

Warm Wishes, Measured

A meta-analysis of loving-kindness practice in non-clinical adults

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



KEY NUMBER · HEDGES G

0.38

Interpersonal connection in working adults: Hedges $g = 0.38$ across 12 employee samples (Wang, Gu, Zhang, Luo and Zeng, 2024).

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A meta-analysis of loving-kindness practice in non-clinical adults

Zeng 2015 pooled positive emotion. Adding 2016–2026 trials: effects on connection, compassion and stress in working adults.

What are the effects of loving-kindness practice on connection, compassion and stress in working adults?

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INDEXING TITLE

Loving-kindness practice in non-clinical adults: an updated meta-analysis, 2016–2026

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01

Abstract

Zeng's 2015 review asked whether loving-kindness practice lifts positive emotion. This update asks a sharper question for people who work: after another decade of trials, what happens to connection, compassion and stress? In working adults the best available random-effects estimates are Hedges $g = 0.38$ for interpersonal connection (12 employee samples) and $g = 0.54$ for stress (10 employee samples). Both figures come from Wang and colleagues' workplace synthesis, which closed in March 2022 and remains the most defensible pooled number for employed samples. Trials published since then, including a 2025 four-week, three-minute-a-day video programme in full-time employees, point the same way against no-practice controls and shrink against active practices such as light exercise or mindfulness. Compassion against passive controls in Petrovic and colleagues' 2024 adult review was small and significant ($g = 0.36$, three trials). Dose in minutes and weeks did not reliably change the size of the effect. Live teachers were not required. Audio and short video were enough. Certainty is moderate for workplace stress and interpersonal outcomes, lower for positive affect against active controls, and very low for Indian professionals: no randomised trial of this practice was found on CTRI, PubMed or Google Scholar through September 2026. A null against another active practice is a real result, not a failed study. For an Indian workplace programme the honest offer is a short daily warm-wishes rep, counted, with a human hand-off when the number is not the point.

02

Key findings box

KEY FINDINGS

Five numbers worth keeping

0.38

Interpersonal connection in working adults: Hedges $g = 0.38$ across 12 employee samples (Wang, Gu, Zhang, Luo and Zeng, 2024).

0.54

Stress in working adults: Hedges $g = 0.54$ across 10 employee samples (Wang et al., 2024).

0.36

Compassion against passive controls in a 2024 adult review: Hedges $g = 0.36$ (three trials, $I^2 = 27\%$) (Petrovic, Mettler, Cho and Heath, 2024).

- A 2025 employee trial used three minutes a day for four weeks and still moved interpersonal mindfulness, empathy and positive affect (Liu et al., 2025).

0

Indian randomised trials of this practice in working adults, 2016–2026: zero.

- Read those five lines the way a stand-up set is supposed to be read. The first two get the laugh of recognition: yes, connection moves; yes, stress moves. The third is the callback to Zeng — compassion is still in the room, but the new adult pool is smaller than the 2014 kindness-based figure because the comparator and the sample got cleaner. The fourth is the entrepreneur's line: the minimum viable product was three minutes. The fifth is the punchline this paper exists to land. India has the instinct. India does not yet have the trial.

03

Definition block

DEFINITION

Warm-wishes practice is a rehearsed sequence of goodwill. You sit. You wish yourself safety, ease and a measure of happiness. You send the same wish to someone you love, then to someone neutral, then — if the hour allows — to someone difficult, and then wider. In the research literature it is called loving-kindness. The mechanism under study is plain. It is attention, repeated.

In machine-learning terms, attention is the loss function and this practice is supervised fine-tuning of the social prior: more labelled examples of goodwill, fewer of the default workplace story that nobody has your back. You do not raise a model's accuracy by shouting at the loss. You show it more examples of the thing you want. The practice does not argue with the cold story. It does the move the mood would postpone. You can still believe the floor is cold and send the wish

anyway, because the wish is a choice, not a mood. Picture a shift lead in Noida who feels nothing warm towards the new hire. She walks over anyway and asks how the first week is going. Warm-wishes practice rehearses that walk in the mind first, so the feet have a chance later.

None of that makes the practice a diagnosis. It is a countable daily rep. EmotionApp already ships it as Warm-Wishes Rounds: five to ten minutes, goodwill phrases moving outward in circles, WhatsApp-first, with an AI coach and a human hand-off. This paper asks what the last decade of controlled trials will let a programme like that say out loud.

04

Introduction

Why the question matters for working adults in India

A team lead in Pune ends a tense client call with “take care, na”. A colleague sends a festival message to the whole group before logging off. Someone stays back an extra hour so a teammate can get home to a child with a fever. Indian offices already run on goodwill. The question is whether a short, guided, repeatable form of it changes anything you can measure.

A small practice grows only where it has ground. An analyst on the morning local plays a three-minute audio between two stations, every weekday, for a month. Nobody announced it in a town hall. It simply happened, day after day. Three minutes a day for four weeks is that kind of small start. An 809-person online course that loses four-fifths of its people before the end is the opposite: a big launch on hard ground. Both belong in the same review.

Entrepreneurs know the same rule in another dialect. A start-up does not ship a feeling. It ships a loop. Sit, wish, count, repeat. Unit economics of goodwill: cheapest channel that still moves a number, killed or kept at four weeks, human hand-off when the dashboard is not the point. That is closer to how a Mumbai product team should read this literature than any sentence that begins with “ancient wisdom”.

The loop has a research history. Galante and colleagues, in 2014, pooled kindness-based meditation across patients and the general population and found moderate lifts in compassion and self-compassion against people who did nothing. Compassion against passive controls sat at Hedges $g = 0.61$ (95% CI 0.24 to 0.99). Self-compassion sat at $g = 0.45$ (0.15 to 0.75). Depression fell by $g = -0.61$. Mindfulness rose by $g = 0.63$. Positive emotion rose by $g = 0.42$ against progressive muscle relaxation. Results against other active controls were inconclusive. Quality was low to moderate. Confidence intervals were wide because studies were small.

Zeng and colleagues, in 2015, narrowed the lens to positive emotion and found a medium effect for loving-kindness-focused programmes against wait-lists (Hedges $g = 0.42$, 95% CI 0.27 to 0.58, across the wait-list randomised set). Compassion-focused programmes sat lower. Minutes and weeks did not explain the size of the effect. A teaching frame did. Programmes without a didactic component had small effects. That last line still matters for anyone tempted to drop a raw audio file into a staff WhatsApp group and call it a programme.

Luberto and colleagues, searching to April 2016, put empathy, compassion and helping behaviour on the same table. Twenty-six randomised trials. Most used compassion or loving-kindness practice. Self-reported prosocial outcomes: standardised mean difference 0.40. Observed helping: 0.45. Many studies were in healthy adults. Many controls were wait-lists. The observed-behaviour line is the one that still saves this literature from being a hall of mirrors. People ticked boxes. In a subset of trials, people also helped.

Those three papers closed before most of the digital decade. They mixed clinical and non-clinical samples. They said little about people who have a job, a commute and a manager. They said nothing about India.

The decade that followed produced online courses, three-minute videos, employee samples in China and Japan, a workplace meta-analysis that finally treated “has a job” as a population rather than a footnote, and a 2024 adult review that split passive controls from active ones and watched the effect shrink. It also produced nulls. An 809-person online trial in 2016 found that a loving-kindness course and a light-exercise course both raised well-being and did not differ from each other. That is not a failed study. That is the difference between beating a wait-list and beating another reasonable way to spend twenty minutes.

For EmotionApp the question is practical. The platform delivers positive-psychology techniques as countable daily reps, in 23 Indian languages, on WhatsApp first, with an AI coach and a human hand-off, on India-resident infrastructure, built under ISO 9001 and ISO 13485, handled under DPDP. If warm-wishes practice is going to sit in that stack, the claim has to be smaller than a speech and larger than a slogan.

Take the thought “this office is cold”. One way is to put it on trial and ask for evidence. Warm-wishes practice does not cross-examine the thought. It runs a competing rehearsal. A sales manager who feels shut out by the next desk does not wait to feel friendly. She sends the wish anyway, in her head: I hope your quarter goes well. The mood can stay; the move still happens, because the wish is a choice. Machine learning would say you are fine-tuning a prior. Overfit to one loved person and the model fails on the difficult colleague. Regularise with daily reps and a wider circle.

This paper asks, in non-clinical adults and especially in people who work, what 2016–2026 controlled trials show for connection, compassion, stress and positive affect. The short answer is in the key-findings box. The longer answer

is that the effect is real against doing nothing, modest, sensitive to who you compare against, and untested in the country this platform serves.

05

Methods

Eligibility

Population. Non-clinical adults. Students and community adults were eligible. Employed samples were pre-specified as a moderator of interest. Trials in diagnosed psychiatric or medical cohorts were excluded from the primary map and reserved for narrative contrast. An online cancer-community trial that mixed patients, family and friends was treated as mixed exposure and kept out of any workplace pool.

Intervention. Loving-kindness or goodwill practice, including programmes that use the traditional mettā sequence. Combined loving-kindness and compassion protocols were eligible if goodwill practice was a named, substantial component. Pure compassion-focused programmes with no loving-kindness component were noted but not treated as identical. In prose we call the work warm-wishes practice.

Comparator. Any control: wait-list, no intervention, attention control, light exercise, mindfulness, progressive muscle relaxation, or another active practice.

Outcomes. Social connectedness or a close interpersonal proxy; compassion or self-compassion; stress or a close distress proxy; positive affect.

Design and years. Randomised and controlled trials published from 1 January 2016 to 22 September 2026. A matched, non-randomised student study was retained for narrative only.

Language and access. English-language reports. Where a Chinese-language delivery was described in an English paper, the trial stayed in.

Words we refused. The intervention is a practice, a technique, a rep, a coaching programme. It is not called a therapy, a treatment or a diagnosis in this paper.

Information sources and search

Sources: PubMed, PsycINFO, Scopus, Web of Science, Google Scholar, CTRI (India), ClinicalTrials.gov, OSF preprints. Prior reviews were used as citation seeds: Galante 2014, Zeng 2015, Luberto 2018, and the later syntheses by Petrovic 2024 and Wang 2024.

This is a PRISMA-informed search by a writing team, not a prospectively registered review with dual independent screening of every hit. No protocol was lodged on PROSPERO. Paywalled full texts limited some numeric extraction. Those limits are stated rather than disguised. A reconstructed flow is labelled as reconstructed. We do not invent a records-identified count we did not log.

Search strings

PubMed	("loving-kindness"[tiab] OR "loving kindness"[tiab] OR metta[tiab] OR "mettā"[tiab] OR "kindness meditation"[tiab]) AND (randomi*[tiab] OR RCT[tiab] OR "controlled trial"[tiab]) AND ("2016/01/01"[Date - Publication] : "2026/12/31"[Date - Publication])
PsycINFO, Scopus, Web of Science	Core terms: ("loving-kindness" OR "loving kindness" OR metta) AND randomi* with date limits 2016–2026. Workplace strings added employee* OR workplace OR worker* as a second pass.
Google Scholar	("loving-kindness" OR metta) (randomised OR randomized OR RCT) 2016..2026, and a second pass with workplace OR employees.
CTRI	loving-kindness OR metta OR "loving kindness". No relevant randomised trial of this practice in Indian adults was identified.
ClinicalTrials.gov	Condition or intervention: loving-kindness OR metta. Filters: Interventional; Adult; 01/01/2016–22/09/2026. Most registered studies were clinical (social anxiety, trauma, loneliness in older adults). Completed non-clinical records without a published paper were not pooled.
OSF	loving-kindness OR metta preprint. Used to flag unpublished work, not to invent results.
Flow (reconstructed, not a registered count)	Petrovic and colleagues, searching six databases on 2 November 2023, reached 23 randomised adult trials of loving-kindness interventions. Wang and colleagues, closing in March 2022, found 21 employee trials with usable numbers inside a wider set of 327 empirical loving-kindness and compassion papers. Our 2016–2026 de novo pass, seeded on those reviews plus CTRI, ClinicalTrials.gov and 2024–2026 updates, identified a working set of verified reports that met the population, practice and outcome rules closely enough to describe. Workplace or employed samples sit at the centre of the map. One large connectedness-and-stress trial sat in a mixed cancer-community sample and was held out of workplace pooling. One student study used a matched rather than randomised control and was held to narrative. One 2025 Japanese student trial circulated on a secondary site without a DOI we could verify and was marked UNVERIFIED and excluded. Approximate reconstructed flow, labelled as such: • Records touching the core terms across databases and registries: order of 800–1,500 unique items. • Title and abstract screen to controlled evaluations of loving-kindness or mettā in adults: order of 80–120. • Full-text candidates for 2016–2026 non-clinical or mixed-community samples with at least one target outcome: order of 25–35. • Included in the evidence map below: 14 verified reports, of which eight are workplace or employed samples.

- India-registered loving-kindness or mettā randomised trials: 0.

These are reconstructed magnitudes, not a dual-screened PRISMA count. They are honest about the size of the field.

Extraction fields

For each included report we sought: first author and year; n randomised and analysed; design; country; language of delivery; dose in sessions and minutes; delivery channel; guidance (audio, video, live, mixed); outcome measure in plain language rather than a trademarked instrument name; time-points; comparator; published effect size or computable means and standard deviations; DOI or URL.

Where means and standard deviations were published, Hedges g was computed from post-scores and, separately, from change scores with a conservative pre–post correlation of 0.5. The interaction eta-squared from a group-by-time analysis of variance was treated as the more conservative randomised-trial summary when both were available. Change-score g that assumes $r = 0.5$ is marked as an approximation.

Analysis plan

Pre-specified model: random effects, REML, Hedges g with 95% confidence intervals, I^2 , tau-squared, 95% prediction interval, Egger’s test, trim-and-fill, leave-one-out, RoB 2, GRADE.

What we actually did, and why it is narrower than that list: a new 2016–2026-only REML pool of identical outcomes was not computed. Connectedness was measured as social connectedness, interpersonal mindfulness, compassionate love, social closeness, collaboration, and variability in daily connection. Stress was measured as perceived stress, a depression-anxiety-stress composite, negative affect, and burnout-adjacent distress. Comparators split between passive and active. Pooling those as if they were one construct would have produced a number that looked precise and was not.

The pre-specified quotable outputs — g for connectedness and g for stress — are therefore taken from the workplace random-effects synthesis that already exists for employed adults (Wang and colleagues, 2024), and then checked against 2022–2026 employee trials extracted for this paper. Petrovic and colleagues (2024) supply the best adult-population estimate for compassion against passive controls. Individual-trial g values that we computed from published means are reported as such and are not treated as a second unpublished meta-analysis.

Wang 2024 is the best workplace anchor, not a 2016–2026-only, loving-kindness-only re-estimation. Its search closed in March 2022. It folds compassion protocols and some earlier employee trials into the same categories. We label that limit every time we quote the number.

Pre-specified moderators — dose, audio-guided versus live, employed samples — are read from published subgroup tests rather than re-estimated. Risk of bias was judged with RoB 2 domains: randomisation, deviations from intended

practice, missing data, measurement of outcomes, selection of the reported result. Certainty used GRADE: risk of bias, inconsistency, indirectness, imprecision, publication bias.

06

Results

What the prior reviews already settled

Galante and colleagues (2014) included 22 randomised trials of kindness-based meditation. Against passive controls they reported Hedges $g = -0.61$ for self-reported depression, $g = 0.63$ for mindfulness, $g = 0.61$ for compassion and $g = 0.45$ for self-compassion. Against progressive muscle relaxation, positive emotion rose by $g = 0.42$. Results against other active controls were inconclusive. Quality was low to moderate. Confidence intervals were wide because studies were small.

Zeng and colleagues (2015) reviewed 24 empirical studies ($N = 1,759$) on self-reported positive emotion. Wait-list randomised trials of loving-kindness-focused programmes showed a medium effect (Hedges $g = 0.42$, 95% CI 0.27 to 0.58). Compassion-focused programmes sat lower. Length of programme and minutes of practice did not moderate. Programmes without a teaching frame had small effects.

Luberto and colleagues (2018), searching to April 2016, included 26 randomised trials ($N = 1,714$). Most used compassion or loving-kindness practice. Self-reported prosocial outcomes: SMD = 0.40. Observed helping: SMD = 0.45. Many studies were in healthy adults. Many controls were wait-lists.

Two later syntheses sit inside our decade and are used as anchors, not as rivals.

Petrovic and colleagues (2024) searched six databases on 2 November 2023 and kept 23 randomised adult trials. Against passive controls, loving-kindness interventions showed small, significant pre-post effects on mindfulness, compassion, positive affect, negative affect and psychological symptoms. Against active controls and alternative practices the same effects were not significant. Format, length and the presence of a live facilitator did not moderate. Compassion against passive controls: $g = 0.36$ (95% CI 0.06 to 0.65), three trials, $I^2 = 27\%$. One of those three is the mixed cancer-community sample. Compassion against alternative practices: $g = 0.17$ (95% CI -0.21 to 0.54), not significant. Mindfulness against passive controls: $g = 0.22$ (0.03 to 0.40), five trials, $I^2 = 0$.

Wang and colleagues (2024) restricted the field to employees. Search to March 2022. Twenty-one trials. Random-effects Hedges g : stress 0.54 ($k = 10$); interpersonal relationships 0.38 ($k = 12$); self-compassion 0.65 ($k = 12$); burnout 0.40 ($k = 10$); mindfulness 0.56 ($k = 14$); personal mental health 0.31 ($k = 13$); job attitudes 0.28 ($k = 4$); psychological resources 0.41 ($k = 6$). Job type, gender and the focus of the protocol (loving-kindness versus compassion) were possible modifiers. Confidence intervals were not printed in the PubMed

abstract; the point estimates and study counts are. Those workplace figures are the pooled numbers this paper is willing to quote. They are not a 2016–2026-only, loving-kindness-only re-estimation. They are the best available employee synthesis, and the newer trials have not reversed them.

Study-characteristics table

Table 1. Verified 2016–2026 reports in the evidence map. Trademarked instrument names are withheld; outcomes are described in plain language.

Study	n	Design	Country	Sample	Dose / channel	Notes
Galante 2016	809	Online RCT	UK / int.	Community adults	Multi-session video; no live teacher vs light exercise	Well-being NS between arms; attrition 82%
Weibel 2017	71	RCT	USA	Students	4 × 90 min live vs wait-list	Compassionate love and self-compassion up; anxiety NS
Aspy 2017	115	RCT, 1 session	Australia	Students	1 audio session vs mindfulness or muscle relaxation	Connectedness up vs relaxation; affect NS
Kok / ReSource 2017	362	RCT module	Germany	Healthy adults	Affect module with LKM + dyad, live	Social closeness up; recruited earlier, published 2017
Le Nguyen 2019	142	RCT	USA	Mid-life adults	6-week workshop, live; vs mindfulness or wait-list	Telomere buffer; emotions did not mediate biology
Sirotina 2020	201	RCT, 1 session	USA	Students	1 guided session vs compassion practice or control	Loving-kindness > compassion on happiness
Totzeck 2020	110	Matched	Germany	Students	Multi-session live vs matched no-practice	Not randomised — narrative only
Liu 2022	100	RCT	China	Employees	8 weeks, 90 min, 5×/week, live group vs wait-list	Altruism up, negative affect down, positive affect NS
Telke 2022	979 / 649	RCT, deferred	USA	Cancer-community adults	21 days, ~12 min audio vs deferred practice	Mixed clinical exposure; held out of workplace pool
Don 2022	224	RCT	USA	Mid-life adults	6 weeks live workshop; LKM vs mindfulness	Connectedness variability down in both arms
Masters-Waage / Bandara 2022	employees	RCT + repl.	Japan / Singapore	Employed	Multi-session plus 1-week state study; live / formal and informal	Day-level yes; longitudinal mostly NS vs controls
Andersson 2022	49	RCT	Sweden	Employees	6-week compassion training vs exercise	Mixed protocol; stress fell in both arms
Zeng / Yang / Wang 2025	200 + 386	Two RCTs	China	Employees	Online self-help audio / digital	Positive emotion and self-compassion mediated workplace outcomes

Study	n	Design	Country	Sample	Dose / channel	Notes
Liu 2025	100	RCT	China	Full-time employees, 25–60	3 min/day × 4 weeks, short video app vs none	Chinese-language delivery; ChiCTR2500108223

Sources for the rows are the primary papers listed in the References. The 2025 Japanese student trial summarised on a secondary site was marked UNVERIFIED and is not in the table.

Forest-plot data table

Table 2. Published or computed effects. Weights are not a new REML model. “Approx.” means a change-score g that assumes a pre–post correlation of 0.5, or an eta-squared conversion. Prefer published η^2 over post-only g when both exist.

Outcome family	Study	Contrast	g or published d	Comment
Interpersonal / connectedness	Wang 2024 workplace pool	Mixed employee trials, $k = 12$	$g = 0.38$	Anchor estimate. CI not printed in abstract.
Interpersonal mindfulness	Liu 2025	Video LKM vs none	$\eta^2 = 0.038$ ($d \approx 0.40$); change $g \approx 0.76$	Employed; 3 min/day. Conservative read is the η^2 .
Empathy	Liu 2025	Video LKM vs none	$\eta^2 = 0.048$ ($d \approx 0.45$); change $g \approx 0.83$	Compassion-adjacent, one trial.
Collaboration	Liu 2025	Video LKM vs none	$\eta^2 = 0.022$ ($d \approx 0.30$); post $g \approx 0.57$	Smaller than empathy.
Social connectedness	Telke 2022	Immediate vs deferred audio	$d = 0.40$	Mixed cancer community. Sensitivity only.
Social connectedness	Aspy 2017	Audio LKM vs relaxation	Significant; g not published	Single session; affect NS.
Connectedness variability	Don 2022	LKM vs mindfulness	Variability down in both	No passive arm.
Social closeness	Kok / ReSource 2017	Affect module vs other modules	Social closeness up	Healthy adults; mixed module.
Stress	Wang 2024 workplace pool	Mixed employee trials, $k = 10$	$g = 0.54$	Anchor estimate. CI not printed in abstract.
Perceived stress	Telke 2022	Immediate vs deferred	$d = 0.40$	Mixed sample; larger with more days practised.
Negative affect	Liu 2025	Video LKM vs none	$\eta^2 = 0.049$ ($d \approx 0.45$); change $g \approx 0.41$	Not a stress scale.
Stress / distress	Andersson 2022	Compassion training vs exercise	Fell in both arms (within $d \approx -0.46$)	Active-control wash.
Self-compassion	Wang 2024 workplace pool	$k = 12$	$g = 0.65$	Workplace.
Self-compassion	Telke 2022	Immediate vs deferred	$d = 0.50$	Mixed sample.
Compassion	Petrovic 2024	LKI vs passive, $k = 3$	$g = 0.36$ [0.06, 0.65]	$I^2 = 27\%$. Includes Telke.
Compassion	Petrovic 2024	LKI vs alternative, $k = 3$	$g = 0.17$ [−0.21, 0.54]	Not significant.

Outcome family	Study	Contrast	g or published d	Comment
Positive affect	Liu 2025	Video LKM vs none	$\eta^2 = 0.042$ ($d \approx 0.42$); change $g \approx 0.83$	One trial. Large.
Positive affect	Liu 2022	Live LKM vs wait-list	NS	Null is publishable.
Well-being	Galante 2016	Online LKM vs exercise	NS between arms; anxiety $\beta = -0.22$	Active-control null.
Anxiety	Weibel 2017	Live LKM vs wait-list	NS	Compassion moved; anxiety did not.
Anxiety (LKCM)	Zheng 2023 pool	RCTs, $k = 19$, $n = 1,284$	$d = -0.28$	Includes clinical samples; listed as context.

Read the table the way a stand-up set is supposed to be read. The first line gets the laugh of recognition: yes, connection moves. The callback is the active-control row: yes, until you put another decent practice on stage.

Moderator table

Table 3. Pre-specified moderators read from published tests, not re-estimated.

Moderator	What the reviews found	What the 2016–2026 trials add
Dose (weeks, minutes)	Zeng 2015: length and minutes did not moderate positive emotion. Petrovic 2024: length did not moderate.	Liu 2025 moved several outcomes with three minutes a day. Telke 2022 found larger stress and self-compassion change with more days practised. Consistency beats duration.
Audio-guided vs live	Petrovic 2024: live facilitator present or absent did not moderate.	Galante 2016 (video), Telke 2022 (audio), Liu 2025 (short video) and Zeng 2025 (online self-help) all produced some movement without a roomful of people.
Employed samples	Wang 2024 is the employee synthesis. Job type and gender may modify size.	China and Japan employee trials 2022–2025 agree in direction against no practice. Longitudinal wins against mindfulness at work were mixed.
Passive vs active control	Galante 2014 and Petrovic 2024: effects shrink or vanish against active practices.	Galante 2016 vs exercise: well-being NS. Aspy 2017 vs mindfulness: connectedness similar. Don 2022 vs mindfulness: connectedness variability down in both. Andersson 2022: stress fell in both arms.

Heterogeneity

Workplace interpersonal and stress effects in Wang 2024 were summarised as category-level random-effects means across 10–12 trials. That already implies between-trial variation. Petrovic 2024 reported low I^2 for compassion against passive controls (27%) and, in the mindfulness-against-passive row, $I^2 = 0$. Active-control rows were unstable. The practical reading is simple. Against doing nothing, the sign is consistent. Against another practice, the size is not.

A 95% prediction interval for a new 2016–2026-only pool was not computed, because that pool was not fitted. Anyone quoting $g = 0.38$ or $g = 0.54$ as a guarantee for the next Indian office should sit down. A prediction interval on a mixed-protocol employee synthesis would be wide. That is not a defect in the practice. It is the shape of a young literature.

Publication bias Neither Wang 2024 nor Petrovic 2024 printed a clean bill of health on small-study effects in the abstracts we could verify. Galante 2014 already warned that small trials inflate precision problems. Online trials with high attrition (Galante 2016, 82%; Telke 2022, 34% missing at three weeks) will look larger among completers than among everyone who clicked “yes”. Trim-and-fill and Egger tests were pre-specified and are not reported here as if we had run them on a new study-level file. The conservative stance: small-study effects are plausible, and the workplace point estimates should be read as upper-middle rather than floor.

Risk-of-bias summary RoB 2, domain by domain, for this literature.

Randomisation. Several recent employee trials used computer-generated sequences (Liu 2025 reports stratified randomisation and a Chinese clinical-trial registration). Allocation concealment is often unclear. Rating: some concerns.

Deviations from intended practice. You cannot blind a person to the fact that they are sending warm wishes. Almost every trial is open-label. Rating: high.

Missing data. The two largest online samples lost a lot of people. Completer analyses in those papers are optimistic. Rating: high in large digital trials; some concerns in smaller supervised ones.

Measurement. Outcomes are almost all self-report. The person who practised is the person who ticks the box. Luberto 2018 is the exception that still matters: observed helping showed a similar-sized effect to self-report in the older mixed literature. Rating: some concerns to high.

Selection of the reported result. Pre-registration becomes common after about 2020. Earlier papers are vulnerable to outcome shopping. Rating: some concerns.

No trial in the map was low risk across all five domains. That is the rule in behavioural-practice research, not a scandal unique to warm wishes. It is why GRADE does not start at “high” and stay there.

GRADE table *Table 4. Certainty of evidence. Workplace point estimates are Wang 2024. Compassion against passive controls is Petrovic 2024.*

Outcome	Estimate	k / source	Certainty	Why it moves
Interpersonal connection, working adults	$g = 0.38$	Wang 2024, 12 employee samples	Moderate	Consistent direction; unblinded self-report; mixed protocols
Stress, working adults	$g = 0.54$	Wang 2024, 10 employee samples	Moderate	Consistent direction; same bias structure; possible small-study effects
Compassion vs passive	$g = 0.36$ (0.06 to 0.65)	Petrovic 2024, 3 trials	Low–moderate	Small k; one trial is the mixed cancer-community sample
Compassion vs active / alternative	$g = 0.17$ (NS)	Petrovic 2024, 3 trials	Low	Imprecise; crosses zero

Outcome	Estimate	k / source	Certainty	Why it moves
Self-compassion, workplace	$g = 0.65$	Wang 2024, 12 samples	Moderate	Largest workplace category effect; still self-report
Positive affect vs passive	Direction positive; size unstable	Zeng 2015 medium; Liu 2025 large; Liu 2022 NS	Low–moderate	Heterogeneous; one good null
Positive affect / well-being vs active	Often NS	Galante 2016; Petrovic 2024	Low	Active controls eat the effect
Generalisability to Indian working adults	No estimate	CTRI and literature search	Very low	Zero randomised trials

07

Discussion

PULL QUOTE

Indian randomised trials of this practice in working adults, 2016 to 2026: zero.

What the number means

A Hedges g of 0.38 on interpersonal connection is a small-to-medium move. In a room of 100 people, it is not the difference between isolation and a wedding. It is the difference between a slightly colder office and a slightly warmer one. A g of 0.54 on stress is a medium move. It is the sort of shift a four-week programme can claim against a wait-list without blushing, and should not claim against a well-run walk or a mindfulness course without blushing back.

Small starts are useful here and easy to oversell. A tiny habit does not grow because someone gives a speech about it. It grows if it is planted in a real working day and left to repeat. Three minutes a day for four weeks — a short video watched at the desk before the morning stand-up — is a seed. It is not a forest. Liu and colleagues showed that the seed can sprout in full-time employees watching a short video. Galante and colleagues showed that another seed — light exercise, delivered online — sprouts about as well on a general well-being scale.

Machine learning has the same warning in a different font. You can raise accuracy on the training set and still fail on the next office. Passive-control trials are the training set. Active-control trials are the out-of-sample test. Petrovic 2024 is the paper that says the test set is not impressed. Format, length and a live teacher did not rescue it. That is good news for a WhatsApp-first product and bad news for anyone selling the practice as uniquely powerful.

Overfitting is the other lesson. Send warm wishes only to the person you already love and the model never sees the difficult colleague. The standard sequence already builds this in: self, loved one, neutral person, difficult person, wider circle. That is a curriculum, not a mood board. Regularisation, in this literature, looks like daily reps rather than a weekend retreat. Dose in minutes barely moved the estimate. Days practised did, in the one large audio trial that bothered to look.

The thought “this office is cold” does not have to be true to be sticky. Warm-wishes practice does not cross-examine the thought. It runs a competing rehearsal. A new joiner in Hyderabad eats lunch alone all week and decides nobody here cares. The practice asks her to send one silent wish to the person at the next desk, then to say good morning. You can have the cold story and still make the warm move. Entrepreneurship would call it an MVP of goodwill. Smallest loop that can be shipped tomorrow. Measured in four weeks. Killed or kept on the number.

The number, kept honestly, is this. Against doing nothing, working adults who practise warm wishes tend to feel more connected and less taut. Against another decent practice, the unique gift is not proven. Against Indian working adults, the unique gift has not been tested.

Limitations

We did not dual-screen eight databases under a registered protocol. Some full texts stayed behind paywalls. Wang 2024 closed in March 2022 and folds compassion protocols and some pre-2016 employee trials into the same categories. Petrovic 2024’s compassion-versus-passive cell includes the mixed cancer-community trial. Most outcomes are self-report. Most trials cannot blind the person who sits. Large digital trials lose people. Positive affect refuses to sit still: medium in Zeng 2015, large in one 2025 video trial, absent in a 2022 employee trial, absent against exercise in 2016.

A new REML model on 2016–2026-only, measure-matched outcomes was not fitted. That is a limitation and also a refusal to mint a precise-looking number from incompatible scales. Anyone who wants a single g for “connectedness” across social-connectedness scales, interpersonal-mindfulness scales, collaboration scales and variability metrics is asking the literature for a smoothness it does not have.

Those are not reasons to throw the practice away. They are reasons to stop talking about it as if it were a drug with a single effect size.

WHAT THIS MEANS**What this means for an Indian workplace programme**

Before the Monday stand-up, a claims team in Bengaluru gets a WhatsApp nudge. Each person plays a short audio, sends one silent wish to a teammate, a neutral colleague and the manager who snapped last week, and taps done. That is warm-wishes practice: the office's old instinct for goodwill, made countable. The 2016–2026 trials say a few minutes of guided goodwill, audio or video, can lift felt connection by about four-tenths of a standard deviation and cut stress by about half a standard deviation in working adults, against doing nothing. They do not show a clear win against other active practices such as light exercise or mindfulness. No randomised trial of this practice has yet been run with Indian employees, in any of the 23 languages EmotionApp serves, or on WhatsApp. That is the India gap. So the honest offer is a short daily rep — not a diagnosis, not a cure. After four weeks, ask the team two questions. Do you feel more connected? Less taut? Start small. Count the reps. When someone needs more than a number, hand off to a human coach.

Research gaps, naming the India gap explicitly

The India gap is not a rumour. CTRI returned no relevant randomised trial of loving-kindness or mettā practice. PubMed and Google Scholar did not repair that absence through 22 September 2026. Closest Indian workplace work in adjacent fields is generic meditation or other contemplative programmes, not this sequence.

That gap matters for more than patriotism. Delivery language, festival calendars, joint-family households, WhatsApp as the default channel, and the difference between a Mumbai commute and a mid-life American workshop are not footnotes. They are the context in which a three-minute video either becomes a habit or becomes another unopened link.

Picture the rollout. An English-only audio reaches a Tamil-speaking claims team in Chennai in the middle of the month-end close. A long module lands on a supervisor's phone at the end of a double shift. Neither gets opened. An Indian workplace programme that ignores language, time-poverty and the already-full calendar is planting on a footpath and then publishing a white paper about why nothing grew. The research gap is not “do Indian people like kindness”. The gap is whether a countable, audio-first, language-matched loop moves connection and stress when the control group is another Indian professional who did not get the audio.

Other gaps sit beside it. Few trials follow people past a month. Few use a behavioural connectedness measure rather than a scale. Few compare warm-wishes practice with a matched-dose gratitude rep or a matched-dose breath rep — the comparisons a product team actually needs. Few report harm.

Galante 2016 noted that some people found the practice emotionally intense and hard to process. That is a safety note, not a scare line. A coaching programme with a human hand-off is the right container for it.

The next trial worth funding is obvious. Indian working adults. WhatsApp or short audio. Five to ten minutes. Four weeks. Wait-list and an active comparator. Outcomes: felt connection, stress, and one behavioural proxy. Pre-registered. India-resident data. Twenty-three languages can wait until one language is done properly.

08

FAQ

Five questions in the form people ask an assistant. Each answer is sixty words or fewer. Each carries a number.

Q1 Does sending warm wishes actually change how connected I feel at work?

Yes, modestly. Across workplace trials the interpersonal effect is about $g = 0.38$ — a small-to-medium lift. One 2025 four-week, three-minute-a-day video programme in working adults found a larger lift on interpersonal mindfulness (change $g \approx 0.76$), but that is a single trial.

Q2 Will it lower my stress?

Against no practice, workplace trials pooled to $g = 0.54$ for stress (10 employee samples). That is a medium effect. Against another active practice the advantage often shrinks to non-significant. Days practised tracked the stress drop more than programme length.

Q3 How many minutes do I need?

Dose in weeks or minutes did not reliably moderate effects in Zeng 2015 or Petrovic 2024. Liu 2025 used three minutes a day for four weeks. A five-to-ten-minute guided round is a defensible workplace rep. Consistency beats duration.

Q4 Do I need any special background for it to work?

No. The trials recruited ordinary community adults, students and employees. The mechanism under study is rehearsed goodwill: attention, repeated. Live teachers were not required. Audio and short video worked as well as in-person guidance in the 2024 adult review.

Q5 Has anyone tested this with Indian professionals?

No published randomised trial was found on CTRI, PubMed or Google Scholar through September 2026. That absence is the main research gap this paper names. Effects from East Asian and Western employee samples are the current best guide, not a substitute.

09

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Dr Atul Aswani is a Mumbai Psychiatrist and trained as a Results Coach. He founded Tranquilo Meditek Sytems Private Limited in Mumbai and built EmotionApp as a non-clinical emotional-fitness platform for Indian professionals. The work sits under ISO 9001 and ISO 13485, with India-resident data and DPDP-aligned handling. He writes so that a daily rep can be counted, not confessed.

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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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