

**Digital Appendix Systematic Cochrane Review and Meta-Analysis on Psychological Interventions to  
Foster Resilience in Healthcare Professionals**

**Appendix D7 Detailed Characteristics of Studies Awaiting Classification**

**Table D7.1**

*Almén 2020*

Category	Extracted data
Methods	
Participants	
Interventions	
Outcomes	
Notes	Result from top-up search in June 2020; will be incorporated into the review at the next update

Table D7.2

Aranda Auserón 2018

Category	Extracted data
Methods	<p>Study design: RCT</p> <p>Study grouping: parallel group</p> <p>Unit of randomization: individuals</p> <p>Power (power &amp; sample size calculation, level of power achieved): A sample size of 50 participants was estimated, necessary for have a power of 80% to detect as significant differences between the pre- and postintervention situation of 0.6 standard deviations in the scores of the scales considered.</p> <p>Imputation of missing data: no imputation of missing data; per-protocol analysis (i.e., only participants who completed training/attended at least 75% of sessions)</p>
Participants	<p>Country: Spain</p> <p>Setting: health center in Pamplona</p> <p>Age: mean = 49.9 (SD = 8.2) years (analyzed sample)</p> <p>Sample size (randomized): 48</p> <p>Sex: 38 women, 7 men (analyzed sample)</p> <p>Comorbidity (mean (SD) of respective measures in indicated, if available) at baseline: no psychiatric illness (see inclusion criteria); burnout in Maslach Burnout Inventory (MBI): 1) emotional exhaustion: low (&lt;19): IG: 9(41%), CG: 13(59%); moderate (19-26): IG: 3(14%), CG: 3(14%); high (&gt;26): IG: 10(46%), CG: 6(27%); 2) depersonalization: low (&lt;6): IG: 10(46%), CG: 11(50%); moderate (6-9): IG: 5(23%), CG: 5(23%); high (&gt;9): IG: 7(32%), CG: 6(27%); 3) personal accomplishment: low (&gt;39): IG: 8(35%), CG: 9(41%); moderate (39-34): IG: 11(48%), CG: 10(45%); high (&lt; 34): IG: 3(14%), CG: 3(14%)</p> <p>Population description: primary care health professionals</p> <p>Included criteria: 1) informed consent; 2) committed to complete pre- and posttest questionnaires; 3) attend at least 75% of sessions and perform mindfulness and self-compassion practices 45 minutes a day</p> <p>Excluded criteria: 1) having completed program of mindfulness and/or self-compassion in the previous 6 months; 2) suffer from psychiatric illness that did not advise participating in the study</p> <p>Attrition (withdrawals and exclusions): 3 dropouts (IG: n = 2 (8%), CG: n = 1 (4%))</p> <p>Reasons for missing data: for 3 dropouts/losses: IG: 2 lost due to not completing the program; CG: 1 due to attending a mindfulness course during the study</p>
Interventions	<p>Intervention: Mindfulness and Self-Compassion Program (n = 25)</p> <ul style="list-style-type: none"> <li>• <i>delivery</i>: face-to-face; group setting; material provided for practices at home (manual of theoretical contents, audios, practice diaries)</li> <li>• <i>providers</i>: taught by Master's level instructor in mindfulness who was trained in Mindfulness-based Stress Reduction (MBSR) and Mindful-Self-Compassion (MSC) programs</li> <li>• <i>duration of treatment period and timing</i>: 8 weekly 2.5-hour sessions hours; daily 45-minute practice</li> <li>• <i>description</i>: <ul style="list-style-type: none"> <li>○ course inspired by MBSR program which incorporates practices for the cultivation of self-compassion of MSC program by Neff</li> <li>○ each session deals with specific topic and mindfulness and self-compassion practices are carried out, including time for dialogue and exchange of experiences between participants</li> <li>○ presentation day: presentation and course objectives; schedule and structure of face-to-face sessions; completion of questionnaires</li> <li>○ WEEK 1: full consciousness: a) concepts: mindfulness, full attention vs autopilot, attitudes for practice, presentation of formal and informal mindfulness practices; b) practices during session: raisin exercise, 3-</li> </ul> </li> </ul>

Category	Extracted data
	<p>minute practice, body scan; c) daily practices at home during the week: body scan at least 6 days a week</p> <ul style="list-style-type: none"> <li>○ WEEK 2: perceptions and reality: a) concepts: how we perceive reality, opening, beginner's mind acceptance, no judgement, metacognition; b) practices during session: introduction to meditation posture, mindfulness in breathing; c) practices at home during the week: body scan at least 6 days a week, mindfulness in breathing for 10-15 minutes per day</li> <li>○ WEEK 3: emotions: a) basic emotions, neurobiology of emotions, emotion regulation, self-compassion: mindfulness, common humanity, self-kindness and opposites; b) practices during session: "self-compassion pause", practice stretching and exercises with mindfulness; c) practices at home during the week: alternate body scan with yoga exercises and stretching with full awareness, practice "self-compassion pause" every time a stressful/painful time is experienced during the week (especially at work)</li> <li>○ WEEK 4: stress reactivity, coping strategies, burnout: a) concepts: stress and stressors, physiological and psychological basis of stress reactivity, automatic reaction vs effective response in stress situations, coping strategies, burnout; b) practices during session: mindful walking compassion hug; c) practices at home during the week: alternate compassionate body scan with yoga and stretching exercises with mindfulness, practice mindfulness in breathing for 10-15 minutes per day, meditative walking</li> <li>○ WEEK 5: relationships, conscious communication, communication styles: a) concepts: stress and interpersonal relationships, conscious communication, communicative styles; b) practices during session: practice of "empathic listening" in pairs; c) practices at home during the week: mindfulness in whole range of experiences or awareness practice without choice, attending to all mental contents (sensations, emotions, thoughts), mindfulness in breathing</li> <li>○ WEEK 6: meaning in medicine, values: a) concepts: values as guides to direct our vital objectives, discovering our values and strengths; b) practices during session: centering meditation: observe the possible connection of this experience with our own values, practice of your "future 1": helps to discover own important values; c) practices at home during the week: formal daily practice of at least 45 minutes duration at the student's choice (choosing each day the most appropriate practice at the time, mood, intention), for example, single formal body scan practice, attention to breathing, body exercises and stretching with full attention or combination of several of them, either in the same session or in several sessions throughout the day</li> <li>○ WEEK 7: healthcare professional in face of suffering, time management: a) concepts: primary pain and secondary suffering, pain resistance, radical acceptance, coping against avoidance/denial, difference between empathy and compassion, empathy fatigue vs compassion satisfaction, time management; b) practices during session: practice of "Tonglen" (give and take) to manage the caregiver's fatigue; c) practices at home during the week: perform any of the formal mindfulness and self-compassion practices learned up to now, to student choice and as needed; can be single practice in one session or by combining several at different times of the day (45 min); participant asked to design a "Personal Self-Care Plan" thinking about the aspects of his life that he/she would like to modify to feel better and committed to include in day-to-day meditation techniques and self-compassion exercises learned during the program</li> </ul>

Category	Extracted data
	<ul style="list-style-type: none"> <li>○ WEEK 8: personal self-care plan, farewell: a) concepts: take care of the caregiver, awareness of own needs, in small groups (2-3 people): sharing of "personal self-care plan", reflection on conditions we need to feel good in our work, factors that influence that well-being, how we can prevent stress, anxiety, hurry, and what measures can we take for our self-care; b) questionnaires and course evaluation; c) final meditation: circle of compassion: meditation of loving kindness (metta meditation) addressed to a loved one, to ourselves, to a neutral being, to a conflicting one and finally to all living beings</li> <li>• <i>compliance</i>: participants had to attend at least 75% of the sessions; n = 2 lost in IG due to not completing the program</li> <li>• <i>integrity of delivery</i>: not specified</li> <li>• <i>economic information</i>: training offered free (outside of working hours)</li> <li>• <i>theoretical basis</i>: mindfulness-based; based on MBSR and MSC</li> </ul> <p>Control: unspecified control group (n = 23)</p> <ul style="list-style-type: none"> <li>• <i>delivery</i>: not specified</li> <li>• <i>providers</i>: not specified</li> <li>• <i>duration of treatment period and timing</i>: not specified</li> <li>• <i>description</i>: not specified</li> <li>• <i>compliance</i>: not specified</li> <li>• <i>integrity of delivery</i>: not specified</li> <li>• <i>economic information</i>: not specified</li> <li>• <i>theoretical basis</i>: not specified</li> </ul>
Outcomes	<p>Outcomes collected and reported:</p> <ul style="list-style-type: none"> <li>• mindfulness - Five Facets of Mindfulness Questionnaire</li> <li>• perceived stress - Perceived Stress Questionnaire</li> <li>• self-compassion, self-kindness - Self-Compassion Scale (SCS)</li> <li>• self-compassion, common humanity - SCS</li> <li>• self-compassion, mindfulness - SCS</li> <li>• burnout, emotional exhaustion - MBI</li> <li>• burnout, depersonalization - MBI</li> <li>• burnout, personal accomplishment - MBI</li> </ul> <p>Time points measured and reported: 1) pre-intervention; 2) postintervention</p> <p>Adverse events: not specified</p>
Notes	<p>Contact with authors: We contacted authors to get the information about the potential focus of the intervention on fostering resilience, but received no response.</p> <p>Study start/end date: not exactly specified; course held during February - March 2016</p> <p>Funding source: partially funded by the Department of Health of the Government of Navarra, when obtaining the first prize in the II Research Ideas Competition Health in Primary Care</p> <p>Declaration of interest: The authors declare that there is no conflict of interest.</p> <p>Ethical approval needed/obtained for study: approved by the Ethics Committee of Clinical Research of Navarra</p> <p>Comments by study authors: not relevant</p> <p>Miscellaneous outcomes by the review authors: focus of intervention on resilience unclear (resilience only mentioned once in report)</p> <p>Correspondence: Gloria Aranda Auserón, Subdirección de Farmacia, Servicio Navarro de Salud-Osasunbidea, Pamplona, Spain; garandaa@navarra.es</p>

**Table D7.3***Chesak 2019*

Category	Extracted data
Methods	
Participants	
Interventions	
Outcomes	
Notes	Result from top-up search in June 2020; will be incorporated into the review at the next update

**Table D7.4***Dyrbye 2019*

Category	Extracted data
Methods	
Participants	
Interventions	
Outcomes	
Notes	Result from top-up search in June 2020; will be incorporated into the review at the next update

**Table D7.5***Grabbe 2020*

Category	Extracted data
Methods	
Participants	
Interventions	
Outcomes	
Notes	Result from top-up search in June 2020; will be incorporated into the review at the next update

**Table D7.6***Heath 2020*

Category	Extracted data
Methods	
Participants	
Interventions	
Outcomes	
Notes	Result from top-up search in June 2020; will be incorporated into the review at the next update



**Table D7.7**

Kim 2018

Category	Extracted data
Methods	<p>Study design: RCT including head-to-head comparison</p> <p>Study grouping: parallel group</p> <p>Unit of randomization: individuals</p> <p>Power (power &amp; sample size calculation, level of power achieved): With a predicted effect size of Cohen <math>d=0.4</math>, an <math>\alpha</math> level of .05, a desired power of 0.95, and a correlation of 0.5 among repeated measures, the estimated total sample size using G-Power was 69 (23 participants per condition); considering a drop-out rate of 20%, we aimed to recruit 87 participants.</p> <p>Imputation of missing data: no imputation of missing data; per-protocol analysis (i.e., only participants who completed the study)</p>
Participants	<p>Country: Korea</p> <p>Setting: training setting not exactly specified; employees and see method of recruitment, but training setting unclear</p> <p>Age: mean = 40.29 (SD = 10.82) years</p> <p>Sample size (randomized): 81</p> <p>Sex: 67 women, 5 men (in analyzed sample)</p> <p>Comorbidity (mean (SD) of respective measures in indicated, if available) at baseline: Mini-International Neuropsychiatric Interview during screening process to detect psychiatric disorders</p> <p>Population description: employees</p> <p>Included criteria: 1) age between 19 and 65 years; 2) a score of <math>\geq 14</math> on the Perceived Stress Scale (PSS) at baseline; 3) possession of an Android smartphone; 4) currently employed full-time</p> <p>Excluded criteria: 1) age <math>&lt;19</math> or <math>&gt;65</math> years; 2) cognitive disorders, such as intellectual disability or dementia; 3) neurological disorders, including epilepsy, stroke, or others; 4) history of schizophrenia or bipolar I disorder; 5) current report of suicidal ideation; and 6) nonpharmacological treatment or counseling within the past 6 months</p> <p>Attrition (withdrawals and exclusions): AFTER RANDOMIZATION (before treatment initiation): IG1: <math>n = 4</math> dropouts; IG2: <math>n = 1</math> dropout; DURING TREATMENT: IG1: <math>n = 3</math> dropouts; CG: <math>n = 1</math> dropout</p> <p>Reasons for missing data: AFTER RANDOMIZATION; for 4 dropouts in IG1: trouble installing the app on their smartphone (<math>n = 3</math>); refused participation due to difficulty in scheduling appointments (<math>n = 1</math>); IG2: needed psychiatric treatment due to aggravation of psychiatric symptoms (<math>n = 1</math>); DURING TREATMENT: for 3 dropouts in IG1: personal schedules (<math>n = 2</math>), complained of unstable Wi-Fi connection (<math>n = 1</math>); CG: dropout due to personal matters, but refused to give a detailed explanation (<math>n = 1</math>)</p>
Interventions	<p>Intervention 1: educational material from self-care condition (CG) + mobile videoconference-based intervention on stress reduction and resilience enhancement (<math>n = 25</math>)</p> <ul style="list-style-type: none"> <li>• <i>delivery</i>: mobile videoconference-based: "Hello Mindcare" Android app; individual setting (1:1 therapy)</li> <li>• <i>providers</i>: one of three psychologists with master's degree in education (1:1 therapy)</li> <li>• <i>duration of treatment period and timing</i>: 4 weekly 50-minute sessions</li> <li>• <i>description</i>: <ul style="list-style-type: none"> <li>○ protocol adapted from Stress Management and Resilience Training: Relaxation Response Resilience Program (SMART-3RP) --&gt; modified into 4-week program</li> <li>○ SMART-3RP = 8-week, 1.5-hour session program developed by the Benson-Henry Institute for Mind Body Medicine at Massachusetts General Hospital</li> </ul> </li> </ul>

Category	Extracted data
	<ul style="list-style-type: none"> <li>○ goals of the program include: 1) eliciting a relaxation response through meditation; 2) reducing overall stress reactivity; 3) increasing connectedness to oneself and others</li> <li>• <i>compliance</i>: n = 18 completed all 4 sessions of intervention; dropout rate after treatment engagement 14% (3/21)</li> <li>• <i>integrity of delivery</i>: not specified</li> <li>• <i>economic information</i>: not specified</li> <li>• <i>theoretical basis</i>: adapted from SMART-3RP, based on principles of cognitive behavioral therapy and positive psychology in conjunction with methods that elicit a relaxation response</li> </ul> <p>Intervention 2: educational material from self-care condition (CG) + in-person condition on stress reduction and resilience enhancement (n = 28)</p> <ul style="list-style-type: none"> <li>• <i>delivery</i>: face-to-face (in-person); individual setting (1:1 therapy)</li> <li>• <i>providers</i>: one of three psychologists with master's degree in education (1:1 therapy)</li> <li>• <i>duration of treatment period and timing</i>: 4 weekly 50-minute sessions</li> <li>• <i>description</i>: <ul style="list-style-type: none"> <li>○ protocol adapted from SMART-3RP</li> <li>○ SMART-3RP = 8-week, 1.5-hour session program developed by the Benson-Henry Institute for Mind Body Medicine at Massachusetts General Hospital</li> <li>○ goals of the program include: 1) eliciting a relaxation response through meditation; 2) reducing overall stress reactivity; 3) increasing connectedness to oneself and others</li> </ul> </li> <li>• <i>compliance</i>: n = 27 completed all 4 sessions of intervention; dropout rate after treatment engagement 0%</li> <li>• <i>integrity of delivery</i>: not specified</li> <li>• <i>economic information</i>: not specified</li> <li>• <i>theoretical basis</i>: adapted from SMART-3RP, based on principles of cognitive behavioral therapy and positive psychology in conjunction with methods that elicit a relaxation response</li> </ul> <p>Control: active control (self-care condition) (n = 28)</p> <ul style="list-style-type: none"> <li>• <i>delivery</i>: educational material</li> <li>• <i>providers</i>: self-guided</li> <li>• <i>duration of treatment period and timing</i>: participants instructed to read 1 chapter each week for 4 weeks</li> <li>• <i>description</i>: educational material regarding methods to self-regulate stress</li> <li>• <i>compliance</i>: n = 27 completed all 4 sessions of intervention; dropout rate after treatment engagement 3% (1/27)</li> <li>• <i>integrity of delivery</i>: not specified</li> <li>• <i>economic information</i>: not specified</li> <li>• <i>theoretical basis</i>: not specified</li> </ul>
Outcomes	<p>Outcomes collected and reported:</p> <ul style="list-style-type: none"> <li>• perceived stress - Korean version of PSS-10</li> <li>• resilience - Brief Resilience Scale</li> <li>• emotional labor - Korean Emotional Labor Scale</li> <li>• occupational/job stress - Korean Occupational Stress Scale-Short Form</li> <li>• insomnia - Athens Insomnia Scale</li> <li>• therapeutic alliance - 4 questions (only IGs)</li> </ul> <p>Time points measured and reported: 1) pre-intervention; 2) postintervention; 3) 1-month follow-up (1 month postintervention)</p> <p>Adverse events: not specified</p>
Notes	<p>Contact with authors: We contacted authors to get the information about the potential inclusion of healthcare professionals, but received no response to two inquiries.</p> <p>Study start/end date: recruitment between August 2017 to November 2017</p>

Category	Extracted data
	<p>Funding source: supported from a fund by the Ministry of Trade, Industry and Energy of South Korea (No. 10069105 to J-HK)</p> <p>Declaration of interest: none declared</p> <p>Ethical approval needed/obtained for study: approved by the IRB of Seoul National University Bundang Hospital</p> <p>Comments by study authors: trial registration NCT03256682</p> <p>Miscellaneous outcomes by the review authors: head-to-head comparison between mobile videoconference condition and in-person condition, self-care condition as control group (i.e., hypothesis that mobile videoconference intervention for stress reduction and resilience enhancement is superior to self-care); unclear if study also included healthcare professionals</p> <p>Correspondence: Jeong-Hyun Kim, Hanyang University Medical Center, Seoul, Republic Of Korea; ten.liamnah@3lairter</p>

**Table D7.8***Mainwaring 2018*

Category	Extracted data
Methods	<p>Study design: not specified in abstract; full text could not be retrieved or obtained from the study authors</p> <p>Study grouping: not specified</p> <p>Unit of allocation/randomization: not specified</p> <p>Power (power &amp; sample size calculation, level of power achieved): not specified</p> <p>Imputation of missing data: not specified</p>
Participants	<p>Country: USA</p> <p>Setting: medium-size anesthesia department (serving one of the busiest surgical and obstetric facilities on the east coast)</p> <p>Age: not specified</p> <p>Sample size (randomized): not specified</p> <p>Sex: not specified</p> <p>Comorbidity (mean (SD) of respective measures in indicated, if available) at baseline: not specified</p> <p>Population description: anesthesia professionals working in a medium-size anesthesia department</p> <p>Included criteria: not specified</p> <p>Excluded criteria: not specified i</p> <p>Attrition (withdrawals and exclusions): not specified</p> <p>Reasons for missing data: not specified</p>
Interventions	<p>Intervention: mindfulness-based resilience training (n not specified)</p> <ul style="list-style-type: none"> <li>• <i>delivery</i>: not specified</li> <li>• <i>providers</i>: not specified</li> <li>• <i>duration of treatment period and timing</i>: not specified</li> <li>• <i>description</i>: mindful communication training; gratitude and mindfulness practice</li> <li>• <i>compliance</i>: not specified</li> <li>• <i>integrity of delivery</i>: unclear not specified</li> <li>• <i>economic information</i>: not specified</li> <li>• <i>theoretical basis</i>: mindfulness-based intervention</li> </ul> <p>Control: potential control group not specified in abstract (n not specified)</p>
Outcomes	<p>Outcomes collected and reported: based on publication abstract 1) mindfulness; 2) resilience; 3) positive outlook and attitude (no statistical data reported)</p> <p>Time points measured and reported: 1) pre-intervention; 2) postintervention; overall changes between pre- and postintervention reported</p> <p>Adverse events: not specified in abstract</p>
Notes	<p>Contact with authors: We contacted authors twice to ask for the corresponding full text, but did not receive a response.</p> <p>Study start/end date: not specified</p> <p>Funding source: not specified</p> <p>Declaration of interest: not specified</p> <p>Ethical approval needed/obtained for study: not specified</p> <p>Comments by study authors: not specified</p> <p>Miscellaneous outcomes by the review authors: study procedures (e.g., design) could not be determined based on abstract</p> <p>Correspondence: Prof. Jacqueline Mainwaring, Thomas Jefferson University; <a href="mailto:jacqueline.mainwaring@jefferson.edu">jacqueline.mainwaring@jefferson.edu</a></p>

**Table D7.9***Moffatt-Bruce 2019*

Category	Extracted data
Methods	
Participants	
Interventions	
Outcomes	
Notes	Result from top-up search in June 2020; will be incorporated into the review at the next update

**Table D7.10**

*NCT03613441*

Category	Extracted data
Methods	<p>Study design: RCT</p> <p>Study grouping: parallel group</p> <p>Unit of randomization: individuals</p> <p>Power (power sample size calculation, level of power achieved): not specified in trial registration</p> <p>Imputation of missing data: not specified</p>
Participants	<p>Country: USA</p> <p>Setting: pediatric residency training at University of California Los Angeles's Mattel Children's Hospital</p> <p>Age: not specified</p> <p>Sample size (randomized): 82 (actual enrolment)</p> <p>Sex: not specified</p> <p>Comorbidity (mean (SD) of respective measures in indicated, if available) at baseline: not specified</p> <p>Population description: residents in pediatrics training</p> <p>Inclusion criteria: 1) age: 18 years and older years; 2) pediatric resident at the University of California Los Angeles's Mattel Children's Hospital; 3) medicine/pediatric resident at University of California Los Angeles's Mattel Children's Hospital</p> <p>Exclusion criteria: none</p> <p>Attrition (withdrawals and exclusions): not specified</p> <p>Reasons for missing data: not specified</p>
Interventions	<p>Intervention: Mindful Awareness Practices (MAPs) (n not specified)</p> <ul style="list-style-type: none"> <li>• <i>delivery</i>: face-to-face (in person) and online; combined setting (group-based and self-study)</li> <li>• <i>providers</i>: live sessions administered by trained mindfulness educator at the University of California, Los Angeles (UCLA), Westwood, Olive View Medical Center and Cedars-Sinai Medical Center campuses</li> <li>• <i>duration of treatment period and timing</i>: 6 weekly 2-hour sessions: one 45-minute live session and 5 web-based self-study sessions</li> <li>• <i>description</i>: group-based course in mindfulness meditation</li> <li>• <i>compliance</i>: not specified</li> <li>• <i>integrity of delivery</i>: not specified</li> <li>• <i>economic information</i>: not specified</li> <li>• <i>theoretical basis</i>: mindfulness-based</li> </ul> <p>Control: wait-list control (n not specified; opportunity to receive intervention after study completion)</p>
Outcomes	<p>Outcomes collected and reported:</p> <p><i>Primary outcome</i></p> <ul style="list-style-type: none"> <li>• perceived stress - Perceived Stress Scale-14</li> </ul> <p><i>Secondary outcome</i></p> <ul style="list-style-type: none"> <li>• burnout symptoms (emotional exhaustion, depersonalization, personal accomplishment) - Abbreviated Maslach Burnout Inventory-9</li> <li>• depression symptoms - Beck Depression Inventory</li> <li>• anxiety - Beck Anxiety Inventory</li> <li>• loneliness - UCLA Loneliness Scale</li> <li>• sleep quality - Pittsburgh Sleep Quality Index</li> <li>• mindfulness - Mindful Attention Awareness Scale</li> </ul> <p>Outcomes reported not specified</p> <p>Time points measured and reported: 1) pre-intervention; 2) postintervention; time points reported not specified</p> <p>Adverse events: not specified</p>

Category	Extracted data
Notes	<p>Contact with authors: We contacted the authors to get the information about the status of the trial (Irwin, 2019) and also whether the trial/intervention focused on resilience. The authors replied with respect to the trial status, but gave no clear response concerning the potential study focus on resilience.</p> <p>Study start/end date: June 2017 to April 2018 (actual study completion date)</p> <p>Funding source: University of California, Los Angeles</p> <p>Declaration of interest: not specified</p> <p>Ethical approval needed/obtained for study: not specified</p> <p>Comments by authors: not specified</p> <p>Miscellaneous outcomes by the review authors: recruitment status: completed, unpublished trial; resilience only mentioned once in trial registration; focus on this construct is unclear</p> <p>Correspondence: Michael Irwin, MD (study director), University of California, Los Angeles, USA; michaelirwin1@mac.com</p>

**Table D7.11**

*NCT03781336*

Category	Extracted data
Methods	<p>Study design: RCT</p> <p>Study grouping: parallel group</p> <p>Unit of randomization: individuals</p> <p>Power (power sample size calculation, level of power achieved): not specified in trial registration</p> <p>Imputation of missing data: not specified</p>
Participants	<p>Country: USA</p> <p>Setting: National Institutes of Health (NIH) Clinical Center</p> <p>Age: not specified</p> <p>Sample size (randomized): 82 (actual enrolment)</p> <p>Sex: not specified</p> <p>Comorbidity (mean (SD) of respective measures in indicated, if available) at baseline: not specified</p> <p>Population description: NIH employees, contractors, or trainees</p> <p>Inclusion criteria: 1) age: 18 years and older; 2) any NIH employee, contractor, or trainee willing and able to participate in a 5-week mindfulness-based self-care course during the work day; 3) English speaking</p> <p>Exclusion criteria: not specified</p> <p>Attrition (withdrawals and exclusions): not specified</p> <p>Reasons for missing data: not specified</p>
Interventions	<p>Intervention: mindfulness-based self-care (n not specified)</p> <ul style="list-style-type: none"> <li>• <i>delivery</i>: not specified</li> <li>• <i>providers</i>: not specified</li> <li>• <i>duration of treatment period and timing</i>: 5 weekly 1.5-hour sessions</li> <li>• <i>description</i>: abridged mindfulness-based program incorporated into work day</li> <li>• <i>compliance</i>: not specified</li> <li>• <i>integrity of delivery</i>: not specified</li> <li>• <i>economic information</i>: not specified</li> <li>• <i>theoretical basis</i>: mindfulness-based</li> </ul> <p>Control: wait-list control (n not specified; as intervention group offered during work hours, wait-list group best described as TAU)</p>
Outcomes	<p>Outcomes collected and reported:</p> <p><i>Primary outcome</i></p> <ul style="list-style-type: none"> <li>• perceived stress - Perceived Stress Scale-10</li> </ul> <p><i>Secondary outcome</i></p> <ul style="list-style-type: none"> <li>• trait mindfulness - Mindful Attention Awareness Scale (MAAS)</li> <li>• state mindfulness - MAAS</li> <li>• positive and negative affect - Positive And Negative Affect Scale</li> <li>• course evaluations</li> <li>• anxiety/stress - Visual Analog Scale</li> <li>• general self-care - Mindful Self Care Scale</li> <li>• burnout - Maslach Burnout Inventory</li> </ul> <p>Outcomes reported not specified</p> <p>Time points measured and reported: 1) pre-intervention; 2) postintervention; time points reported not specified</p> <p>Adverse events: not specified</p>
Notes	<p>Contact with authors: We contacted the authors to get the information about the status of the trial and also whether the trial/intervention focus on resilience, but received no response from the authors.</p> <p>Study start/end date: October 2017 to June 2018 (actual completion date)</p>



Category	Extracted data
	<p>Funding source: National Institutes of Health Clinical Center</p> <p>Declaration of interest: not specified</p> <p>Ethical approval needed/obtained for study: not specified</p> <p>Comments by authors: not specified</p> <p>Miscellaneous outcomes by the review authors: recruitment status: completed, unpublished trial; resilience only mentioned once in trial registration; focus on this construct is unclear</p> <p>Correspondence: Rezvan Ameli, PhD (principal investigator), National Institutes of Health Clinical Center, USA; rezvan.ameli@nih.gov</p>

**Table D7.12***NCT04368676*

Category	Extracted data
Methods	
Participants	
Interventions	
Outcomes	
Notes	Result from top-up search in June 2020; will be incorporated into the review at the next update

**Table D7.13***NCT04372303*

Category	Extracted data
Methods	
Participants	
Interventions	
Outcomes	
Notes	Result from top-up search in June 2020; will be incorporated into the review at the next update

**Table D7.14***NCT04373382*

Category	Extracted data
Methods	
Participants	
Interventions	
Outcomes	
Notes	Result from top-up search in June 2020; will be incorporated into the review at the next update

**Table D7.15***NCT04384861*

Category	Extracted data
Methods	
Participants	
Interventions	
Outcomes	
Notes	Result from top-up search in June 2020; will be incorporated into the review at the next update

**Table D7.16**

*Ouyang 2017*

Category	Extracted data
Methods	<p>Study design: not specified in abstract (randomization unclear)</p> <p>Study grouping: not specified in abstract</p> <p>Unit of randomization: individuals as unit of assignment; however, randomization unclear</p> <p>Power (power sample size calculation, level of power achieved): not specified</p> <p>Imputation of missing data: not specified</p>
Participants	<p>Country: not specified</p> <p>Setting: hospital</p> <p>Age: not specified in abstract</p> <p>Sample size (randomized): 160</p> <p>Sex: 160 women</p> <p>Comorbidity (mean (SD) of respective measures in indicated, if available) at baseline: not specified</p> <p>Population description: primary nurses</p> <p>Included criteria: not specified</p> <p>Excluded criteria: not specified</p> <p>Attrition (withdrawals and exclusions): not specified</p> <p>Reasons for missing data: not specified</p>
Interventions	<p>Intervention 1: positive psychology group only receiving positive psychology (n = 40)</p> <ul style="list-style-type: none"> <li><i>only theoretical basis specified</i>: positive psychology</li> </ul> <p>Intervention 2: professional training group receiving professional training (n = 40)</p> <p>Intervention 3: joint counseling group with professional training combined with positive psychology counseling (n = 40)</p> <ul style="list-style-type: none"> <li><i>only theoretical basis specified</i>: in part, positive psychology</li> </ul> <p>Control: no intervention (without counseling; n = 40)</p>
Outcomes	<p>Outcomes collected and reported: based on abstract: 1) well-being (General Well-Being Schedule ); 2) resilience; 3) anxiety (Self-Rating Anxiety Scale); 4) nurse satisfaction</p> <p>Time points measured and reported: based on abstract: 1) postintervention (after 3 months if intervention); group differences reported</p> <p>Adverse events: not specified in abstract</p>
Notes	<p>Contact with authors: We were not able to identify contact data to ask for the full text and more information about the study procedures.</p> <p>Study start/end date: not specified</p> <p>Funding source: not specified</p> <p>Declaration of interest: not specified</p> <p>Ethical approval needed/obtained for study: not specified</p> <p>Comments by study authors: not specified</p> <p>Miscellaneous outcomes by the review authors: study procedures (e.g., design) could not be determined based on publication abstract; full text not available; no contact data for authors for inquiry identified</p> <p>Correspondence: no contact data identified</p>

**Table D7.17***Rodgers 2018*

Category	Extracted data
Methods	
Participants	
Interventions	
Outcomes	
Notes	Result from top-up search in June 2020; will be incorporated into the review at the next update

**Table D7.18***Ruehl 2013*

Category	Extracted data
Methods	<p>Study design: RCT</p> <p>Study grouping: parallel group</p> <p>Unit of randomization: individuals</p> <p>Power (power &amp; sample size calculation, level of power achieved): Sample size was estimated using (Cohen, 1992) power tables' suggestions for necessary Ns for sufficient power of .80. For a medium to large effect size with two groups, at an <math>\alpha</math> level of <math>p &lt; .05</math>, accounting for a 15% attrition rate, a minimum of 60 participants per group were initially required for the study. The current study was only able to recruit 29 total participants due to extensive difficulty with participant recruitment.</p> <p>Imputation of missing data: no imputation of missing data; per-protocol and available case analysis (i.e., only participants who are finally left in the sample; <math>n = 19</math>)</p>
Participants	<p>Country: USA</p> <p>Setting: psychology office at RCHSD or participants' home (if face-to-face visits) or mail contact</p> <p>Age: mean = 34.5 (range = 23-62) years</p> <p>Sample size (randomized): 29</p> <p>Sex: not specified</p> <p>Comorbidity (mean (SD) of respective measures in indicated, if available) at baseline: depression (Beck Depression Inventory-II, BDI-II): IG: 5.20 (2.74), CG: 5.00 (5.29); burnout (Maslach Burnout Inventory, MBI): IG: 62.00 (11.10), CG: 60.44 (6.13); secondary trauma (Secondary Traumatic Stress Scale, STSS): IG: 33.10 (5.80), CG: 27.78 (7.93)</p> <p>Population description: male and female nursing staff from different hospital units</p> <p>Included criteria: 1) currently employed as nurse in the Hematology/Oncology, pediatric intensive care unit (PICU) or neonatal intensive care unit (NICU) at Rady Children's Hospital San Diego (RCHSD) for at least three months or employed as Emergency Room or Adult Psychiatric nurse working at the same facility for at least three months; 2) nurses required to hold one of the following nursing degrees: LVN (Licensed Vocational Nurses), RN (Registered Nurse), ASN, (Associate's Degree in Nursing), BSN (Bachelor of Science in Nursing), or MSN (Master of Science in Nursing); 3) self-reported perceived stress: reported at least one work-related or personal stressor (list of work-related and personal-life stressors); 4) report of a traumatic event or events: report experience of one or more traumatic events, as measured by Traumatic Life Events Questionnaire; 5) employed at least 30 hours per week; 6) directly involved with patient care; 7) participants currently taking any medications, including psychotropic medications, must be stabilized on medications for at least one month prior to starting the study and were requested not to change medication status during the study; had to notify investigator of any medication changes; 8) read and write in English; 9) be able to write for required duration of 20-30 minutes, on three separate occasions</p> <p>Excluded criteria: 1) current medical diagnosis of a major chronic illness (i.e., heart disease, cancer, hypertension, diabetes, HIV, liver/kidney disease); 2) starting new medication, or with medication changes less than one month prior to study start dates; 3) individuals who evidenced symptoms of psychotic spectrum disorders, bipolar disorder, dissociative disorders, or organic brain damage, as indicated by a recent diagnosis, past/current hospitalizations, active psychosis, or use of antipsychotic medications not eligible; 4) reporting a current or recent suicidal ideation/threat within the past six months or suicidal attempt within the past year (were referred to psychiatric care); 5) participants currently in psychotherapy were asked not to change their psychotherapist during study and asked not to make any changes in their psychotherapy during the study</p> <p>Attrition (withdrawals and exclusions): <math>n = 9</math> dropouts (attrition rate of 31%); <math>n = 1</math> exclusion from final analysis</p> <p>Reasons for missing data: DROPOUTS: main reasons for attrition: too busy participants; <math>n = 3</math> initially expressed interest in study participation, but did not return preliminary</p>



Category	Extracted data
	consents/questionnaires; n = 1 dropped for meeting exclusion medical criteria; n = 3 dropped prior to writing; n = 2 did not complete post- and follow-up questionnaires; EXCLUSION: n = 1 (CG) excluded due to significant outlying variables
Interventions	<p>Intervention: written emotional expression intervention (n = 10 in analyzed sample)</p> <ul style="list-style-type: none"> <li>• <i>delivery</i>: face-to-face writing sessions (meetings with investigator in psychology office at RCHSD or at participant's home) or via mail; all sessions involved talking with participant via telephone for specific instructions pertaining to certain session; participants receive booklet for writing sessions (for participants completing study through mail: material is sent in envelopes); individual setting</li> <li>• <i>providers</i>: investigator</li> <li>• <i>duration of treatment period and timing</i>: three 20-30-minute journal-writing sessions; each approx. one week apart (within range of 4-10 days); writing session either completed immediately before/after the participant's work shift or on day off</li> <li>• <i>description</i>: <ul style="list-style-type: none"> <li>○ prior to writing, participants asked to turn to previous week's behavior log and are given another behavior log to complete over next week (not further presented here)</li> <li>○ participants complete measure of current affective state</li> <li>○ participants use booklet and receive set of writing instructions that they are asked to read over and complete</li> <li>○ immediately after 20-30-minute writing session, participants again complete Positive and Negative Affect Schedule and Subjective Experience Questionnaire</li> <li>○ participants received contact information from the researcher/investigator and could call if they had any questions during the three weeks</li> <li>○ participants asked to write about their most stressful or upsetting experience or a chronic stressful situation</li> <li>○ participants have choice to write about a traumatic event or chronic stressor that was either personal or work-related</li> <li>○ DAY 1 INSTRUCTION: e.g., "...write about your most stressful or upsetting experience or a chronic situation that is currently most important to you. You could write about your work stress, a situation in your personal life, something from your past that is still bothering you, or a combination of these."</li> <li>○ DAY 2 INSTRUCTION: e.g., "...tell a story about the topic that you wrote about on Day 1, emphasizing how you reacted to the situation. You might discuss who you were before the experience, what might have led up to the experience, and/or how the experience came or did not come as an interruption in your life"</li> <li>○ DAY 3 INSTRUCTION: e.g., "...think about and maybe re-read what you wrote on Day 2. Begin your writing today by re-telling your story, this time incorporating any new insights you may have come to over the writing sessions, including any alternative ways of handling the stressful situation or your reactions to it, knowing what you know now"</li> <li>○ examples of essay topics found in this group: work stress, trauma (i.e., rape, abuse), death of patients and family members, career development stress, relationship conflict</li> </ul> </li> <li>• <i>compliance</i>: n = 4 in IG did not complete study; n = 30 journal completed; no missing journal entries for study completers</li> <li>• <i>integrity of delivery</i>: adherence to writing instructions assessed for all participants by raters using a three point Likert scale; instructions were followed in IG</li> <li>• <i>economic information</i>: reward bucks or \$5gift card at study completion</li> <li>• <i>theoretical basis</i>: written emotional expression intervention developed by Pennebaker and Beall (1986)</li> </ul> <p>Control: attention control (n = 9 in analyzed sample)</p>

Category	Extracted data
	<ul style="list-style-type: none"> <li>• <i>delivery</i>: face-to-face writing sessions (meetings with investigator in psychology office at RCHSD or at participant's home) or via mail; all sessions involved talking with participant via telephone for specific instructions pertaining to certain session; participants receive booklet for writing sessions (for participants completing study through mail: material is sent in envelopes); individual setting</li> <li>• <i>providers</i>: investigator</li> <li>• <i>duration of treatment period and timing</i>: three 20-30-minute journal-writing sessions; each approx. one week apart (within range of 4-10 days); writing session either completed immediately before/after the participant's work shift or on day off</li> <li>• <i>description</i>: <ul style="list-style-type: none"> <li>○ see five first bullet points for IG (identical in CG)</li> <li>○ participants asked to write about a series of time management topics</li> <li>○ participants wrote strictly about activities outside of work</li> <li>○ DAY 1 INSTRUCTION: "...list your activities outside of work, for the past seven days, and how much time you spent on each of them. Describe your activities in detail without referring to your thoughts or feelings about them"</li> <li>○ DAY 2 INSTRUCTION: "You will continue to write about time management, but today I want you to focus just on the next seven days."</li> <li>○ DAY 3 INSTRUCTION: "For the third writing session, you will continue to focus on time management. Today, I would like you to write about your activities outside of work for the next two weeks examples of essay topics found in this group: mundane daily activities with no emotions"</li> </ul> </li> <li>• <i>compliance</i>: n = 1 did not complete study; n = 27 journals completed; no missing journal entries for study completers</li> <li>• <i>integrity of delivery</i>: adherence to writing instructions assessed for all participants by to raters using a three point Likert scale; instructions were followed in CG</li> <li>• <i>economic information</i>: reward bucks or \$5gift card at study completion</li> <li>• <i>theoretical basis</i>: writing instructions adapted from Broderick and colleagues (Broderick et al., 2004)</li> </ul>
Outcomes	<p>Outcomes collected and reported:</p> <ul style="list-style-type: none"> <li>• behavioral and illness journal (physician visits, work absenteeism)- Behavioral and Illness Journal</li> <li>• depression - BDI-II</li> <li>• positive affect - Profile of Mood States – Vigor Subscale</li> <li>• burnout - MBI</li> <li>• fatigue, chronic fatigue - Occupational Fatigue Exhaustion Recovery Scale-Revised (OFER15)</li> <li>• fatigue, acute fatigue - OFER15</li> <li>• fatigue, intershift recovery - OFER15</li> <li>• job satisfaction - Job In General</li> <li>• perceived control over stress - Dimensions of Stress–Control</li> <li>• secondary trauma - STSS</li> </ul> <p>Post-traumatic growth (Posttraumatic Growth Inventory) and other variables as exploratory measure; further exploratory measures and moderators assessed (not presented here since no outcomes)</p> <p>Time points measured and reported: 1) pre-intervention (1 week prior to first writing session); 2) postintervention (1 week after last writing session); 3) 6-week follow-up (5 weeks after 1st posttest appointment, since posttest is one week after last writing session -- &gt; 6 weeks after last writing session); NO OUTCOME MEASURE, but assessed before and after each writing session: PANAS as measure of current affective state (for manipulation check)</p> <p>Adverse events: not specified</p>
Notes	<p>Contact with authors: We contacted authors to get the information about the potential focus of the intervention on fostering post-traumatic growth, but received no response.</p> <p>Study start/end date: not specified</p>

Category	Extracted data
	<p>Funding source: not specified</p> <p>Declaration of interest: not specified</p> <p>Ethical approval needed/obtained for study: probably approved by IRBs of Alliant International University, and Rady Children's Hospital and Care Center, San Diego</p> <p>Comments by study authors: not specified</p> <p>Miscellaneous outcomes by the review authors: dissertation; post-traumatic growth assessed as exploratory measure, but unclear if also primary focus of the study on fostering this construct</p> <p>Correspondence: no contact data for author Brooke D. Ruehl identified; therefore, contact to Melanie Greenberg, PhD (dissertation chair person); <a href="mailto:melanie@drmelaniegreenberg.com">melanie@drmelaniegreenberg.com</a></p>

Table D7.19

Van Berkel 2014

Category	Extracted data
Methods	<p>Study design: RCT</p> <p>Study grouping: parallel group</p> <p>Unit of randomization: individuals</p> <p>Power (power sample size calculation, level of power achieved): The sample size was based on finding an effect on the primary outcome of this study, work engagement, measured using the Utrecht Work Engagement Scale (UWES). An effect of a 10% increase in mean score was expected to be relevant and feasible. With a power of 90% and a two-sided <math>\alpha</math> of 5%, both groups needed 89 participants. Accounting for a loss to follow-up of 25% over 12 months, each group needed 119 workers at baseline, thus an initial total of 238 participants for the two groups.</p> <p>Imputation of missing data: intent-to-treat analysis (linear mixed effects model; according to authors all 257 participants taken into analyses) and sensitivity analysis (linear regression analyses with complete cases on either time 1 (T1) or time 2 (T2), i.e., only participants with at least 1 follow-up measurement)</p>
Participants	<p>Country: Netherlands</p> <p>Setting: intervention held in a room at the worksite (2 Dutch research institutes)</p> <p>Age: mean = 45.6 (SD = 9.5) years</p> <p>Sample size (randomized): 257</p> <p>Sex: 173 women, 84 men</p> <p>Comorbidity (mean (SD) of respective measures in indicated, if available) at baseline: mental health (mental health scale 36-Item Short Form Survey Instrument, RAND-36): IG: 74.8 (12.9); CG: 73.6 (14.1) (range: 0-100)</p> <p>Population description: employees from Dutch research institutes</p> <p>Inclusion criteria: 1) signed informed consent; 2) not being on sick leave for more than 4 weeks; 3) not being pregnant at the time of recruitment</p> <p>Exclusion criteria: not specified</p> <p>Attrition (withdrawals and exclusions): lost to follow-up: postintervention (T1; at 6 months after baseline): n = 22 (IG: 8, CG: 14); 6-month follow-up (T2; at 12 months after baseline): n = 3 further lost to follow-up in CG</p> <p>Reasons for missing data: reasons for losses to follow-up: resignation (n = 6), no time (n = 11), personal reasons (n = 4), dissatisfied with control (n = 3), unknown (n = 1)</p>
Interventions	<p>Intervention: active control (web link to website about health promotion) + Mindful “Vitality In Practice” intervention (Mindful VIP intervention) (n = 129)</p> <ul style="list-style-type: none"> <li>• <i>delivery</i>: face-to-face group sessions (4-17 participants) (in-company mindfulness-related training with homework exercises); compact discs (CDs) with guided meditation exercises and booklet with examples of workplace situations, background and (workplace) exercises for homework training; e-coaching (individual setting)</li> <li>• <i>providers</i>: led by 4 certified trainers; trainers are all members of the Society of Mindfulness-Based trainers in the Netherlands and Flanders (i.e., followed mindfulness trainer education that is recognized by this society)</li> <li>• <i>duration of treatment period and timing</i>: 6 months in total: 1) 8 weekly 90-minute sessions of in-company mindfulness-related training (participation during own time of workers, but timetable adapted to working hours as much as possible: before working hours, around lunch time, after working hours) with homework exercises for approximately. 30 minutes per day on 5 days per week; 2) followed by 8 sessions of e-coaching</li> <li>• <i>description</i>: <ul style="list-style-type: none"> <li>○ worksite mindfulness-related multicomponent health promotion intervention</li> </ul> </li> </ul>

Category	Extracted data
	<ul style="list-style-type: none"> <li>○ IN-COMPANY MINDFULNESS-RELATED TRAINING WITH HOMEWORK EXERCISES: 8 weekly sessions <ul style="list-style-type: none"> <li>▪ WEEK 1: training mindful attention: a) homework formal exercises: body scan; b) informal exercises: walking with mindful attention; eating with mindful attention; stop, sit and do nothing for 1 minute; read the booklet (background information, working situations)</li> <li>▪ WEEK 2: gaining by stopping and exploring boundaries: a) formal exercise: body scan and/or sitting meditation; b) informal exercises: logbook for (small) pleasant happiness; meditation exercise to start working day; meditation exercise to finish working day</li> <li>▪ WEEK 3: switching from doing to being: a) formal exercises: body scan, breathing exercises; b) informal exercises: Logbook for (small) unpleasant happiness; standing meditation in front of the window, eat a raisin/apple...with attention; walk the stairs with attention</li> <li>▪ WEEK 4: vigor and balance: a) formal exercise: office yoga, breathing exercises; b) informal exercises: walking with mindful attention; meditation exercise to finish the working day; yoga balance exercise; meditation (breathing exercise) with moments of inspiration or vigor</li> <li>▪ WEEK 5: inspiration for working and living: a) formal exercises: sitting meditation, breathing exercise (each stressful or joyous moment); b) informal exercises: value orientation exercise, guided meditation exercise "the tree" (values)</li> <li>▪ WEEK 6: maintaining your center in interpersonal relationships: a) formal exercises: sitting meditation or body scan at choice; room for breathing exercise, and notice your needs (each stressful or joyous moment); b) informal exercises: set your mobile phone alarm daily on a random moment and stop for one minute to notice how you are doing; compliment a colleague, notice what happens, internally and externally; train a different sense each day (hearing, seeing etc.)</li> <li>▪ WEEK 7: handling habits: a) formal exercises: walking meditation; b) informal exercises: write your personal energy plan; mindful grocery shopping (using senses); "awareness of intake" exercise (information, light, computer, phone, food, drinks)</li> <li>▪ WEEK 8: caring for yourself: a) formal exercises: free choice of previous exercises; b) informal exercises: Personal Energy Plan (PEP)</li> </ul> </li> <li>○ HOMEWORK EXERCISES: formal ("body scan", sitting meditation) and informal exercises (small exercises, such as breathing exercises when starting up the computer, grocery shopping mindfully); materials for this training: 2 CDs with guided meditation exercises and booklet with examples of workplace situations, background and (workplace) exercises</li> <li>○ COGNITIVE EXERCISES in the training: hypothesized to have an effect on work engagement; adjusted to mindfulness context, such as logbook for pleasant happenings</li> <li>○ E-COACHING: <ul style="list-style-type: none"> <li>▪ adapted to mindfulness context as much as possible</li> <li>▪ key-elements: kindness and awareness; during penultimate session, participants are asked to write a PEP, setting goals for themselves, answering the central question: "What do I need to do, to feel well at work?" (p. 2), using the techniques and exercises from the training (e.g., "to sit and meditate five times a</li> </ul> </li> </ul>

Category	Extracted data
	<p>week”, or “to concentrate on my breath before speaking up in a meeting”)</p> <ul style="list-style-type: none"> <li>▪ had to email the PEP to the trainer before the last session (marked the start of the coaching per email); 8 e-coaching sessions existing of positive feedback (kindness) and answers to questions</li> <li>▪ provision of free fruit and vegetables during 6 months</li> <li>▪ lunch walking routes and buddy-system offered as supportive tools; participants asked to form pairs to discuss homework exercises and keep in contact between sessions</li> </ul> <ul style="list-style-type: none"> <li>• <i>compliance</i>: not specified</li> <li>• <i>integrity of delivery</i>: not specified</li> <li>• <i>economic information</i>: workers participated in their own time (not during paid working hours)</li> <li>• <i>theoretical basis</i>: <ul style="list-style-type: none"> <li>○ mindfulness-related training</li> <li>○ effect of mindfulness-related intervention on work engagement expected, because it was hypothesized in the literature that increasing mindfulness would be effective cognitive activity to increase work engagement; working mechanism for increasing work engagement is that by becoming aware of thoughts, emotions and bodily sensations, and accepting them in a non-judging way, personal resources can be built; personal resources are positive self-evaluations that are linked to resiliency and refer to individuals’ sense of their ability to cope with their environment successful; examples of personal resources for work engagement are organizational-based self-esteem, self-efficacy, and optimism</li> </ul> </li> </ul> <p>Control: active control (n = 128)</p> <ul style="list-style-type: none"> <li>• <i>delivery</i>: email with link to internet web page (individual setting)</li> <li>• <i>providers</i>: self-guided</li> <li>• <i>duration of treatment period and timing</i>: not specified</li> <li>• <i>description</i>: <ul style="list-style-type: none"> <li>○ web page contained information about what the organizations offered their employees with respect to health promotion (e.g., contact information of the occupational physician and psychologist, an overview of available training and education (mindfulness-related training was NOT provided), and information about the incompany fitness facilities)</li> <li>○ information already available for all employees but all information about health- and vitality related offer of the organizations was sorted together on one page</li> </ul> </li> <li>• <i>compliance</i>: not specified</li> <li>• <i>integrity of delivery</i>: not specified</li> <li>• <i>economic information</i>: workers participated in their own time (not during paid working hours)</li> <li>• <i>theoretical basis</i>: not specified</li> </ul>
Outcomes	<p>Outcomes collected and reported:</p> <ul style="list-style-type: none"> <li>• work engagement - UWES - reported</li> <li>• general mental health - mental health scale RAND-36 - reported</li> <li>• need for recovery - need for recovery scale from Dutch version of Questionnaire on the Experience and Evaluation of Work - reported</li> <li>• mindfulness - Mindful Attention Awareness Scale - reported</li> <li>• (vigorous) physical activity - Short Questionnaire to Assess Health Enhancing Physical Activity</li> <li>• (vigorous) physical activity - accelerometers in subgroup</li> <li>• fruit and vegetable intake - Short Fruit and Vegetable Questionnaire</li> <li>• sedentary behavior - questionnaire based on instrument used in previous study</li> <li>• perceived behavioral control (self-efficacy, controllability) - 7-point Likert scale</li> </ul>

Category	Extracted data
	<p>Time points measured and reported: 1) pre-intervention; 2) postintervention (after 6-month intervention; 6 months after baseline); 3) 6-month follow-up (6 months postintervention/12 months after baseline)</p> <p>Adverse events: not specified</p>
Notes	<p>Contact with authors: We contacted authors to get the information about the potential inclusion of healthcare professionals and the respective subgroup data (if included), but had received no response at the time of writing the review.</p> <p>Study start/end date: recruitment between April 2010 to November 2010; follow-up assessment between October 2010 to November 2011</p> <p>Funding source: part of a research intervention, "Vitality In Practice", which is financed by Fonds Nuts Ohra (Nuts Ohra Foundation)</p> <p>Declaration of interest: no competing interests</p> <p>Ethical approval needed/obtained for study: approved by the Medical Ethics Committee of the Vrije Universiteit (VU) University Medical Center</p> <p>Comments by study authors: Netherlands Trial Register NTR2199; study protocol available in Supplement (Van Berkel et al., 2011)</p> <p>Miscellaneous outcomes by the review authors: unclear whether healthcare professionals were also included in this study; two reports to the same study, one of them focuses on lifestyle behaviors</p> <p>Correspondence: Jantien van Berkel; Corresponding author: Cécile R. L. Boot, Department of Public and Occupational Health - Institute for Health and Care Research, VU University Medical Center and Body@Work, Research Center on Physical Activity, Work and Health (TNO-VU) University Medical Center, Amsterdam, the Netherlands; <a href="mailto:crl.boot@vumc.nl">crl.boot@vumc.nl</a></p>

**Table D7.20***Yeo 2019*

Category	Extracted data
Methods	
Participants	
Interventions	
Outcomes	
Notes	Result from top-up search in June 2020; will be incorporated into the review at the next update

*Note (for Tables D7.1 to D7.20).*  $\alpha$  = alpha (significance level); BAI = Beck Anxiety Inventory; BDI = Beck Depression Inventory; BRS = Brief Resilience Scale; CBT = cognitive behavioral therapy; CD = compact disc; CG = control group;  $d$  = delta (Cohen's  $d$ , effect size); e.g. = for example; FFMQ = Five-Facet Mindfulness Questionnaire; IG = intervention group; IRB = Institutional Review Board;  $n$  = sample size (e.g., in respective study group); MAAS = Mindful Attention and Awareness Scale; MAPs = mindful awareness practices; MBI = Maslach Burnout Inventory; MBSR = Mindfulness-based Stress Reduction; MSC = Mindful Self-Compassion; NICU = Neonatal Intensive Care Unit; OFER15 = Occupational Fatigue Exhaustion Recovery Scale; PANAS = Positive and Negative Affect Schedule; PGI = Post-traumatic Growth Inventory; PICU = Paediatric Intensive Care Unit; POMS = Profile of Moods States; PSS = Perceived Stress Scale; PSQ = Perceived Stress Questionnaire; PSQI = Pittsburgh Sleep Quality Index; RAND-36 = Short Form Health Survey; RCT = randomized controlled trial; SCS = Self-Compassion Scale; SD = standard deviation; SMART-3RP = Stress Management and Resilience Training - Relaxation Response Resilience Program; STSS = Secondary Trauma Stress Scale; TAU = treatment as usual; UWES = Utrecht Work Engagement Scale; VAS = Visual Analogue Scale.



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