Evidence Profile

Evidence profile: Stand-alone meditation and yoga treatments

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)[1] Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
MEDITATION							
Meditation for PTSD							
Group-based meditation for PTSD (compared to non-active comparison)							
Bormann, Thorp, Wetherell, Golshan & Lang (2013)	RCT	N = 146	I = Mantram repetition program (MRP) + treatment as usual (TAU) (n = 71) C = TAU (n = 75)	I = MRP intervention - Delivered to augment TAU in six 90-min weekly group sessions. - Each class was attended by three to nine veterans C = TAU - Case management, as needed, to evaluate mental health status and to monitor treatments and ongoing medication	USA Outpatient veterans with PTSD diagnosis confirmed by the medical record and the CAPS Mean age = 57 [10.10] Female gender = 3%	PTSD symptoms: - CAPS - PCL	Depressive & anxiety symptoms: - BSI-18 Quality of Life: - SF-12
This randomised controlled trial (RCT) examined the effects of the mantram repetition program (MRP) on treatment of PTSD amongst veterans recruited from an outpatient PTSD clinic. Results indicated that self-reported PTSD symptoms, as measured using the PCL, decreased by 5.62 points in the MRP group (n = 71) and 2.47 points in the TAU control group (n = 75) (p <							

[1] Mean age and SD is given when provided, alternatively age range is provided

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.05). Clinician-rated symptoms measured using CAPS at post-intervention assessment had a clinically significant change (indicated by a 10-point reduction and CAPS score of 45 or less) in symptom severity in 24% of participants within the MRP group, and 12% of the TAU control group. Effect size calculations of differences in pre-treatment and post-treatment PTSD symptoms indicated significant but small effect size interactions in symptoms measured by the PCL (p = .05) as well as the CAPS (p = .05). Within the CAPS measurements, the subscale of hyperarousal had a significant effect size, while re-experience and avoidance did not. Amongst the secondary outcomes, depressive symptoms showed significant reduction in the intervention group (p=.0001), while anxiety did not (p = .31). No adverse effects of the treatment were reported, and equal drop-out rates (7%) were found for both the MRP and TAU control groups. A limitation of the trial is the short follow-up of six weeks, which did not include data from the control group, thus preventing group comparison of follow-up data. There was also an overrepresentation of male participants (97%), limiting the generalisability of results to females.							
Group-based meditation for PTSD (compared to active comparison)							
Nidich, Mills, Rainforth, Heppner, Schneider, Rosenthal, Salerno, Gaylord-King & Rutledge (2018)	RCT	N = 203	I = Transcendental meditation (TM) (n = 68) C = Prolonged exposure (PE) (n = 68) C = PTSD Health education (n = 67)	I = Transcendental meditation - Delivered in 12 sessions over 12 weeks, with sessions 1 – 5 consisting of teaching TM technique, and seven maintenance sessions. - Participants were encouraged to practice two 20-minute TM sessions at home each day. C = Prolonged exposure - Delivered individually in 12 weekly sessions over 12 weeks C = PTSD health education - 12 weekly sessions of PTSD education following manualised instructions - Conducted in groups of 2-4 participants	USA Veterans from the VA San Diego Healthcare System with a current diagnosis of PTSD and CAPS score of 45 or higher Mean age: TM = 46.4 [14.3] PE = 48.5 [15.6] HE = 46.2 [16.4] Female gender: TM = 18% PE = 18% HE = 15%	PTSD symptoms: - CAPS - PCL-M	Depressive symptoms: - PHQ-9

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This three-armed RCT examined the use of transcendental meditation (TM) (n = 68), prolonged exposure (PE) (n = 68), and health education (n = 67) to treat PTSD in US veterans recruited from the VA San Diego Healthcare system. Results indicated that mean changes in PTSD scores after the three-month intervention was greater than the health education comparison group for the TM group (d = 0.82) and the PE group (d = 0.49). A Non-inferiority analysis indicated that TM was significantly non-inferior to PE in reducing PTSD symptoms, as measured using the CAPS and PCL-M (p = .0002). Within the TM group, 61% of participants displayed clinically significant reductions in PTSD symptoms on the CAPS (classified as a 10-point reduction in scores), whereas 42% of participants in the PE group and 32% of participants in the health education group displayed clinically significant reductions. The amount of clinically significant reduction in the TM group was statistically significantly greater in the TM group compared to the health education group (p = .001) but was not significantly greater in the PE group compared to the health education group (p = .30). When examining clinically significant symptom reduction using the self-report PCL-M, however, both TM and PE had greater rates of change than the health education group (p = .0005; p = .029). Three adverse events were reported within the TM group (two suicide attempts, one non-suicidal death), two in the PE group (one drug overdose, one illness) and two in the health education group (psychiatric hospitalisations), but none of these were found to be related to the treatment administered. The study was limited by a lack of generalisability or results resulting from having a sample of primarily male veterans with a baseline level of severe PTSD. There were also relatively high attrition rates reported in all groups, with the highest in the PE group (38%) and the lowest in the TM group (25%).							
Individual meditation for PTSD (compared to active comparison)							
Bormann, Thorp, Smith, Glickman, Beck, Plumb, Zhao, Ackland, Rodgers, Heppner, Herz, Elwy (2018)	RCT	N = 173	I = MRP (n = 89) C = Present-Centred Therapy (PCT) (n = 84)	I = MRP - Delivered one-on-one in weekly one-hour sessions over 8 weeks - Participants were encouraged to practise skills as needed to manage hyperarousal, anger, irritability, insomnia, flashbacks, and numbing/avoidance C = PCT - Delivered one-on-one in weekly one-hour sessions over 8 weeks	USA Veterans Health Administration Patients met DSM-IV-TR criteria for PTSD, and all met symptom severity cut-off scores of ≥45 on the CAPS and ≥50 on the PCL-M Mean age: MRP = 48.3 [14.63] PCT = 49.5 [14.50] Female gender:	PTSD symptoms: - CAPS - PCL-M	Depressive symptoms: - PHQ-9 Spiritual Well-being: - Functional Assessment of Chronic Illness Therapy–Spiritual Well-Being questionnaire Quality of Life: - WHOQoL-BREF

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				- Participants given daily diary to record stressors	MRP = 18% PCT = 12%		
This RCT compared two treatments that were conducted on an individual basis; mantram repetition (n = 89) and present-centred therapy (PCT) (n = 84) in patients from the Veteran Health Administration. Results indicated significantly greater improvement in CAPS scores within the mantram group when compared to the comparison group, at the post-treatment assessment (between-group difference = -9.98, 95% CI = -3.63, -16.00, p = .006) as well as at the two-month follow-up assessment (between group difference = -9.34, 95% CI = -1.50, -17.18, p = .04). In the mantram group, 75% of participants (n = 49) displayed clinically significant improvement in CAPS scores, compared to 61% of the PCT group (n = 43), which was not a significant difference. Self-reported PTSD symptoms on the PCL-M indicated a significant difference between groups at post-treatment assessment (-5.83, 95% CI = -1.73. -9.93, p = .04) with the mantram group showing greater reduction in symptoms, but not at the two-month follow-up assessment (p = 0.25). At the post-treatment assessment, there was no significant difference in the number of participants who no longer met criteria for PTSD between the mantram group (48%, n = 32) and the PCT group (35%, n = 24). Amongst participants who completed the two-month follow-up assessment, 59% of the mantram group no longer met criteria for PTSD (n = 36), compared to 40% of the present-centred therapy group (n = 26), which represented a significant difference (X^2 = 4.55, p < .04). Four adverse events were reported, but the authors stated they were unrelated to the study treatments. The mantram group displayed higher attrition rates than the PCT group at both post-treatment (22% compared to 14%) and follow-up assessments (26% compared to 15%) but these difference were not significant. Limitations of the trial include a use of a self-selected sample of veterans from only two centres within the US, thus somewhat limiting the generalisability of results.							
Meditation for depression							
Group-based meditation for depression (compared to non-active comparison)							
Vasudev, Arena, Burhan, Ionson, Hirjee, Maldeniya, Wetmore, & Newman (2016)	RCT (preliminary analysis)	N = 51	I = Automatic self-transcending meditation (ASTM) (n = 26) C = Waitlist TAU (n = 25)	I = ASTM - Four two-hour meditation sessions in groups of 3-8, followed by 11 one-hour weekly reinforcement sessions. - Participants were asked to practise ASTM at home 20-minutes a day and attend	Canada Adults between 60-85 years old diagnosed with mild-to-moderate MDD (either unipolar or bipolar depression) based on a HAMD-17 score of 8-22 Mean age:	Affective symptoms of depression: - HAMD-17	Geriatric depression: - GDS Geriatric anxiety: - GAI Quality of life: - QOLSV

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				75% of reinforcement sessions C = Continued existing antidepressants and/or therapy and were offered meditation training after the study period	Meditation = 68.33 [6.12] Control = 66.95 [6.31] Female gender: Meditation = 53% Control = 73%		
This RCT examined the effectiveness of a training program involving the use of automatic self-transcending meditation (ASTM) to treat late-life depression in seniors aged 60 and above recruited from primary and secondary health centres in Ontario. The trial was ongoing at the time of publication, but preliminary analyses revealed that the primary outcome measure of depressive symptoms, the HAMD-17 score, was significantly reduced in the ASTM condition compared to TAU ($p < .05$). Secondary depression outcome measures also demonstrated significant changes over time, with significant interactions between score and condition in both the GDS ($p < .05$) and GAI ($p < .05$). Quality of life improved throughout the study period in both conditions ($p < .05$). The mean dropout rate was 18% (22% for ASTM and 13% for TAU), and none of the dropouts were related to adverse events. The small sample size was a limitation of the trial, as well as the lack of long-term follow-up to determine enduring effects of the intervention. This was a preliminary analysis of an RCT, and thus does not provide the full analysis, which further limits interpretation of the results.							
Individual meditation for depression							
No studies identified							
Meditation for anxiety							
Group-based meditation for anxiety							
No studies identified							
Individual meditation for anxiety							

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No studies identified							
Meditation for combined depression and anxiety							
Group-based meditation for heterogeneous groups of depression and/or anxiety							
No studies identified							
Individual meditation for heterogeneous groups of depression and/or anxiety							
No studies identified							
Meditation for AUD							
Group-based meditation for AUD							
No studies identified							
Individual meditation for AUD							
No studies identified							
YOGA							
Yoga for PTSD							

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)[1] Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
Group-based yoga for PTSD (compared to non-active comparison)							
Jindani, Turner, Khalsa (2015)	RCT	N = 80	I = Kundalini Yoga (KY) (n = 59) C = Waitlist (WL) (n = 21)	I = Kundalini yoga classes - Weekly 90-minute group classes for eight weeks, including a 15-minute daily home practice guided by a YouTube video C = WL received the same intervention at a later date All participants were permitted concurrent outside treatment provided it did not have a contemplative component	Canada Adults with score above 57 on the PCL-17 Median age: 41 (Age range: 18-64) Female gender: KY = 93% WL = 76%	PTSD symptoms: PCL	Perceived Stress: - PSS Depression, Anxiety, Stress: - DASS-21
This RCT was conducted to compare the effects of an eight-week Kundalini Yoga intervention on PTSD symptoms (n = 59), compared to a waitlist group (n = 21) in adults recruited from a community population in Toronto. Results indicated that post-intervention PTSD symptoms, as measured using the PCL, were significantly lower in the yoga group compared to the watilist group ($p < .05$). Secondary outcomes of perceived stress decreased by about half, which was significantly greater than reductions in the waitlist group ($p < .05$). DASS score reductions were also significantly greater in the yoga group in the domains of anxiety ($p < .05$) and stress ($p < .05$). The overall dropout rate for the trial was 30%, but substantially more dropouts were observed in the yoga group (51%). The lack of follow-up assessment in this trial was considered a limitation, as the long-term impact of the intervention could not be determined.							
Mitchell, Dick, DiMartino, Smith, Niles, Koenen, Street (2014)	RCT	N = 38	I = Kripalu-based yoga (n = 20) C = Assessment control group (n = 18)	I = Kripalu-based yoga classes - Participants were given the option to attend 12 weekly yoga sessions or 12 twice-weekly sessions over 6 weeks, but were not allowed to switch from one group to	USA Veteran and civilian adult women who scored positive on the Primary Care PTSD screen (PC-PTSD)	PTSD severity - PC-PTSD - PCL Depressive symptoms: - CES-D	Alcohol use: - AUDIT

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Reddy, Dick, Gerber, & Mitchell (2014)				the other once the intervention had begun. - All sessions were 75-minutes long C = Assessments - Met once per week for 12 weeks in groups of 4-5 to complete weekly questionnaires	Mean age: 44.37 [12.37] Female gender: 100%	Anxiety symptoms: - STAI	
Participants in this RCT received either Kripalu yoga-based intervention (n = 20) targeting PTSD or subthreshold PTSD and completed weekly assessments, or completed the assessments only (n = 18). Participants included veteran and civilian adult women recruited through a Veterans Affairs (VA) medical centre. Clinically significant decreases in PCL total scores were observed in both the intervention and control groups, with no significant effect of group on symptom reduction (p = .591). The yoga group had significant reductions in PCL scores throughout the course of the intervention (p = .003), while the assessment control group had marginally significant decreases (p = .02). When examining specific subscales of the PCL, there were also no significant effects of group on reductions in re-experiencing (p = .409), avoidance (p = .806), and hyperarousal (p = .850). Decreases in depressive and anxiety symptoms, as measured by the CES-D and STAI, also demonstrated no significant effect of group, although STAI scores decreased significantly for both groups. A secondary analysis of the results found that immediately after the 12-week intervention and at the 1-month follow-up, alcohol use (AUDIT) decreased in the yoga group and increased in the control group. However the difference between these groups was not statistically significant. No adverse events were reported, but 32% of randomised participants withdrew from the trial or were lost to follow-up, although dropout rates were similar for both groups. Participants who did not complete treatment or control assessments had higher PCL scores (marginally significant at p = .032) than those who completed treatment, suggesting that more severe symptomatology may have decreased tolerance for participation in the trial. Limitations of the trial included a small sample size, a short follow-up period of one month, and a female-only sample, which reduces generalisability to male populations.							
Quinones, Maquet, Velez, Lopez (2015)	RCT	N = 100	I = Satyananda Yoga (n = 50) C = Continued the regular demobilisation program (n = 50)	I = Satyananda yoga classes - Twice-weekly one-hour classes taught for 16 weeks - Participants were encouraged to practice at home using a CD and handbook	Columbia Ex-combatants with diagnosis of PTSD confirmed by a minimum total PCL score of 44. Mean age: N.A.	PTSD symptoms: - PCL	

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				C= Mandatory ordinary assistance protocol for reintegrating individuals - Monthly appointment with a trained psychologist designed to follow up on individual progress in the reintegration process - Placed on a waiting list for yoga classes	Female gender: I = 30% C = 24%		
This trial investigated the use of Satyananda Yoga as a treatment for PTSD symptoms in adults recruited from a population of illegal armed group ex-combatants reintegrating after being exposed to armed conflict in Columbia. Both the yoga group (n = 50) and the control group (n = 50) demonstrated significant decreases in PTSD symptoms according to the PCL. The yoga group experienced a large treatment effect, as indicated by a large effect size (d = 1.15), while the control group showed a medium effect size (d = 0.42). Large effect sizes were also found for all symptom clusters for the yoga group, including re-experiencing (d = 1.40), avoidance (d = 1.09), and hyperarousal (d = 0.99). The clinical improvement in PTSD symptoms was significantly greater in the yoga condition compared to the control condition ($p < .05$). At the post-intervention assessment, the mean PCL score for the yoga condition (38.84) was below the clinical cut-off of 44 for diagnosing PTSD, while the mean score for the control condition (48.26) was above the cut-off. No serious adverse effects were reported, but two participants reported minor headaches. A limitation of this trial was the short follow-up period of one month. There were also higher proportions of males than females in both the intervention group (70%) and the control group (76%).							
Reinhardt, Taylor, Johnston, Zameer, Cheema, Khalsa (2018)	RCT	N = 51	I = Kripalu Yoga (n=26) C = Waitlist control (n=25)	I = Kripalu yoga - Twice weekly 90-minute group yoga sessions over 10 consecutive weeks including discussion on specific themes. - Participants were asked to practice yoga at home for 15-minute with audio recording	USA Veterans or active duty military personnel with PTSD diagnosis based on DSM-IV-TR Mean age: Yoga = 44.13 [13.97] WL = 56.15 [1.39]	PTSD symptoms: - PCL - CAPS Distress: - IES-R	

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				C = WL group could chose to receive the same yoga intervention at a later date	Assessment group = 46.58 [12.66] Female gender: Yoga = 8% WL = 15% Assessment group = 17%		
Participants for this RCT were recruited from VA hospitals, and included veterans and active duty military personnel, with the aim of treating PTSD symptoms. Results of the trial indicated that while participants in the yoga and comparison groups both had average CAPS scores in the severe range, the yoga group's average symptom severity dropped to the moderate range after the intervention, and the comparison group's remained in the severe range. Both groups had reductions in total CAPS scores and subscales, but only the subscale of re-experiencing yielded significant differences (p = .02). There were no significant between-group differences in total CAPS scores when comparing the yoga and comparison groups. Self-report PCL-M scores indicated a reduction in PTSD symptoms in the yoga group and slight increase in the comparison group, but these differences were not significant. The waitlist yoga group, which included participants who chose to receive the yoga intervention at a later date (n = 7) demonstrated significant reductions in CAPS past-month scores (p = 0.02). A major limitation of this trial was the high dropout rate of 51%. Over half the yoga group (62%) dropped out of the treatment, and 46% of the waitlist yoga group dropped out.							
Seppala, Nitschke, Tudorascu, Hayes, Goldstein, Nguyen, Perlmanm & Davidson (2014)	RCT	N = 21	I = Sudarshan Kriya yoga (n = 11) C = Waitlist (n = 10)	I = Sudarshan Kriya yoga - Daily three-hour group yoga sessions for seven days C = Waitlist group - Received the same intervention at a later date Participants in both groups were encouraged to continue concurrent treatment	USA Male veterans with service in Afghanistan or Iraq Mean age: Yoga = 28.09 [2.91] WL = 29.20 [6.66] Female gender: 0%	PTSD symptoms: - PCL-M	Anxiety and depression: - MASQ
This RCT examined the effects of Sudarshan Kriya yoga on male veterans recruited from military and veteran organisations with symptoms of PTSD, compared to a waitlist control group. While clinical diagnosis of PTSD was not in the inclusion criteria, mean scores on the PCL-M were above the clinical cut-off of in both groups. Results indicated that the yoga group had							

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significantly fewer PCL-M symptoms at the post-intervention assessment, 1 month post-intervention, and 1 year post-intervention compared to pre-intervention assessment. The differences between the yoga group and watilist group were significant and demonstrated large effect sizes at post-intervention (d = 1.16, 95% CI = 0.20, 2.04), 1 month post-intervention (d = 0.94, 95% CI = 0.00, 1.80), and 1 year post-intervention (d = 1.00, 95% CI = 0.05, 1.86). Similar results were found for anxiety and depression (MASQ) scores (d = 0.96, 95% CI = 0.02, 1.82; d = 1.11, 95% CI = 0.15, 1.98; d = 0.99, 95% CI = 0.05, 1.86). No adverse events were reported by participants. Limitations of the trial included a small sample size as well as an all-male sample, both of which limit the generalisability of the findings. Twenty-five percent of the sample was lost at the 1 year follow-up, but an intent to treat analysis was used to replace missing data.							
Individual yoga for PTSD							
No studies identified							
Yoga for depression							
Group-based yoga for depression (compared to non-active comparison)							
Buttner, Brock, O'Hara, & Stuart (2015)	RCT	N = 57	I = Gentle vinyasa flow yoga classes (n = 28) C = Waitlist (n = 29)	I = Vinyasa flow yoga classes - 16 one-hour yoga classes over eight weeks - Participants were asked to practice at least once a week at home with a DVD including a 30-minute yoga routine C = WL group - Received the same treatment at a later date	USA Adult females who had given birth within 12 months and met criteria for MDD using a HDRS score greater than 12. Mean age: Yoga = 29.81 [5.17] Control = 32.45 [4.78] Female gender: 100%	Depression: - HDRS	Depression: - PHQ-9 - SCID-I - IDAS Health-related quality of life: - SF-36

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This RCT investigated the effectiveness of a postpartum yoga class (n = 28) compared to a waitlist group (n = 29) amongst women aged between 18 and 45 who had given birth within the past 12 months, identified and recruited using public birth records. Depression symptoms (HDRS) decreased significantly within the entire sample ($p < .001$), but the decrease was greater for the yoga group than for the waitlist group ($p = .005$). In the yoga group, 78% of participants reported clinically significant change at the post-treatment assessment, compared to 59% of participants in the waitlist group. There was no long-term follow-up reporting the enduring effects of the intervention, which was a limitation of the trial. Generalisability was also limited by the non-representative sample (women who had recently given birth).							
Chu, Wu, Lin, Chang, Lin, & Yang (2017)	RCT	N = 26	I = Yoga group (n = 13) C = Waitlist - Instructed not to engage in any yoga practice and maintain usual level of physical activity (n = 13)	I = Yoga classes - Twice weekly 60-minute yoga classes over 12 weeks. - Classes comprised of three to five participants C = Waitlist - Provided with a free 12-week yoga program following post-test assessment completion	Taiwan Adult females with mild to moderate depressive symptoms, as characterised by BDI-II score of 14-28 Mean age: Yoga = 33.08 [9.11] Control = 32.38 [8.27] Female gender: 100%	Depressive symptoms: BDI-II	Perceived stress: - PSS Heart rate variability - ECG heart rate recording
This trial aimed to examine the effectiveness of a 12-week yoga program (n = 13) to decrease depressive symptoms and heart rate compared to a waitlist group (n = 13) in depressed women recruited from a university and the surrounding community. There was a significant group x time interaction effect for depressive symptoms but not for perceived stress. Results indicated that the yoga group reported significantly reduced BDI-II scores ($p=.005$) while the waitlist group reported no significant change. Perceived stress, assessed using the perceived stress scale (PSS) was also significantly reduced in the yoga group ($p=.003$) and not in the waitlist group. No adverse events were reported in response to the yoga intervention. The trial was limited by a small sample size and lack of follow-up data to determine long-term effects of the yoga intervention.							

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Field, Diego, Medina, Delgado, & Hernandez (2012)	RCT	N = 84	I = Yoga (n= not reported) I = Massage therapy (n= not reported) C = Standard prenatal care (n = not reported)	I = Twice weekly 20-minute group yoga sessions for 12 weeks. Groups consisted of approximately eight participants I = Twice weekly 20-minute massage C = Standard prenatal care	USA Adult females in second trimester of pregnancy between 18 and 22 weeks with a diagnosis of depression based on SCID Mean age: 26.6 (Age range: 18-40) Female gender: 100%	Depression: - CES-D	Anxiety: - STAI
This trial examined the efficacy of yoga, massage therapy, and standard prenatal care amongst adult females in their second trimester of pregnancy who were screened for depression at two medical school prenatal ultrasound clinics. Results indicated significant reductions in depression, as measured using the CES-D, and anxiety (measured using the STAI) in both the yoga group ($p < .001$) and the massage group ($p < .001$) but not the control group. The difference in mean CED-D scores at baseline and post-intervention was greater in the massage group (mean difference = 11.77) than in the yoga group (mean difference = 8.23) but a significance test was not conducted, making it unclear whether these differences represented a statistically significant reduction in depression. The trial was limited by a lack of follow-up, as well as poor generalisability as the sample consisted only of pregnant females.							
Kinser, Bourguignon, Whaley, Hauenstein, & Taylor (2013)	RCT	N = 27	I = Hatha yoga (n = 15) C = Attention-control (n = 12)	I = Hatha yoga classes - Weekly 75-minute group yoga class for 8 weeks - Daily home practice with a DVD and handouts C = Health education classes	USA Adult females with a diagnosis of MDD or dysthymia based on MINI or a score of 9 or above on PHQ-9 Mean age:	Depression severity: - PHQ-9	Stress: - PSS-10 Anxiety: - STAI Rumination: - RSS

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Kinser, Elswick, & Kornstein (2014)				- Weekly 75-minute group health education class for eight weeks	43.26 [15.57] Female gender: 100%		
This trial tested Hatha yoga as a treatment for women with MDD recruited from a community population in the US. A subsequent paper reported the results of a one-year follow-up. Initial results indicated that all participants had decreasing levels of depression over the course of the 8-week trial, but there was no significant difference in reductions in the yoga group compared to the comparison group (as indicated by PHQ-9 scores). There were also no significant differences in levels of stress or anxiety between the two groups. The only outcome that demonstrated a significant group x time effect was rumination, which demonstrated greater reductions in the yoga group compared to the comparison group. The 1-year follow-up analysis (Kinser, Elswick & Kornstein, 2014) included nine participants from the original trial, tested on all outcome measures one year after the completion of the intervention. Participants in both groups experienced a decrease in depression, but the yoga group had a significantly greater reduction in depression severity ($p < .001$) and rumination ($p = .017$). There was no statistically significant difference in reductions in other outcomes, including perceived stress and anxiety. The limitations of this trial include a small sample size and a high drop-out rate, both in the primary analysis (33%) and in the follow-up analysis (66%).							
Prathikanti, Rivera, Cochran, Tungol, Fayazmanesh, Weinmann (2017)	Parallel RCT	N = 38	I = Hatha yoga (n = 20) C = Attention Control (AC) (n = 18)	I = Hatha yoga classes - Twice weekly 90-minute yoga classes for eight weeks C = Yoga history module - 8 twice weekly 90-minute yoga history module with short lectures and documentary clips focussing on historical figures of the yoga tradition	USA Adults who met diagnostic criteria for mild-to-moderate major depression using MINI and BDI-II score of 14-28 Mean age: 43.40 [14.8] Female Gender: 68%	Depressive symptoms: BDI-II	
This RCT compared a group yoga intervention (n = 20) to an attention control education group (n = 18) for treating mild-to-moderate depression in individuals recruited from the local community and outpatient clinics. The group-time interaction was found to be significant, indicating that participants in the yoga group displayed a greater reduction in depression symptoms on the BDI-II when compared to the comparison group ($p = .034$). Between the baseline and 8-week assessments, BDI scores in the yoga group decreased by an average of 9.47 points							

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)[1] Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
(95% CI = 6.57, 12.37), while scores in the comparison group decreased by an average of 2.99 (95% CI = 0.45, 6.43). The difference between the two groups was statistically significant (p = .005), and the effect size was large (d = -0.96, 95% CI = -1.81, -0.12). Among those who completed the 8-week intervention, 60% achieved remission, while in the comparison group 10% achieved remission (remission was defined by a BDI score of 9 or less at the final assessment). Adverse events included two reports of musculoskeletal injury that were unrelated to yoga exercises, and musculoskeletal discomfort during yoga classes, which resolved throughout the course of the intervention. The trial was limited by a small sample size and lack of follow-up assessment.							
Uebelacker, Battle, Sutton, Magee, & Miller (2016)	RCT	N = 20	I = Prenatal yoga program (n = 12) C = Mom-baby wellness workshop (n = 8)	I = Prenatal yoga classes - Weekly 75-minute group prenatal yoga classes for nine weeks C = Mom-baby wellness workshop - Weekly 75-minute group workshops focussed on postpartum health and general wellness	USA Adult females 12-26 weeks pregnant with minor or major depression based on scores between 7 and 20 on QIDS Mean age: 28.4 [5.8] Female gender: 100%	Depression severity: - QIDS - EPDS	Injuries - Asked participants in the intervention group if they had experienced any injuries or medical problems due to yoga Amount of yoga: - Amount of home yoga practice
This pilot RCT aimed to reduce depression amongst pregnant females with depression who were recruited from community locations and OB/GYN practices. The trial compared prenatal yoga (n = 12) to perinatal health workshops (n = 8). Both the QIDS and EPDS showed improvement in depression severity in both groups, but these changes were not significant. The yoga group had greater reductions in depression severity according to the QIDS and EPDS, with medium effect sizes, but these differences were not statistically significant. Limitations of this trial included a small sample size and a lack of blinding of assessors despite use of a clinician-rated assessment depression severity. There were additional methodological limitations that introduced risk of bias, including an unknown randomisation process and lack of intent-to-treat analysis.							
Individual yoga for depression							
No studies identified							

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)[1] Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
Yoga for anxiety							
Group-based yoga for anxiety							
No studies identified							
Individual yoga for anxiety (compared to non-active comparison)							
Bidgoli, Taghadosi, Gilasi, & Farokhian (2016)	RCT	N = 80	I = Sukha pranayama breathing exercises (n = 40) C = Routine coronary angiography-related care services (n = 40)	I = Sukha pranayama - Five minute breathing exercise before undergoing coronary angiography procedure C = Routine angiography care without breathing exercises	Iran Adults undergoing coronary angiography for the first time with an anxiety score of 43 or greater based on SAI Mean age: Yoga = 55.50 [7.36] Control = 62.70 [6.28] Female gender: Yoga: 55% Control: 45%	Anxiety: - SAI	
This RCT examined the effects of a single dose of pranayama breathing on anxiety in patients undergoing coronary angiography recruited from a hospital in Iran. The experimental group had a session of sukha pranayama breathing before undergoing the surgery, while the comparison group received only the routine pre-angiography care. The experimental group had significant reductions in anxiety scores half an hour and one hour after the intervention ($p < .001$). The comparison group also experienced a slight, but non-significant, decrease in anxiety. There were also between group differences in anxiety levels in the experimental and comparison groups at all time points ($p < .05$).							

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)[1] Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
The trial included only a single intervention session, which differs from other trials in the review which implemented multiple treatment sessions. This should be considered when comparing this trial with others included in the table. There was no long-term follow-up to track if the decrease in anxiety continued or if patients continued to utilise breathing exercises to relieve anxiety. Generalisability was also limited due to the sample comprising of coronary angiography patients, who may have different health profiles from healthy adults.							
Yoga for combined depression and anxiety							
Group-based yoga for combined depression and anxiety (compared to non-active comparison)							
Davis, Goodman, Leiferman, Taylor, & Dimidjian (2015)	RCT	N = 46	I = Ashtanga Vinyasa yoga and TAU (n = 23) C = TAU (n = 23)	I = Ashtanga Vinyasa yoga classes - Weekly 75-minute group yoga classes over eight weeks C = TAU - Participants were asked to report outside treatments received	USA Adults females who were pregnant (up to 28 weeks) with depression score of nine or greater on EPDS, and/or anxiety score of 35 or greater on STAI Mean age: 30.15 [4.92] Female gender: 100%	Depression: - EPDS Negative affect: - PANAS-N State and trait anxiety: - STAI	
This trial randomly assigned pregnant women with symptoms of depression and anxiety to an Ashtanga Vinyasa yoga program (n = 23) or TAU (n = 23) after they were recruited through community advertisements and health care provider referral. Both groups demonstrated a significant improvement in depression scores (EPDS) but there was no significant difference in the improvement between the yoga and comparison groups (p = .55). There was a significantly greater reduction in negative affect (PANAS-N) in the yoga group compared to the comparison group, indicating that the yoga group had less negative affect (p = .011). Both state and trait anxiety reductions were significant within each group, but there was no significant group difference in these reductions. Only one participant reported medical complications, in the form of premature labour, but this was not linked to the yoga intervention. The trial's limitations include potentially reduced generalisability due to a sample including only pregnant females. There was also a small sample size, and results did not separate scores for those with anxiety symptoms from those with depressive symptoms, thus making it difficult to isolate the effects of the intervention on either disorder.							

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)[1] Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
Falsafi (2016)	Repeated measures RCT	N = 90	I = Hatha yoga (n = 23) I = Mindfulness (n = 21) C = Waitlist (n = 23)	I = Hatha yoga classes - Weekly 75-minute group yoga classes for eight weeks - Yoga materials provided to practice at home I = Mindfulness and self-compassion intervention - Weekly 75-minute group mindfulness training for eight weeks C = Waitlist - Only assessments with option to receive intervention that provided best outcomes after the trial	USA Adult students with a diagnosis of depression and/or anxiety Mean age: 22.1 (Age range: 18-50) Female gender: 86%	Depression: - BDI Anxiety: - HAS Stress: - Student-Life Stress Inventory	
This trial investigated Hatha yoga (n = 23) and mindfulness (n = 21) treatments, in comparison to a waitlist group (n = 23). Participants were recruited from a mid-size public US university Compared to the waitlist group, depression, anxiety, and stress symptoms scores in the yoga group reduced significantly from pre-intervention to follow-up assessment ($p < .01$). The scores remained similar at the 12-week follow-up assessment compared to post-intervention assessment. The dropout rate for the trial was 20%, and limitations included a potential lack of generalisability due to the sample being 85% female and 90% Caucasian.							
Kuvacic, Fratini, Padulo, Iacono, & Giorgio (2018)	RCT	N = 30	I = Yoga (n = 15) C = Pamphlet (n = 15)	I = Yoga classes - Twice-weekly group yoga classes over eight weeks C = Pamphlet - Received a pamphlet about chronic low back pain	Croatia Adults with pervasive chronic low back pain and depression and anxiety based on Zung self-rating depression and anxiety scales	Depression: - SDS Anxiety: - SAS	Low back pain: - ODI-I Pain: - NRS 0-10

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)[1] Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
					Mean age: 34.30 [4.52] Female gender: 47%		
This trial compared an 8-week yoga program (n = 15) with an informational pamphlet (n = 15) in adults with chronic low back pain diagnosed with depression and anxiety. Results indicated a significant time x group interaction (p = .021). The yoga group had a significant decrease in depression scores (p < .01) whereas the comparison group did not, and the difference between these groups was statistically significant (p <.001). For anxiety, only the yoga group showed a significant decrease (p < .01), but the between group difference when compared to the comparison group was not significant. The yoga group demonstrated significant decreases in pain levels and this was significantly different between groups (p < .001). Limitations of this trial include a small sample size and a lack of follow-up assessment, which limited the information known about the long-term effectiveness of this intervention, as well as a small sample size.							
Rani, Tiwari, Singh, & Srivastava (2012)	RCT	N = 150	I = Yoga nidra and pharmacotherapy (n = 65) C = Pharmacotherapy only (n = 61)	I = Yoga nidra classes - Daily 35-minute group yoga classes five days a week for six months C = Pharmacotherapy only	India Adult females between 18 and 45 years with menstrual irregularities Mean age: Yoga = 27.67 [7.85] Control = 26.58 [6.87] Female gender: 100%	Anxiety: - HAM-A Depression: - HAM-D	
This trial examined the use of yoga nidra as a treatment for anxiety and depression in females with menstrual disorder who were recruited from a medical university. Participants were allocated to the yoga nidra group (n = 65) or the comparison group with pharmacotherapy only (n = 61). Results showed significant improvement in anxiety and depression symptoms six months after the yoga intervention in those with mild or moderate anxiety and depression at baseline (mild: p < .01; moderate: p < .02). In those who started the intervention with severe anxiety and depression symptoms, there was no significant change in scores after six months. When compared to the comparison group, the yoga group reported significantly greater improvement in anxiety (p < .003) and depression (p < .02).							

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)[1] Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
Limitations of this trial include the fact that not all participants had clinical levels of depression and anxiety when assessed at baseline. In the intervention group, 86% reached criteria for clinical anxiety, 89% for clinical depression. In the comparison group, 90% with anxiety and 84% had depression. Results did not differentiate the effects of the treatment on those with and without clinical levels of anxiety and depression. There was also high levels of attrition, with 23% of the comparison group and 15% of the intervention group lost to follow up. Additionally, it was not clear from this trial if the medication prescribed was targeting psychological symptoms or menstrual irregularities.							
Individual yoga for combined depression and anxiety (compared to non-active comparison)							
de Manincor, Bensoussan, Smith, Barr, Schweickle, Donoghoe et al. (2016)	RCT (single group cross-over design)	N=101	I = Yoga intervention plus TAU (n = 47) C = Waitlist control plus TAU (n = 54)	I = Yoga classes - Four individual one-hour consultations/lessons over a six-week period with a qualified yoga teacher. - Individualised yoga practice was developed for each participant for home practice according to their presenting symptoms, needs, abilities, goals, and circumstances. Yoga practice included postures, movement, breathing exercises, relaxation, mindfulness and meditation, cultivation of positive values, thoughts, attitudes, and lifestyle changes. C = 6-week TAU only (waitlist)	Australia Adults with at least mild, moderate, or severe depression or anxiety according to the DASS-21 Mean age: Yoga = 39.5 [11.3] Control = 38.2 [11.2] Female gender: Yoga = 87% Control = 74%	Depression and anxiety: - DASS-21 Psychological distress/wellbeing: - K10 - SPANE	Resilience: - CD-RISC 2 Health: - SF-12
Participants for this RCT were recruited through referrals from local psychologists, GPs, mental health service providers, advertisements, email newsletters, and social media. A total of 107 participants were randomised into a yoga intervention (n = 47) or waitlist group with TAU (n = 54) to treat depression and/or anxiety, however there were six post-randomisation exclusions. Assessments were taken at baseline, at the end of the intervention, and six weeks after the end of the intervention. The post-intervention analysis included data from 101 participants (47 intervention, 54 waitlist), while follow-up analyses included the 37 intervention group participants. At six-week follow-up, statistically significant differences were observed between the yoga							

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)[1] Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
and watilist groups on reduction of depression scores (-4.30; 95% CI: -7.70-0.01; p = .01). Differences in reduction of anxiety scores were not significant (-1.91; 95% CI: -4.58-0.76; p = .16). Statistical significant differences in favour of the yoga group were observed on total DASS (p = .03), K10, SF12 mental health, SPANE, FS and resilience scores (p < .01). Differences in stress and SF12 physical health scores were not statistically significant. No adverse effects related to the yoga intervention were reported. Limitations of the current study include that the majority of participants (n = 61) presented with comorbidity of elevated symptoms in both depression and anxiety. The extent to which the yoga intervention implemented in this study targeted depression, anxiety or both is unclear and the effects on targeted conditions cannot be separated. Study measures were all self-reported which may introduce reporting bias. Some participants were eligible before randomisation, but because re-assessment occurred before commencing the intervention, some participants were no longer eligible only a single assessment for elevated symptoms of depression and/or anxiety scores on DASS subscales was used at screening, they were no longer eligible at commencement of the trial. Using diagnostic criteria for assessment to determine eligibility at the screening stage is recommended.							
Yoga for AUD							
Group-based yoga for AUD (compared to non-active comparison)							
Bichler, Miedermeier, Fruhauf, Langle, Fleischhacker, Mechtcheriakov, Kopp (2017)	Cross-over RCT	N = 16	I = Yoga-gymnastic (YG) (n = 16) C = Nordic walking (NW) (n = 16) C = Passive control (PC) (n = 16)	YG = Hatha yoga classes - 60-minute of training in Hatha-yoga, a practice of postures, controlled breathing and meditation. - Patients performed exercise with intensity of 11-14 on Rating of Perceived Exertion - Groups of 3-5 NW = Nordic walking - 60-minute Nordic walking using sticks to perform moderate intensity outdoor walking on uneven terrain - Groups of 3-5	Austria Inpatients diagnosed as alcohol dependence with clinical observable cravings, but currently abstinent without relapse Mean age: 47.3 [7.9] Female gender: 20%	Alcohol craving: - AUQ Affective responses: - Feeling Scale - Felt Arousal Scale	

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)[1] Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
				PC = Sitting in gym while reading magazines - Groups of 3-5			
This cross-over RCT investigated the use of single session interventions consisting of yoga, Nordic walking, and reading magazines with inpatients recruited during withdrawal treatment, after they had undergone alcohol detoxification at psychiatric hospitals. All 16 participants participated in all three activities in randomised orders, with a one-week wash-out period between activities. Results indicated no significant changes in alcohol cravings (as measured by the AUQ) over time in any of the groups. This trial involved only single session interventions limiting the ability to determine the ongoing efficacy of the interventions. The small sample size and 80% male sample also limited the generalisability of these results.							
Individual yoga for AUD							
No studies identified							
YOGA/MEDITATION							
Yoga/meditation for PTSD							
No studies identified							
Yoga/meditation for depression (compared to non-active comparison)							
Tolahunase, Sagar, Faiq, & Dada (2018)	RCT	N = 58	I = Yoga and meditation, in addition to routine drug treatment (n = 29)	I = Yoga and meditation intervention - 12-week yoga-and-mediation-lifestyle intervention	India Adults diagnosed with MDD based on DSM-5 criteria and on routine drug treatment for at least six months	Depression severity: - BDI-II	

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)[1] Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
			C = Routine drug treatment (n = 29)	- Five 120-minute sessions per week of theory and practice C = Continued routine drug treatment	Mean age: Intervention = 36.94 [8.94] Control = 39.10 [9.26] Female gender: Intervention = 55% Control = 52%		
This RCT examined a mixed yoga and meditation intervention along with routine drug treatment in adults with MDD who were recruited from an outpatient psychiatric unit in New Delhi. The intervention group (n = 29) was compared to a group with only routine drug treatment (n = 29). There was a significant decrease in BDI score in the intervention group compared to the comparison group (-5.83, 95% CI = -7.27, -4.49, p < .001). The results also indicated that females in the intervention group demonstrated significantly more clinical improvement than males, with a larger difference of change (females: -6.12, p = .003; males: -3.86, p = .032). This trial was limited by a lack of long-term follow-up, which makes it unclear whether the benefits of this intervention persisted long-term.							
Yoga/meditation for anxiety							
No studies identified							
Yoga/meditation for mixed depression and anxiety							
No studies identified							
Yoga/meditation for AUD							
No studies identified							

N.B:

AUDIT = Alcohol Use Disorder Identification Test; AUQ = Alcohol Urges Questionnaire; BDI-II = Beck Depression Inventory; BSI -18 = Brief Symptom Inventory 18; CAPS = Clinician Administered PTSD scale; CD-RISC = Connor-Davidson Resilience Scale; CES-D = Center for Epidemiologic Studies Depression Scale; DASS-21 = Depression, Anxiety and Stress Scale; DUDIT = Drug Use Disorders Identification Test; EPDS = Edinburgh Postnatal Depression Scale; GAI = Geriatric Anxiety Inventory; GDS = Geriatric Depression Scale; FFMQ = Five Facet Mindfulness Questionnaire; HAM-A: Hamilton Anxiety Scale; HAM-D: Hamilton Rating Scale for Depression; HAM-D17 = Hamilton Depression Rating Scale 17-item version; HAS = Hamilton Anxiety Scale; HDRS = Hamilton Depression Rating Scale; K10 = Kessler Psychological Distress Scale; MASQ = Mood and Anxiety Symptoms Questionnaire; MINI = Mini Neuropsychiatric Interview; MRP = Mantram Repetition Program; NRS 0-10 = Numeric rating scale for pain; ODI-I = Owestry low back pain disability questionnaire; PCL = PTSD Checklist; PCL-M = PTSD Checklist-Military; PC-PTSD = The Primary Care PTSD Screen; PHQ = Patient Health Questionnaire; PSS = Perceived Stress Scale, QIDS = Quick Inventory of Depressive Symptomatology; QOLSV = Quality of Life Profile Seniors Version; RSS = Ruminative Response Scale; SAI = Spielberger State Anxiety Inventory (SAI); SAS = Zung self-rating anxiety scale; SDS = Zung self-rating depression scale; SF-12 = Health Survey Short Form-12; SPANE = Scale of Positive and Negative Experience; STAI = State-Trait Anxiety Inventory; WHOQoL-BREF = WHO Quality of Life-BREF

Evidence profile: Stand-alone mindfulness treatments

Authors (Year)	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment session, treatment duration, treatment frequency, group size	Country Population Mean age (SD)2 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
Mindfulness for PTSD							
Group-based mindfulness for PTSD							
Polusny, Erbes, Thuras, Moran, Lamberty, Collins, Rodman, Lim (2015)	Clinical RCT	N = 116	I = MBSR (n = 58) C = Present Centred Group Therapy (PCGT) (n = 58)	I = MBSR - 8 weekly 2.5 h group sessions - A daylong retreat, focused on teaching participants to attend to the present moment in a non-judgemental, accepting manner C = PCGT - 9 weekly 1.5 h group sessions focused on current life problems	USA Veterans with PTSD diagnosis according to DSM-IV or subthreshold PTSD Mean age: MBSR = 57.6 [10.4] PCGT = 59.4 [9.2] Female gender: MBSR = 21% PCGT = 10%	PTSD symptom severity: - PCL	Diagnosis and symptom severity of PTSD: - CAPS Depressive symptom severity: - PHQ-9 Quality of life: - WHOQoL-BREF Mindfulness: - FFMQ
This randomised clinical trial involving 116 veterans with PTSD compared the efficacy of MBSR to PCGT on PTSD symptom severity. Patients were recruited through advertisements and clinical referrals at a large VA medical centre. Outcomes were assessed before, during, and after treatment and at 2-month follow-up. Participants receiving MBSR demonstrated greater improvement in self-reported PTSD symptom severity during treatment (change in mean PCL scores from 63.6 to 55.7 vs 58.8 to 55.8 with present-centered group therapy; between-group difference = 4.95; 95% CI [1.92-7.99]; p = 0.002) and at 2-month follow-up (change in mean PCL scores from 63.6 to 54.4 vs 58.8 to 56.0, respectively); between-group differences = 6.44; 95% CI [3.34-9.53], p <0.001). Although participants in the MBSR group were more likely to show clinically significant improvement in self-reported PTSD symptom severity (49% vs 28% with present-centered group therapy; difference, 21%; 95%CI [2.2-39.5]; p = 0.03) at 2-month follow-up, they were no more likely to have loss of PTSD diagnosis (53% vs 47%, respectively; difference, 6.0%; 95%CI [14.1 - 26.2]; p = 0.55). For secondary outcomes, the MBSR group showed significantly better outcomes in mindfulness (p <0.001) and quality of life (p = 0.004) at 2-month follow-up when compared to the PCGT group. There is a trend toward significant difference for depression symptom severity between the two groups at 2-month follow-up (p = 0.06).							

[2] Mean age and SD is given when provided, alternatively age range is provided

Authors (Year)	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment session, treatment duration, treatment frequency, group size	Country Population Mean age (SD)2 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
There was one serious adverse event in the PCGT group, in which a patient made a suicide attempt. Study limitations include that PCGT may not have fully accounted for all nonspecific factors present in MBSR, with MBSR received longer total in-session time than the PCGT group.							
Possemato, Bergen-Cico, Treatman, Allen, Wade, Pigeon (2016)	Clinical RCT	N = 62	I = Primary Care Brief Mindfulness Training (PC-BMT) + Primary Care Treatment as Usual (PC-TAU) (n = 36) C = PC-TAU (n = 26)	I = PC-BMT - 4 weekly 1.5 h group sessions, adapted from MBSR - Provided with CDs with audio files to support home practice, which is a 2-minute Chill Out to be used at least once daily for all weeks C = PC-TAU Received usual PC treatment, could include primary care mental health integrated (PCMHI) care, including medications and brief psychotherapy provided by mental health clinicians	USA Veterans with subthreshold or diagnostic-level PTSD according to DSM-IV Mean age: PCBMT = 46.3 [16.4] PC-TAU = 47.4 [16.2] Female gender: PCBMT = 17% PC-TAU = 8%	PTSD Symptoms severity: - CAPS - PCL-S	Depressive symptoms severity: - PHQ-9
This parallel, two-arm, single-blinded randomised clinical trial recruited 62 veterans from VA primary care clinics with subthreshold or diagnostic-level PTSD. This study tested whether a brief mindfulness training (BMT) offered in primary care can decrease PTSD severity. PCBMT was adapted from manualised MBSR, and included much of the MBSR contents but with a shorter session duration and fewer sessions overall. The outcomes were measured pre- and post- treatment using CAPS and PCL-S, and at 8-week follow-up using PCL-S. Intention-to-treat analysis results indicated no statistical significance for differences in CAPS and PCL-S scores between PCBMT and PCTAU groups when followed up after 8 weeks. For the secondary outcomes, results indicated a significant difference between PCBMT and PCTAU groups for depressive symptoms (p = 0.04), with PCBMT group showing a greater reduction in depressive symptom severity measured by PHQ-9. Due to low participation rate in the PCBMT group (44.4% completed PCBMT, defined as completing at least three sessions), the study subsequently grouped the non-completers for PCBMT with the PCTAU group and compared to the individuals who completed PCBMT. PTSD severity decreased in both groups, although the PCBMT completers reported significantly larger decreases in PTSD and depression from pre- to post-treatment and maintained gains at the 8-week follow-up compared with the comparison group. Significant differences were observed in both CAPS and PCL-S measures (p= 0.001 and p = 0.04 respectively). No adverse event reported. Limitation of the study include a low rate of participant engagement in the PCBMT arm (44% completed PCBMT).							

Authors (Year)	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment session, treatment duration, treatment frequency, group size	Country Population Mean age (SD)2 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
Individual mindfulness for PTSD							
No studies identified							
Mindfulness for depression							
Group-based mindfulness for depression							
Michalak, Schultze, Heidenreich, Schramm (2015)	Three-arm clinical RCT	N = 106	I = MBCT (n = 36) C = Cognitive behavioural analysis system of psychotherapy (CBASP) (n = 35) C = TAU (n = 35)	I = MBCT - 1 individual pre-class interview - 8 weekly 2.5 h group sessions - Group size = 6 C = CBASP - 2 individual treatment sessions - 8 weekly 2.5 h group sessions TAU = Patients were encouraged to continue any current medication and to attend appointments with their psychiatrist or psychotherapist	Germany Patients with a current major depressive episode defined by the DSM-IV and had experienced depressive symptoms for more than 2 years without remission Mean age: MBCT +TAU = 48.4 [11.5] CBASP + TAU = 50.2 [10.5] TAU = 54.0 [13.24] Female gender: MBCT +TAU = 58% CBASP + TAU = 63% TAU = 66%	Depressive symptoms severity: - HAM-D	Depressive symptoms severity: - BDI Quality of Life: - SF-36
This was a bi-centre, three-arm randomised clinical trial, designed to evaluate the effects of MBCT compared to CBASP on depressive symptoms for patients with a current DSM-IV defined major depressive episode and persistent depressive symptoms for more than 2 years. At Site A all patients were recruited by media announcements; at Site B patients were recruited from community health care facilities or private practices. MBCT and CBASP groups were set up at each site, with four of each at Site A, and two of each at Site B. The group size was restricted to six patients per class in the present trial in both treatment conditions.							

Authors (Year)	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment session, treatment duration, treatment frequency, group size	Country Population Mean age (SD)2 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
The pre- and post-assessment results indicated that MBCT was no more effective than TAU in reducing depressive symptoms (p = 0.76) at Site A, although it was significantly superior to TAU at treatment Site B (p = 0.01). CBASP was significantly more effective than TAU in reducing depressive symptoms in the overall sample and at both treatment sites (Ps <0.01). Overall, the direct comparison of MBCT and CBASP in terms of changes in depression scores at post-treatment did not reveal any statistical significance for a difference between the two groups. Similarly for remission rates, no significant difference between MBCT and CBASP groups was observed. Both treatments had only small to medium effects on social functioning and quality of life. No adverse events were reported. There was no follow-up data for the studies and therefore long-term outcomes cannot to be determined.							
Shallcross, Gross, Visvanathan, Kumar, Palfrey, Ford, Dimidjian, Shirk, Holm-Denoma, Goode, Cox, Chaplin, Mauss (2015)	RCT	N = 92	I = MBCT (n = 46) C = Active control (AC) (n = 46)	I = MBCT - 8 weekly 2.5 h group sessions - Outside of class for homework (approximately 50 minutes per day) - Group size = 10-12 C = AC was based on the validated and manualised Health Enhancement Program (HEP) - 8 weekly 2.5 h group sessions - Outside of class for homework (approximately 50 minutes per day) - Group size = 10-12	USA Participants with confirmed MDD-related and co-morbid Axis I/II diagnostic eligibility based on Clinical Interview for the DSM-IV (SCID I/II) Mean age: MBCT = 36.7 [12.8] AC = 33 [9.6] Female gender: MBCT = 76% ACC = 76%	Relapse and time to relapse for depression: - SCID	Depressive symptoms severity: - BDI Life satisfaction: - SWL
This RCT evaluated the comparative effectiveness of MBCT versus an active comparison condition for depression relapse prevention, depressive symptom reduction and improvement in life satisfaction. Participants were recruited from an urban area through referrals from community mental health centres and local advertisements. Intention-to-treat analyses indicated no differences between MBCT and AC in depression relapse rates (OR = 1.10, 95% CI [0.42-2.92], p = 1) or time to relapse over a 60-week follow-up using a survival analysis (HR = 0.945, 95% CI [0.36-2.45], p = 0.91). Both groups experienced significant and equal reductions in depressive symptoms and improvements in life satisfaction. The AC group experienced immediate symptom reduction post-intervention and then a gradual increase over the 60-week follow-up. The MBCT group experienced a gradual linear depression symptom reduction. The pattern for life satisfaction was identical but only marginally significantly different to each other.							

Authors (Year)	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment session, treatment duration, treatment frequency, group size	Country Population Mean age (SD)2 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
Limitations of the study include small effect sizes for analyses and therefore only confer modest statistical power. There was also a high level of drop-outs in both groups which can introduce attrition bias.							
Williams, Crane, Barnhofer, Brennan, Duggan, Fennell, et al. (2014)	Three-arm RCT	N = 274	I = MBCT (n = 108) C = cognitive psychological education (CPE) (n = 110) C = TAU (n = 56)	I = MBCT - 1 individual Pre-class interview - 8 weekly 2 h classes - Participants were invited to 2h follow-up classes taking place 6 weeks and 6 months post-treatment - Each follow-up class included meditation, discussion of discoveries and difficulties since the course ended, and how these were being dealt with by participants C = CPE comprised all elements of the MBCT program except the experiential cultivation of mindfulness through meditation practice - 8 weekly 2 h classes - Follow-up classes at 6 weeks and 6 months C = TAU = Receive treatment as usual, with 21% received on or more new antidepressants prescriptions, 11% saw psychiatrist or community psychiatric nurse, 21% saw	UK Patient with a history of at least three episodes of major depression meeting DSM–IV Mean age: MBCT = 43.99 [11.55] CPE = 43.86 [12.92] TAU = 43.43 [12.03] Female gender: MBCT = 71% CPE = 74% TAU = 70%	Time until relapse to major depression: - SCID criteria for at least 2 weeks since the previous assessment Depression symptom severity: - HAM-D - BDI	

Authors (Year)	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment session, treatment duration, treatment frequency, group size	Country Population Mean age (SD)2 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
				counsellor, psychologist or psychotherapist during follow-up			
This RCT compared mindfulness-based cognitive therapy (MBCT) with both cognitive psychological education (CPE) and treatment as usual (TAU) for preventing relapse to major depressive disorder (MDD) in people currently in remission following at least 3 previous episodes. Participants recruited through referrals from primary care and mental health clinics and advertisements in the community. Participants were allocated to MBCT plus TAU, CPE plus TAU, and TAU alone. MBCT was delivered in accordance with its published manual, modified to address suicidal cognitions; CPE was modelled on MBCT, but without training in meditation. Both treatments were delivered through 8 weekly classes. Follow-up measurements took place at 3, 6, 9, 12 months after randomisation. Allocated treatment had no significant effect on risk of relapse to MDD over 12 months follow-up (hazard ratio for MBCT vs. CPE = 0.88, 95% CI [0.58, 1.35]). Among participants above median severity, the hazard ratio was 0.61, 95% CI [0.34, 1.09], for MBCT vs. CPE. For those below median severity, there were no such differences between treatment groups. Fifteen serious adverse events were reported to the research team, with five arising from MBCT and 10 from CPE. Only one of these serious adverse reaction was potentially arising from a trial treatment – an episode of serious suicidal ideation following discussion of different coping responses to low mood in CPE. Others involved an overnight hospital admission, with 13 for physical health problems and 1 following an overdose during follow-up in a patient received MBCT. One participant died from an unrelated medical condition after partially withdrawing from trial follow-up due to illness. A limitation of the study includes data being analysed 'as treated'. This can introduce bias associated with the non-random loss of participants (i.e,. attrition).						
Individual mindfulness interventions for depression							
Tovote, Fleer, Snippe, Peeters, Emmelkamp, Sanderman, Links, Schroevers (2014)	RCT	N = 94	I = Individual MBCT (n = 31) C = CBT (n = 32) C = Waitlist (WL) (n = 31)	I = MBCT - Delivered individually - 8 weekly sessions - Each session lasts for 45-60 minutes - Daily 30 minutes homework C = CBT - Delivered individually - 8 weekly sessions - Each session lasts for 45-60 minutes	The Netherlands Participants were adult patients with type I or II diabetes diagnosed at least 3 months prior to inclusion, and having symptoms of depression as indicated by a Beck Depression Inventory-II (BDI-II) score of ≥14 Mean age: MBCT = 49.8 [13.3] CBT = 54.6 [11.3] WL = 54.7 [10.5]	Depressive symptom severity: - BDI-II - HAM-D7	Wellbeing: - WHO-5 Anxiety symptom severity: - GAD-7

Authors (Year)	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment session, treatment duration, treatment frequency, group size	Country Population Mean age (SD)2 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
				- Daily 30 minutes homework C = WL Participants in the WL condition received no psychological intervention for 3 months.	Female Gender: MBCT = 55% CBT = 50% WL = 48%		
This RCT from the Netherlands examined the effectiveness of individual MBCT and CBT for depressive symptoms in patients with diabetes in comparison with a waitlist condition. Patients were recruited from four hospitals in the northern part of Netherlands. The pre-post treatment results for primary outcome on depression showed that both MBCT and CBT had significantly decreased BDI-II scores than the WL group at post-treatment ($p = 0.004$ and $p < 0.001$, respectively). However, when compared between MBCT and CBT groups directly, no significant differences were observed. Assessing depressive symptoms using the HAM-D7 revealed similar results: both MBCT and CBT had significantly higher outcome improvement than WL condition ($p < 0.001$ and $p = 0.001$, respectively). For secondary outcomes, comparing MBCT and CBT groups with the WL group, individuals in both MBCT and CBT exhibited greater improvement in levels of wellbeing (both Ps <0.001) and anxiety symptom severity ($p = 0.004$ and $p = 0.01$, respectively). No adverse event reported. Several limitations to this study including a smaller sample size limiting the statistical power. Secondly, attrition rates in both MBCT and CBT were high, as only around 70% of the randomized participants completed treatment. In addition, the study sample is a group of patients diagnosed with diabetes comorbid with depression, hence the results may not be generalisable to all types of depression.							
Mindfulness for anxiety							
Group-based mindfulness for anxiety							
Arch, Ayers, Baker, Almklov, Dean, Craske (2013)	RCT	N = 124	I = MBSR (n = 45) C = CBT (n = 60)	I = MBSR - 10 weekly 1.5 h group sessions - One 3 h onsite mindfulness retreat in week 7 served as the treatment session of that week C = Group-based CBT - 10 weekly 1.5 h group sessions	USA Veterans satisfy the DSM-IV diagnosis of heterogeneous anxiety disorders including panic disorder with or without agoraphobia (PD/A), generalized anxiety disorder (GAD), social anxiety disorder (SAD), specific phobia (SP), obsessive-compulsive disorder (OCD) or	Anxiety disorder diagnosis: - PSWQ-16 - Principal CSR	Depressive symptoms severity: - BDI-II Arousal symptoms: - MASQ-Anxious Arousal

Authors (Year)	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment session, treatment duration, treatment frequency, group size	Country Population Mean age (SD)2 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
					civilian posttraumatic stress disorder (PTSD) Mean age: MBSR = 46.48 [14.45] CBT = 45.50 [13.21] Female gender: MBSR = 21% CBT = 14%		
This randomised controlled trial compared an adapted mindfulness-based stress reduction with cognitive behavioural therapy for the group treatment of 105 veterans with one or more anxiety disorders (PD, GAD, SAD, PTSD, SP and OCD). Veterans were recruited from an outpatient VA Healthcare System Medical Centre specialise in treatment of anxiety disorders. The results indicate both groups showed large and equivalent improvements on principal disorder severity through 3-month follow up ($p < 0.001$, $d = -4.08$ for adapted MBSR; $d = -3.52$ for CBT). For anxious arousal outcomes at follow up, CBGT group showed better performance than the MBSR group ($p < 0.01$, $d = 0.49$), whereas adapted MBSR reduced worry at a greater rate than CBGT ($p < 0.05$, $d = 0.64$). For the secondary outcome, no between-group difference for depressive symptoms were observed at a statistically significant level. No adverse effects were reported. The study recruited a particularly complex patient population which meant that attrition rates were high, and only about half of patients completed an adequate dose of treatment (defined as 70% or 10.5h). The sample size is respectable, but somewhat underpowered to detect group differences of medium effect size, and this was exacerbated by attrition. In addition, the sample is relatively diverse, consisting of patients suffering from a spectrum of anxiety disorders, which represents a limitation to distinguishing the effects on a specific disorder.							
Goldin, Morrison, Jazaieri, Brozovich, Heimberg, Gross (2016)	Three-arm RCT	N = 108	I = MBSR (n = 36) C = Cognitive-based group therapy (CBGT) (n = 36) C = WL (n = 36)	I = MBSR - 12 weekly 2.5 h sessions - Modified so that the 1-day meditation retreat was converted to four additional weekly group sessions between the standard Class 6 and 7 C = CBGT was delivered by two doctoral clinical psychologists	USA Patients met DSM-IV-TR criteria for a principal diagnosis of generalised SAD Mean age: CBGT = 34.1 [8.0] MBSR = 29.9 [7.6] WL = 34.1 [7.8] Female gender:	Social anxiety symptoms severity: - LSAS-SR	N/R

Authors (Year)	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment session, treatment duration, treatment frequency, group size	Country Population Mean age (SD)2 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
				- 12 sessions of 2.5 h each (total time= 30 h) - Groups size = 6	CBGT = 56% MBSR = 56% WL = 56%		
This randomised controlled trial investigated treatment outcomes for cognitive behavioural group therapy (CGGT) versus mindfulness-based stress reduction (MBSR) versus WL in patients with generalised social anxiety disorder (SAD). Patients were recruited through clinician referrals and community listings. Unmedicated patients (N = 108) meeting DSM-IV-TR criteria for a principal diagnosis of generalised SAD were included, and subsequently randomised to CBGT, MBSR or WL. Assessments were completed at baseline, post-treatment/WL, and at 1-year follow-up. Both CBGT and MBSR yielded improvements in social anxiety symptoms ($p < 0.001$), with greatest reduction of social anxiety symptoms measured by LSAS-SR observed in the CBGT group, with 48% change from baseline level. The MBSR group showed 40% reduction of social anxiety symptoms from baseline. However, there was no significant difference for CBGT versus MBSR ($p = 0.18$), indicating similar treatment efficacy. In addition, the study looked at whether there was equivalent maintenance of reduced social anxiety symptoms from immediately after treatment to 1-year post treatment. Results indicated no significant differences ($p = 0.11$), suggesting similar sustained clinical improvement during the 1-year follow-up period between CBGT and MBSR groups. No adverse events were reported. Dropout from treatment was low and did not differ between the three arms (CBGT: 6%; MBSR: 8%; WL: 3%). Limitations included self-reported measures which can introduce reporting bias.							
Hoge, Bui, Marques, Metcalf, Morris, Robinaugh, Worthington, Pollack, Simon (2013)	RCT	N = 93	I = MBSR (n = 48) C = Stress Management Education (SME) (n = 45)	All participants were given the 'Trier Social Stress Test' before and at the end of the trial. TSST consists of an 8-minute public speaking task and a subsequent 5-minute mental arithmetic task (serial subtraction) performed in front of two strangers I = MBSR - 8 weekly 2 h group classes - A single 4 h weekend 'retreat' day - Daily 20 minutes home practice guided by audio recordings C = SME course was designed as an active control, for comparison	USA Patients with DSM-IV criteria for current primary GAD and designated GAD as the primary problem Mean age: MBSR = 41 [14] SME = 37 [12] Female gender: MBSR = 48% SME = 54%	Anxiety symptoms severity: - HAM-A - CGI-S & CGI-I - BAI	Stress reactivity: - STAI

Authors (Year)	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment session, treatment duration, treatment frequency, group size	Country Population Mean age (SD)2 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
				with MBSR, and did not contain any mindfulness components - 8 weekly 2 h group classes - A single 4 h weekend "Special Class" - Daily 20 minutes home practice guided by audio recordings			
This randomised controlled trial compared the manualised Mindfulness-Based Stress Reduction (MBSR) program with Stress Management Education in 93 patients with a diagnosis for GAD based on DSM-IV. Anxiety symptoms were measured with the Hamilton Anxiety Scale (HAM-A, primary outcome measure), the Clinical Global Impression of Severity and Improvement (CGI-S and CGI-I), and the Beck Anxiety Inventory (BAI). Stress reactivity was assessed by comparing anxiety and distress during pre- and post-treatment Trier Social Stress Tests (TSST). Participants were recruited by referral and media advertisement. A modified intent-to-treat analysis including participants who completed at least one session of MBSR (N = 48) or SME (N = 41) showed that both interventions led to significant reductions in HAM-A scores at endpoint (p <0.0001), but did not significantly differ from each other. MBSR, however, was associated with a significantly greater reduction in anxiety as measured by the CGI-S, the CGI-I, and the BAI (all Ps <0.05). MBSR was also associated with greater reductions than SME in anxiety and distress ratings in response to the TSST stress challenge (P <0.05), and a greater increase in positive self-statements (P = 0.004). One participant in the MBSR group reported muscle soreness and one participant in the SME group reported sleep disruption as adverse events.							
Kocovski, Fleming, Hawley, Huta, Antony (2013)	RCT	N = 137	I = mindfulness and acceptance-based group therapy (MAGT) (n = 53) C = cognitive behavioural group therapy (CBGT) (n = 53) C = WL (n = 31)	I = MAGT - 7 sessions, each starting with a mindfulness exercise (lasting approx. 15 minutes) followed by inquiry - Homework was reviewed after the mindfulness exercise and consisted of mindfulness exercises C = CBGT	Canada Patients with a principal diagnosis of SAD, Generalised using DSM-IV-TR Mean age: MAGT = 34.94 [12.52] CBGT = 32.66 [9.07] WL = 36.55 [11.58] Female gender:	Social anxiety symptom severity: - SPIN - LSAS	Depressive symptoms severity: - BDI Mindfulness: - FMI

Authors (Year)	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment session, treatment duration, treatment frequency, group size	Country Population Mean age (SD)2 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
				- First two sessions in CBGT focused on an introduction to the CBT model and cognitive restructuring - Sessions 3 to 11 focused on in-session exposures (using an extinction rationale) with cognitive restructuring prior to each exposure and cognitive debriefing afterwards - Homework, consisting of exposures and cognitive restructuring, was reviewed and set each week In both CBGT and MAGT, session 12 and the briefer follow-up session focused on review and planning	MAGT = 49 % CBGT = 53% WL = 65%		
This randomised controlled trial compared mindfulness and acceptance-based group therapy (MAGT) with cognitive behavioural group therapy (CBGT) in a group of individuals diagnosed with SAD. Participants were recruited via advertisements in local Newspapers, letters sent to physicians informing them of the study, and flyers posted in clinics and other public places. The primary outcome was social anxiety symptom severity assessed at baseline, treatment midpoint, treatment completion, and 3-month follow-up. MAGT and CBGT were both more effective than the WL group ($p < 0.001$) but did not significantly differ from one another on social anxiety reduction and most other variables assessed. No adverse effects were reported. Dropout rate was high (include percentage/rate of dropout) and commonly the reason for exiting the study was time commitment. Much of the data presented in the study relied on self-report, and therefore increased the risk of reporting bias. There was significant attrition (30% for MAGT, 40% for CBGT), and the follow-up data may have been particularly affected by attrition bias with only around half of patients providing follow-up data.							
Wong, Yip, Mak, Mercer, Cheung, Ling, Lui, Tang, Lo, Wu, Lee, Gao,	Three-arm RCT	N = 182	I = MBCT (n = 61) C = Psychoeducation (n = 61)	I = MBCT - 8 weekly 2 h group session - Modification included discussing the cognitive-behavioural model of GAD,	Hong Kong Patients with a DSM-IV principal diagnosis of GAD on a SCID and a score of 19 or above using	Anxiety symptoms severity: - BAI (Chinese version)	Depressive symptoms severity: - CES-D (Chinese version)

Authors (Year)	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment session, treatment duration, treatment frequency, group size	Country Population Mean age (SD)2 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
Griffiths, Chan, Ma (2016)			C = TAU (n = 60)	automatic anxiety thoughts, reactive–avoidance and ruminative worrying and the development of an action plan in line with personal values and relapse prevention of anxiety - Group size = 15 C = Psychoeducation - 8 weekly 2 h group session - With didactic teaching and minimal group interaction and discussion - Group size = 15 C = TAU Participants did not receive any specific intervention but allowed unrestricted access to primary care services	the Chinese version of BAI at baseline Mean age: MBCT = 50.40 [9.95] Psychoeducation = 50.79 [9.57] TAU = 48.78 [10.59] Female gender: MBCT = 79% Psychoeducation = 79% TAU = 80%		Health-related quality of life: - MCS-12 - PCS-12

This RCT compared changes in anxiety levels among participants with GAD who were randomly assigned to MBCT, cognitive-behavioural therapy-based psychoeducation and usual care. Participants with GAD were assigned to the three groups and followed for 5 months after baseline assessment with the two intervention groups followed for an additional 6 months. Primary outcomes were anxiety levels. All participants were recruited from: (a) advertisements placed in the health education columns of local newspapers; (b) public general practice or family medicine clinics; and (c) non-governmental organisations and community centres that cater for people with chronic conditions.

The results from BAI indicated significant decreases from baseline in both MBCT and psychoeducation groups at both 2-months and 5-months follow-up ($F(4,148) = 5.10$, $p = 0.001$), but no significant relative change between MBCT and Psychoeducation groups. For secondary outcomes, significant group differences were seen for CES-D and MCS-12 scales between the psychoeducation and usual care groups at 2- and 5-months after baseline assessment. No significant group differences were observed between the MBCT and TAU groups or the MBCT and psychoeducation groups at these time points. In addition, no significant group differences in these outcomes between MBCT and psychoeducation groups at 8 and 11 months.

Limitations include much lower adherence for MBCT group than the psychoeducation group. The outcome measures were based on self-reported questionnaires, and no clinician-rated instruments or diagnostic interviews were used at follow-up. As a result, it is unknown whether the improvements in anxiety symptoms led to clinical remission of GAD. In addition, participants had at least moderate

Authors (Year)	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment session, treatment duration, treatment frequency, group size	Country Population Mean age (SD)2 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
levels of generalised anxiety symptoms at the time of recruitment based on validated self-reported questionnaires, and the majority of the participants were recruited via advertisements. As a result, the results may not be generalisable to patients who experience a milder degree of anxiety symptoms or to all patients in clinical settings. There may also have been a selection bias of recruited participants being more motivated when compared with those patients seen in clinics.							
Individual mindfulness for anxiety							
No studies identified							
Mindfulness for combined depression and anxiety							
Group-based mindfulness for combined depression and anxiety							
Sundquist, Lilja, Palmer, Memon, Wang, Johansson, Sundquist (2015)	RCT	N = 215	I = Mindfulness group therapy (n = 110) C = TAU = Pharmacological treatment and psychotherapy or counselling (76% of control received CBT) (n = 105)	I = Mindfulness group therapy, a combination of MBSR and MBCT - 8 weekly 2 h group sessions - Home mindfulness practice for 20 min/day using a compact disc, a training manual and a diary C = The control group received TAU, which sometimes included pharmacological treatment and in most cases also psychotherapy or counselling. 76% of patients in the control group received CBT. The average number of individual CBT sessions was six	Sweden Patients newly diagnosed with psychiatric disorders based on ICD-10 diagnostic criteria or those who had a history of psychiatric disorders who sought treatment Mean age: Mindfulness = 42 [11] TAU = 41 [11] Female gender: Mindfulness = 81% TAU = 90%	Depressive symptoms severity: - MADRS-S - HADS-D - PHQ-9 Anxiety symptoms severity: - HADS-A	N/R
This study explored the efficacy of MBCT versus TAU (mostly individual CBT) in terms of reducing depression and anxiety symptoms. The sample was heterogeneous, consisting of 215 individuals suffering from depression, anxiety, stress and adjustment disorders recruited from 16 primary care clinics in South Sweden. Comparing pre- and post-treatment data, both MBCT and TAU groups							

Authors (Year)	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment session, treatment duration, treatment frequency, group size	Country Population Mean age (SD)2 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
exhibited significant reduction in depression and anxiety symptom severity (p<0.001), however, the results did not significantly differ from each other between groups (MDRS-S: OR = 1.04, 95% CI [0.49-2.22], p = 0.92; HADS-D: OR = 0.59, 95% CI [0.28-1.25], p = 0.17; HADS-A: OR = 0.83, 95% CI [0.39-1.75], p = 0.62; PHQ-9: OR = 0.75, 95% CI [0.35-1.59], p = 0.45). No adverse events were reported. Limitations included that all measures were self-report measures, which introduced a risk of reporting bias. The study sample was a very heterogeneous group with a mix of patients with depression, anxiety, stress and adjustment disorders, and therefore it was difficult to determine the effect of the mindfulness intervention on specific types of disorder.							
Individual mindfulness for combined depression and anxiety							
No studies identified							
Mindfulness for AUD							
Group-based mindfulness for AUD							
Garland, Roberts-Lewis, Tronnier, Graves, Kelley (2016)	Three-arm RCT	N = 180	I = Mindfulness-Oriented Recovery Enhancement (MORE) (n = 64) C = CBT (n = 64) C = TAU (n = 52)	I = MORE - 10 session adapted as a treatment for alcohol dependence from MBCT - 15 minutes per day C = CBT - 10 group 2 h sessions - Participants were asked to do daily homework C = TAU - TAU in the modified therapeutic community consisted of: participation in a therapeutic milieu	USA Patients with co-occurring substance use and psychiatric disorders, defined by the DSM-IV Mean age: MORE = 37.7 [10.4] CBT = 36.5 [11.2] TAU = 38.7 [9.8] Female gender: 0%	Alcohol craving: - PACS	PTSD symptoms severity: - 17-item PTSD Checklist-Civilian version (PCL-C) Depression and anxiety severity: - Subscales of BSI

Authors (Year)	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment session, treatment duration, treatment frequency, group size	Country Population Mean age (SD)2 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
				- psychoeducation on topics related to addiction; client-centred, supportive-expressive group therapy and coping skills group			
This randomised controlled trial consisted of three arms, compared Mindfulness-Oriented Recovery Enhancement (MORE) to group-based Cognitive-Behavioural Therapy (CBT) and TAU. The study participants were recruited from a modified therapeutic community in an urban area. Men with co-occurring substance use and psychiatric disorders, as well as extensive trauma histories were included. In the study sample, 47% of the participants had alcohol dependence. The study results indicated improvements in substance craving (p = 0.03), post-traumatic stress (p = 0.04), and negative affect (p = 0.04) in the MORE group when compared to CBT; however, depression and anxiety outcome measures using BSI did not exhibit any statistical significance between the two groups. Limitations included a lack of biochemical measures of abstinence, these types of measures may be better at measuring abstinence than self-report measures, which may increase the risk of reporting bias. Another limitation was that less than half of the sample had alcohol dependence, therefore the effects of mindfulness on treating AUD specifically cannot be determined.							
Garland, Gaylord, Boettiger, Howard (2010)	RCT	N = 53	I = MORE (n = 27) C = Alcohol Support Group (ASG) (n = 26)	I = MORE - 10 session adapted as a treatment for alcohol dependence from MBCT - 15 minutes per day C = ASG - 10 session consisted of social support groups derived from the active, evidence-based treatment condition outlined in the Matrix Model intensive outpatient treatment manual	USA Patients who met lifetime DSM-IV for alcohol dependence Mean age: MORE = 39.9 [8.7] ASG = 40.7 [10.2] Female Gender: MORE = 19% ASG = 23%	Psychosocial factors related to alcohol dependence: - BSI - IRISA - WBSI Stress: - PSS-10	Mindfulness: - FFMQ
This randomised controlled trial recruited 53 alcohol-dependent adults recruited from a modified therapeutic community in an urban area. The study participants were randomised to mindfulness training (MORE) or a support group (ASG). 37 participants completed the interventions.							

Authors (Year)	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment session, treatment duration, treatment frequency, group size	Country Population Mean age (SD)2 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
Outcome measures were taken before the intervention and 10 weeks post-intervention. The results indicated both MORE and ASG led to significant reductions in perceived stress over time (F (1, 35) = 18.11, p <0.001). MORE led to significantly larger decreases in perceived stress (mean difference = 3.3, 95% CI [3.09- 3.51], p = 0.03) and thought suppression (mean difference = 6.1, 95% CI [5.77-6.43], p = 0.04) over the 10-week period than ASG. The results also indicated increased physiological recovery from alcohol cues, and modulated alcohol attentional bias among the MORE participants. Limitations of the study included a small sample size which therefore limited the statistical power and generalisability. Another notable limitation was that self-report measures were administered through face-to-face interviews, which may have led to social desirability bias in self-reported outcomes.							
Zgierska, Shapiro, Burzinski, Lerner, Goodman-Strenski (2017)	Parallel RCT	N = 123	I = Mindfulness-Based Relapse Prevention for Alcohol (MBRP-A) (n = 64) C = TAU (n = 59)	I = MBRP-A - 8 weekly, therapist-led, manual-driven 2 h group sessions - Participants were asked to practice Mindfulness Meditation at home throughout the 26-week study C = TAU=Typically included motivational enhancement, relapse prevention, and 12-step facilitation strategies	USA Adult patients with a SCID-confirmed diagnosis of alcohol dependence in an early remission Mean age: 41.2 [11.9] Female gender: 43%	Alcohol problem: - Self-reported helpfulness of the program for alcohol problem	N/R
This parallel randomised controlled trial investigated the effectiveness of a mindfulness-based relapse prevention for alcohol intervention compared to TAU on self-report alcohol problem severity in 123 alcohol dependent adults. Participants were alcohol dependent adults in early recovery recruited from eight local addiction treatment centres. The participants were randomised into receiving either MBRP-A, or continued their treatment as usual, which typically include motivational enhancement, relapse prevention, and 12-step facilitation strategies. Overall change in alcohol problem at the 8-week follow-up in the intervention group reported a mean score of 5.8 [SD=0.9] (On a 1-7 Likert Scale, with 1=very much worse, 7=very much improved), indicating that their “alcohol problem” improved since their study enrolment and rating the intervention as helpful for their “alcohol problem” (1.7 [SD=0.7]; 1-5 Likert scale, with 1=very helpful, 5=not helpful and has made things worse). No comparison was made to the TAU comparison group. In addition, the outcome measure has not been validated in other studies, and the outcomes were not based on clinical assessments.							
Individual mindfulness for AUD							
No studies identified							

N.B:

BAI = Beck Anxiety Inventory; BDI = Beck Depression Inventory; BSI = Brief Symptom Inventory; CAPS = Clinician-Administered PTSD Scale; CEDS = the Center for Epidemiologic Studies Depression Scale; CGI-S = Clinical Global Impression of Severity and Improvement; DSM-IV = Diagnostic and Statistical Manual of Mental Disorders 4th Edition; FMI = 14-item Freiburg Mindfulness Inventory; GAD-7 = Generalized Anxiety Disorder-7 scale; HAM-A = Hamilton Anxiety Rating Scale; HAM-D17 = 17-item Hamilton Depression Rating Scale; IRISA = Impaired Alcohol Response Inhibition Scale; LSAS = 24-item Liebowitz Social Anxiety Scale; mADM = maintenance antidepressant medication; MBCT = Mindfulness-Based Cognitive Therapy; MBSR = Mindfulness-Based Stress Reduction; MCS-12 = the Mental Component Summary; N/A = Not Available; N/R = Not Reported; PACS = Penn Alcohol Craving Scale; PCGT = Present Centred group therapy; PCL = PTSD Checklist; PCL-C = PTSD Checklist – Civilian; PCL-M = PTSD Checklist – Military; PCL-S = PTSD Checklist - Specific; PCS-12 = Physical Component Summary; PHQ = Patient Health Questionnaire; PSS-10 = The 10-item Perceived Stress Scale; PSWQ = Penn State Worry Questionnaire; SCID = Structured Clinical Interview for DSM-IV; SCL-90 = Symptom Distress Checklist; SF-36 = Short Form Health Survey 36-item; SPIN = Social Phobia Inventory; STAI = State-Trait Anxiety Inventory; TAU = Treatment as Usual; TSST = Trier Social Stress Tests; QOLI = Quality of Life Inventory; WBSI = White Bear Suppression Inventory; WHO-5 = The Well-Being Index; WHOQoL-BREF = World Health Organization Quality of Life –BREF

Evidence profile: Adjunct meditation, yoga and mindfulness treatments

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)3 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
ADJUNCT MEDITATION AND TRANSCENDENTAL MEDITATION							
Adjunct meditation for PTSD							
No studies identified							
Adjunct meditation for depression							
No studies identified							
Adjunct meditation for anxiety							
No studies identified							
Adjunct meditation for AUD							
No studies identified							
ADJUNCT YOGA							
Adjunct group yoga for PTSD (compared to active comparison)							
van der Kolk, Stone, West, Rhodes, Emerson,	RCT	N = 64	I = Trauma-informed yoga + psychopharmacologic treatment (supportive therapy, pharmacologic	I = Protocolised trauma-informed yoga intervention incorporating the central elements of Hatha	USA Women with chronic, treatment-resistant PTSD	PTSD symptom severity: - CAPS	Depressive symptom severity: - BDI-II

[3] Mean age and SD is given when provided, alternatively age range is provided

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)3 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
Suvak, & Spinazzola (2014)			treatment) (n = 32) C = Supportive women's health education + Psychopharmacologic treatment (supportive therapy, pharmacologic treatment) (n = 32)	yoga including breathing, posture and meditation - 10 weekly 1 hr group classes C = Women's health education focused on active participation and support - 10 weekly 1 hr group classes	based on CAPS score (if greater than 45). Chronicity was based on meeting criteria for PTSD in relation to an index trauma that occurred at least 12 years prior to intake. Mean age: Yoga = 41.5 [12.2] Control = 44.3 [11.9] Female gender: 100%	- DTS	

This study assessed the efficacy of trauma-informed yoga adjunct to psychopharmacologic treatment versus supportive women's health education adjunct to psychopharmacologic treatment on chronic, treatment-resistant PTSD in women. The participants were recruited via newspaper and radio ads, website, and solicitation from mental health professionals. The study randomly assigned 64 women with chronic, treatment-resistant PTSD to receiving trauma-informed yoga or supportive women's health education interventions, with primary outcome of interest being change in PTSD symptom severity measured by CAPS. Depressive symptom severity measured by BDI-II were secondary outcomes in this study.

Assessments were conducted at pre-treatment, mid-treatment and post-treatment. For primary outcome measure, both groups exhibited significant decreases on the CAPS score, with the decrease falling in the large effect size range for the yoga group (d = 1.07) and the medium to large effect size decrease for the comparison group (d = 0.66). Both groups exhibited significant decrease in PTSD symptoms measured by DTS during the first half of the treatment from pre-treatment to mid-treatment assessment (yoga: p = 0.02; d = -0.37, comparison: p = 0.001; d = -0.54), with the improvements maintained in the yoga group, while the comparison group relapsed after its initial improvement. For secondary outcome, the BDI-II scores decreased significantly in both groups, with the yoga group showing a medium effect size decrease (d = -0.60) and the comparison condition exhibiting a small to medium effect size decrease (d = -0.39). However, the differences between the two groups were not statistically significant.

No adverse events were reported. The study sample consisted only of treatment-resistant adult women with chronic PTSD secondary to interpersonal assaults that started in childhood, limiting the generalisability of findings.

Adjunct individual yoga for PTSD

No studies identified

Adjunct group yoga for depression (compared to active comparison)

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)3 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
Sarubin, Nothdurfter, Schule, Lieb, Uhr, Born et al. (2014)	RCT	N = 53	I = Hatha Yoga + atypical antipsychotic drug with antidepressant properties (Quetiapine fumarate extended release (QXR) or Escitalopram (ESC)) (n = 22) C = Atypical antipsychotic drug with antidepressant properties only (Quetiapine fumarate extended release (QXR) or Escitalopram (ESC)) (n = 31)	I = Hatha yoga + antipsychotic drug - 5 weeks with either QXR (300mg/day) or ESC (10mg/day) plus Hatha yoga (60 min/week) - Maximum group size = 15 C = antipsychotic drug only - 5 weeks with either QXR (300mg/day) or ESC (10mg/day)	Germany In-patients suffering from MDD according to DSM-IV Mean age: Yoga = 37.27 [11.85] Control = 42.36 [12.85] Female gender: Yoga = 36% Control = 23%	Depressive symptom severity: - 21-HAMD	N/R
This RCT evaluated the effectiveness of Hatha yoga as an add-on treatment to atypical antipsychotic drugs in a group of patients suffering from MDD. In-patients suffering from MDD (n = 53) were randomised to a 5-week treatment with yoga in addition to their medication (either QXR or ESC) or continuing their medication only without receiving any yoga intervention. The 21-HAMD was used weekly to measure the change in depressive symptom severity. There were no baseline differences between the two groups for 21-HAMD total score (p=0.46). A statistically significant reduction in depressive symptoms as measured by 21-HAMD after five weeks of treatment compared to baseline was observed in both groups. When comparing the two groups at follow-up, there was no statistically significant group effect (F=0.003; p=0.935). No adverse events were reported. The study was limited by a small sample size and an unequal number of participants in the intervention and comparison arms.							
Sharma, Barrett, Cucchiara, Gooneratne, & Thase (2017)	Randomised pilot study	N = 25	I = Sudarshan Kriya Yoga (SKY) + antidepressant (n = 13) C = WL + antidepressant (n = 12)	I = The SKY yoga intervention consisted of two phases of a manualised, group program featuring a breathing-based meditative technique. SKY includes a series of sequential, rhythm-specific breathing exercises that bring practitioners into a restful, meditative state.	USA Outpatients with MDD (defined by DSM-IV-TR), with ≥8 weeks of stable dose of antidepressant treatment and total scores ≥14 on the HDRS-17 Mean age:	Depressive symptom severity: - HDRS-17	Depressive symptom severity: - BDI Anxiety symptom severity: - BAI

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)3 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
				- During the first phase, participants need to complete six-session SKY program for 3.5 hours per day - During the second phase, participants attended weekly SKY follow-up sessions for 1.5 hours per session - Participants were also asked to complete a home practice version of SKY (20-25 minutes per day) C = Participants maintained their antidepressant dose and were offered the yoga intervention after completing the study	SKY = 39.4 [13.9] WL = 34.8 [13.6] Female gender: SKY = 69% WL = 75%		
A randomised pilot study evaluated the efficacy of Sudarshan Kriya Yoga (SKY) as an adjunct intervention in patients with major depressive disorder (MDD). Outpatient with MDD (defined by DSM-IV-TR) despite ≥8 weeks of antidepressant treatment were randomized to SKY or a WL (delayed yoga) arm for 8 weeks. Results from the ITT sample (N=25), indicated that the SKY group showed a greater improvement in HDRS-17 total score compared to the WL from baseline to 2 months follow-up (-9.77 vs 0.50, p = 0.0032). For secondary outcomes, the SKY group also showed greater reduction in BDI total score compared to the waitlist condition at 2 months follow-up (-17.23 v.s. -1.75, p = 0.0101). In addition, mean changes in BAI total score were significantly greater for SKY than waitlist at 2-months follow-up (-5.19, 95% CI -9.34 to -0.93, p = 0.0097). No adverse events were reported. The statistical power of the study was limited by a small sample size. The study sample was a group of treatment-resistant MDD patients suffering from a severe form of depression, therefore limiting the generalisability of results.							
Uebelacker, Tremont, Gillette, Epstein-Lubow, Strong,	RCT	N = 122	I = Hatha yoga + antidepressant medication (n = 63) C = Healthy living workshop +	I = Hatha yoga - Manualised program	USA Individuals with elevated depression symptoms who met criteria for MDD based on SCID; and currently taking	Depressive symptom severity: - QIDS	Depressive symptom severity: - PHQ-9

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)3 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
Abrantes et al. (2017)			antidepressant medication (n = 59)	- Introductory individual meeting with yoga instructor (20-30 mins) - Two group yoga classes offered per week, with the expectation for participants to attend at least one class per week with the option of attending two per week - 10 weeks of 80-minute yoga classes C = Health Living Workshop (HLW) - Group HLW used detailed manual - Initial individual orientation, meeting with instructor - Participants were invited to attend at least one and up to two HLW class - 10 weeks of 60-minute HLW classes in total	antidepressant at maintained dose with demonstrated effectiveness according to American Psychiatric Association practice guidelines Mean age: Yoga = 46.78 [12.27] Control = 47.2 [12.13] Female gender: Yoga = 86% Control = 83%		Wellbeing: - SF-20
The RCT examined the effectiveness of weekly yoga classes versus HLW in individuals with elevated depression symptoms who were currently using antidepressant medication. Follow up assessments took place 3 and 6 months after the intervention. The primary outcome was depression symptom severity, at post-treatment, no statistical significant difference between groups in depression symptoms was observed (b=-0.82, p=0.36). Over the entire intervention and at 3-month and 6-month follow up, when controlling for baseline, the yoga group showed lower levels of depression than the HLW group (b=-1.38, p=0.02). At 6-month follow-up, 51% of yoga participants demonstrated a greater than 50% reduction in depression symptoms, compared to 31% of HLW participants (OR=2.31; p=0.04).							

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)3 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
Although there was no significant differences in depression symptoms at the end of the intervention period, yoga participants showed fewer depression symptoms over the entire follow-up period, suggesting that the benefits of yoga may accumulate over time. No serious adverse events related to the study procedures were reported. The study sample was predominantly female and white, this may limit the generalisability of the study findings.							
Adjunct group yoga for depression (compared to non-active comparison)							
Niemi, Kiel, Allebeck, & Hoan (2016)	Cluster-randomised controlled trial	N = 56	I = Yoga + Psychoeducation (n = 34) C = TAU (n = 22)	I = The yoga course lasted 8 weeks with one session per week, using the MANAS manual in a group setting. The yoga course include some components derived from Qigong. Patients also received 8-week course of psychoeducation in a group setting C = Provided with TAU	Vietnam Patients classified as moderately and severely depressed through the PHQ-9 questionnaire (PHQ-9 score >9), were also diagnosed by trained general doctor according to the ICD-10 and DSM-IV criteria using MINI Median age (Age range): Yoga = 63 (56-69.5) Control = 64.5 (58-69) Female gender: Yoga = 38% Control = 50%	Depressive symptom severity: - PHQ-9	N/R
This cluster-randomised controlled trial evaluated the effectiveness of a community-based intervention including psychoeducation and yoga for depression management at the primary healthcare level in one district in Ha Nam province in Vietnam. The study participants were recruited from 21 community health centres and a district hospital, using a cluster randomisation, with 10 communes randomised to the intervention group and 11 communes randomised to comparison group. Eligible participants were classified as moderately and severely depressed through the PHQ-9 questionnaire (PHQ-9 score >9), and were also diagnosed by trained doctor according to the ICD-10 and DSM-IV criteria using MINI. Both groups had similar PHQ-9 scores at baseline (p = 0.91). The intervention group had on average significantly lower PHQ-9 scores after the intervention than the comparison group (p <0.001) at post-treatment. Almost half of the patients in the intervention group recovered from depression (43%), whereas no one from the comparison group had lost their depression diagnosis as measured by PHQ-9 (0%) after 8 weeks of treatment.							

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)3 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
No adverse events were reported. The study had a relatively small sample size and hence may be underpowered. The weak randomisation procedure resulted in an unequal number of participants in the intervention and comparison arms. In addition, there was only a single outcome measure (PHQ-9), potentially reducing the reliability of the findings.							
Adjunct individual yoga for depression							
No studies identified							
Adjunct group yoga for anxiety							
No studies identified							
Adjunct individual yoga for anxiety							
No studies identified							
Adjunct group yoga for depression and anxiety							
No studies identified							
Adjunct individual yoga for depression and anxiety							
No studies identified							
Adjunct group yoga for AUD (compared to active comparison)							
Hallgren, Romberg, Bakshi, & Andreasson (2014)	Pilot RCT, feasibility study	N = 18	I = Yoga plus TAU (n = 9) C = TAU (n = 9)	I = Yoga classes combined breathing techniques, yoga postures (light physical exercise), meditation, and deep relaxation.	Sweden Participants were diagnosed with AD according to the DSM-IV criteria	Alcohol consumption: - Timeline follow-back (TLFB) method Alcohol dependence:	Depression and anxiety: - HADS Health related quality of life:

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)3 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
				- 10 weekly group yoga sessions (1.5 hours each) - Participants were also encouraged to practice yoga at home once per day - In addition to yoga, participants also received standard treatment which typically include psychotherapeutic interventions (CBT and/or motivational interviewing) with appropriate pharmacological interventions C = TAU = Psychological and pharmacological interventions for alcohol dependence. These were individual counselling sessions with a CBT and/or motivational interviewing focus, typically one hour per week conducted with a medical doctor or psychologist, and the prescription of medication for alcohol dependence (AD) as required	Age and gender information were not reported, however the inclusion criteria included being over 18 years of age, and both males and females were invited to participate	- DSM-IV criteria for alcohol dependence - SADD	- SDS Stress: - PSS - Saliva cortisol
This study examined the adjunct use of 10 weeks of yoga with TAU for changes in alcohol consumption, affective symptoms, quality of life, and stress. Alcohol-dependent participants were recruited from an outpatient alcohol treatment clinic in Stockholm, Sweden. Assessments were taken at baseline and six-month follow-up. Two participants withdrew from the treatment for personal reasons, and two additional participants could not be reached for follow-up. Therefore the analyses included 14 participants (eight TAU plus yoga, and six TAU alone). Both groups improved from baseline to six-month follow-up on all measures, however improvements were not							

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)3 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
significantly different between the groups (All Ps >0.10). This suggests that adding yoga to TAU was no more effective in reducing alcohol consumption, alcohol dependence, and stress, and improving mood and quality of life, than TAU alone. The study suffered from limited statistical power due to a very small sample size.							
ADJUNCT MINDFULNESS							
Adjunct group mindfulness for PTSD (compared to active comparison)							
Jasbi, Sadeghi Bahmani, Karami, Omidbeygi, Peyravi, Panahi, Mirzaee, Holsboer-Trachsler, Brand (2018)	RCT	N = 48	I = MBCT + medication treatment with SSRI (Citalopram) (n = 24) C = Socio-Therapeutic Events (STE) + medication treatment with SSRI (Citalopram) (n = 24)	I = MBCT - Eight weekly group sessions lasting for 60-70 minutes - Group size = 7-12 C = Socio-therapeutic group events - Eight weekly socio-therapeutic group events such as sharing their daily life experiences, playing board games, undertaking short trips in the immediate countryside, checking medication adherence and checking blood pressure - Socio-therapeutic group events lasted between 70 minutes to 3 hours - Group size = 6-12 Standard treatment for all patients consisted of citalopram (30-50 mg/day at therapeutic dosages)	Iran Outpatient military veterans diagnosed with PTSD based on DSM-5; and PTSD is due to war experience during the Iraq-Iran war Mean age: MBCT = 53.03 [2.45] STE = 52.91 [2.91] Female gender: 0%	PTSD symptom severity: - PCL-5	Symptoms of depression, anxiety and stress: - DASS

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)3 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
This RCT explored the effectiveness of MBCT vs socio-therapeutic events as an add-on to standard treatment with citalopram. 48 male outpatient military veterans diagnosed with PTSD were recruited from a psychiatric hospital in Tehran in Iran. Assessments were taken at pre- and post-treatment. The primary outcome of the study was PTSD symptom severity using the PCL-5, reporting on four subscales; re-experiencing, avoidance, negative mood and cognition, and hyperarousal. The study results indicated PTSD symptom severity measured by PCL-5 was lowered when compared to baseline in both treatment conditions, with the MBCT group exhibiting greater mean differences from pre- to post-treatment than the comparison group (All ps <0.01 for all PCL-5 subscales). Measures of depression, anxiety and stress yielded similar results, with both treatments arms showing reduction in DASS scores at post-treatment compared to baseline (All ps <0.01 for all DASS subscales), but the MBCT group had a greater effect size than the comparison group. At post-treatment, comparing the intervention to the comparison, all PCL-5 subscales exhibited large effect sizes (Re-experiencing the events: d = 1.70; Negative mood and cognitive: d = 4.21; hyperarousal: d = 2.56), with the exception of avoidance subscale (d = 0.69), exhibiting only a medium effect size. For the DASS scores, all subscales had a large effect size (depression: d = 2.15; anxiety: d = 1.47; stress: d = 3.26) at post-treatment between the two groups. The data suggest that MBCT is an effective intervention as an adjunct to standard Selective Serotonin reuptake inhibitor (SSRI) medication in reducing symptoms of PTSD, depression, anxiety and stress among veterans. No adverse events were reported. There were several limitations of the study including a relatively small sample size which limited the statistical power. The study participants were all male therefore reducing the generalisability of the results. In addition, all outcome measures relied on self-report entirely, using experts' rating may have made the data more robust. The present study did not collect any follow-up data, and therefore the long-term effectiveness of MBCT as an add-on cannot be determined.							
Adjunct individual mindfulness for PTSD							
No studies identified							
Adjunct group mindfulness for depression (compared to active comparison)							
Eisendrath, Gillung, Delucchi, Segal, Nelson, McInnes, Mathalon, Feldman (2016)	RCT	N = 173	I = MBCT + TAU Pharmacotherapy (n = 87) C = Health-Enhancement Program (HEP) + TAU Pharmacotherapy (n = 86)	I = MBCT with modifications for Treatment Resistant Depression (TRD) - 8 weekly 2.25 h group sessions + 45 minutes homework 6 days per week - Group size = 6-12 C = HEP with modifications for TRD, included discussion on	USA Patients satisfying the DSM-IV diagnostic criteria for unipolar MDD, and taking antidepressant medications with evidence of two or more adequate trials prescribed during the current episode assessed with the Antidepressant Treatment History Form (ATHF)	Depressive symptoms severity: - HAMD17	Depression treatment response and remission: - HAMD17 Mindfulness: - FFMQ

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)3 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
				mood, aerobic exercise, music therapy, dietary education and functional movement - 8 weekly 2.25 h group sessions + 45 minutes homework 6 days per week - Group size = 6-12 Participants in both conditions were asked to continue their antidepressant treatment	Mean age: MBCT = 47.1 [13.46] HEP = 45.2 [11.19] Female gender: MBCT = 76% HEP = 77%		
This single site, RCT compared 8-week courses of MBCT vs Health-Enhancement Program (HEP) as adjuncts to pharmacotherapy. Participants were recruited from outpatient psychiatry and general medicine clinics, an outpatient psychiatry clinic and from the community. At the end of 8-week treatment, a multivariate analysis showed that relative to the HEP condition, the MBCT condition was associated with a significantly greater mean percent reduction on the HAM-D17 (37% versus 25%; p=0.01) and a significantly higher rate of treatment responders (30% versus 15%; p=0.03). Although numerically superior for MBCT than for HEP, the rates of remission did not significantly differ between treatments (22% versus 14%; p=0.15). One limitation of the study included that the two interventions were delivered by two different sets of instructors.							
Huijbers, Spinhoven, Spijker, Ruhe, van Schaik, van Oppen, Nolen, Ormel, Kuyken et. al. (2015)	RCT	N = 68	I = MBCT + mADM (n = 33) C = mADM alone (n = 35)	I = MBCT - 8 weekly 2.5 h group sessions - One day of silent practice between the 6th and 7th session - Participants were encouraged to practise meditation at home for about an hour a day using CDs - Group size = 8-12	Netherlands Patients with DSM-IV history of at least three depressive episodes Mean age: MBCT + mADM = 51.9 [14.4] mADM = 51.6 [14.2] Female gender: MBCT + mADM = 73% mADM = 71%	Depressive relapse/recurrence: - SCID-I	Recurrence and depression severity: - Time to relapse/recurrence Severity of (residual) depressive symptoms: - IDS-C Quality of life: - WHOQoL short version

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)3 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
				C = Continuing their mADM was defined as using a therapeutic dose of mADM at each follow-up contact during the observed time period			
This randomised controlled trial compared the combination of MBCT and maintenance anti-depressant medication (mADM) to mADM alone on depressive relapse and recurrence in a group of recurrently depressed patients in remission. Patients were referred by mental health professionals, general practitioners, or recruited via advertisements in the media (TV, magazines, and newspapers). There were no significant differences in relapse/recurrence rates between the two groups (p=0.95) within the 15 month follow-up period. Results from a survival curve for time to relapse showed that there was no difference in time to relapse/recurrence between the two conditions (HR=0.87, 95% CI 0.40-1.90, p=0.72). The latent growth curve analysis for severity of residual depressive symptoms over the 15-month follow-up period showed that patients maintained mild levels of depression throughout the study period, with the course of depression not significantly different between the conditions (p=0.69). There were no significant differences between the conditions with regard to quality of life. The results were confounded by the increasing availability of MBCT in the Netherlands, almost a quarter of the individuals who were randomised into the comparison condition decided to participate in MBCT course elsewhere outside the trial, thus greatly compromised the ITT analyses.							
Kuyken, Hayes, Barrett, Byng, Dalgleish, Kessler, Lewis, Watkins, Brejcha, Cardy, Causley, Cowderoy, et al. (2015)	RCT	N = 424	I = MBCT with support to taper or discontinue antidepressant treatment (MBCT-TS) (n = 212) C = mADM (n = 212)	I = MBCT-TS - 8 weekly 2.5 h group sessions - 4 refresher sessions offered roughly every 3 months for the following year - Patients in the MBCT-TS group received support to taper or discontinue their maintenance antidepressants C = mADM Patients in the maintenance antidepressant group received support from their GPs to maintain a therapeutic-level of	UK Patients with a diagnosis of recurrent major depressive disorder in full or partial remission according to the DSM-IV, with three or more previous major depressive episodes. Patients were also required to be on a therapeutic dose of maintenance antidepressant drugs in line with the British National Formulary (BNF) and NICE guidance Mean age: MBCT-TS = 50 [12] mADM = 49 [13]	Time to relapse/recurrence of depression: - SCID	Number of depression free days: - SCID Residual depressive symptoms severity: - GRID-HAMD - BDI-21 Quality of life: - WHOQOL-BREF Health-related quality of life: - EQ-5D-3L

Authors & year	Design	Total sample size	Intervention (I) and Comparison (C) and participants for I and C	Number of treatment sessions, treatment duration, treatment frequency, group size	Country Population Mean age (SD)3 Gender (%)	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))
				antidepressant medication for the 2-year follow-up period	Female gender: MBCT-TS = 71% m-ADM = 82%		
This is a single-blind, parallel randomised controlled trial, involving adult patients (N = 424) with three or more previous major depressive episodes who were taking a therapeutic dose of maintenance antidepressants. Participants were recruited from general practices in urban and rural settings in four UK centres. The time to relapse or recurrence of depression did not differ between MBCT-TS and mADM over 24 months (HR = 0.89, 95% CI 0.67–1.18; p=0.43). No significant differences were observed between the two groups in depression-free days, residual depressive symptoms (as measured by the BDI and GRID-HAMD) over the follow-up period. Non-significance for a difference in quality of life between groups (p = 0.07). The study sample consisted of a group of individuals who were currently taking antidepressants and were considered a high risk of depressive relapse or recurrence, therefore the study results may not be generalisable to most people with depression. A total of ten serious adverse events were reported, four of which resulted in death. However the trial steering committee concluded that these adverse events were not attributable to the intervention or the trial.							
Adjunct mindfulness for anxiety							
No studies identified							
Adjunct mindfulness for AUD							
No studies identified							

N.B.:

AD = Alcohol Dependence; ATHF = Antidepressant Treatment History Form; BAI = The Beck Anxiety Inventory; BDI = The Beck Depression Inventory ; BNF = British National Formulary; CAPS = Clinician Administered PTSD Scale; CD-RISC2 = Connor-Davidson Resilience Scale; DASS-21 = Depression Anxiety Stress Scale; DTS = Davidson Trauma Scale; EQ-5D-3L = EuroQol 5 dimensions 3 levels; ESC = Escitalopram; FFMQ = Five Facet Mindfulness Questionnaire; HADS = the Hospital Anxiety and Depression Scale; HAMD-21 = Hamilton Depression Rating Scale (21 items); HEP = Health Enhancement Program; HDRS-17 = Hamilton Rating Scale for Depression; HLW = Healthy Living Workshop; HR = Hazard Ratio; IDS-C = Inventory of Depressive Symptomatology; mADM = Maintenance Anti-depressant medication; MBCT = Mindfulness-Based Cognitive Therapy; MBCT-TS = Mindfulness-Based Cognitive Therapy with support to taper or discontinued antidepressant treatment; MDD = Major Depressive Disorder; NICE = National Institute for Health and Care Excellence; OR = Odds Ratio; PHQ-9 = Patient Health Questionnaire; PSS = Perceived Stress Scale; QIDS = Quick Inventory of Depressive Symptomatology; QXR = Quetiapine fumarate extended release; SADD = Short Alcohol Dependence Data questionnaire; SCID = Structured Clinical Interview for DSM-5; SDS = Sheehan Disability Scale; SF12 = Short-Form Healthy Survey; SKY = Sudarshan Kriya Yoga; SSRI = Selective Serotonin Reuptake Inhibitor; TAU = Treatment as usual; TRD = Treatment Resistant Depression; WHOQOL-BREF = World Health Organization Quality of Life