

Supplementary Online Material 6 – Study Characteristics

Table S6.1 Study Characteristics of 132 RCTs, including Risk of Bias, Sample Characteristics, Location, Intervention Type, Delivery Mode, Duration and Comparator Type.

Reference	Risk of Bias	Sample Description	Location	Programme Type	Delivery Mode	Duration	Comparator
Acabchuk et al. (2020)	Some Concerns	University Students	United States	10% Happier App with Muse Neurofeedback Device	Self-Guided	4 weeks	Active – App Only
Adventure-Heart and Proeve (2017)	Some Concerns	Undergraduate Students	Australia	Mindfulness Meditation	Online	8 days	Active - Progressive Muscle Relaxation Passive - BC
Ainsworth et al. (2013)	Some Concerns	University Students	England	Focused Attention Meditation Program	Face to Face	7 days	Passive - BC
Alhawatmeh et al. (2022)	Low	Nursing Students	Jordan	Relaxation, Meditation & Mindfulness (Smith, 2005)	Face to Face	3 days	Passive - MCC
Alsaraireh and Aloush (2017)	Some Concerns	Nursing Students	Jordan	Mindfulness Meditation Program	Face to Face	5 days	Active - Exercise: stretching, aerobics, and strength exercises. Passive - WL
Alzahrani et al. (2023)	Some Concerns	Medical Students	Saudi Arabia	MBSR	Online	1 week	Passive - WL
An et al. (2022)	Some Concerns	Undergraduate Students	Vietnam	MBSR	Face to Face	4 days	Passive - BC
Andersson et al. (2021)	Some Concerns	University Students	Sweden	The Mindfulness App (developed by Mindapps Ltd.)	Mobile App	5 weeks	Passive - WL
Armstrong and Rimes (2016)	Some Concerns	University Students	England	MBCT	Face to Face	6 weeks	Active - Self-Help
Barcaccia et al. (2024)	Some Concerns	Educational Science Students	Italy	MBSR-based Program	Hybrid	5 weeks	Passive - BC
Beerse et al. (2020)	Some Concerns	University Students	United States	Mindfulness-Based Art Therapy (MBAT)	Face to Face	14 days	Active - Neutral Clay Task
Bi et al. (2024)	Some Concerns	Undergraduate Students	China	MBSR	Face to Face	5 weeks	Active - Two Lectures on Mindfulness

Boyd and Alexander (2022)	Some Concerns	Medical Students	South Africa	Brief Mindfulness Program (Based on Williams and Penman's 8-Week Self-Help Programme)	Online	5 weeks	Active - Supportive Counselling Group
Cavanagh et al. (2013)	Some Concerns	University Students	England	Learning Mindfulness Online	Online	2 weeks	Passive - WL
Cheese et al. (2024)	Some Concerns	Undergraduate Students	United States	Mindfulness Course for Wellbeing and Academic Performance	Online	4 weeks	Passive - BC
Chen et al. (2013)	Some Concerns	Nursing Students	China	Mindfulness Meditation Training Program (Based on Zeidan, 2010)	Face to Face	4 weeks	Passive - BC
Chu et al. (2022)	Some Concerns	Pharmacy Students	United States	Headspace	Mobile App	3 weeks	Passive - WL
Crone et al. (2023)	Some Concerns	University Students	United States	Mindful Engineer: Cultivating Transformative Research Through Mindfulness	Face to Face	4 weeks	Passive - WL
de Sousa et al. (2021)	Some Concerns	University Students	Brazil	Mindfulness Meditation	Face to Face	5 weeks	Active – Health Education and Colouring
DeTore et al. (2023)	Some Concerns	University Students with Mildly Elevated Depressive or Psychotic Symptoms	United States	Resilience Training with Mindfulness	Face to Face	4 weeks	Passive - WL
de Vibe et al. (2013)	Some Concerns	Medical and Psychology Students	Norway	MBSR	Face to Face	5 weeks	Passive - BC
Delgado et al. (2010)	Some Concerns	University Students (High in Trait Worry)	England	Mindfulness Meditation Program	Face to Face	21 weeks	Active - Relaxation
Dundas et al. (2017)	Some Concerns	University Students	Norway	Mindful Self-Compassion Program Based on Compassionate	Face to Face	5 weeks	Passive - WL

				Mind Training and MBSR			
Dvorakova et al. (2017)	Some Concerns	Undergraduate Students	United States	Learning to BREATHE (L2B)	Face to Face	6 weeks	Passive - WL
Ellison et al. (2024)	Some Concerns	First Year University Students in Health Sciences	United States	MBCT via Sanvello App	Hybrid	4 weeks	Active – MBSR- based Positive Control
Erogul et al. (2014)	Some Concerns	Medical Students	United States	MBSR	Face to Face	6 weeks	Passive - BC
Falb (2015)	Some Concerns	Undergraduate Students in Psychology	United States	Mindfulness Training (MBCT-adapted)	Online	4 weeks	Active – Relaxation Training
Falsafi (2016)	Some Concerns	Undergraduate Students	United States	MBSR	Face to Face	4 weeks	Passive - BC
Fazia et al. (2023)	Some Concerns	Medical Students	Italy	MBP using Integral Meditation	Online	6 weeks	Passive - BC
Feruglio et al. (2021)	Some Concerns	University Students in Educational, Teaching and Sports Science	Italy	Mindfulness- Oriented Meditation Protocol	Face to Face	6 weeks	Active - MCC
Galante et al. (2018)	Low	University Students	England	Mindfulness Skills for Students (MSS) Plus Mental Health Support as Usual	Face to Face	4 weeks	Passive - BC
Gallego et al. (2015)	Some Concerns	Undergraduate Education Students	Spain	MBCT	Face to Face	6 weeks	Passive - BC
Gan et al. (2023)	Some Concerns	University Students	China	MBSR	Face to Face	3 weeks	Passive - WL
Gao et al. (2024)	Some Concerns	University Student Athletes	China	MBSR-based Program	Self-Guided	3 weeks	Passive - Behavioural Pamphlets
Goldberg et al. (2021)	Low	Undergraduate Students	United States	Breath Awareness Session	Face to Face	5 weeks	Active - Gratitude
Gomutbutra et al. (2022)	Some Concerns	Nurse and Occupational Therapy Students	Thailand	Mindfulness Based Flow Practice	Face to Face	4 weeks	Passive - MCC
Greeson et al. (2014)	Some Concerns	University Students	United States	MBSR-based Koru Program	Face to Face	6 weeks	Passive - WL
Guo et al. (2019)	Some Concerns	Military Recruits	China	MBSR	Face to Face	28 weeks	Passive - WL

Hall et al. (2018)	Some Concerns	University students	China	Low-Intensity MBP using mHealth text messaging	Hybrid	4 weeks	Passive - WL
Hanley et al. (2019)	Low	University Students in Medicine and Clinical Psychology	Norway	MBSR-adapted and shortened	Face to Face	7 weeks	Passive - Standard Academic Curriculum
Hasselberg et al. (2020)	Some Concerns	Community Sample	Sweden	Mindfulness and Compassion for Stressed Youth	Self-Guided	2 weeks	Passive - WL
Hazlett-Stevens and Oren (2017)	Some Concerns	University Students Seeking Stress Reduction	United States	MBSR - Bibliotherapy	Self-Guided	3 weeks	Passive - WL
Hirshberg et al. (2018)	Low	Undergraduate Students	United States	Breath Awareness Session	Self-Guided	4 weeks	Active - Attention Training Session
Hooper et al. (2024)	Some Concerns	Female Community Sample	England	Brief Mindfulness Meditation	Self-Guided	21 weeks	Passive - MCC
Huberty et al. (2019)	Low	University Students	United States	Calm	Mobile App	4 weeks	Passive - WL
Isham et al. (2022)	Some Concerns	University Students with Remitted Depression	Scotland	MBSR	Face to Face	5 weeks	Passive - WL
Jain et al. (2007)	Some Concerns	Medical Students, Graduate Nursing Students, and Undergraduate Students in Premedical or Prehealth Studies	United States	MBSR	Face to Face	4 weeks	Passive - BC
Jaiswal et al. (2024)	Some Concerns	Healthcare Professionals	United States	WellMind: Brief Digital Mindfulness and Compassion Training App	Self-Guided	3 weeks	Passive - BC
Jia-Yuan et al. (2022)	Some Concerns	University Students	China	Mindfulness-Based Emotion Management Program	Online	12 min (single session)	Passive - BC
Joss et al. (2024)	Some Concerns	Young Adults with Adverse Childhood Experiences (ACEs)	United States	MBSR-Based Program	Face to Face	8 weeks	Active - Stress Management Program
Karing (2023)	Some Concerns	University Students	Germany	MBSR-Based Program	Online	4 weeks	Active - Podcast-Delivered MBSR

Karing (2024)	Some Concerns	University Students	Germany	Group-Based Manualised Mindfulness Intervention and 7Mind (Mobile App) MBSR	Hybrid	30 weeks	Passive - Communication Intervention
Keng et al. (2020)	Some Concerns	Community Sample	Singapore		Face to Face	4 weeks	Active - Music Therapy-Based Stress Reduction
Kim et al. (2020)	Some Concerns	First Year Undergraduate Students	United States	Mindfulness Program (Based on Stahl and Goldstein's Mindfulness Stress Reduction Workbook)	Online	4 weeks	Active - Stress Management
Kingston et al. (2007)	Some Concerns	University Students	England	Mindfulness Training	Face to Face	14 weeks	Active - Guided Visual Imagery
Komariah et al. (2022)	Some Concerns	University Students	Indonesia	Mindfulness Training	Online	4 weeks	Passive - BC
Kou et al. (2023)	Some Concerns	Undergraduate Students	China	MBSR	Face to Face	2 weeks	Active - One Mindfulness Lecture
Kou et al. (2025)	Some Concerns	Undergraduate Students	China	EmotionCore Mindfulness Training	Face to Face	5 weeks	Active – WL and 2 Lectures on Mindfulness
Kuchler et al. (2023)	Low	University Students from Germany, Austria, and Switzerland	Switzerland	StudiCare Mindfulness (StudiCare-M) with Guidance on Demand	Face to Face	4 weeks	Passive - WL
Kuhlmann et al. (2016)	Low	Medical Students	Germany	MediMind - Mindfulness-Based Stress Prevention Training for Medical Students	Face to Face	3 months	Passive - BC
Latt et al. (2024)	Some Concerns	Female University Students	England	Mindful Self-Hypnosis	Face to Face	3 months	Passive - WL

Lee and Nam (2025)	Some Concerns	Community Young Adults	Korea	MoVemEnT Program	Online	4 weeks	Passive - WL
Liu et al. (2023)	Some Concerns	University Students	China	Mindfulness Training	Face to Face	6 months	Passive - MCC
F. Liu et al. (2024)	Some Concerns	University Students	China	Mindfulness Training Recording	Face to Face	20 weeks	Passive - MCC
W. Liu et al. (2024)	Some Concerns	Undergraduate Students with First Episode or Untreated Depression	China	MBCT	Face to Face	6 months	Passive - WL
Lothes et al. (2022)	Some Concerns	University Students (Experiencing Anxiety About Exams)	United States	Sitting Meditation Program	Self-Guided	10 weeks	Passive - WL
Loucks et al. (2021)	Low	University Students	United States	MB-College Program (MBSR-Based Program)	Face to Face	8 weeks	Active - Enhanced Usual Care
Ma et al. (2023)	Some Concerns	University Students	Scotland	Mindful Nature Walking	Face to Face	8 weeks	Active - Mindful Urban Walking
MacDonald and Neville (2022)	Some Concerns	Liberal Arts and Sciences Students	United States	MBSR	Face to Face	8 weeks	Passive - BC
Mak et al. (2015)	Some Concerns	University Students	Hong Kong	MBSR-based HAPA Enhanced Program	Online	12 weeks	Passive - WL
Mak et al. (2023)	Some Concerns	Individuals At Risk for Depression and Anxiety (High Trait Worry and Rumination)	England	MBSR- and MBCT-Based Program (Based on Previous Interventions By First Author)	Online	8 weeks	Active - Psychoeducation
Marens et al. (2023)	Some Concerns	University Students	United States	WeMindful	Online	6 weeks	Active - WeActive
Martinez-Rubio et al. (2021)	Some Concerns	Psychology Students	Spain	Mindfulness-and Compassion-Based Program for University Life	Face to Face	7 weeks	Passive - WL
McEvoy et al. (2017)	Some Concerns	High Trait-Anxious Individuals	Australia	Mindfulness-Based Progressive Muscle Relaxation	Face to Face	6 weeks	Active - Thought Wandering
McIndoo et al. (2016)	Some Concerns	Depressed University Students	United States	Mindfulness-Based Therapy	Face to Face	8 weeks	Passive - WL

Min et al. (2023)	Some Concerns	Undergraduate Students (Interested in Mindfulness Meditation)	South Korea	Mabo (developed by Mabo Corporation)	Mobile App	7 weeks	Passive - BC
Modrego-Alarcon et al. (2021)	Low	University Students	Spain	MBP for Anxiety with Virtual Reality (VR) (Based on Navarro-Haro et al., 2019)	Face to Face	8 weeks	Active - Progressive Muscle Relaxation
Moir et al. (2016)	Some Concerns	Medical Students	New Zealand	MBSR- Based Peer Led Program	Face to Face	8 weeks	Passive - BC
Moser et al. (2024)	Low	University Students (Early Weeks of Pandemic)	United States	Daily Mindfulness Program (Psychoeducation and Simple Breathing and Grounding Exercises)	Self-Guided	8 weeks	Passive - BC
Neto et al. (2019)	Low	First Year Medical Students	Brazil	MBSR-Based Program for Large Groups	Face to Face	8 weeks	Passive - BC
Nguyen-Feng et al. (2017)	Some Concerns	Psychology Students	United States	Mindfulness and Present Control	Online	8 weeks	Active - Stress Management Information
Noone and Hogan (2018)	Low	University Students	Ireland	Headspace	Mobile App	8 weeks	Active - Sham Meditation
O'Hare and Gemelli (2023)	Some Concerns	Undergraduate Students	United States	Focused Attention Mindfulness Before Course as Usual	Face to Face	8 weeks	Active - Self-Compassion Mindfulness
O'Leary and Dockray (2015)	Some Concerns	Female Community Sample	Ireland	Mindfulness Meditation and Diary (Body Scan Meditation)	Online	8 weeks	Active - Progressive Muscle Relaxation
Olendzki et al. (2020)	Some Concerns	University Students	United States	Mindful Hypnotherapy	Face to Face	8 weeks	Passive - WL
Orosa-Duarte et al. (2021)	Some Concerns	Healthcare Students	Spain	Mindfulness-Based Emotion Regulation. Going Home. (APP)	Mobile App	7 weeks	Passive - BC
Ozturk and Toruner (2022)	Low	Nursing Students	Turkey	Mindfulness-Based Mandala Activity	Face to Face	10 weeks	Passive - BC

Petrovic et al. (2025)	Low	Community Young Adults with and without Non-Suicidal Self-Injury (NSSI)	Canada	Formal Mindfulness	Face to Face	10 minutes	Active – Informal Mindfulness
Phang et al. (2015)	Some Concerns	Medical Students	Malaysia	Mindful-Gym: Mindfulness-Based Stress Management (MBSM) (MBSR-Based Program)	Face to Face	8 weeks	Passive - BC
Pickett et al. (2024)	Some Concerns	University Students (Experiencing Stress/Seeking Improved Sleep)	United States	Brief Online Mindful Breathing Exercise (Script from Stahl and Goldstein's MBSR workbook)	Self-Guided	8 weeks	Active - Self-Monitoring (sleep diary)
Plummer et al. (2018)	Some Concerns	Graduate Nursing Students	United States	Mindfulness-Based Nursing Curriculum	Face to Face	7 weeks	Passive - BC
Priebe and Kurtz-Costes (2022)	Some Concerns	Undergraduate Students	United States	MBSR-Based Program	Face to Face	8 weeks	Active - Sham Mindfulness
Purdie et al. (2023)	Some Concerns	Pediatric Resident Physicians	United States	Mindfulness Awareness Practices (MAPs) Curriculum	Hybrid	8 weeks	Passive - WL
Rad et al. (2023)	Some Concerns	Undergraduate Students with High Procrastination	Iran	Mindfulness Training for Procrastination (MBCT- and MBSR-Based Program)	Face to Face	8 weeks	Passive - WL
Radosavljevic and Farb (2023)	Some Concerns	Undergraduate Students	Canada	Mindfulness and Relaxation Workshop with Booster Session	Hybrid	8 weeks	Active - Workshop without Booster Session
Ratanasiripong et al. (2015)	Some Concerns	Nursing Students	Thailand	Vipassana Meditation Training Sessions	Face to Face	8 weeks	Passive - BC
Repo et al. (2022)	Some Concerns	Healthcare Students	Finland	Mindfulness Skills for Students (MSS)	Face to Face	8 weeks	Passive - BC
Ritvo et al. (2021)	Low	Youth with Major Depressive Disorder	Canada	Online Cognitive Behavioural Therapy with Mindfulness Meditation	Online	8 weeks	Passive - Standard Psychiatric Care

Roys et al. (2023)	Some Concerns	University Students - Current Smokers with Smoking Outcome Expectancies for Managing Negative Affect	United States	Mindfulness Meditation Session	Face to Face	8 weeks	Passive - MCC
Rubin et al. (2024)	Some Concerns	Community Sample	United States	Telehealth Mindfulness Session	Online	8 weeks	Passive - WL
Salcido-Cibrian et al. (2019)	Some Concerns	Online Training Course Students	Spain	The Mindfulness and Emotional Intelligence Program (PINEP) (MBSR-Based Program)	Online	10 weeks	Passive - WL
Saldana (2021)	Some Concerns	Nonclinical Young Adults with Elevated Stress	United States	The Breathing App	Mobile App	4 weeks	Passive - MCC
Sarfraz et al. (2023)	Low	University Students	Pakistan	Mindfulness Training Course (MBSR-Based Program)	Hybrid	8 weeks	Passive - WL
Schulte-Frankenfeld and Trautwein (2022)	Some Concerns	Working University Students (part-time work alongside studies)	Germany	Balloon App	Mobile App	8 weeks	Passive - WL
Seppala et al. (2020)	Some Concerns	Undergraduate Students	United States	MBSR-Based Program	Face to Face	8 weeks	Active – Emotional Intelligence Program
Shapiro et al. (2011)	Some Concerns	Undergraduate Students	United States	MBSR	Face to Face	6 weeks	Passive - WL
Simonsson et al. (2021)	Some Concerns	University Students (During COVID-19)	England	Adapted from Mindfulness: a Practical Guide to Finding Peace in a Frantic World	Online	8 weeks	Passive - WL
Smeets et al. (2014)	Some Concerns	Female University Students	Netherlands	Mindful Self-Compassion	Face to Face	8 weeks	Active - Time Management Program
Song and Lindquist (2015)	Some Concerns	Nursing Students	South Korea	MBSR	Face to Face	12 weeks	Passive - WL
Sun et al. (2022)	Low	Distressed University Students in Quarantine	China	Mindfulness for Growth and	Online	8 weeks	Active - Social Support-Based

				Resilience (MBCT- and MBSR-Based Program)			mHealth Intervention
Tanay et al. (2012)	Some Concerns	Community Sample	Israel	Brief Mindfulness Skills Training Program - Mahasi tradition	Face to Face	8 weeks	Passive - BC
Taylor et al. (2014)	Some Concerns	University Students	England	MBCT	Self-Guided	8 weeks	Passive - BC
Thabrew et al. (2022)	Low	Young People	New Zealand	Whitu: Seven Ways in Seven Days	Mobile App	8 weeks	Passive - WL
Thomas et al. (2016)	Some Concerns	Female Students in Introductory Psychology Course	United Arab Emirates	MBSR	Face to Face	8 weeks	Passive - WL
van der Zwan et al. (2015)	Some Concerns	Community Sample	Netherlands	Mindfulness Training (Based on Mindfulness: A Practical Guide to Finding Peace in a Frantic World by Williams and Penman)	Face to Face	8 weeks	Active - HRV-BF (Heart Rate Variability Biofeedback)
Vollbehr et al. (2022)	Some Concerns	Young Women With Major Depressive Disorder	Netherlands	Mindful Yoga	Face to Face	8 weeks	Active - BC
Vollbehr et al. (2025)	Some Concerns	Study 1: Healthy Undergraduate Students; Study 2: Undergraduate Students with Depressed Affect	Netherlands	Mindful Yoga	Hybrid	8 days	Active – Relaxation Training
Vorontsova-Wenger et al. (2022)	Some Concerns	University Students	Switzerland	Mindfulness Training Program (MBSR- Based Program)	Self-Guided	9 weeks	Active - MCC
Wagner et al. (2023)	Low	University Students	England	Mindfulness Skills for Students (MSS) Plus Mental Health Support as Usual	Hybrid	8 weeks	Passive - BC

Walsh et al. (2016)	Some Concerns	Young Women with Depressive Symptoms	United States	Mindfulness Training Program (MBCT- and MBSR-Based Program)	Face to Face	8 weeks	Passive - MCC
Q. Wang et al. (2023)	Some Concerns	Postgraduate Students	China	Mindful Learning Coaching (MLC)	Face to Face	8 weeks	Passive - BC
Y. Wang et al. (2023)	Low	Psychology Students	Canada	MBCT - Brief	Hybrid	10 weeks	Active - Stress Mindset Training
Westbrock and Dohnke (2022)	Some Concerns	University Students	Germany	MBSR-based Mindfulness Course (MC)	Face to Face	8 weeks	Passive - BC
Xiong et al. (2022)	Some Concerns	International University Students	United States	Mindfulness Based Wellbeing Group for International Students	Face to Face	14.20 min (single session)	Passive - WL
Yang et al. (2018)	Some Concerns	Medical Students	United States	Headspace	Mobile App	10 min (single session)	Passive - WL
Yang et al. (2022)	Some Concerns	Pregnant Women with Depressive or Anxious Symptoms	China	Monitoring Training	Face to Face	15 min (single session)	Active - Emotion Regulation Training
Yook et al. (2024)	Some Concerns	Female University Students	South Korea	Online Mindful Somatic Psychoeducation (o-MSP)	Online	8 hours (single session)	Passive - WL
Young et al. (2023)	Some Concerns	University Students with Anxiety (During COVID-19)	Hong Kong	Low-Intensity iMBI (MBCT-Based Program)	Hybrid	12 min (single session)	Passive - BC
Zainal et al. (2024)	Low	Self-Reported/Undiagnosed Social Anxiety	Singapore	Brief Mindfulness Ecological Momentary Intervention	Online	10 min (single session)	Active - Self-Monitoring App
Zeidan et al. (2010)	Some Concerns	Undergraduate Students	United States	Brief Mindfulness Meditation Program (Based on Vipassana and no homework)	Face to Face	40 min (single session)	Active - Audiobook

Zheng et al. (2024)	Some Concerns	University Students	China	Mindfulness Virtual Reality (VR) MBCT-Based Program	Face to Face	10 min (single session)	Passive - BC
Zhong et al. (2024)	Some Concerns	Young Adult Males from Security Industry	China	Brief Mindfulness Meditation Training (BMM)	Self-Guided	1 hour (single session)	Passive - MCC

Note: BC – Blank Control; MCC – Matched Contact Control; WL – Waitlist Control

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