's question.

Forest-plot data table

A forest plot implies a pooled diamond. There is no honest diamond for emotion regulation. The table below is a study-level map, not a meta-analysis. Weights are not computed.

Study	Endpoint	Effect	Direction	Pool?
Parsons & Young 2022	Regulation strategies	Condition × week null; all $p > .05$	No change	No — only trial on this endpoint
Parsons & Young 2022	Positive emotion	week × condition $d = -0.11$, $p = .032$	Small increase vs control	No — different construct
Parsons & Young 2022	Negative emotion	week × condition $d = 0.20$, $p = .001$	Small decrease	No — different construct
Do et al. 2025	Flourishing / resilience / gratitude	$\eta^2 = 0.13$ to 0.17	Extension up, restriction down	No — not regulation
Eigl et al. 2023	Mood (feedback + education)	TIME × GROUP $\eta^2 p = 0.076$	Improvement	No — workplace mood, not ER
Reynolds et al. 2024	Mood, depression, anxiety	No significant differences	Null	No
Reynold et al. 2014	Depression inventory	ES = -0.86 after +3 h TIB (control -0.15)	Worsening	No — over- extension
Chen et al. 2026	Anxiety; life satisfaction	$d = 0.35$; $d = 0.44$	Hygiene benefit	No — hygiene, students

Study	Endpoint	Effect	Direction	Pool?
Chen et al. 2026	Stress	$d = 0.23, p = .087$	Non-significant	No
Ghoul et al. 2025	Perceived stress	$\eta^2 = 0.07, p = .006$	Hygiene benefit	No — adjacent
Motomura et al. 2017	Negative affect	$Z(14) = 2.41, \text{adj. } p = .032$	Decrease after 9-day extension	No — not randomised
Wang et al. 2026	Next-day PA and reappraisal	Within-person β mixed; some FDR-fail	Extra minutes associated with better next-day numbers	No — $n = 11$, no control

What the trials actually found

Emotion regulation

Parsons and Young ran the only eligible randomised test. Seventy-two adults aged 18–24 who had been sleeping under seven hours were randomised, after a seven-day baseline, to add 90 minutes of sleep opportunity or to continue as usual. Emotion and regulation were sampled six times a day. Sleep lengthened by 1.28 hours in the extension arm ($d = 0.71$ to 0.75 depending on the contrast reported). Positive emotion intensity showed a small week-by-condition interaction ($d = -0.11$). Negative emotion intensity showed a larger interaction ($d = 0.20$), with ratings about 4.7 points lower in the extension week. Across all emotion-regulation models — reappraisal, suppression, emotion-focused and self-focused positive-emotion strategies — there was no main effect of condition and no condition-by-week interaction. The authors described the mood effect as small and “to a minor extent”, and “unlikely to be of clinical relevance”.

Wang and colleagues later ran an $n = 11$ sequential pilot: baseline, hygiene, then hygiene plus a 90-minute extension. Objectively measured sleep rose from 5.01 hours to 6.67 hours. On days with more sleep than the person’s own average, next-day well-being and positive affect were higher, and within-person sleep gain predicted more acceptance and reappraisal and less rumination. Between-phase strategy effects mostly did not survive false-discovery correction. It is a signal, not a trial.

Affect, mood and flourishing

Do, Schnitker and Scullin randomised 90 young adults to restrict, extend or sleep as usual from Monday to Friday. Extension added 46 minutes. State flourishing, resilience and gratitude improved with extension and worsened with restriction ($\eta^2 = 0.13$ to 0.17). Extended sleepers wrote twice as many details on a gratitude list ($\eta^2 = 0.11$). Several effects survived a mood covariate, which matters: this is not only “they felt less tired”.

Eigl, Urban-Ferreira and Schabus randomised 100 university employees (mean age 39.5, range 22–62) — the closest working-adult analogue in the set — to sleep-data feedback plus a 45-minute hygiene education session, feedback alone, or waitlist, over two weeks. Mood, vitality and sleep quality improved when feedback was paired with the education session. Feedback alone helped well-being and sleep-onset latency. The waitlist did not improve.

	Reynolds, Seymour, Iftikhar, Burnette, Vendemia and Youngstedt asked healthy middle-to-older adults who already slept six to eight hours to add two hours in bed for three weeks, in a crossover with a habitual-sleep block. Time in bed rose by 82 minutes and total sleep by 66 minutes. Mood, depression, anxiety, cognition and cardiovascular measures did not differ by condition. Extending a sufficient night in a 65-year-old sleeper was feasible only in part, and it did not buy a mood effect. Reynold, Bowles, Saxena, Fayad and Youngstedt had already shown the opposite risk in 2014. Fourteen healthy adequate sleepers were randomised to add three hours in bed for a week or to hold a fixed habitual window. Depression scores rose more after extension (ES = -0.86; means 2.38 to 5.25) than after control (ES = -0.15). Sleepiness rose. An inflammatory marker doubled. Over-extension is not a free lunch.
Hygiene and adjacent emotion	Chen, Cheng, Koay, Soh and Hartanto delivered 14 days of digital hygiene nudges to college students (n = 233 analysed). Anxiety fell (d = 0.35) and life satisfaction rose (d = 0.44). Stress (d = 0.23) and depression did not differ reliably from control. Compliance was high (mean 83 per cent). Ghoul and colleagues randomised 108 undergraduates to a one-hour remote hygiene sequence versus sleep education. Hygiene and sleep disturbance improved with large effects ($\eta p^2 = 0.21$). Stress fell with a medium effect ($\eta p^2 = 0.07$), and the stress change ran through better hygiene and less disturbance.
Mechanistic support, not a trial	Motomura and colleagues gave 15 healthy men nine nights with a 12-hour time-in-bed window. Negative affect fell by day 9. Amygdala blood flow fell. Negative connectivity between the amygdala and the medial prefrontal cortex strengthened — the circuit you want if the goal is “the feeling happens and the board still holds”. After one subsequent night awake, the gains reversed. Small sample, no parallel control, useful picture.

Moderator table

Pre-specified moderator	What the studies suggest	Confidence
Extension vs hygiene	Extension changes duration more directly. Hygiene changes behaviour and can move stress and anxiety in students. Neither has a replicated regulation-strategy effect.	Low
Days	Parsons: 7 nights. Do: 5 weeknights. Eigl: 14 days. Motomura: 9 days before negative affect moved. Overnight miracles are not in this set.	Low
Baseline sleep debt	Short sleepers (Parsons, Do, Wang) show small favourable affect or flourishing shifts. Adequate sleepers asked to add 2–3 hours show nulls or harm (Reynolds 2024; Reynold 2014). Debt appears to be the eligibility criterion that matters.	Low–moderate as a pattern; not a fitted slope
Quality vs minutes	Bessone: +27 min of fragmented night sleep, well-being unchanged; a higher-efficiency nap moved well-being. Baron: direct schedule change beats extra curriculum. Minutes without efficiency are a weak currency.	Moderate as a qualitative finding

Heterogeneity	Heterogeneity was not quantified with I ² because there was no pool. Qualitatively the set is a jumble: students and employees; seven days and three weeks; +46 minutes and +3 hours; affect scales, flourishing scales, strategy items, stress scales; United Kingdom, United States, Austria, Japan, Singapore, India. Any pooled g would have been a blender setting, not a finding.
Publication bias	Egger’s test was not run. The visual pattern is the usual small-study weather: the n = 10–15 papers are split between hopeful mechanistic results and frank nulls or harms. The larger papers (Bessone n = 452; Chen n = 233; Eigl n = 100; Ghoul n = 108; Do n = 90; Parsons n = 72) are not a chorus. Two of the largest emotion-adjacent tests are a small affect lift plus a regulation null (Parsons) and a well-being null for night extension (Bessone). That is not the shape of a suppressed negative literature. It is the shape of a thin one.

Risk-of-bias summary

RoB 2 domain	Typical judgement	Why
Randomisation process	Low to some concerns	Parsons, Do, Eigl, Ghoul, Chen, Reynold 2014 and Reynolds 2024 randomised. Motomura and Wang did not.
Deviations from intended practice	Some concerns	Sleep opportunity is not blindable. Adherence varies. People told to spend two extra hours in bed often fail to do it (Reynolds 2024).
Missing outcome data	Some concerns	Experience-sampling compliance is never perfect. Small-n studies have no spare.
Outcome measurement	Some concerns to high	Almost all emotion endpoints are unblinded self-report. Motomura adds imaging. No trial used a blinded behavioural regulation task after extension in healthy adults.
Selection of reported result	Some concerns	Multiple strategy models in Parsons; multiple well-being indices in Do and Eigl. Pre-registration quality is uneven.

Overall: every emotion result in this review should be read as “some concerns”. That is normal for behavioural sleep work. It is not a reason to upgrade a null into a product claim.

GRADE table

Outcome	Studies	Certainty	Narrative conclusion
Emotion-regulation strategy use after sleep gain in healthy adults	1 RCT (n = 72) + 1 n = 11 pilot	Very low	No demonstrated effect of extension on reappraisal or related strategies
Next-day / same-week PA and NA after extension	2–4 small RCTs, mixed	Low	Small favourable shift possible when short sleepers add ~45–90 min for a week; not a general law
Irritability after sleep gain in healthy adults	0 dedicated RCTs	Very low / insufficient	Cannot be graded as an effect
Adjacent stress, anxiety, flourishing after hygiene or extension	Several student RCTs and one employee RCT	Low	Hygiene and brief feedback can move stress, anxiety, mood and flourishing modestly
Well-being after night-sleep extension in Indian working adults	1 RCT (n = 452)	Moderate for that contrast	+27 min fragmented night sleep: ~0.00 SD on well-being. Workplace nap: +0.12 SD overall index

07

Discussion

PULL QUOTE

In Chennai, +27 minutes of fragmented night sleep bought 0.00 SD of well-being.

What the number means

The number that belongs in a headline is not a pooled g . It is one. One randomised trial in healthy adults has asked the regulation-strategy question after sleep extension. That trial found a small next-day affect shift and a regulation null. Everything else in this review is either a neighbouring construct, a neighbouring population, or a neighbouring design.

Stand-up version, because the industry needs it: sleep is not a vending machine where you insert 90 minutes and a reappraisal falls out. Sleep is more like overnight gradient descent. It can flatten the loss surface so tomorrow's skill is cheaper to run. It does not install the skill. A well-rested analyst still has to practise the moves: catch “they think I’m useless” as a thought, not a fact; make the calm call when anger wants the all-caps reply; tell the feeling apart from the story stuck to it. Entrepreneurship still has to teach that working capital is not the product.

Scott's $g \approx 0.53$ remains the best single sentence we have for “improve sleep quality, and mental-health symptoms ease” — in samples that often started with insomnia or poor sleep, using programmes that were often full insomnia protocols. Tomaso's $g = -0.32$ remains the best single sentence we have for

“take sleep away, and adaptive regulation gets worse” — in youth. Palmer 2024 remains the best single sentence for “take sleep away, and positive affect falls”. None of those sentences is “healthy adults who add an hour will reappraise a difficult colleague tomorrow”.

The pattern that is supported is more modest, and more useful.

- Debt matters. Topping up a short sleeper is not the same operation as putting an adequate sleeper to bed for 11 hours. The first can lift affect and flourishing a little. The second can do nothing, or can make mood worse.
- Quality matters more than minutes. Chennai participants added 27 minutes of low-efficiency night sleep and did not feel better. A higher-efficiency nap at work moved well-being. That is not a nap manifesto. It is a quality manifesto.
- Affect is not regulation. Feeling 1 point less negative on a 0–100 slider is not the same as using reappraisal when the slider spikes at 4 p.m. Parsons measured both. Only affect moved.
- Dose is days, not a night. Motomura’s negative-affect change was clearer at day 9 than at day 4. Do used a working week. Eigl used two weeks. A single heroic early night is a nice Tuesday. It is not a programme.

Limitations

The search is electronic and reconstructed; a professional information-specialist dual screen of every paid database instance was not run. Some hygiene trials sit on the edge of eligibility because their emotion measures are stress or anxiety rather than regulation or affect. Parsons’ sample had a mean insomnia-severity score in the subthreshold range; they were not a diagnosed-insomnia cohort, but they were not pristine good sleepers either. Almost every emotion endpoint is unblinded self-report. Experience-sampling is a strength for “next day” and a weakness for demand characteristics. No included trial was powered for a small regulation effect. No included trial delivered the practice in an Indian language to Indian professionals and then measured next-day reappraisal. Adjacent India surveys of sleep hours are self-report; they describe a climate, they do not estimate an effect.

What this means for an Indian workplace programme

WHAT THIS MEANS

What this means for an Indian workplace programme · 150 words

Indian professionals do not, as a class, have insomnia. They have a calendar that liquidates recovery. A Bengaluru engineer's night: the US call, the laptop in bed. In Chennai, 27 extra minutes of broken night sleep bought no well-being; a protected workplace nap moved an outcome index, including psychological well-being, by 0.12 SD. Parsons says a week of extra opportunity takes a little heat out of next-day negative feeling and will not, on present evidence, install reappraisal. Her programme is two reps, not one promise. Rep one: the same lights-out time, an earlier last chai, the phone across the room and, where floor and culture allow, a short nap instead of another poor night hour. Rep two, next day, on purpose: the curt escalation lands; she names the feeling, recasts the story, sends the shorter email. Quality beats minutes. Debt beats surplus. The skill still has to be trained.

Research gaps, including the India gap

The missing trial is not mysterious. It looks like this: working-age Indian adults without diagnosed insomnia; baseline sleep measured with actigraphy, not a vibes survey; randomisation to a sleep-opportunity practice versus an active control; outcomes measured the next day with both affect items and a regulation task (reappraisal efficacy, not only "how often did you try"); irritability measured as its own construct; delivery in the languages people actually use; a two-to-four-week dose, not a weekend; a pre-registered distinction between minutes gained and efficiency gained. CTRI does not currently hold that trial. Until it exists, every Indian workplace slide that puts Scott's 0.53 under a photo of a smiling, well-rested team is selling a number earned mostly in insomnia and poor-sleep samples as a reappraisal effect in healthy employees.

Secondary gaps: adult irritability after sleep gain is an empty cell; almost all regulation work after sleep loss is still student or youth; no trial has tested whether a regulation skill practised on a short night transfers better after a week of protected sleep; mechanisms (prefrontal-amygdala connectivity, next-day cognitive capacity, reduced threat salience) are sketched in samples of 15, not in samples of 150.

The point at the end is the same as the one at the start. Sleep is the working capital. Reappraisal is the product, and someone still has to build it. Confuse the two and you get the product manager from the opening, well rested for once, still sending the sharp reply in the 4 p.m. thread.

08

FAQ

Q1 Does sleeping more make me better at reappraisal tomorrow?

On present evidence, no — or at least not automatically. One randomised trial in healthy adults measured regulation strategies after a 90-minute extension and found no change. Affect moved a little. The skill still needs its own reps.

Q2 How large is the next-day mood effect if I extend a short sleep?

In the best available trial, negative emotion shifted by $d = 0.20$ after seven nights of extra opportunity. That is a small effect. Authors said it was unlikely to matter clinically. Treat it as a nudge, not a personality transplant.

Q3 Is Scott's 0.5 a number I can put on an India workplace poster?

$g \approx 0.53$ is the effect of improving sleep quality on mental-health symptoms across 65 trials, many of them insomnia programmes. It is a real number for that question. It is not a reappraisal effect in healthy Indian professionals.

Q4 Can extra sleep ever make mood worse?

Yes. In 14 already-adequate sleepers, adding three hours in bed for a week raised depression scores more than a fixed habitual schedule. Topping up debt is not the same as forcing surplus.

Q5 Has this been tested in Indian professionals?

Zero eligible trials. The closest experiment is Chennai, $n = 452$: +27 minutes of night sleep, 0.00 SD on well-being; a workplace nap moved the index by 0.12 SD. That is the India gap, named.

09

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About the author

ABOUT THE AUTHOR

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

Atul Aswani is a Mumbai Psychiatrist and trained as a Results Coach. He builds EmotionApp, a non-clinical emotional-fitness platform for Indian professionals: countable daily reps, an AI coach with human hand-off, WhatsApp-first delivery, 23 Indian languages, India-resident data, DPDP-compliant, designed under ISO 9001 and ISO 13485. He writes so that workplace programmes cite trials, not slogans.

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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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