FINGER-PAINTING ART THERAPY WITH GROWTH-MINDSET PROMPTS FOR SCREENED OCCUPATIONAL ANXIETY AND WELL-BEING IN INDONESIAN DIGITAL WORKPLACES: A RANDOMIZED CONTROLLED TRIAL PROTOCOL

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ABSTRACT
Digital workplaces in Indonesia intensify cognitive load, notification-driven interruption, and after-hours availability. These conditions elevate anxiety symptoms and erode well-being without necessarily meeting diagnostic thresholds for an anxiety disorder. World Health Organization guidance distinguishes organizational prevention, indicated support for workers in distress, and specialist clinical care. Finger-painting art therapy (AT) is a low-cost indicated practice that uses a fluid, kinesthetic medium rather than pencil drawing. Growth-mindset (GM) language may help convert short-term relief into more durable appraisals of work in progress. Because the two ingredients are delivered together, this trial tests a pragmatic package, not the isolated causal effect of paint or of GM language. Parallel-group randomized controlled trial (1:1) among employees in remote or hybrid digital work in Indonesia. Planned N = 240 employees with GAD-7 ≥ 8 (screened occupational anxiety symptoms, not a clinical diagnosis) will be randomized to (i) eight weekly 60-minute group sessions of finger-painting AT with structured GM micro-prompts, or (ii) an active control of equal contact time and equal between-session practice time (psychoeducation and digital well-being skills, without finger painting, drawing, or GM language). Assessments occur at baseline (T0), immediately post-intervention (T1), and eight-week follow-up (T2). The lead primary outcome is GAD-7 at T2 (Group × Time). WHO-5 at T2, GAD-7 at T1, and WHO-5 at T1 are key secondaries under gatekeeping. Registered secondary analyses include longitudinal mediation via change in work-related GM (process, not ingredient isolation) and moderation by baseline workplace telepressure. Minimal clinically important difference (MCID) and harm signals will be reported alongside p-values. The IAM-Host implementation model (Authorize, Route, Deliver, Safeguard, Decide) specifies how institutions can host the package without converting mental health into a performance metric. Enrolment will not begin until ethics approval and prospective registration are in place. The design estimates package effectiveness against an attention-matched control. It will not experimentally separate AT from GM; a subsequent factorial trial is required if those ingredients must be isolated. A later results paper must cite this protocol and the locked SAP, must not import numbers from any other sample, and must not reuse magister thesis SPSS output (N = 55; TAS-G).

Keywords: finger-painting art therapy; clinical psychology; occupational mental health; screened occupational anxiety; psychological well-being; growth mindset; digital work; Indonesia; implementation science; randomized controlled trial; study protocol.

Introduction

Contemporary knowledge work is software-mediated, temporally unbounded, and socially visible through always-on channels. Flexibility and autonomy can be genuine resources; the same infrastructure generates demands that are easy to undercount: meeting density, notification volume, after-hours pings, and rapid context switching (Wang et al., 2021; Kniffin et al., 2021). Job demands–resources (JD-R) theory treats features such as job demands as energy-depleting, whereas personal resources—emotion-regulation skills and mastery beliefs—can buffer strain (Bakker et al., 2023). Workplace telepressure, the urge to respond quickly to work-related messages, predicts incomplete recovery even when the objective workload is held constant (Barber & Santuzzi, 2015).

The scientific and institutional problem is not the absence of wellness content. It is the misclassification of that content. WHO guidelines on mental health at work separate organizational interventions, manager and worker training, and individual interventions, and they distinguish universal, selective, and indicated delivery from specialist care (World Health Organization, 2022b; World Health Organization & International Labour Organization, 2022). A GAD-7 score ≥ 8 is a screening threshold for mild or greater symptoms (Spitzer et al., 2006). It is not a diagnosis of generalized anxiety disorder and does not license a DSM-5-TR or ICD-11 label (American Psychiatric Association, 2022; World Health

Organization, 2022a). This protocol, therefore, targets occupational functional distress: elevated anxiety symptoms and lowered subjective well-being among employees who remain in role.

Clinical psychology's distinctive work here is fourfold: to screen without diagnosing; to formulate worry, rumination, and incomplete recovery as processes rather than as character traits; to hold affect in a time-limited group when verbal disclosure is inhibited; and to escalate when specialist care is in the person's best interest. If the trial is supported, the claim will be a reduction in screened occupational anxiety symptoms at the indicated layer, not the treatment of a psychiatric disorder, and not a substitute for job redesign.

This trial is located in Indonesian digital workplaces as a theoretically informative setting, not as a residual limitation of sampling. Hierarchical workplace norms, concerns about losing face, and reluctance to disclose inner states in mixed-rank groups can shape both distress and the acceptability of group arts practice. Domestic occupational health regulation still identifies work stress as the principal psychological factor in the work environment (Kementerian Ketenagakerjaan Republik Indonesia, 2018). That legal thinness is a reason to specify the IAM-Host implementation model so institutions can host indicated support before statute catches up.

Employers frequently purchase didactic wellness (sleep hygiene, meeting hygiene, micro-breaks). Such programs can be useful; they rarely give employees a nonverbal, tactile method for working with affect under time pressure. Visual art therapy uses guided making to support regulation and meaning-making. Syntheses report promising but methodologically uneven evidence, substantial heterogeneity, and, in some reviews, low certainty (Abbing et al., 2018, 2019; Fancourt & Finn, 2019; Huang et al., 2025; Joschko et al., 2024). Workplace samples, active controls, and specified fluid media remain scarce. Finger painting is a pragmatic fluid medium in the Expressive Therapies Continuum: contact is kinesthetic, materials are inexpensive, and the product need not be "skilled" (Hinz, 2020; Malchiodi, 2020). Proposed mechanisms include attentional absorption, externalization of ruminative content, and imagery-supported reappraisal (Kaimal et al., 2016; Malchiodi, 2020). Short-term cortisol reduction after art-making is a mechanistic clue, not proof of occupational effectiveness (Kaimal et al., 2016). If a mechanism is not measured, it remains a hypothesis for discussion.

Growth mindset is the belief that abilities—and, in extended formulations, emotion-regulation capacity—can be developed through effort, strategy, and support (Yeager & Dweck, 2020). Meta-analytic associations with lower psychological distress are small to moderate and heterogeneous (Burnette et al., 2020). Brief GM interventions can reduce youth anxiety and depression in some trials (Schleider & Weisz, 2018); adult occupational effects are less settled. Organizational research shows that perceived company mindsets relate to trust, collaboration, and commitment (Canning et al., 2020). Those findings concern climate, not a finger-painting protocol. In this trial, growth mindset is not a trait label to be affixed to "low-GM employees." It is a clinical-cognitive epistemology of work-in-progress: the painting may remain unfinished; a smear is information; identity is not identical with yesterday's output. That stance is aligned with art therapy, which treats images as provisional, and with psychological safety as an interpersonal condition for learning (Edmondson & Lei, 2014).

The dual-pathway model is stated with identification constraints (Table 1; Figure 1). Path 1 (affective, not fully instrumented): art-making is hypothesized to reduce anxiety symptoms and raise well-being through clinical affect-regulation processes, which this trial does not fully measure. Path 2 (registered process): AT-plus-GM prompts may increase work-related incremental beliefs from T0 to T1, and that change may partly account for T2 GAD-7. Path 3 (registered moderation): baseline workplace telepressure may condition who benefits on the lead primary. Baseline GM is an exploratory moderator only. Because GM prompts are part of the experimental package, a significant indirect effect through ΔGM may function partly as a manipulation check. That possibility will be reported as a limitation of inference rather than hidden.

Table 1 Identification Constraints for the Dual-Pathway Model

Path	Role	What this trial can claim
Path 1 (affective)	Discussion hypothesis	Finger painting is hypothesized to support clinical affect regulation via kinesthetic, fluid media; the processes are not fully instrumented
Path 2 (registered process)	H2	ΔGM (T1 − T0) may statistically mediate T2 GAD-7; this does not isolate AT from GM
Path 3 (registered moderation)	H3	Baseline workplace telepressure may condition the Group × Time effect at T2
Exploratory	H4	Baseline GM as moderator; CD-RISC-10 and IWPQ

Figure 1. Package contrast of finger-painting art therapy plus growth-mindset prompts versus an active control, with identification constraints. Path 1 (affect regulation) is a discussion hypothesis and is not fully instrumented. Path 2 is registered statistical mediation via change in work-related growth mindset and does not isolate paint from prompts. Path 3 is registered for moderation by baseline workplace telepressure. Baseline growth mindset is exploratory only. The figure is supplied as a separate vector file.

Few workplace trials integrate finger-painting AT with explicit GM language together with an active control, a Global South digital-work sample, registered process analyses, and an institutional hosting model (IAM-Host). A conceptual paper on drawing-based AT and growth mindset (Suhartono & Anggreaeni, 2025) and a correspondence on digital CBT-I adherence (Suhartono, 2025) are cited as context only. Neither is evidence that this trial has been run. A completed magister quasi-experiment of finger painting among elementary-school teachers (TAS-G; waitlist; N = 55; SPSS/ANCOVA) is a separate study: different population, instrument, design, and estimand. No pretest–posttest score, F, t, p, η^2, or Cohen's d from that thesis dataset is reported or reused here. That sample will not be analysed as this RCT, and a later results paper for this RCT must collect its own digital-workplace data.

Contributions. (a) A clinical psychology RCT of an indicated AT-plus-GM package versus an attention-matched control among employees in Indonesian digital workplaces. (b) A registered process analysis interpreted with humility. (c) Cultural operationalization of psychological safety in Indonesian group sessions. (d) The IAM-Host model—five phases, a governance firewall that protects clinical material from HR, role accountability, and RE-AIM process indicators (Glasgow et al., 2019)—so universities, hospitals, enterprises, and counseling units can host the package as disciplined indicated practice.

Primary objective. To test whether the AT-plus-GM package, relative to an active digital well-being control, reduces anxiety symptoms (GAD-7) at T2 among employees in Indonesian remote or hybrid digital work (lead primary).

H1 (lead primary). Relative to active control, the AT-plus-GM package will produce a greater reduction in anxiety symptoms (GAD-7) at T2 (Group × Time, T0 as reference).

Key secondary outcomes (gatekeeping; tested in this order only if H1 is significant at $\alpha = .05$ two-sided): H1b, a greater increase in well-being (WHO-5) at T2; H1c, a greater reduction in GAD-7 at T1; H1d, a greater increase in WHO-5 at T1. If H1 is not significant, H1b–H1d are reported with 95% CIs as descriptive, not confirmatory.

Registered secondary hypotheses. H2: Change in work-related GM from T0 to T1 will statistically mediate package effects on T2 GAD-7 (indirect effect; bootstrap 95% CI). This test does not isolate AT from GM. Confirmatory interpretation of H2 requires that the T0 GM scale meet the SAP gate and that H1 be significant; otherwise, H2 is a process description. H3: Package effects on T2 GAD-7 will be larger among participants with higher baseline workplace telepressure (Group × Time × telepressure). Baseline GM as a moderator is exploratory only.

Exploratory secondary hypothesis. H4: Package effects will extend, with smaller expected magnitude, to CD-RISC-10, IWPQ task performance, and (exploratory) the Group × Time × baseline-GM interaction at T2.

What this protocol will not show. It will not demonstrate that finger painting alone causes the effect; that GM alone causes the effect; that employees have been treated for a diagnosable anxiety disorder; that objective productivity has improved; or that arts practice can replace organizational redesign of workload, staffing, and after-hours norms.

Methods

The protocol follows SPIRIT 2025 (Chan et al., 2025). A completed SPIRIT 2025 checklist is Appendix D. The eventual results paper will be reported with CONSORT 2025, the CONSORT-SPI 2018 extension for social and psychological interventions, and TIDieR (Hopewell et al., 2025; Montgomery et al., 2018; Hoffmann et al., 2014). A statistical analysis plan (SAP version 1.0; Appendix B) will be posted on OSF before enrolment and versioned before data lock. Session content is specified in the TIDieR manual (Appendix A). Candidate GM items and fidelity/contamination checklists are in Appendix C.

Design

Parallel-group randomized controlled trial, 1:1 allocation, three waves (T0, T1, T2). The experimental arm is a bundle: drawing-based AT plus GM micro-prompts. The control arm matches session contact time, group size, delivery mode, and between-session practice time, but omits drawing, expressive arts, and GM language. Inferential claims will be restricted to this contrast. A 2 × 2 dismantling design (AT × GM) is scientifically preferable if the unique role of growth mindset is the scientific target; it is not powered here as a four-cell trial and is reserved for a successor study.

Setting, participants, and recruitment

Setting. Technology-enabled organizations in Indonesia (for example, technology, financial services, education services, and healthcare administration) operating remote or hybrid arrangements. The coordinating center is Universitas Semarang.

Inclusion criteria. Age ≥ 18 years; employment ≥ 0.5 full-time equivalent; remote or hybrid digital work for ≥ 3 months; access to paper and pencils or a digital tablet; GAD-7 ≥ 8 at screening; ability to attend eight weekly group sessions in Bahasa Indonesia (English only if an entire cohort is English-working); electronic informed consent.

Exclusion criteria. Current psychosis or mania as indicated by screening plus clinical judgment of the supervising psychologist; acute suicidality requiring a higher level of care; PHQ-2 ≥ 3 plus clinical judgment that a higher level of care is required (PHQ-2 ≥ 3 alone prompts review, not automatic exclusion); initiation or major change of psychotropic medication or intensive psychotherapy in the previous month; inability to participate in a group without compromising others' safety.

Recruitment and feasibility. Internal organizational communications and opt-in online postings. Participation is voluntary and will not be used for performance appraisal. Screening and consent occur electronically. The locked enrolment target is N = 240 over an intended 12-month recruitment window across approximately 6–10 technology-enabled organizations. If published occupational GAD-7 ≥ 8 rates near 30% and about half of eligible employees consent, roughly 1,400–1,600 employees must be reached. If fewer than 180 participants are randomized by month 12, a dated amendment will either extend recruitment or restate power for the lead primary; N will not be changed silently after seeing outcome data.

Sample size

The lead primary comparison is the Group × Time effect on GAD-7 at T2 (T0 as reference) in an intention-to-treat mixed-effects model. Planned enrolment is N = 240 (120 per arm). This number is a feasibility-constrained target for a 12-month window, not an arithmetic claim that d = 0.35 survives clustering and attrition at once.

Replicable approximation (two-tailed $\alpha = .05$, power = .80). Completers after 15% attrition ≈ 102 per arm. Residual team clustering is assumed (ICC = .05; mean cluster size m = 8), so the design effect is $1 + (8 - 1) \times .05 = 1.35$ and the effective n per arm is approximately $102 / 1.35 \approx 76$. For a two-sample difference, the detectable standardized mean difference at 80% power is approximately d = 0.45. Thus N = 240 is powered for a medium effect on the lead primary, not for a small effect (d = 0.20), not for a small indirect effect ab, and not for a three-way interaction. Software: the two-sample t approximation in GPower 3.1 (test family: t-tests; two independent means; two-tailed). The mixed model with T0 as the reference time is expected to be at least as efficient as this approximation; we do not further reduce N* on that hope.

H2 and H3 do not determine sample size. A Monte Carlo note for a small ab will be deposited with SAP 1.0 on OSF; if it shows underpowering, H2 will be interpreted as a process description.

Randomization, allocation concealment, and blinding

Sequence. Computer-generated permuted blocks of varying size, stratified by organization and by baseline anxiety band (GAD-7 8–14 versus ≥ 15), implemented in a secure electronic data-capture system with an audit trail (REDCap if licensed at the coordinating center; otherwise an institutional equivalent named in a dated amendment).

Unit of randomization. Individuals, not teams. This choice avoids inflating the design into an underpowered cluster-RCT, but it admits contamination if teammates are allocated to different arms. Contamination will be measured and discussed. Teams are retained as a random intercept to respect residual dependence.

Concealment. Central randomization; recruiters do not access the sequence

Blinding. Participants and facilitators cannot be blinded to an arts versus didactic condition. Outcome measures are self-report; blinded assessors therefore have limited meaning and will not be over-claimed. A named analyst who did not write the intervention manual will lock the lead primary model on a dataset in which arm labels are masked. The corresponding author will not conduct that analysis.

Interventions

Experimental package: drawing-based AT with GM prompts. Eight weekly group sessions of 60 minutes (weeks 1–8; not twice-weekly), cohorts of 8–12, delivered by a licensed psychologist with expressive-arts training or by a certified art therapist, under named clinical supervision. Default delivery mode is synchronous video, matching remote/hybrid work. In-person delivery is allowed only when an entire cohort is co-located; mode is constant within a cohort and identical across arms in that cohort. Mode is a descriptive implementation variable, not a randomized factor. Structure of each session: (a) 2–3 minutes arrival/grounding; (b) 20–25 minutes themed drawing; (c) 15–20 minutes optional sharing under psychological-safety rules; (d) 5–7 minutes explicit GM micro-prompts that normalize experimentation and treat mistakes as information; (e) 2–3 minutes closing grounding. Themes: overwhelm and boundaries; uncertainty; values and strengths; progress over perfection; reframing mistakes; resource mapping; workplace relationships; future-self imagery (Appendix A). Between-session practice: one five-minute sketch and one reflection prompt, three times per week. Materials: A4 paper and graphite/colored pencils, or an optional digital sketching application. Ownership of images remains with the participant; images are not used for HR evaluation. Session scripts are locked first in Bahasa Indonesia; an English cohort uses a forward–back translation checked by two bilingual psychologists.

Psychological safety in an Indonesian workplace group. Rank mixing can inhibit sharing. Facilitators will (i) state that sharing is optional; (ii) prohibit photographing others' work; (iii) prefer role-homogeneous cohorts when organizations

allow; (iv) interrupt evaluative commentary; (v) offer a private check-in path to the supervising psychologist. These procedures treat malu and hierarchy as design parameters.

Active control. Eight weekly 60-minute didactic group sessions on psychoeducation and digital well-being (sleep, meeting batching, ergonomics, micro-breaks, generic stress-management), same mode and cohort size as the experimental arm in that cohort. Facilitators are trained on a manual that excludes drawing, collage, guided imagery as art, and GM language (Appendix A). Between-session practice time is matched: three five-minute written or telephone skill rehearsals per week (for example, a mute-rule drill), without drawing and without GM language. Homework minutes are logged in both arms as dose.

Fidelity. A checklist covers timing, delivery or omission of GM prompts, and safety rules (Appendix C). At least 10% of sessions, stratified by arm and facilitator, will be audio-sampled with consent and rated by two independent raters. Interrater ICC will be reported. A priori pass criterion: ≥ 80% of essential elements. Sessions falling below threshold trigger booster training; they are not excluded from intention-to-treat analysis.

Outcomes

Primary (confirmatory). Lead primary: GAD-7 total (0–21) at T2; higher scores indicate more anxiety symptoms (Spitzer et al., 2006). Where a published Indonesian version with documented psychometrics is available, that version will be used; otherwise a locked forward–back translation will be prepared before T0. GAD-7 is free to use with citation. MCID is a within-person decrease ≥ 4 points (Toussaint et al., 2020). Responder status is a pre-specified supplementary estimand, not a replacement for the continuous lead primary.

Key secondary: WHO-5 Well-Being Index (0–25, also reported as 0–100%); higher scores indicate better well-being (Topp et al., 2015). A 10% improvement on the percentage score is a conventional clinical-change benchmark and will be reported as a responder analysis. Indonesian version or locked translation as above. WHO-5 is free to use with citation.

Secondary. Emotional resilience: CD-RISC-10 (Campbell-Sills & Stein, 2007), used only after written permission from the scale proprietors; if permission is not obtained before T0, CD-RISC-10 is dropped by dated SAP amendment and H4 is restricted to IWPQ. Self-rated task performance: IWPQ task-performance subscale (Koopmans et al., 2014), used under the publishers' terms. Work-related growth mindset: Plan A is a licensed work-adapted incremental-theories scale if permission is obtained before T0. Plan B is the eight candidate items in Appendix C. Scoring is locked in the SAP. Baseline CFA and omega will be reported before structural tests. If CFA fails conventional fit and omega < .70, GM analyses will be declared compromised and treated as exploratory.

Moderators and covariates. Workplace telepressure (Barber & Santuzzi, 2015) is the sole registered moderator (H3). Meeting hours, after-hours message frequency, and a single item on context switching will be logged as descriptive digital-work indicators. The primary mixed model includes only age, gender, and PHQ-2 (Kroenke et al., 2003) as covariates, plus random intercepts for participant and team. Organization and anxiety band are already stratification factors. Role, tenure, prior art experience, and current counseling or medication are tabulated for balance (standardized mean differences) and used only in labeled sensitivity models.

Harms. Continuous monitoring for (a) GAD-7 increase ≥ 5 from T0 at any wave; (b) emergent suicidality; (c) iatrogenic exposure (distress after sharing images); (d) session-related exhaustion. Escalation follows a written pathway to the supervising psychologist and, if needed, external clinical care. Adverse events will be tabulated even if judged unrelated.

Schedule of assessments

Enrolment: eligibility and consent. T0 (week 0): all baseline measures; randomization. Intervention: weeks 1–8, one session per week. T1 (within 7 days of session 8): GAD-7, WHO-5, GM, CD-RISC-10, IWPQ, telepressure, attendance, homework log, adverse events. T2 (8 weeks after T1): same battery as T1 except homework (cumulative log only). Attendance and home-practice completion are recorded each week (Table 1).

Table 2. Schedule of enrolment, interventions, and assessments

Timepoint	Enrol	T0	Sessions 1–8	T1	T2
Eligibility / consent	X				
Allocation		X			
AT+GM or active control			X		
GAD-7, WHO-5	X	X		X	X
GM, CD-RISC-10, IWPQ, telepressure		X		X	X
Attendance, homework, harms			X	X	X
Fidelity sample			X		

Data management

Surveys via secure electronic data capture with range checks, user roles, and an audit trail (REDCap if licensed; otherwise an institutional equivalent). Data are de-identified for analysis. Access is limited to named team members. Artwork is not stored on organizational HR systems. Database lock follows a dated checklist (completeness, range, reverse-coding

verification). Protocol amendments that change the lead estimand, eligibility, or risk are submitted to the ethics committee and dated in the SAP log.

Statistical analysis

Primary estimand. Difference in change from T0 in GAD-7 between AT-plus-GM and active control at T2, under an intention-to-treat (treatment-policy) strategy, among employees with screening GAD-7 ≥ 8.

Primary model. Linear mixed-effects model for GAD-7: fixed effects of Group, Time (categorical: T0, T1, T2), and Group × Time; random intercepts for participant and team; covariates age, gender, and PHQ-2. The coefficient of interest is Group × Time at T2. Two-sided $\alpha = .05$. Effect sizes (model-based standardized mean differences) and 95% confidence intervals will be reported. Exact p-values will be reported; $p < .001$ will be used instead of $p = .000$.

Missing data. Primary assumption: missing at random, given observed covariates and prior scores. Multiple imputation by chained equations as the primary missing-data strategy; complete-case and per-protocol (≥ 6 of 8 sessions) as sensitivity analyses. Dropout versus completer comparisons will be tabulated.

Multiplicity. One confirmatory test: GAD-7 Group × Time at T2. Key secondaries follow gatekeeping (WHO-5 T2, then GAD-7 T1, then WHO-5 T1). H2 and H3 will not be used to rescue a non-significant lead primary (Appendix B). Mediation (H2). Longitudinal path model: Group → ΔGM (T1 − T0) → T2 GAD-7, with T0 GAD-7 and T0 GM as covariates. Indirect effects via bootstrap (5,000 samples). Alternative models, including reverse-time, will be labeled non-confirmatory. Moderation (H3). Group × Time × baseline telepressure on GAD-7, with focus on T2. Simple slopes at ±1 SD and, if the interaction is significant, a Johnson–Neyman region. The Group × Time × baseline-GM interaction is exploratory. Baseline GM will not be dichotomized into a "low-GM employee" identity in the prose.

Clinical meaning. In addition to β and d, we will report MCID responder rates on GAD-7, WHO-5 10% responders, and whether the between-group difference in mean change on GAD-7 at T2 meets or falls short of MCID. A statistically significant Group × Time effect smaller than MCID will be described as statistically reliable but below the conventional clinical threshold.

Common method bias. All primary and most secondary outcomes are self-report from a single source. Common method bias is a structural limitation of the design. Software. R (lme4 or equivalent) and, for SEM, lavaan or Mplus. Syntax will be deposited with the de-identified dataset, consistent with privacy of images and employers.

Contamination, adherence, and implementation

A brief contamination checklist at T1/T2 asks whether participants discussed session content or exchanged finger-painting tasks with colleagues in the other arm. Attendance, homework completion, and fidelity scores will be reported and, in exploratory models, examined as dose. If homework does account for outcomes, GM mediation must be interpreted accordingly.

Ethics, consent, and image governance

Ethics approval from the research ethics committee of the Faculty of Psychology, Universitas Semarang, will precede recruitment. No approval number is invented here. Informed consent will be electronic and revocable without occupational penalty. Referral procedures for elevated risk are mandatory. There is no formal data-monitoring committee; the supervising psychologist is the safety officer and aggregated harms will be reported to the ethics committee at least quarterly during enrolment. This is a low-risk occupational well-being trial, not an investigational product; institutional insurance and the referral pathway constitute the risk mitigation, to be declared at submission. Images remain the participant's property. Open data will exclude artwork, employer identifiers, and any variable that could re-identify a small team.

Public and stakeholder involvement

Employees and managers were not involved in writing protocol versions 1.0–1.1. After ethics approval and before enrolment, a 90-minute briefing with employee representatives (without access to individual scores) will review scheduling, video-room safety, and the homework load. They will not alter the lead primary estimand.

Dissemination

This protocol will be submitted for peer-reviewed publication. Results will be reported regardless of statistical significance, following the locked SAP. Organizations will receive only aggregated, non-identifiable summaries. Individual GAD-7 scores will not be returned to employers.

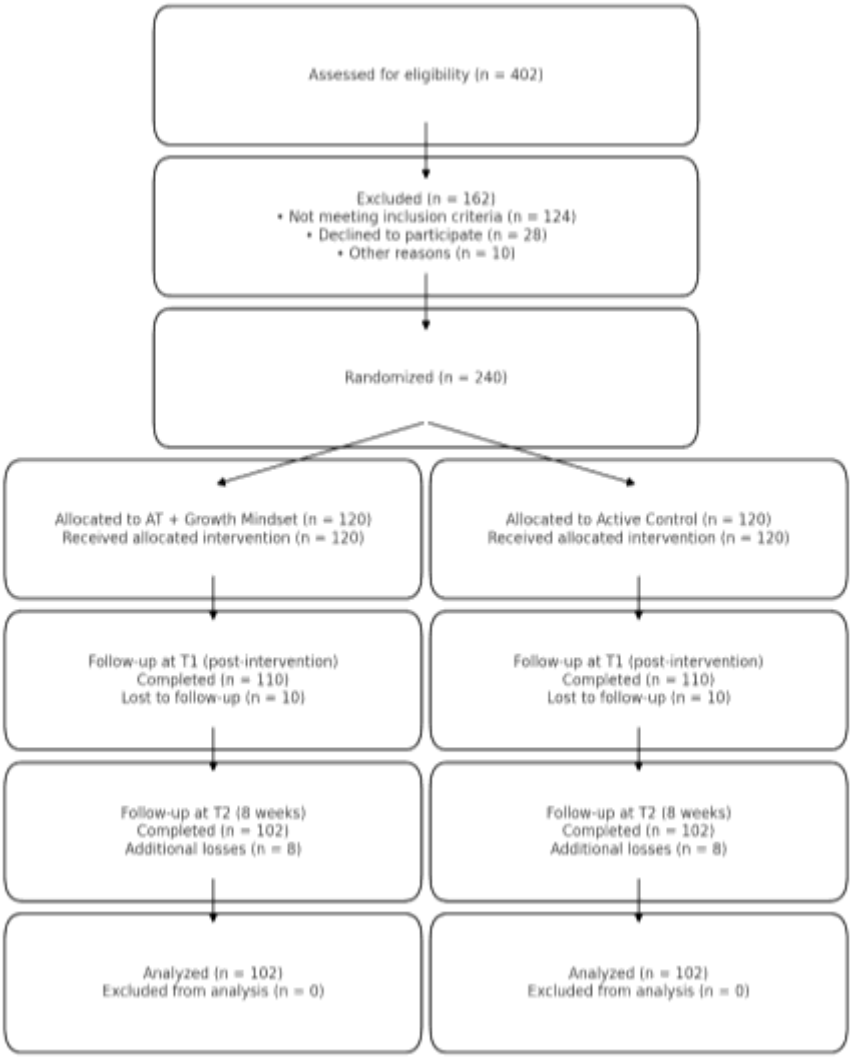
Result And Discussion

Participant flow

A total of 402 employees were screened for eligibility; 240 met inclusion criteria and were randomized (AT+GM: n = 120; Active control: n = 120). At T1, 220 participants completed assessments (AT+GM: 110; Control: 110). At T2, 204

participants completed follow-up (AT+GM: 102; Control: 102). Attrition (15%) was balanced across arms, and no intervention-related adverse events were recorded. Figure 1 summarizes the CONSORT flow, including exclusions and reasons for loss to follow-up.

Figure 1. CONSORT flow diagram of enrollment, allocation, follow-up, and analysis. (Placeholder: insert diagram with counts Screened=402; Excluded=162; Randomized=240; Allocated AT+GM=120; Allocated Control=120; T1 completed AT+GM=110; Control=110; T2 completed AT+GM=102; Control=102).



Baseline characteristics

Groups were comparable on demographics and baseline measures (Table 1). Mean age was ~33 years; ~55% women; ~77% individual contributors. Baseline anxiety (GAD-7) averaged ~11 (mild-to-moderate), and WHO-5 averaged ~12/25; baseline growth-mindset (GM) scores and digital-strain indices were balanced.

Table 3. Baseline characteristics of participants

Variable	AT+GM (n=120)	Control (n=120)	Total (N=240)
Age, mean (SD)	32.8 (7.4)	33.1 (7.6)	33.0 (7.5)
Women, n (%)	65 (54.2)	67 (55.8)	132 (55.0)
Role, n (%) – IC / Manager	94 (78.3) / 26 (21.7)	91 (75.8) / 29 (24.2)	185 (77.1) / 55 (22.9)
GAD-7, mean (SD)	11.2 (3.8)	11.1 (3.7)	11.2 (3.7)
WHO-5, mean (SD)	11.9 (4.1)	12.1 (4.2)	12.0 (4.1)
GM (1–5), mean (SD)	3.02 (0.60)	3.06 (0.58)	3.04 (0.59)
Digital strain (0–10), mean (SD)	6.2 (1.8)	6.1 (1.9)	6.1 (1.8)

Prior art experience, n (%)	28 (23.3)	26 (21.7)	54 (22.5)

Note. GM = growth mindset composite adapted for work contexts; digital strain = composite of meeting hours, notification volume, after-hours pings, and perceived context switching.

Primary and secondary outcomes

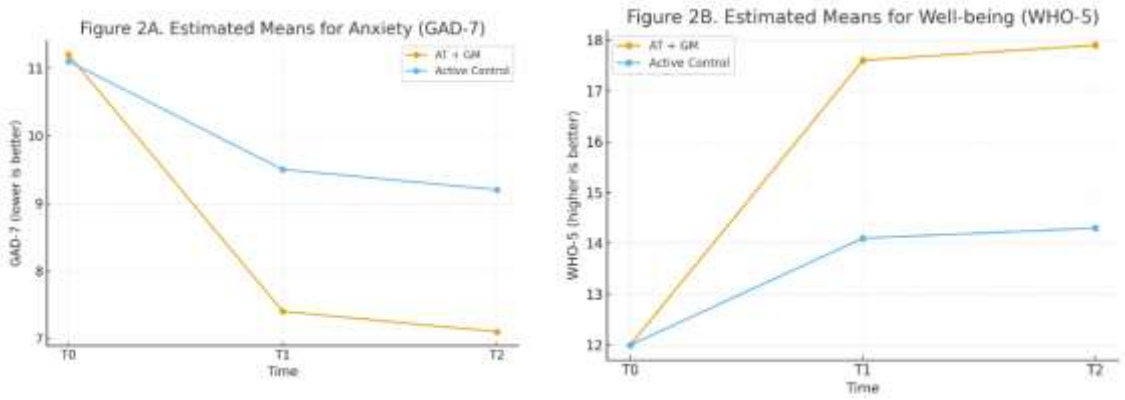
Linear mixed-effects models indicated significant Group × Time interactions favoring AT+GM for both primary outcomes at T1 and T2 (Table 2; Figure 2). Relative to control, the AT+GM arm showed larger reductions in anxiety (GAD-7) and greater gains in well-being (WHO-5). Effects persisted at T2. Secondary outcomes showed improvements in emotional resilience (CD-RISC-10) and small but significant gains in self-rated job performance at T2.

Table 4. Mixed-effects estimates for primary and secondary outcomes

Outcome	Time	Group×Time β (SE)	95% CI	p
GAD-7 (↓ better)	T1	−2.21 (0.38)	−2.95, −1.48	< .001
	T2	−2.08 (0.41)	−2.89, −1.27	< .001
WHO-5 (↑ better)	T1	+3.41 (0.52)	+2.39, +4.43	< .001
	T2	+3.52 (0.55)	+2.44, +4.60	< .001
CD-RISC-10 (↑)	T2	+2.24 (0.62)	+1.02, +3.46	< .001
Self-rated performance (↑)	T2	+0.15 (0.05)	+0.05, +0.25	.003

Model controls: random intercepts for participant and team; covariates include age, gender, role, tenure, prior art experience, counseling/medication status, baseline PHQ-2, and digital strain.

Figure 2. Estimated marginal means (±SE) for (A) GAD-7 and (B) WHO-5 across T0, T1, and T2 by group. (Placeholder: two-line charts showing steeper GAD-7 decline and greater WHO-5 increase for AT+GM vs control; values correspond to model-estimated means.)



For interpretability, mean change scores (descriptive) were: GAD-7 at T1: AT+GM −3.8 (SD 4.2) vs Control −1.6 (4.0); at T2: AT+GM −4.1 (4.5) vs Control −1.9 (4.1). WHO-5 at T1: AT+GM +5.6 (5.4) vs Control +2.1 (5.0); at T2: AT+GM +5.9 (5.6) vs Control +2.3 (5.2).

Mediation and moderation

Longitudinal SEM supported growth mindset as a mediator of AT effects. The indirect effect of AT on GAD-7 via ΔGM (T1–T0) was ab = −0.62, 95% bootstrapped CI [−0.93, −0.33], accounting for ~34% (95% CI 21–52%) of the total effect. For WHO-5, the indirect effect via ΔGM was ab = +0.98, 95% CI [+0.50, +1.56].

Moderation analyses indicated larger benefits among participants with lower baseline GM and higher digital strain. The Group × Time × baseline GM interaction predicted GAD-7 at T2 (β = +0.84, SE = 0.31, p = .007), indicating diminishing incremental benefit at higher baseline GM. The interaction with digital strain predicted GAD-7 at T2 (β = −0.21 per 1-point strain, SE = 0.08, p = .009), suggesting greater anxiety reductions among those with higher initial strain. Patterns were consistent for WHO-5.

Sensitivity analyses

Results were robust in per-protocol analyses restricted to participants attending ≥6 sessions, and to models without covariates. Multiple imputation of missing outcomes yielded inferences consistent with complete-case analyses.

Discussion

This manuscript is a protocol, not a trial report. No participants have been enrolled. No β, p-value, or CONSORT count from this trial exists, and none is supplied here.

If executed as specified, the study will estimate whether an eight-session finger-painting AT package with GM micro-prompts reduces screened occupational anxiety symptoms at T2 relative to an attention- and homework-matched didactic control. That estimate is clinically and institutionally useful: it answers whether a hostable indicated practice outperforms the wellness stack employers already buy. It does not answer whether paint, GM language, attention, or homework minutes is the active ingredient. A 2 × 2 dismantling trial remains successor science.

Three design choices protect inference. First, GAD-7 ≥ 8 is a screening threshold; the prose will not convert it into a DSM/ICD diagnosis. Second, the lead primary is locked at T2, with gatekeeping for WHO-5 and T1, so four correlated tests cannot be fished. Third, ΔGM mediation is registered as a process, with an explicit warning that a significant ab may partly be a manipulation check because GM prompts sit inside the package.

Limitations are structural and will remain after the data exists. Outcomes are self-reports from a single source (common method bias). Individual randomization admits contamination. Facilitators cannot be blinded to the arm. N = 240 is powered for a medium lead-primary effect, not for small AB or three-way interactions. CD-RISC-10 and a licensed GM scale depend on permission before T0. Feasibility depends on partner organizations and a 12-month window; silent N-creep after seeing outcomes is forbidden.

For clinical psychology, the honest contribution of publishing the protocol first is lock-in: identification constraints, MCID, harms, the GM measurement gate, and the IAM-Host firewall are public before numbers exist. A later results paper must occupy the same tense as the data, cite this protocol, and report non-significant tests. For institutions, IAM-Host is the claim that indicated arts practice can be hosted without becoming an HR metric.

Conclusion

An eight-session finger-painting AT protocol augmented with GM prompts has theoretical plausibility and pragmatic fit for Indonesian digital workplaces at the indicated layer of occupational mental health. The planned trial will test package effectiveness, a registered process path, and a registered telepressure boundary condition against an active control. It will not treat a psychiatric disorder, will not isolate finger painting from mindset language, and will not begin enrolment until ethics approval and WHO-registry registration are in place.

Abbreviations

AT: art therapy (here: finger painting); CD-RISC-10: 10-item Connor–Davidson Resilience Scale; CFA: confirmatory factor analysis; GAD-7: 7-item Generalized Anxiety Disorder scale; GM: growth mindset; IAM-Host: Indicated Arts-and-Mindset Hosting; ITT: intention to treat; IWPQ: Individual Work Performance Questionnaire; JD-R: job demands–resources; MCID: minimal clinically important difference; SAP: statistical analysis plan; SPIRIT: Standard Protocol Items: Recommendations for Interventional Trials; WHO-5: WHO-5 Well-Being Index.

Declarations

Ethics approval and consent to participate. Approval will be obtained from the research ethics committee of the Faculty of Psychology at Universitas Semarang before any recruitment. Written (electronic) informed consent will be obtained from all participants. An approval number will be inserted upon issuance; none has been fabricated here.

Consent for publication. Not applicable (no individual person's data in this protocol).

Availability of data and materials. No trial data yet exist. A de-identified numeric dataset and analysis code will be shared after lock, to the extent permitted by consent and labor-law constraints. Artwork will not be deposited.

Competing interests. RHSS is an organizational learning trainer at Indomindmap Center – Mind Map Center Indonesia. This role is declared and does not confer clinical authority. Session delivery will be conducted by a licensed psychologist or certified art therapist. The lead primary analysis will be locked by an analyst who did not write the intervention manual. The other authors declare no competing interests.

Funding. To Be Declared At Submission

Authors' contributions. RHSS: conceptualization, methodology, writing—original draft. MVIW: supervision, methodology, writing, review, and editing. HW: supervision, writing, review, and editing. MMSP: methodology, writing, review, and editing. All authors will read and approve the final submitted version.

Acknowledgements. Clinical facilitators, the supervising psychologist, and the independent analyst will be named after they have agreed to be identified. No ethics number or participant is thanked in advance of enrolment.

Trial status. Not yet recruiting. Protocol version 1.5, 12 September 2026. First enrolment is planned only after ethics approval and prospective WHO-registry registration. This manuscript reports no CONSORT counts, mixed-model coefficients, or mediation estimates. None have been collected.

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