

## NKR 58 PICO 8 Mindfulness for angstlidelser

### Review information

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#### Characteristics of studies

*Arch 2013*

Methods	Participants	Interventions
<p><b>Study design:</b> Randomized controlled trial</p> <p><b>Study grouping:</b> Parallel group</p> <p><b>Intervention 1</b></p> <ul style="list-style-type: none"> <li>• mean age, years (SD): 46.48 (14.45)</li> <li>• No of female, %: 21.43%</li> </ul> <p><b>Kontrol 1</b></p> <ul style="list-style-type: none"> <li>• mean age, years (SD): 45.50 (13.21)</li> <li>• No of female, %: 13.79%</li> </ul>	<p><b>Baseline Characteristics</b></p> <p><b>Intervention 1</b></p> <ul style="list-style-type: none"> <li>• mean age, years (SD): 46.48 (14.45)</li> <li>• No of female, %: 21.43%</li> </ul> <p><b>Kontrol 1</b></p> <ul style="list-style-type: none"> <li>• mean age, years (SD): 45.50 (13.21)</li> <li>• No of female, %: 13.79%</li> </ul> <p><b>Included criteria:</b> Eligible patients (Ps) included 124 veterans referred for treatment to the Anxiety Disorders Clinic at the VA San Diego Healthcare System Medical Center, an outpatient clinic that specializes in the behavioral treatment of anxiety disorders. Participants were required to be 18-75 years of age, English speaking, and have a principal (or dual principal) DSM-IV diagnosis of panic disorder with or without agoraphobia (PDA), generalized anxiety disorder (GAD), social anxiety disorder (SAD), specificphobia (SP), obsessive-compulsive disorder (OCD) or civilian post-traumatic stress disorder (PTSD) (e.g., non combat or military sex-ual trauma related) on the MINI International Neuropsychiatric Interview (MINI) for DSM-IV (Sheehan et al., 1998) (see Diagnostic Assessment, below).</p> <p><b>Excluded criteria:</b> We excluded patients with principal military-related PTSD because we were required to refer them to a specialized military PTSD clinic for treatment (which is common in many VAs). To maximize external validity, exclusion criteria were limited to active suicidal ideation, active substance use disorders within the past 3 months, or current participation in other CBT or adapted MBSR treatments for anxiety disorders.</p> <p><b>Pretreatment:</b></p> <p><b>Intervention Characteristics</b></p> <p><b>Intervention 1</b></p> <ul style="list-style-type: none"> <li>• Description: Mindfulness-based stress reduction (MBSR) Both treatments utilized patient workbooks with didactic handouts, homework, and in-session exercises</li> <li>• Dose: Each group met weekly for 90 min over the course of 10 weeks (10 sessions), with the exception of a single 3-h onsite mindfulness retreat in week 7 of adapted MBSR that served as the treatment session for that week.</li> <li>• Duration: 10 weeks</li> <li>• Therapist qualifications/training: Therapist assignment was based on background and training; we required a minimum of three years</li> </ul>	

	<p>experience in a particular type of therapy to serve as a therapist in a given condition. MBSR study therapists included two non-VA clinical psychologists and a VA psychiatric nurse; each had a minimum of three years experience leading MBSR groups and training within the University of Massachusetts Center for Mindfulness MBSR training program. The MBSR therapists, however, had more general clinical experience than the CBT therapists. Weekly hour-long group supervision for study therapists in each treatment condition was led separately by the first two authors of this study and by Steve Hickman, Psy.D., a licensed clinical psychologist and experienced MBSR instructor who served as the main MBSR supervisor.</p> <p><b>Kontrol 1</b></p> <ul style="list-style-type: none"> <li>● <b>Description:</b> Cognitive-behavioral therapy (CBT). Both treatments utilized patient workbooks with didactic handouts, homework, and in-session exercises.</li> <li>● <b>Dose:</b> Each group met weekly for 90 min over the course of 10 weeks (10 sessions), with the exception of a single 3-h on site mindfulness retreat in week 7 of adapted MBSR that served as the treatment session for that week.</li> <li>● <b>Duration:</b> 10 weeks</li> <li>● <b>Therapist qualifications/training:</b> Therapist assignment was based on background and training; we required a minimum of three years experience in a particular type of therapy to serve as a therapist in a given condition. BT therapists included one doctoral intern and two doctoral fellows in clinical psychology with a minimum of three years experience in behavioral therapy, including CBT. Weekly hour-long group supervision for study therapists in each treatment condition was led separately by the first two authors of this study and by Steve Hickman, Psy.D., a licensed clinical psychologist and experienced MBSR instructor who served as the main MBSR supervisor.</li> </ul>	
	<p><b>Outcomes</b></p> <p><i>Grad af angstsymptomer, Clinician's rating severity</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Continuous Outcome</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Scale:</b> Clinician's rating severity</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul> <p><i>Funktion, Penn State Worry Questionnaire</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Continuous Outcome</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Scale:</b> Penn State Worry Questionnaire</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul> <p><i>Frafald, alle årsager</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Adverse Event</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul>	<p><b>Sponsorship source:</b> No information</p> <p><b>Country:</b> USA</p> <p><b>Setting:</b> Outpatient clinic that specializes in the behavioral treatment of anxiety disorders.</p> <p><b>Authors name:</b> Joanna J. Arch</p> <p><b>Institution:</b> Dept of Psychology and Neuroscience, University of Colorado Boulder</p> <p>Email: E-mail address: Joanna.Arch@Colorado.edu</p> <p><b>Address:</b> Dept of Psychology and Neuroscience, University of Colorado Boulder, 345 UCB Muenzinger, Boulder, CO 80309-0345, USA</p>
	<p><b>Identification</b></p> <p><b>Notes</b></p>	

**Risk of bias table**

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "A computerized random number generator created all randomization sequences, which were known to the PIs but not the blind assessors. Delays in securing VA approval for community-based MBSR therapists necessitated creating a computerized randomization of 2:1 CBT to adapted MBSR for the first third of the study. For the middle third of the study, the computer returned to assigning on a 1:1 randomization schedule. In attempt to equalize participation in both treatment conditions, for the final third of the study the computer randomized Ps 1:2 CBT to adapted MBSR. A greater number of Ps enrolled in the first than the final third of the study, however." Judgement Comment: Computer generated allocation sequence
Allocation concealment (selection bias)	Unclear risk	Quote: "A computerized random number generator created all randomization sequences, which were known to the PIs but not the blind assessors." Judgement Comment: Insufficient information on allocation concealment
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: Insufficient information on blinding, but is assumed to not be feasible
Blinding of outcome assessment (detection bias)	Low risk	Quote: "Assessors were blind to treatment condition and assessed multiple waves of patients at once (e.g., patients at pre, post, and FU), blinding the time point of the assessment. Diagnoses" Quote: "A computerized random number generator created all randomization sequences, which were known to the PIs but not the blind assessors. Delays in"
Incomplete outcome data (attrition bias)	Low risk	Judgement Comment: Missing data are balance between group in numbers and reasons. Intention to treat analyses
Selective reporting (reporting bias)	Low risk	Judgement Comment: No reference to study protocol. Report all outcomes stated in the methods section. No reporting of quality of life and avoidance
Other bias	Low risk	Judgement Comment: Appears to be free of other sources of bias

**Goldin 2016**

<b>Methods</b>	<b>Study design:</b> Randomized controlled trial <b>Study grouping:</b> Parallel group
<b>Participants</b>	<b>Baseline Characteristics</b> Intervention <ul style="list-style-type: none"> <li>● mean age, years, SD: 29.9 (7.6)</li> <li>● Female %: 55.6</li> <li>● years since onset, mean SD: 20.5 (9.1)</li> </ul> Kontrol 1 <ul style="list-style-type: none"> <li>● mean age, years, SD: 34.1 (8.0)</li> <li>● Female %: 55.6</li> <li>● years since onset, mean SD: 25.1 (1.3)</li> </ul> Kontrol 2 <ul style="list-style-type: none"> <li>● mean age, years, SD: 34.1 (7.8)</li> <li>● Female %: 55.6</li> <li>● years since onset, mean SD: 25.8 (8.3)</li> </ul>

<p><b>Included criteria:</b> Patients met Diagnostic and statistical manual of mental disorders (4th ed., text rev.: DSM-IV-TR; American Psychiatric Association, 2000) criteria for a principal diagnosis of generalized SAD based on the Anxiety Disorders Interview Schedule for the DSM-IV. Patients met the criteria for the generalized subtype of SAD if they endorsed greater than moderate social fear in five or more distinct social situations assessed by the ADIS-IV-L. Patients had to achieve a score greater than 60 on the Liebowitz Social Anxiety Scale- Self report</p> <p><b>Excluded criteria:</b> Pharmacotherapy or psychotherapy during the past year, participation in CBT for any anxiety disorder during the last 2 years, any previous MBSR course, previous participation in long-term meditation retreats, history of regular meditation practice of 10 min or more three or more times per week, history of neurological disorders, cardiovascular disorders, thought disorders, or bipolar disorders as well as current substance and alcohol abuse or dependence.</p>	<p><b>Interventions</b></p> <p>Intervention</p> <ul style="list-style-type: none"> <li><b>Description:</b> Mindfulness-based stress reduction (MBSR) followed the standard CV online compiled in 1993 by Jon Kabatt-Zinn, except that the 1-day meditation retreat was converted to four additional weekly group sessions between the standard class 6 and 7, so that there were 12 weekly 2.5 hour sessions. To support the practice the participants were given a mindfulness-based stress reduction workbook, which includes descriptions of mindfulness exercises together with prerecorded audio files to support the ongoing practice.</li> <li><b>Dose:</b> 12 weekly 2.5 hour sessions.</li> <li><b>Duration:</b> 12 weeks</li> <li><b>Therapist qualifications/training:</b> The MBSR intervention was delivered by a certified MBSR instructor with more than 30 years of teaching experience.</li> </ul> <p>Kontrol 1</p> <ul style="list-style-type: none"> <li><b>Description:</b> Cognitive-behavioral group therapy (CBGT). CBGT was delivered by two doctoral clinical psychologists trained by Richard Heimberg to implant his CBGT for SAD protocol. The participants also used selected portions of the client workshop developed by Hope, Heimberg and Turk. The treatment comprised of four major components: a) psychoeducation and orientation to CBGT, b) cognitive restructuring skills, c) graduated exposure to feared social situations, within sessions and as homework, D) relapse prevention and termination.</li> <li><b>Dose:</b> Groups of six individuals met for 12 sessions of 2.5 hour each (total time = 30 hr)</li> <li><b>Duration:</b> 12 weeks</li> <li><b>Therapist qualifications/training:</b> CBGT was delivered by two doctoral clinical psychologists trained by Richard Heimberg to implant his CBGT for SAD protocol</li> </ul>	<p><b>Outcomes</b></p> <p>Grad af angst, Subtle Avoidance Frequency avoidance (SAFE)</p> <ul style="list-style-type: none"> <li><b>Outcome type:</b> Continuous Outcome</li> <li><b>Reporting:</b> Fully reported</li> <li><b>Scale:</b> Subtle Avoidance Frequency avoidance (SAFE)</li> <li><b>Direction:</b> Lower is better</li> <li><b>Data value:</b> Endpoint</li> </ul> <p>Grad af angst, The Liebowitz Social Anxiety Scale (LSAS), total score</p> <ul style="list-style-type: none"> <li><b>Outcome type:</b> Continuous Outcome</li> <li><b>Reporting:</b> Fully reported</li> <li><b>Scale:</b> The Liebowitz Social Anxiety Scale (LSAS), total score</li> <li><b>Direction:</b> Lower is better</li> <li><b>Data value:</b> Endpoint</li> </ul> <p>Fraafid, alle årsager</p> <ul style="list-style-type: none"> <li><b>Outcome type:</b> Adverse Event</li> <li><b>Reporting:</b> Fully reported</li> </ul>
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	<ul style="list-style-type: none"> <li>• Direction: Lower is better</li> <li>• Data value: Endpoint</li> </ul>
<b>Identification</b>	<p><b>Sponsorship source:</b> No information</p> <p><b>Country:</b> UK</p> <p><b>Setting:</b> Outpatient clinic</p> <p><b>Authors name:</b> Philippe R Goldin</p> <p><b>Institution:</b> University of California</p> <p>Email: pgoldin@ucdavis.edu</p>

**Notes****Risk of bias table**

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Judgement Comment: No information of how the allocation sequence was generated
Allocation concealment (selection bias)	Unclear risk	Judgement Comment: No information on allocation concealment
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No information of blinding of participants and health care providers, but blinding not feasible
Blinding of outcome assessment (detection bias)	High risk	Judgement Comment: No information of tester blinding. Selfreported outcomes not blinded
Incomplete outcome data (attrition bias)	Low risk	Judgement Comment: Intention to treat analyses, dropout low and equal distributed between the groups
Selective reporting (reporting bias)	Unclear risk	Judgement Comment: No information of a protocol, no reporting of quality of life and function, severity of anxiety only reported with LSAS-SR.
Other bias	Low risk	Judgement Comment: The study appears to be free of other sources of bias

**Hoge 2013**

<b>Methods</b>	<p><b>Study design:</b> Randomized controlled trial</p> <p><b>Study grouping:</b> Parallel group</p>
<b>Participants</b>	<p><b>Baseline Characteristics</b></p> <p>Intervention</p> <ul style="list-style-type: none"> <li>• mean age, years, SD: 14 (13)</li> <li>• Female %: 48%</li> </ul> <p>Kontrol 1</p> <ul style="list-style-type: none"> <li>• mean age, years, SD: 37(12)</li> <li>• Female %: 54%</li> </ul> <p><b>Included criteria:</b> Individuals age 18 or older were eligible if they: (a) met DSM-IV criteria for current primary GAD and designated GAD as the primary problem, and (b) scored 20 or above on the Hamilton Anxiety scale (HAM-A)</p> <p><b>Excluded criteria:</b> Exclusion criteria included: (1) a lifetime history of schizophrenia or any other psychosis, mental retardation, organic medical disorders, bipolar disorder, post-traumatic stress disorder or obsessive compulsive disorder, (2) alcohol or substance abuse or dependence within the past 6 months, (3) significant suicidal ideation or behaviors within past 6 months,(4) if on medication, on a stable dose for less than 4 weeks, or</p>

	<p>unwilling to remain on that dose throughout the study, (5) serious medical illness or instability, (6) concurrent psychotherapy directed toward GAD, (7) more than 4 classes of meditation training and practice (including yoga and tai-chi) in the past 2 years; (8) pregnancy or lactation, and (9) significant personality disorder likely to interfere with study participation.</p>
<b>Interventions</b>	<p><b>Intervention Characteristics</b></p> <p><b>Intervention</b></p> <ul style="list-style-type: none"> <li><b>Description:</b> The intervention is comprised of 8 weekly group classes with a single weekend "retreat" day, and a daily home practice guided by audio recordings. In-class practices (breath-awareness, a body-scan, and gentle Hatha yoga) are used to cultivate awareness of internal present moment experiences with an accepting, non-judgmental stance. For example, breath-awareness practice starts with the awareness of the sensations of breathing, then expands to other body sensations, thoughts and emotions, all of which are treated with acceptance and non-judgment, and are allowed to "pass by" in order to return mental focus to the breath. The body-scan exercise guides the attention sequentially through the body, focusing on sensations of each area, and the yoga practices contain gentle stretching and slow movements, focusing on present experience and treating the body kindly. Participants were also instructed in "informal" mindfulness practice (e.g. present-focused awareness during eating, bathing, or cleaning). For this protocol, some small adjustments were made to improve adherence and practicality: classes were shortened from 2.5 to 2 hours, the day-long retreat to 4 hours, and the homework from 45 to 20 minutes. In addition, metta (loving-kindness) was introduced in the first class, and a metta CD for home practice was included. The class was taught by an MBSR instructor with over 8 years of experience.</li> <li><b>Dose:</b> For this protocol, some small adjustments were made to improve adherence and practicality: classes were shortened from 2.5 to 2 hours, the day-long retreat to 4 hours, and the homework from 45 to 20 minutes. In addition, metta (loving-kindness) was introduced in the first class, and a metta CD for home practice was included. The class was taught by an MBSR instructor with over 8 years of experience.</li> <li><b>Duration:</b> 8 weeks</li> </ul> <p><b>Kontrol 1</b></p> <ul style="list-style-type: none"> <li><b>Description:</b> The SME course was designed as an active control, for comparison with MBSR, and did not contain any mindfulness components. It also consisted of an 8-week two-hour class, with 20 minute homework exercises, and a 4-hour weekend "special class", such that the total number of minutes of both class and home activities were exactly matched with MBSR</li> </ul> <p>The SME course was taught in a didactic format, covering topics relevant to stress, stress physiology, effect of stress on body systems, time management techniques, sleep physiology, insomnia, optimal nutrition, effects of stress on diet, caffeine, exercise, stress hardness, and factors that can buffer the impact of stress such as humor, altruism, and volunteering. The course content was based on the control condition used by Dusek et al, but delivered in a group lecture format. To more closely match the yoga portion of MBSR, SME included gentle strength and posture exercises with a physical therapist for the same number of total minutes. Extra resistance bands were provided for assigned home exercises. There was no aerobic exercise in the course. The weekend Special Class included stability ball exercise instruction, a lecture on functional movement and individual postural assessments with a fitness instructor, a short massage, and a lecture from a licensed dietitian. Similar to the MBSR class, participants in SME were provided 20 minute audio book recordings to listen to at home (same total number of minutes)</p> <ul style="list-style-type: none"> <li><b>Dose:</b> an 8-week two-hour class, with 20 minute homework exercises, and a 4-hour total number of minutes of both class and home activities were exactly matched with MBSR.</li> <li><b>Therapist qualifications/training:</b> The SME class was taught by an instructor with 9 years of experience providing health and wellness courses in a hospital-based clinic to groups of patients with physical health conditions, and a physical therapist with 22 years of experience.</li> </ul>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li><i>Frafald, alle årsager</i></li> <li><b>Outcome type:</b> Adverse Event</li> <li><b>Reporting:</b> Fully reported</li> <li><b>Direction:</b> Lower is better</li> <li><b>Data value:</b> Endpoint</li> <li><b>Outcome type:</b> AdverseEvent</li> </ul> <p>Skadesvirkninger (total antal SAE og AE)</p>
	Review Manager 5.3

	<ul style="list-style-type: none"> <li>● Direction: Lower is better</li> <li>● Data value: Endpoint</li> </ul> <p><i>Grad af angst, CGI-Illness severity</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Continuous</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Scale:</b> CGI-Illness severity</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul> <p><i>Grad af angst, HAM-A</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Continuous</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Scale:</b> HAM-A</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul> <p><i>Grad af angst, The Beck Anxiety Inventory (BAI)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Continuous</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Scale:</b> The Beck Anxiety Inventory (BAI)</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul>	<p><b>Sponsorship source:</b> This study was primarily supported by grant K23AT4432 from the National Center on Complementary and Alternative Medicine, National Institutes of Health (Hoge, P.I.). The Highland Street Foundation provided additional support including to Ms Metcalf and Drs. Simon, Bui, Marques and Pollack</p> <p><b>Country:</b> USA</p> <p><b>Setting:</b> Outpatient clinic</p> <p><b>Authors name:</b> Elizabeth A. Hoge</p> <p><b>Institution:</b> Department of Psychiatry, Massachusetts General Hospital, Boston, MA</p> <p><b>Email:</b> ehoge@partners.org</p> <p><b>Address:</b> Corresponding Author: Elizabeth Hoge, MD, Assistant Professor of Psychiatry, Center for Anxiety and Traumatic Stress Disorders, Massachusetts General Hospital, One Bowdoin Square, 6th Floor, Boston, MA 02114</p>
		<p><b>Notes</b></p>

### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Judgement Comment: No information of how the allocation sequence was generated
Allocation concealment (selection bias)	Unclear risk	Judgement Comment: No information of allocation concealment
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No information of blinding of participants and health care providers, but blinding not feasible

Blinding of outcome assessment (detection bias)	<b>Low risk</b>	Quote: "IEs, blinded to treatment assignments, completed the assessments"
Incomplete outcome data (attrition bias)	<b>Unclear risk</b>	Judgement Comment: 3 dropouts in the MBSR group and 11 in the SME group, reasons for dropout not described. Intention to treat analyses, last observation carried forward
Selective reporting (reporting bias)	<b>High risk</b>	Judgement Comment: The study is preregistered at clinicaltrials.gov. Only HAM-A and CGI-illness severity are stated in the protocol, but the study also reports on The Beck Inventory (BA).
Other bias	<b>Unclear risk</b>	Judgement Comment: The study appears to be free of other sources of bias

### Kocovski 2013

Methods	Study design: Randomized controlled trial Study grouping: Parallel group		
Participants	<p><b>Baseline Characteristics</b></p> <p><b>Intervention</b></p> <ul style="list-style-type: none"> <li>● mean age, years, SD: 34.94 (12.52)</li> <li>● Female %: 49.06</li> <li>● years since onset, mean SD: 22.17 (13.94)</li> </ul> <p><b>Kontrol 1</b></p> <ul style="list-style-type: none"> <li>● mean age, years, SD: 32.66 (9.07)</li> <li>● Female %: 52.83</li> <li>● years since onset, mean SD: 18.55 (13.94)</li> </ul> <p><b>Kontrol 2</b></p> <ul style="list-style-type: none"> <li>● mean age, years, SD: 36.55 (11.58)</li> <li>● Female %: 64.52%</li> <li>● years since onset, mean SD: 23.84 (13.22)</li> </ul>		
<b>Interventions</b>	<p><b>Included criteria:</b> Inclusion criteria were: principal diagnosis of SAD, Generalized (based on criteria from the Diagnostic and Statistical Manual of Mental Disorders, 4th ed., text revision [DSM-IV-TR];American Psychiatric Association, 2000)assessed using the Structured Clinical Interview for DSM-IV/SCID-NV;First; Spitzer, Gibbon,&amp; Williams, 1996); English fluency; and age between 18 and 65 years.</p> <p><b>Excluded criteria:</b> Exclusion criteria were: current major depressive disorder(MDD); current alcohol or substance abuse or dependence; lifetime psychosis; lifetime mania; current suicidal intent; and past ACT or CBT for SAD. Psychotropic medications were allowed if doses were stable in the 3 months prior to the study and there was agreement to remain stable for the study duration.</p> <p><b>Intervention Characteristics</b></p> <p><b>Intervention</b></p> <ul style="list-style-type: none"> <li>● <i>Description:</i> Mindfulness and acceptance-based group therapy (MAGT). An unpublished manual was used (Fleming &amp; Kocovski,2009); therefore details are provided. Session one included an introduction to the acceptance based therapy (ACT) model of social anxiety and mindful eating of a raisin. Subsequent sessions began with a mindfulness exercise (lasting approximately 15 min), followed by inquiry. Most mindfulness exercises were adapted (shortened) from MBCT (e.g., bodyscan, mindful stretching, mountain meditation). Acceptance of thoughts and feelings and acceptance of social anxiety exercises were adapted from Eifert and Forsyth (2005). Homework was reviewed after the mindfulness exercise and consisted of mindfulness exercises (using a CD recorded by the first two authors),written work that addressed core concepts, and exposures. Sessions two through six introduced topics such as the costs of control/experiential avoidance, values and goals, defusion (the process of relating thoughts as just thoughts so as reduce their automatic impact"), and willingness to experience anxiety as an alternative to control. Sessions seven through 11 concentrated on exposure (using an acceptance rationale) (seeabove for session 12 and</li> </ul>		

	<p>follow-up)</p> <ul style="list-style-type: none"> <li>● <b>Dose:</b> Each therapy consisted of 12 weekly 2-hour sessions and a 3-month follow-up brief check-in session.</li> <li>● <b>Duration:</b> 12 weeks</li> </ul> <p>Kontrol 1</p> <ul style="list-style-type: none"> <li>● <b>Description:</b> Cognitive behavioral group therapy (CBGT)(Heimberg &amp; Becker, 2002). Briefly, the first two sessions in CBGT focused on an introduction to the CBT model and cognitive restructuring. Sessions three 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.</li> <li>● <b>Dose:</b> Each therapy consisted of 12 weekly 2-hour sessions and a 3-month follow-up brief check-in session.</li> <li>● <b>Duration:</b> 12 weeks</li> </ul> <p>Kontrol 2</p> <ul style="list-style-type: none"> <li>● <b>Description:</b> Waiting list</li> </ul>	<p><i>Fratåld, alle årsager</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Adverse Event</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul> <p><i>Funktion, Social Adjustment Scale</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Continuous Outcome</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Scale:</b> Social Adjustment Scale-Self</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul> <p><i>Funktion, Social phobia inventory</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Continuous Outcome</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Scale:</b> Social phobia inventory</li> <li>● <b>Data value:</b> Endpoint</li> </ul> <p><i>Livskvalitet, Valued Living Questionnaire (VLQ)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Continuous Outcome</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Scale:</b> Valued Living Questionnaire (VLQ)</li> <li>● <b>Data value:</b> Endpoint</li> </ul>	<p><b>Sponsorship source:</b> The authors gratefully acknowledge financial support awarded to the first author from the Ontario Mental Health Foundation and the Ministry of Research and Innovation.</p> <p><b>Country:</b> Canada</p> <p><b>Setting:</b> Outpatient clinic</p> <p><b>Authors name:</b> Nancy L. Kocovski</p> <p><b>Institution:</b> Department of Psychology, Wilfrid Laurier University, 75 University Ave., Waterloo, Ontario N2L 3C5, Canada</p> <p><b>Email:</b> E-mail address:nkocovski@wlu.ca</p> <p><b>Address:</b> Department of Psychology, Wilfrid Laurier University, 75 University Ave., Waterloo, Ontario N2L 3C5, Canada</p>
		<p><b>Identification</b></p>	Review Manager 5.3

**Notes****Risk of bias table**

<b>Bias</b>	<b>Authors' judgement</b>	<b>Support for judgement</b>
Random sequence generation (selection bias)	Low risk	Quote: "Randomization. For the first three rounds of groups, the ratio of participants assigned to MAGT, CBGT or WAIT was equivalent. Recruitment became increasingly difficult and as such, for rounds four through six, fewer participants were assigned to WAIT (ratio of 2:2:1 for CBGT, MAGT, and WAIT, respectively) and none were assigned to WAIT for the seventh round. MINIM software (Evans, Day, & Royston; freely available on the internet) was used for the randomization procedure, which included three stratification variables: age (>30 or 30 years), gender (male, female), and social anxiety severity (LSAS > 75 or 75)."
Allocation concealment (selection bias)	Unclear risk	Judgement Comment: No information of allocation concealment
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No information of blinding of participants and health care providers, blinding not possible
Blinding of outcome assessment (detection bias)	Low risk	Quote: "Two clinical psychology graduate students, blind to condition, administered the LSAS, CGI and SAD section of the CSID at posttreatment (for all groups) and follow-up (for MAGT and CBGT only)" Judgement Comment: Self reported measurement
Incomplete outcome data (attrition bias)	Unclear risk	Intention to treat analyses, last observation carried forward. High dropout rate, 40% in the CBGT group and 30% in the MAGT group. The dropout rates were not significantly different from one another. There were no reporting of reasons and numbers for each reason for dropout other than it was stated that the most common reason for dropout was time commitment.
Selective reporting (reporting bias)	Low risk	Judgement Comment: No reference to a protocol, seems to report on all outcomes of interest
Other bias	Low risk	Judgement Comment: The study appears to be free of other sources of bias

**Koszycki 2007**

<b>Methods</b>	<b>Study design:</b> <b>Study grouping:</b>
<b>Participants</b>	<b>Baseline Characteristics</b> intervention 1 <ul style="list-style-type: none"> <li>● <i>mean age, years (SD): 38.9 (15.7)</i></li> <li>● <i>No of female, %: 62%</i></li> </ul> kontrol 1 <ul style="list-style-type: none"> <li>● <i>mean age, years (SD): 37.6 (11.1)</i></li> <li>● <i>No of female, %: 44%</i></li> </ul> <b>Included criteria:</b> Patients were eligible to participate if they had a current diagnosis of DSM-IVSAD, generalized subtype, based on psychiatric interview and a structured clinical interview (Mini International Neuropsychiatric Interview (MINI), Sheehan et al., 1998) and reported at least moderately severe SAD symptoms as determined by a total score $\geq 50$ on the clinician-rated Liebowitz Social Anxiety Scale (LSAS) (Liebowitz, 1987) and a severity rating $\geq 4$ on the Clinical Global Impression (CGI)-Severity of illness subscale (Guy, 1976) at screening and baseline visits. Because comorbidity is common in SAD (Kessler, Chiu, Demler, & Walters, 2005), certain additional current Axis I disorders were allowed as long as they were secondary to and not clinically more prominent than the SAD. In the present study, these included dysthymia, major depression, panic disorder, agoraphobia, GAD, specific phobia and somatization disorder.

<p><b>Interventions</b></p> <p><b>Excluded criteria:</b> Exclusion criteria were a Hamilton Depression Rating Scale (Hamilton, 1960) score <math>\geq 14</math> at screen visit; presence of other Axis I disorders; lifetime history of psychotic disorders or bipolar disorder; substance abuse in the past 12 months; current suicide risk; participation in any form of psychotherapy in the last 3 months; received CBT in the past 12 months; participated in any formal stress reduction program that includes regular meditation and yoga practices in the past 12 months; and presence of any clinically significant medical condition that would make it unsafe for the patient to participate in the study. Concurrent use of psychotropics was allowed as long as the medication type and dose remained stable for 6 weeks prior to randomization and throughout the study. Concomitant treatment with any form of psychotherapy was not permitted during the study</p>	<p><b>Intervention Characteristics</b></p> <p>intervention 1</p> <ul style="list-style-type: none"> <li><b>Description:</b> The MBSR program followed the manual developed by Kabat-Zinn and Santorelli (1993). Patients attended an initial one-to-one orientation interview with the instructor, 8 weekly 2 1/2 hour group sessions and an all-day meditation retreat (total 27.5 hours of treatment). The program included psychoeducation about stress and meditation techniques such as the body scan, mindful yoga and sitting meditation. Participants were required to practice formal meditation techniques for 30 min a day using audiotapes for guidance. In week 2-4 they were asked to practice formal meditation technique for 30 min a day using the audiotapes. Reading material was provided from a variety of sources on aspects of mindfulness practice. Each group had a maximum of 12 participants.</li> <li><b>Dose:</b> Patients attended an initial one-to-one orientation interview with the instructor, 8 weekly 2 1/2h group sessions and an all-day meditation retreat (total 27.5 hours of treatment). Participants were required to practice formal meditation techniques for 30 min a day.</li> <li><b>Duration:</b> 8 weeks</li> <li><b>Therapist qualifications/training:</b> The MBSR program followed the manual developed by Kabat-Zinn and Santorelli (1993) and was delivered by an experienced MBSR instructor (MB) who provides mindfulness training to the public and community health centers in Ottawa.</li> </ul> <p>kontrol 1</p> <ul style="list-style-type: none"> <li><b>Description:</b> CBGT followed the treatment manual of Helmberg and Becker (2002). Treatment included psychoeducation about anxiety and the cognitive model of SAD, cognitive restructuring and in-session simulated social exposures. Patients were also assigned between-session homework that focused on cognitive restructuring</li> <li><b>Dose:</b> Patients attended a one-to-one treatment orientation interview with the therapist and 12 weekly 2 1/2h group sessions (total 30 hours of treatment).</li> <li><b>Duration:</b> 12 weeks</li> <li><b>Therapist qualifications/training:</b> CBGT was delivered by an experienced CBT therapist for anxiety</li> </ul>
<p><b>Outcomes</b></p> <p><i>Fraafald, alle årsager</i></p> <ul style="list-style-type: none"> <li><b>Outcome type:</b> Adverse Event</li> <li><b>Direction:</b> Lower is better</li> <li><b>Data value:</b> Endpoint</li> </ul> <p><i>Skadeførkninger (total antal SAE og AE)</i></p> <ul style="list-style-type: none"> <li><b>Outcome type:</b> Adverse Event</li> <li><b>Direction:</b> Lower is better</li> <li><b>Data value:</b> Endpoint</li> </ul> <p><i>Grad af angst, CGI-I/Illness severity</i></p> <ul style="list-style-type: none"> <li><b>Outcome type:</b> Continuous Outcome</li> <li><b>Reporting:</b> Fully reported</li> <li><b>Scale:</b> CGI-I/Illness severity</li> <li><b>Direction:</b> Lower is better</li> <li><b>Data value:</b> Endpoint</li> </ul>	<p><i>Funktion, The Social / Interaction Scale (SIAS)</i></p>

Identification	Notes
<p>● <b>Outcome type:</b> Continuous Outcome  ● <b>Reporting:</b> Fully reported  ● <b>Scale:</b> The Social Interaction Scale (SIAS)  ● <b>Direction:</b> Lower is better  ● <b>Data value:</b> Endpoint</p> <p><i>Funktion, Social/Phobia Scale (SPS), mean final, SD</i></p> <p>● <b>Outcome type:</b> Continuous Outcome  ● <b>Reporting:</b> Fully reported  ● <b>Scale:</b> Social Phobia Scale (SPS)  ● <b>Direction:</b> Lower is better  ● <b>Data value:</b> Endpoint</p> <p><i>Livskvalitet, Quality of Life Inventory (QoL), mean final, SD</i></p> <p>● <b>Outcome type:</b> Continuous Outcome  ● <b>Reporting:</b> Fully reported  ● <b>Scale:</b> Quality of Life Inventory (QoL)  ● <b>Data value:</b> Endpoint</p> <p><i>Undgåelse, The Liebowitz Social Anxiety Scale (LSAS), total score</i></p> <p>● <b>Outcome type:</b> Continuous Outcome  ● <b>Reporting:</b> Fully reported  ● <b>Scale:</b> The Liebowitz Social Anxiety Scale (LSAS), total score  ● <b>Direction:</b> Lower is better  ● <b>Data value:</b> Endpoint</p> <p><i>Undgåelse, The Liebowitz Social Anxiety Scale (LSAS), subscore avoidance</i></p> <p>● <b>Outcome type:</b> Continuous Outcome  ● <b>Reporting:</b> Fully reported  ● <b>Scale:</b> LSAS subscore avoidance  ● <b>Direction:</b> Lower is better  ● <b>Data value:</b> Endpoint</p> <p><b>Sponsorship source:</b> This study was funded in part by a grant from the University (Ottawa) Medical Research Fund. We would like to thank Maria Pizzi, Simin Stephens, Murray Weeks, Emilie Chan and Ramona Eryzulu for research assistance</p> <p><b>Country:</b> USA  <b>Setting:</b> Outpatient</p> <p><b>Authors name:</b> Diana Koszycki  <b>Institution:</b> Stress and Anxiety Clinical Research Unit, University of Ottawa Institute of Mental Health Research  <b>Email:</b> E-mail address:dkoszyck@rohcg.on.ca  <b>Address:</b> Stress and Anxiety Clinical Research Unit, University of Ottawa Institute of Mental Health Research, RoyalOttawa Mental Health Centre, 1145 Carling Ave., Ottawa, Ontario, Canada K1Z 7K4.</p>	

**Risk of bias table**

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Judgement Comment: No information of how the allocation sequence was generated
Allocation concealment (selection bias)	Unclear risk	Judgement Comment: No information of allocation concealment
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: Insufficient information on blinding, but is assumed to not be feasible
Blinding of outcome assessment (detection bias)	Low risk	Quote: "Clinician-rated symptom scales were administered by the study psychiatrists who were blind to treatment allocation. Specific instructions were given to research participants for assuring blindness of raters throughout the study."
Incomplete outcome data (attrition bias)	Low risk	Quote: "Two sets of analyses were conducted: one for all randomized patients including those who did not start treatment and drop-outs (intent-to-treat (ITT) sample) and the other for the sample of patients who completed treatment and who attended at least 80% of sessions (completer sample). For patients with missing data ( $n = 5$ ), the expectation-maximization (EM) method was used to impute missing values. The EM algorithm is an iterative estimation procedure that yields more reliable and unbiased estimates compared to other imputation techniques such as simple regression techniques, mean substitution and the last-observation carried forward (Graham, Hofer, & Piccinin, 1994; Schafer & Graham, 2002)."
Selective reporting (reporting bias)	Low risk	Judgement Comment: Information of number and reasons for dropouts/intention to treat analyses.
Other bias	Low risk	Judgement Comment: No reference to study protocol, but appears to report on all outcomes of interest.

**Koszycki 2016**

Methods	<p><b>Study design:</b> Randomized controlled trial</p> <p><b>Study grouping:</b> Parallel group</p>
Participants	<p><b>Baseline Characteristics</b></p> <p>Intervention</p> <ul style="list-style-type: none"> <li>● <i>mean age, years, SD:</i> 41.0 (14.4)</li> <li>● <i>Female %:</i> 86%</li> </ul> <p>Kontrol 1</p> <ul style="list-style-type: none"> <li>● <i>mean age, years, SD:</i> 38.33 (16.6)</li> <li>● <i>Female %:</i> 72%</li> </ul> <p><b>Included criteria:</b> The sample comprised men and women age 18 years and older who were recruited via referrals from mental health services and advertisements placed in local media, the Internet, university and hospital bullet in boards, and physician offices. Individuals who inquired about the study participated in a telephone prescreen interview to confirm the presence of SAD symptoms and exclude those who were clearly ineligible to participate. After the telephone prescreen, potentially eligible participants were scheduled an appointment with the study investigators for confirmation of SAD and other eligibility criteria. To be eligible, participants needed to meet SAD criteria based on the Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (SCID), with scores greater than 30 on the Liebowitz Social Phobia Scale and 4 or greater on the Clinical Global Impression-Severity (CGI-S) scale at the baseline visit.</p> <p><b>Excluded criteria:</b> Exclusion criteria included a lifetime history of psychosensor bipolar disorder, history of substance use disorders in the last 12 months, history of psychotic features of affective disorder, and high suicide risk. Other comorbidities were allowed so long as the SAD was the</p>

<p>primary and predominant disorder. Participants with depressive disorders who obtained a score of 24 or greater on the Montgomery-Asberg Depression Rating Scale at baseline visit were excluded.Consistent with previous research on MBIs for SAD, participants with an established meditation were excluded, as were those who had a regular yoga practice given the overlap between yoga and MBIs.Concurrent use of anti-depressants, anxiolytics, hypnotics, and herbal products with psychoactive substances was allowed as long as the medication type and dose had remained stable for 6 weeks before randomization and medication type and dose did not change after randomization. Concomitant treatment with any psychotherapy was proscribed during the study. Concomitant treatment was recorded at each assessment.</p>	<p><b>Interventions</b></p> <p><b>Intervention Characteristics</b></p> <p><b>Intervention</b></p> <ul style="list-style-type: none"> <li>● <b>Description:</b> Mindfulness. The sessions followed a structured format; each session began with a meditation practice, followed by a discussion of participants' experience with the home practice and specific sessions theme the session outline and readings from a variety of sources on aspects of mindfulness and self-compassion. Participants were provided with audio recordings of guided formal mindful meditations (body scan meditation, mindful yoga, sitting meditations, and loving-kindness meditations), and they were asked to complete a weekly log of their home meditation practice. The initial session included a review of group rules, an overview of the 12-week program, psychoeducation about the nature of social anxiety, and an orientation to mindfulness (including a discussion of the mind-body connection, why mindfulness is relevant to people with SAD, and the attitudinal foundations that inform mindfulness practice).Participants were introduced to the raisin exercise and completed an in-session body scan meditation. Subsequent sessions focused on training in other formal mindful meditations (i.e., sitting meditations, mindful yoga, mindfulwalking), and participants were encouraged to practice mindfulness in routine daily activities.The main theme covered in sessions 2-7 included automatic pilot versus mindfulness, how the untrained mind contributes to suffering, labeling emotions, responding mindfully to difficult emotions, the stress response, and cultivating awareness of the interconnection between body, emotions, and mind. Mindful exposure was introduced in session 6. Participants completed a hierarchy of feared social situations, and they were instructed to gradually approach these situations with the aim of turning toward and accepting difficult internal experiences without reacting to or engaging with them. During in-session and between-session exposures, participants practised using the four principles of mindful responding (recognize, accept, investigate, and non-identification) to internal experiences evoked by socially phobic stimuli. The breath was used as an anchor to stabilize the mind and manage physiologic arousal.The compassion-based meditations were introduced in session 8 and included the traditional Buddhist loving-kindness meditation and other self-compassion meditations.Session themes focused on what self-compassion is, its relevance to well-being in general and SAD in particular, distinguishing self-compassion from self-esteem (which is more contingent on external outcomes and therefore associated with less stable feelings of self-worth<sup>35</sup>), exploring attachments to beliefs and practices that contribute to low levels of self-compassion, inter connectedness, and relating to others more skilfully.The final session focused on reviewing what participants had learned during the program, reinforcing changes that occurred through the cultivation of mindfulness and self-compassion, and developing strategies to maintain a regular meditation practice. Each participant was invited to say their good-byes to other group members, wish them well, and offer words of praise. Participants were provided with a list of additional readings, websites, and community resources and retreat centers where they could further deepen their practice of mindfulness.</li> <li>● <b>Dose:</b> 12-weekly 2-hour group sessions, with 8-10 participants in each group</li> <li>● <b>Duration:</b> 12 weeks</li> <li>● <b>Therapist qualifications/training:</b> The intervention was led by the first author, a registered psychologist with expertise in treating SAD, formal training in MBIs, and an individual mindfulness practice. An intervention manual was developed to ensure consistency of program administration. A graduate student in counseling or psychology with personal experience in meditative practices co-facilitated aspects of the program.</li> </ul> <p>Kontrol 1</p> <ul style="list-style-type: none"> <li>● <b>Description:</b> Waiting list</li> </ul>
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Outcomes	<p><i>Frafald, alle årsager</i></p> <ul style="list-style-type: none"> <li>• <b>Outcome type:</b> Adverse Event</li> <li>• <b>Direction:</b> Lower is better</li> <li>• <b>Data value:</b> Endpoint</li> </ul> <p><i>Skadesvirkninger (total antal SAE og AE)</i></p> <ul style="list-style-type: none"> <li>• <b>Outcome type:</b> AdverseEvent</li> <li>• <b>Direction:</b> Lower is better</li> <li>• <b>Data value:</b> Endpoint</li> </ul> <p><i>Grad af angst, CGI-I/Illness severity</i></p> <ul style="list-style-type: none"> <li>• <b>Outcome type:</b> ContinuousOutcome</li> <li>• <b>Reporting:</b> Fully reported</li> <li>• <b>Scale:</b> CGI-Illness severity</li> <li>• <b>Direction:</b> Lower is better</li> <li>• <b>Data value:</b> Endpoint</li> </ul> <p><i>Funktion, Social Adjustment Scale</i></p> <ul style="list-style-type: none"> <li>• <b>Outcome type:</b> Continuous Outcome</li> <li>• <b>Reporting:</b> Fully reported</li> <li>• <b>Scale:</b> Social Adjustment Scale-Self</li> <li>• <b>Direction:</b> Lower is better</li> <li>• <b>Data value:</b> Endpoint</li> </ul> <p><i>Undgåelse, The Liebowitz Social Anxiety Scale (LSAS), total score</i></p> <ul style="list-style-type: none"> <li>• <b>Outcome type:</b> Continuous Outcome</li> <li>• <b>Reporting:</b> Fully reported</li> <li>• <b>Scale:</b> The Liebowitz Social Anxiety Scale (LSAS), total score</li> <li>• <b>Direction:</b> Lower is better</li> <li>• <b>Data value:</b> Endpoint</li> </ul>	<p><b>Sponsorship source:</b> The study was funded in part by a grant from the Institut de recherche de l'Hôpital Montfort awarded to Dr. Kos-Zycki. The authors would like to thank Jessie Bosse (DPsych Candidate, Psychology, Université de Québec en Outaouais) for co-facilitating one of the groups and Julie Wallis, BSc, and Eva Guérin, PhD, for research assistance</p> <p><b>Country:</b> Canada</p> <p><b>Setting:</b> Outpatient clinic</p> <p><b>Authors name:</b> Diana Koszycki</p> <p><b>Institution:</b> University of Ottawa, Ottawa, Ontario, Canada</p>
<b>Identification</b>		<b>Risk of bias table</b>
		<b>Notes</b>

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "After informed consent and completion of baseline assessments, eligible participants were sequentially allocated a unique participant number that determined assignment to one of the two study conditions. The treatment allocation scheduled was generated by an independent research assistant using a computer-based random-number generation program. Allocations were generated using permuted blocks of varying lengths to maintain close balance of the numbers of participants in each group during the trial. Participants who were randomly assigned to WL received the intervention after the 12-week wait period."
Allocation concealment (selection bias)	Low risk	Quote: "After informed consent and completion of baseline assessments, eligible participants were sequentially allocated a unique participant number that determined assignment to one of the two study conditions. The treatment allocation scheduled was generated by an independent research assistant using a computer-based random-number generation program. Allocations were generated using permuted blocks of varying lengths to maintain close balance of the numbers of participants in each group during the trial. Participants who were randomly assigned to WL received the intervention after the 12-week wait period." Judgement Comment: Allocations were generated by an independent research assistant.
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No information of blinding of participants and health care providers, blinding not feasible
Blinding of outcome assessment (detection bias)	Low risk	Quote: "Clinician-rated outcomes were administered by blind assessors by telephone. Blind evaluation was ensured by instructing participants not to discuss their assigned treatment with the independent evaluators. There were no reports of compromised blinding during the telephone evaluations." Judgement Comment: Outcome assessors are blinded, no blinding for self reported outcomes
Incomplete outcome data (attrition bias)	Low risk	Quote: "Analyses were performed on the intention-to-treat (ITT) sample. Clinical and demographic characteristics were evaluated using two-sample t-tests or chi-squared tests. Continuous outcomes were analyzed using a general linear model with condition (WB-SAD versus WL), time (baseline, week 6, and week 12), and condition by time interaction as fixed factors. The models were estimated using restricted maximum likelihood with a compound symmetry covariance structure to account for correlations among the repeated measures over time. The analyses were conducted using the SAS Mixed Procedure. 60 In contrast to conventional repeated-measures analysis of variance, this approach allowed the use of all available observations on each patient without the use of imputation procedures, such as last-observation-carried-forward methods, which are known to cause bias." Judgement Comment: Low drop out rate.
Selective reporting (reporting bias)	Low risk	Judgement Comment: Protocol at clinicaltrials.gov, appears to report on all prespecified outcomes.
Other bias	Low risk	Judgement Comment: The study appears to be free of other sources of bias

**Lee 2007**

Methods	Study design: Study grouping:
Participants	Baseline Characteristics intervention 1 <ul style="list-style-type: none"> <li>● mean age, years (<i>SD</i>): 38.6 (7.4)</li> <li>● No of female, %: 37%</li> </ul> kontrol 1 <ul style="list-style-type: none"> <li>● mean age, years (<i>SD</i>): 38.1 (9.7)</li> <li>● No of female, %: 32%</li> </ul>

<p><b>Included criteria:</b> Subjects were between 20 and 60 years of age and fulfilled the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition(DSM-IV) criteria for generalized anxiety disorder or panic disorder with or without agoraphobia, as diagnosed by two psychiatrists using the Structured Clinical Interview for DSM-IV Axis I disorders. In all subjects, symptoms were not relieved after more than 6 months of pharmacotherapy. Written informed consent was obtained after a full description of the study had been presented to the subjects. Prior to the study, the subjects were treated with the antidepressant paroxetine (20 mg/day), sertraline (50-100 mg/day), or fluvoxamine (50-100 mg/day) and with the anxiolytic alprazolam (0.125-0.5 mg/day). Psychiatrists confirmed that acute symptoms in the patients had stabilized and had remained unchanged for the past 2 months. The medications and dosages were not altered during the study.</p> <p><b>Excluded criteria:</b> Exclusion criteria included any history of substance abuse or dependency, other psychiatric comorbidities, significant medical problems (such as diabetes mellitus, hypertension, tuberculosis, hepatitis, or pregnancy), and involvement in litigation or compensation.</p>	<p><b>Interventions</b></p> <p>intervention 1</p> <ul style="list-style-type: none"> <li>● <b>Description:</b> The meditation program consisted of a training program that can be performed by anxious patients, together with the psychiatrist's complementary instruction on the stress management in anxiety disorder (see Appendix A). The training program comprised medication, exercise, stretching, muscle buildup and relaxation, and hypnotic suggestion, with the goal of including it in every day life through steady practice. At the end of each session, homework and an audio CD were given to participants.</li> <li>● <b>Duration:</b> 8 weeks</li> <li>● <b>Therapist qualifications/training:</b> A psychiatrist and two meditation specialists with 5 years of education and training experience conducted the program.</li> </ul> <p>kontrol 1</p> <ul style="list-style-type: none"> <li>● <b>Description:</b> The education program consisted of a presentation from the psychiatrist and education about the biological aspects of anxiety disorders, lasting for 1 hour, once a week. The education curriculum was as follows: "What is anxiety disorder (panic or generalized anxiety disorder)?", on Weeks 1 and 2; "symptoms and respiratory physiology of anxiety disorder" on Weeks 3 and 4, "biology, anatomy, and pharmacotherapy of anxiety disorder" on Weeks 5-7, and "sharing" and "discussion" on Week 8. Stress management techniques and behavior therapy for anxiety disorder were not included.</li> <li>● <b>Dose:</b> 1 h, once a week.</li> <li>● <b>Duration:</b> 8 weeks</li> </ul>	<p><i>Frafeld, alle årsager</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> AdverseEvent</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul> <p><i>Funktion, The Symptom Checklist-90-Revised (SCL-90-R)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> ContinuousOutcome</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Scale:</b> The Symptom Checklist-90-Revised (SCL-90-R)</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul> <p><i>Grad af angst, HAM-A</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> ContinuousOutcome</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Scale:</b> HAM-A</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul>
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Identification	<p><b>Sponsorship source:</b> No information  <b>Country:</b> South Korea  <b>Setting:</b> Inpatient or outpatient at the Department of Psychiatry, PochoCHA University College of Medicine</p> <p><b>Authors name:</b> Sang Hyuk Lee  <b>Institution:</b> Department of Psychiatry, Pochoon CHA University College of Medicine, Seongnam, South Korea  <b>Email:</b> E-mail address:cik7089@hanmail.net  <b>Address:</b> Department of Psychiatry, Pochoon CHA University College of Medicine, Bundang CHA Hospital, 351 Yatap-Dong, Bundang-Gu, Seongnam 463-712, South Korea</p>
Notes	

### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Judgement Comment: No information of how the allocation sequence was generated
Allocation concealment (selection bias)	Unclear risk	Judgement Comment: No information of allacotion concealment
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No information of blinding of participants and health care providers, but blinding assumes not to be possible
Blinding of outcome assessment (detection bias)	Low risk	Judgement Comment: HAM-A was assessed by subject-blinded psychiatrist
Incomplete outcome data (attrition bias)	Low risk	Quote: "After the 8-week programs, the last observation carried forward method was used for intent-to-treat analysis." Judgement Comment: Intention to treat analysis, and only 2 dropouts i the education group and 3 in the meditation group
Selective reporting (reporting bias)	Low risk	Judgement Comment: There is no reference to study protocol, but the study appears to report on all outcomes of interest
Other bias	Low risk	Judgement Comment: the study appears to be free of other sources of bias

### Piet 2010

<b>Methods</b>	<p><b>Study design:</b> Randomized controlled trial</p> <p><b>Study grouping:</b></p>
<b>Participants</b>	<p><b>Baseline Characteristics</b></p> <p>intervention 1</p> <ul style="list-style-type: none"> <li>● mean age, years (<i>SD</i>): 21.6 (2.84)</li> <li>● No of female, %: 79%</li> </ul> <p>Kontrol 1</p> <ul style="list-style-type: none"> <li>● mean age, years (<i>SD</i>): 22.1 (2.54)</li> <li>● No of female, %: 58%</li> </ul> <p><b>Included criteria:</b>age 18-25 with a primary diagnosis of SP according to DSM-IV criteria (American Psychiatric Association, 2000).</p> <p><b>Excluded criteria:</b>Exclusion criteria comprised: psychosis, severe depression, alcohol or drug dependence, bipolar disorder, cluster A and B personality disorders, and current (but not previous) psycho-pharmacological or psychotherapeutic treatment.</p>

Interventions	Intervention Characteristics	Outcomes
intervention 1	<ul style="list-style-type: none"> <li>● <b>Description:</b> MBCT was carried out according to a manual by Segal et al. (2002) developed for the treatment of chronic depression, with a few modifications for SP, mainly concerning the content of psychoeducation. Main treatment components were mindfulness meditation techniques such as the body scan, gentle mindful yoga exercises, and sitting meditation. Participants were recommended to spend 30-40 minutes daily on homework practices of mindfulness. The intervention consisted of 8 weekly 2-hour sessions in groups with up to 14 participants.</li> <li>● <b>Dose:</b> The intervention consisted of 8 weekly 2-hour sessions in groups with up to 14 participants.</li> <li>● <b>Duration:</b> 8 weeks</li> <li>● <b>Therapist qualifications/training:</b> The therapist conducting MBCT was a highly experienced mindfulness instructor (trained by Mark Williams).</li> </ul>	<p>Kontrol 1</p> <ul style="list-style-type: none"> <li>● <b>Description:</b> GCBT was carried out according to a treatment program developed at the Clinic for Anxiety and OCD, Aarhus University Hospital. This program, described in a manual by Hougaard (2006) for both therapists and patients, combines elements from Heimberg's GCBT and Clark and Wells individual cognitive therapy for SP. The main components of treatment included: (a) psycho-education on SP and CBT, (b) analysis of patients' individualized case-formulations based on the Clark &amp; Wells (1995) model, (c) cognitive restructuring (i.e., analysis and change of negative automatic thoughts), and (d) exposure to feared social situations via behavioral experiments. The participants borrowed a copy of the manual during the CBT treatment period. Homework assignments were given after each session of therapy.</li> <li>● <b>Dose:</b> Treatment consisted of two weekly 2-hour sessions of individual therapy prior to 12 weekly 2-hour sessions of group therapy. Each group included up to six clients and two therapists</li> <li>● <b>Duration:</b> 12 weeks</li> <li>● <b>Therapist qualifications/training:</b> One therapist in each group had extensive training and experience (&gt;10 years) in CBT for anxiety disorders</li> </ul>
		<p>Frafald, alle årsager</p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Adverse Event</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul> <p>Undgælse, The Liebowitz Social Anxiety Scale (LSAS), total score</p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Continuous Outcome</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Scale:</b> The Liebowitz Social Anxiety Scale (LSAS), total score</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul> <p>Grad af angst, The Beck Anxiety Inventory (BAI)</p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Continuous Outcome</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Scale:</b> The Beck Anxiety Inventory (BAI)</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul> <p>Funktion, Sheehan Disability Scale, mean final, SD</p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Continuous Outcome</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Scale:</b> Sheehan Disability Scale</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul>

	<p><i>Funktion, The Symptom Checklist-90-Revised (SCL-90-R)</i></p> <ul style="list-style-type: none"> <li>• <b>Outcome type:</b> Continuous Outcome</li> <li>• <b>Reporting:</b> Fully reported</li> <li>• <b>Scale:</b> The Symptom Checklist-90-Revised (SCL-90-R)</li> <li>• <b>Direction:</b> Lower is better</li> <li>• <b>Data value:</b> Endpoint</li> </ul>
<b>Identification</b>	<p><b>Sponsorship source:</b> No information</p> <p><b>Country:</b> Denmark</p> <p><b>Setting:</b> Outpatient clinic</p> <p><b>Authors name:</b> JACOB PIET</p> <p><b>Institution:</b> Institute of Psychology, Aarhus University, Denmark</p> <p><b>Email:</b> jacobj@psy.au.dk</p> <p><b>Address:</b> Jacob Piet, Institute of Psychology, Aarhus University, Nobelparken, Jens Chr. Skous Vej 4, 8000 Aarhus C, Denmark.</p> <p><b>Notes</b></p>

### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "Randomization was carried out in blocks of 14 or 12 (for group 1 and 2 respectively) by a secretary at the institute independent of the Anxiety Clinic. Outcome measures were collected at five data points: (1) prior to therapy; (2) after participants' first treatment (post 1), (3) after their second treatment (post 2); and at follow-ups (4) six months; and (5) 12 months after end of treatment."
Allocation concealment (selection bias)	Unclear risk	Judgement Comment: Insufficient information on allocation concealment
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No information of blinding of participants and health care providers, blinding judged not to be feasible
Blinding of outcome assessment (detection bias)	High risk	No information of tester blinding
Incomplete outcome data (attrition bias)	Low risk	Quote: "All outcome analyses were conducted on both the intention-to-treat (ITT) sample and on treatment completers. Except for within-group ESs, only ITT data are presented, since results from the two analyses were almost identical for the first treatment period, and the high dropout rate in the second period made completer results difficult to interpret. In the ITT analyses, which included all randomized participants, missing values were substituted by means of last observation carried forward. All data were analyzed using SPSS Version 17, and all tests performed were two-tailed with a set at 0.05."
Selective reporting (reporting bias)	Low risk	Judgement Comment: No reference study protocol, but appears to report on all outcomes of interest
Other bias	Low risk	Judgement Comment: The study appears to be free of other sources of bias

**Vollestad 2011**

Methods	<p><b>Study design:</b> Randomized controlled trial  <b>Study grouping:</b> Parallel group</p> <p><b>Participants</b></p> <p><b>intervention 1</b></p> <ul style="list-style-type: none"> <li>● mean age, years (SD): 41.4 (11.0)</li> <li>● No of female, %: 66.7%</li> <li>● years since onset, mean SD: 13.1 (9.7)</li> </ul> <p><b>kontrol 1</b></p> <ul style="list-style-type: none"> <li>● mean age, years (SD): 43.5 (11)</li> <li>● No of female, %: 67.6%</li> <li>● years since onset, mean SD: 19.7 (16.0)</li> </ul> <p><b>Included criteria:</b> Inclusion criteria were that patients 1) be between 18 and 65 years, and 2) fulfill diagnostic criteria for either PD/AG, SAD, or GAD.</p> <p><b>Excluded criteria:</b> Exclusion criteria were: 1) suicidality, 2) substance abuse and/or dependence, 3) severe mental disorder (psychosis or bipolar disorder), 4) other Axis I disorders as primary diagnosis, 5) use of anxiolytics, 6) deficits in impulse control as assessed by the MINI module for antisocial personality disorder, and 7) other concurrent treatment. These criteria allowed for the presence of comorbid Axis I symptomatology, provided that patients had anxiety disorder as a primary diagnosis.</p>
Interventions	<p><b>intervention 1</b></p> <ul style="list-style-type: none"> <li>● <b>Description:</b> MBSR was delivered by the first author employing the protocol developed by Kabat-Zinn (1990). The intervention consists of three main components: 1) didactical material covering the concept of mindfulness, the psychology and physiology of stress and anxiety, and ways in which mindfulness can be implemented in everyday life to facilitate more adaptive responses to challenges and distress, 2) mindfulness exercises during the group meetings and as homework between sessions, and 3) discussion and sharing in pairs and in the larger group. The MBSR program includes eight weekly 2.5 hour sessions, a half-day meditation retreat after class 6, daily home practice based on audio CDs with instruction, and a daily record keeping of mindfulness exercises. Formal mindfulness exercises include the body scan, sitting meditation with awareness of breath, and mindful movement. In keeping with the transdiagnostic nature of MBSR, the intervention was not specifically tailored to patients with anxiety diagnoses. Instead, symptoms of anxiety were framed as specific incidents of a ubiquitous tendency to experience distress as a function of relating to experience in a reactive manner</li> <li>● <b>Dose:</b> The MBSR program includes eight weekly 2.5 hour sessions, a half-day meditation retreat after class 6, daily home practice</li> <li>● <b>Duration:</b> 8 weeks</li> </ul> <p><b>kontrol 1</b></p> <ul style="list-style-type: none"> <li>● <b>Description:</b> Waiting list</li> </ul>
Outcomes	<p><i>Funktion, Penn State Worry Questionnaire</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Continuous Outcome</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Scale:</b> Penn State Worry Questionnaire</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul> <p><i>Frafald, alle årsager</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Adverse Event</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul>

	<p><i>Skadesvirkninger (total antal SAE og AE)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Adverse Event</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul> <p><i>Grad af angst, The Beck Anxiety Inventory (BAI)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Continuous Outcome</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Scale:</b> The Beck Anxiety Inventory (BAI)</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul> <p><i>Funktion, The Symptom Checklist-90-Revised (SCL-90-R)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Continuous Outcome</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Scale:</b> The Symptom Checklist-90-Revised (SCL-90-R)</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul>
<b>Identification</b>	<p><b>Sponsorship source:</b> No information</p> <p><b>Country:</b> Norway</p> <p><b>Setting:</b> Outpatient clinic</p> <p><b>Authors name:</b> Jon Vøllestad</p> <p><b>Institution:</b> Department of Clinical Psychology, University of Bergen, Christiesgate 12, 5015 Bergen, Norway</p> <p><b>Email:</b> E-mail address:jon.vollestad@psykp.uib.no</p>
<b>Notes</b>	

#### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Judgement Comment: No information of how the allocation sequence was generated
Allocation concealment (selection bias)	Unclear risk	Judgement Comment: No information on allocation concealment
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No information, but blinding not possible
Blinding of outcome assessment (detection bias)	Unclear risk	Judgement Comment: No information of tester blinding
Incomplete outcome data (attrition bias)	Low risk	Quote: "Treatment effect estimated in intention-to-treat sample" Judgement Comment: Intention to treat analyses
Selective reporting (reporting bias)	Low risk	Judgement Comment: No information of a study protocol, but seems to report on all outcomes of interest
Other bias	Low risk	Judgement Comment: The study appears to be free of other sources of bias

**Wong 2016**

Methods	Study design: Randomized controlled trial Study grouping: Parallel group
Participants	<p><b>Baseline Characteristics</b></p> <p>Intervention</p> <ul style="list-style-type: none"> <li>• mean age, years, SD: 50.40 (9.95)</li> <li>• Female %: 78.7%</li> </ul> <p>Kontrol 1</p> <ul style="list-style-type: none"> <li>• mean age, years, SD: 50.59 (9.57)</li> <li>• Female %: 78.7%</li> </ul> <p>Kontrol 2</p> <ul style="list-style-type: none"> <li>• mean age, years, SD: 48.78 (10.59)</li> <li>• Female %: 80.0%</li> </ul> <p><b>Included criteria:</b> (a) aged 21-65 (b) with a DSM-IV principal diagnosis of GAD on a structured Clinical Interview for DSM-IV (SCID) and a score of 19 or above using the Chinese version of the Beck Anxiety Inventory (BA) at baseline; (c) could understand Cantonese; (d) were willing to attend either the MBCT or psychoeducation group sessions; (e) if they were on medications for anxiety, they needed to have been on stable doses for at least 2 months before starting the intervention.</p> <p><b>Excluded criteria:</b> Participants were excluded if they: (a) were illiterate as they would have been unable to complete the self-report assessment; (b) had psychiatric and medical comorbidities that were potentially life threatening (i.e. psychosis, suicidal ideation, terminal medical illness) or conditions expected to severely limit patient participation or adherence (such as psychosis, current substance misuse, dementia, pregnancy); (c) were currently seeing a cognitive-behavioural therapist or psychotherapist/counsellor for any psychological problems; and (d) undertook regular meditation or yoga practice (or had previously done so).</p>
Interventions	<p><b>Intervention</b></p> <ul style="list-style-type: none"> <li>• Description: Mindfulness-based cognitive therapy (MBCT) group. Five MBCT groups were led by two clinical psychologists and one social worker who were all experienced in leading an MBCT group. All of them had attended intensive MBCT and MBSR training retreats and had both practised and conducted MBCT with patients for at least 2 years. The intervention consisted of weekly sessions for 8 weeks each lasting 2 hours involving up to 15 participants. Our intervention programme followed the MBCT for depression protocol published in the book by Segal et al. Modifications were made by a team of MBCT instructors in order to make the intervention more suitable for people with anxiety disorders with the cognitive-behavioural components dealing with depression being replaced by component dealing with anxiety. This included discussion the cognitive-behavioural model of GAD in session two, automatic anxiety thoughts in session four, refractive-avoidance and ruminative worrying in session five and the development of an action plan in line with personal values and relapse prevention of anxiety in session seven. The session summary can be found in online supplement DS1. During the intervention period, participants in this group were given daily homework exercises including guided awareness exercises via audio instruction on compact discs, which included sitting meditation, body scan and mindful movements. Moreover, shorter unguided awareness exercises such as the 3 min breathing space were also included in the homework, with the aim of increasing moment-by-moment awareness of feelings, thoughts and bodily sensations together with exercises designed to integrate the application of mindfulness skills into daily activities. All sessions were audiotaped with a subset reviewed to ensure the fidelity of the programme. All participants were instructed to practise mindfulness meditation for 45 min a day.</li> <li>• Dose: eekly sessions for 8 weeks each lasting 2 hour</li> <li>• Duration: 8 weeks</li> <li>• Therapist qualifications/training: Five MBCT groups were led by two clinical psychologists and onesocial worker who were all experienced in leading an MBCT group. All of them had attended intensive MBCT and MBSR training retreats and had both practised and conducted MBCT</li> </ul>

<p>with patients for at least 2 years.</p> <p><b>Kontrol 1</b></p> <ul style="list-style-type: none"> <li>● <b>Description:</b> Psychoeducation group. The psychoeducation intervention was designed to be comparable with MBCT in terms of the course structure and the therapist's contact time and attention, with participants having to comply with an agenda during each session with a similar amount of homework assignments to that of the MBCT group. As for the MBCT group, it consisted of weekly sessions for 8 weeks each lasting 2 hours involving up to 15 participants with didactic teaching and minimal group interaction and discussion. The content of the teaching was based on White's book <i>Treating anxiety and stress</i>, a handbook that is used by clinical psychologists to help people cope with anxiety using the cognitive-behavioural approach. A brief description of the schedule of psychoeducation is presented in online supplement DS2. The topics included preparing for stress control, learning about stress, controlling one's body, thoughts and action; controlling one's panic, insomnia, depression and future in addition to the didactic teaching content, simple relaxation skills such as muscle relaxation were also taught during class although instructors were asked, as best as they could, not to teach any skills in a way that may enhance mindfulness. Two clinical psychologists with at least 2 years' experience in CBT practice or teaching were employed to lead the psychoeducation groups.</li> <li>● <b>Dose:</b> weekly sessions for 8 weeks each lasting 2 hours.</li> <li>● <b>Duration:</b> 8 weeks</li> <li>● <b>Therapist qualifications/training:</b> Two clinical psychologists with at least 2 years' experience in CBT practice or teaching were employed to lead the psychoeducation groups.</li> </ul> <p><b>Kontrol 2</b></p> <ul style="list-style-type: none"> <li>● <b>Description:</b> Usual care group. Participants in the usual care (control) group did not receive any specific intervention but they are allowed unrestricted access to primary care services. In Hong Kong, the average consultation time for public primary care clinics is about 6 min and it is often difficult for doctors to have enough time to deal with patients' emotional problems. The waiting time for referral to be seen by mental health specialists is at least 6 months.</li> </ul>	<p><i>Grad af angst, The Beck Anxiety Inventory (BAI)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Continuous Outcome</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Scale:</b> The Beck Anxiety Inventory (BAI)</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul> <p><i>Funktion, Penn State Worry Questionnaire</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Continuous Outcome</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Scale:</b> Penn State Worry Questionnaire</li> <li>● <b>Direction:</b> Lower is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul> <p><i>Livskvalitet, SF 12, Mental Component Summary (MCS-12)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Continuous Outcome</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Scale:</b> SF 12, Mental Component Summary (MCS-12)</li> <li>● <b>Direction:</b> Higher is better</li> <li>● <b>Data value:</b> Endpoint</li> </ul> <p><i>Livskvalitet, SF 12, Physical Component Summary (PCS-12)</i></p> <ul style="list-style-type: none"> <li>● <b>Outcome type:</b> Continuous Outcome</li> <li>● <b>Reporting:</b> Fully reported</li> <li>● <b>Scale:</b> SF 12, Physical Component Summary (PCS-12)</li> </ul>
<p><b>Outcomes</b></p>	<p>Review Manager 5.3</p>

	<ul style="list-style-type: none"> <li>• Direction: Higher is better</li> <li>• Data value: Endpoint</li> </ul> <p><i>Frafald, alle årsger</i></p> <ul style="list-style-type: none"> <li>• Outcome type: Adverse Event</li> <li>• Direction: Lower is better</li> <li>• Data value: Endpoint</li> </ul>
<b>Identification</b>	<p><b>Sponsorship source:</b> This study was funded by the Health and Health Services Research Fund of the Food and Health Bureau of the HK SAR government with grant reference number 07080451. The funders had no role in study design, data collection and analysis, decision to publish or preparation of the manuscript.</p> <p><b>Country:</b> China</p> <p><b>Setting:</b> Outpatient clinic</p> <p><b>Authors name:</b> Samuel Yeung Shan Wong</p>
<b>Notes</b>	

### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "Simple randomisation method was used to randomly assign eligible participants to one of the three groups using the Microsoft Excel RAND function. For every batch of participants recruited, a third of the participants were randomised to the MBCT group, a third to the psychoeducation group and the rest to the control group."
Allocation concealment (selection bias)	Low risk	Quote: "To ensure concealment of randomisation, a biostatistician who was not part of this study pre-generated random numbers from a normal distribution." Quote: "Assigned to group A, the middle third to group B and the remaining ones to group C, where A, B and C represents the treatment the patient will receive (for example A, MBCT group; B, psycho- education group; C, control group) and only the research coordinator could decode it. The" Quote: "<b>To ensure concealment of randomisation, a biostatistician who was not part of this study pre-generated random numbers from a normal distribution. Participants were ranked in order according to their generated values. Participants ranked in the top third of the list were</b> assigned to group A, the" Judgement Comment: Performed by a biostatistician who was not part of the study.
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: No information of blinding of participants and health care providers, blinding not feasible
Blinding of outcome assessment (detection bias)	High risk	Judgement Comment: No information of tester blinding, blinding not possible for patient reported outcomes
Incomplete outcome data (attrition bias)	Low risk	Quote: "To investigate significant changes over time, linear mixed models (LMM) were conducted for both primary and secondary outcomes following the intention-to-treat principle. A two-sided P-value of 0.05 or less was considered to be statistically significant. The use of LMM provided the means to include participants with incomplete data (missed 1 or 2 questionnaires) to assess the treatment effect over time (i.e. trend or group*time interaction). In our models, intervention group, time and the interactions between the intervention group and time were treated as fixed factors, and an unstructured covariance structure was employed. Statistical analysis of the primary and secondary outcome measures, including BAI, PSWQ, CES-D, SF-12, FFMQ as well as health service utilisation over time were made." Judgement Comment: Few drop outs at two months, however, there are more drop outs from the usual care group.

Selective reporting (reporting bias)	Low risk	Judgement Comment: Reference to a protocol number, protocol not available, seems to report on all outcomes of interest
Other bias	Low risk	Judgement Comment: The study appears to be free of other sources of bias

*Footnotes***Characteristics of excluded studies*****Arch 2012***

Reason for exclusion	Wrong intervention
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***Arch 2013a***

Reason for exclusion	Wrong outcomes
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***Arch 2013b***

Reason for exclusion	Already included from systematic review
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***AsmaeeMajid 2012***

Reason for exclusion	Wrong comparator
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***Delgado 2010***

Reason for exclusion	Wrong patient population
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***Faucher 2016***

Reason for exclusion	Wrong outcomes
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***Goldin 2017***

Reason for exclusion	Wrong outcomes
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***Helmes 2017***

Reason for exclusion	Wrong patient population
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***Jazaieri 2012***

Reason for exclusion	Wrong comparator
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<b>Kocovski 2013b</b>	Reason for exclusion	not a add-on study
<b>Momeni 2018</b>	Reason for exclusion	Wrong study design
<b>Moore 2016</b>	Reason for exclusion	Wrong comparator
<b>Saha 2018</b>	Reason for exclusion	Wrong outcomes
<b>Shortland Jones 2015</b>	Reason for exclusion	Only a short synopsis
<b>strm 2014</b>	Reason for exclusion	Wrong comparator
<b>Sundquist 2017</b>	Reason for exclusion	Wrong patient population
<b>TorresPlatas 2019</b>	Reason for exclusion	Wrong patient population
<b>Wong 2016a</b>	Reason for exclusion	Only a short synopsis

*Footnotes***Characteristics of studies awaiting classification***Footnotes*

## Characteristics of ongoing studies

Footnotes

## References to studies

### Included studies

#### Arch 2013

Arch, J. J.; Ayers, C. R.; Baker, A.; Almklov, E.; Dean, D. J.; Craske, M. G.. Randomized clinical trial of adapted mindfulness-based stress reduction versus group cognitive behavioral therapy for heterogeneous anxiety disorders. *Behaviour research and therapy* 2013;51(4-5):185-196. [DOI: 10.1016/j.brat.2013.01.003 [doi]]

#### Goldin 2016

Goldin, Philippe R.; Morrison, Amanda; Jazaieri, Hooria; Brozovich, Faith; Heimberg, Richard; Gross, James J.. Group CBT versus MBSSR for social anxiety disorder: A randomized controlled trial. *Journal of Consulting & Clinical Psychology* 2016;84(5):427-437. [DOI: ]

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#### Kocovski 2013

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Piet, J.; Hougaard, E.; Hecksher, M. S.; Rosenberg, N. K.. A randomized pilot study of mindfulness-based cognitive therapy and group cognitive-behavioral therapy for young adults with social phobia. *Scandinavian Journal of Psychology* 2010;51(5):403-410. [DOI: 10.1111/j.1467-9450.2009.00801.x [doi]]

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Wong, Samuel Yeung Shan; Yip, Benjamin Hon Kei; Mak, Winnie Wing Sze; Mercer, Stewart; Cheung, Eliza Yee Lai; Ling, Candy Yuet Man; Lui, Wacy Wai Sze; Tang, Wai Kwong; Lo, Herman Hay Ming; Wu, Justin Che Yuen; Lee, Tatia Mei Chun; Gao, Ting; Griffiths, Sian M.; Chan, Peter Hoi Sing; Ma, Helen Shuk Wah. Mindfulness-based cognitive therapy v. group psychoeducation for people with generalised anxiety disorder: randomised controlled trial.. *British Journal of Psychiatry* 2016;209(1):68-75. [DOI: ]

**Excluded studies****Arch 2012**

Arch, J. J.; Eifert, G. H.; Davies, C.; Plumb Vilardaga, J. C.; Rose, R. D.; Craske, M. G.. Randomized clinical trial of cognitive behavioral therapy (CBT) versus acceptance and commitment therapy (ACT) for mixed anxiety disorders. *Journal of consulting and clinical psychology* 2012;80(5):750-765. [DOI: 2012-12071-001 [pii]]

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Arch, Joanna J.; Ayers, Catherine R.. Which treatment worked better for whom? Moderators of group cognitive behavioral therapy versus adapted mindfulness based stress reduction for anxiety disorders.. *Behaviour Research & Therapy* 2013;51(8):434-442. [DOI: ]

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Arch, Joanna J.; Ayers, Catherine R.; Baker, Aaron; Almklov, Erin; Dean, Derek J.; Craske, Michelle G.. Randomized clinical trial of adapted mindfulness-based stress reduction versus group cognitive behavioral therapy for heterogeneous anxiety disorders.. *Behaviour Research & Therapy* 2013;51(4-5):185-196. [DOI: ]

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Delgado, L. C.; Guerra, P.; Perakakis, P.; Vera, M. N.; Reyes del Paso, G.; Vila, J.. Treating chronic worry: Psychological and physiological effects of a training programme based on mindfulness. *Behaviour research and therapy* 2010;48(9):873-882. [DOI: 10.1016/j.brat.2010.05.012 [doi]]

**Faucer 2016**

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Goldin, Philippe R.; Morrison, Amanda S.; Jazalati, Hooria; Heimberg, Richard G.; Gross, James J.. Trajectories of social anxiety, cognitive reappraisal, and mindfulness during an RCT of CBGT versus MBSR for social anxiety disorder.. *Behaviour Research & Therapy* 2017;97(Journal Article):1-13. [DOI: ]

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Jazaieri, H.; Goldin, P. R.; Werner, K.; Ziv, M.; Gross, J. J. A randomized trial of MBSR versus aerobic exercise for social anxiety disorder. *Journal of clinical psychology* 2012;68(7):715-731. [DOI: 10.1002/jclp.21863 [doi]]

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Kocovski, Nancy L.; Fleming, Jan E.; Hawley, Lance L.; Huta, Veronika; Antony, Martin M. Mindfulness and acceptance-based group therapy versus traditional cognitive behavioral group therapy for social anxiety disorder: a randomized controlled trial.. *Behaviour Research & Therapy* 2013;51(12):889-898. [DOI: ]

**Momeni 2018**

Momeni F.; Shahidi S.; Mootabi F.; Heydari M.; Dadashi, S. Comparison of the effectiveness of cognitive behavior therapy and mindfulness-based cognitive therapy on quality of life and parent-child relationship in women with generalized anxiety disorder.. *Iranian Journal of Psychiatry and Behavioral Sciences* 2018;12(1) (pagination).Arté Number: e9653. ate of Pubaton: 01 Mar 2018. [DOI: ]

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Moore, Raeanne C.; Depp, Colin A.; Wetherell, Julie Loebach; Lenze, Eric J. Ecological momentary assessment versus standard assessment instruments for measuring mindfulness, depressed mood, and anxiety among older adults.. *Journal of psychiatric research* 2016;75(Journal Article):116-123. [DOI: ]

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Saha, Sanjib; Jarl, Johan; Gerdham, Ulf-G; Sundquist, Kristina; Sundquist, Jan. Economic evaluation of mindfulness group therapy for patients with depression, anxiety, stress and adjustment disorders compared with treatment as usual.. *British Journal of Psychiatry* 2018;1-7(Journal Article). [DOI: ]

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TorresPlatas S.G.; Escobar S.; Belliveau C.; Wu, J.; Sasi N.; Fotso J.; Potes A.; Thomas Z.; Goodman A.; Looper K.; Segal M.; Berlim M.; Vasudev A.; Moscovitz N.; Rei, S.. Mindfulness-Based Cognitive Therapy Intervention for the Treatment of Late-Life Depression and Anxiety Symptoms in Primary Care: A Randomized Controlled Trial.. *Psychotherapy and psychosomatics* 2019;88(4):254-256. [DOI: ]

**Wong 2016a**

Wong S.Y.; Tang W.K.; Mercer S.W.; Kung K.; Griffiths S.M.; Mak W.W.; Lee, T. M. Mindfulness-based cognitive therapy for generalised anxiety disorder and health service utilisation among Chinese patients in primary care: a randomised, controlled trial.. *Hong Kong medical journal = Xianggang yi xue za zhi* 2016;22(6 Supplement 6) (pp 35-36).ate of Pubaton: 01 e 2016. [DOI: ]

## Data and analyses

### 2 Mindfulness vs aktiv kontrol

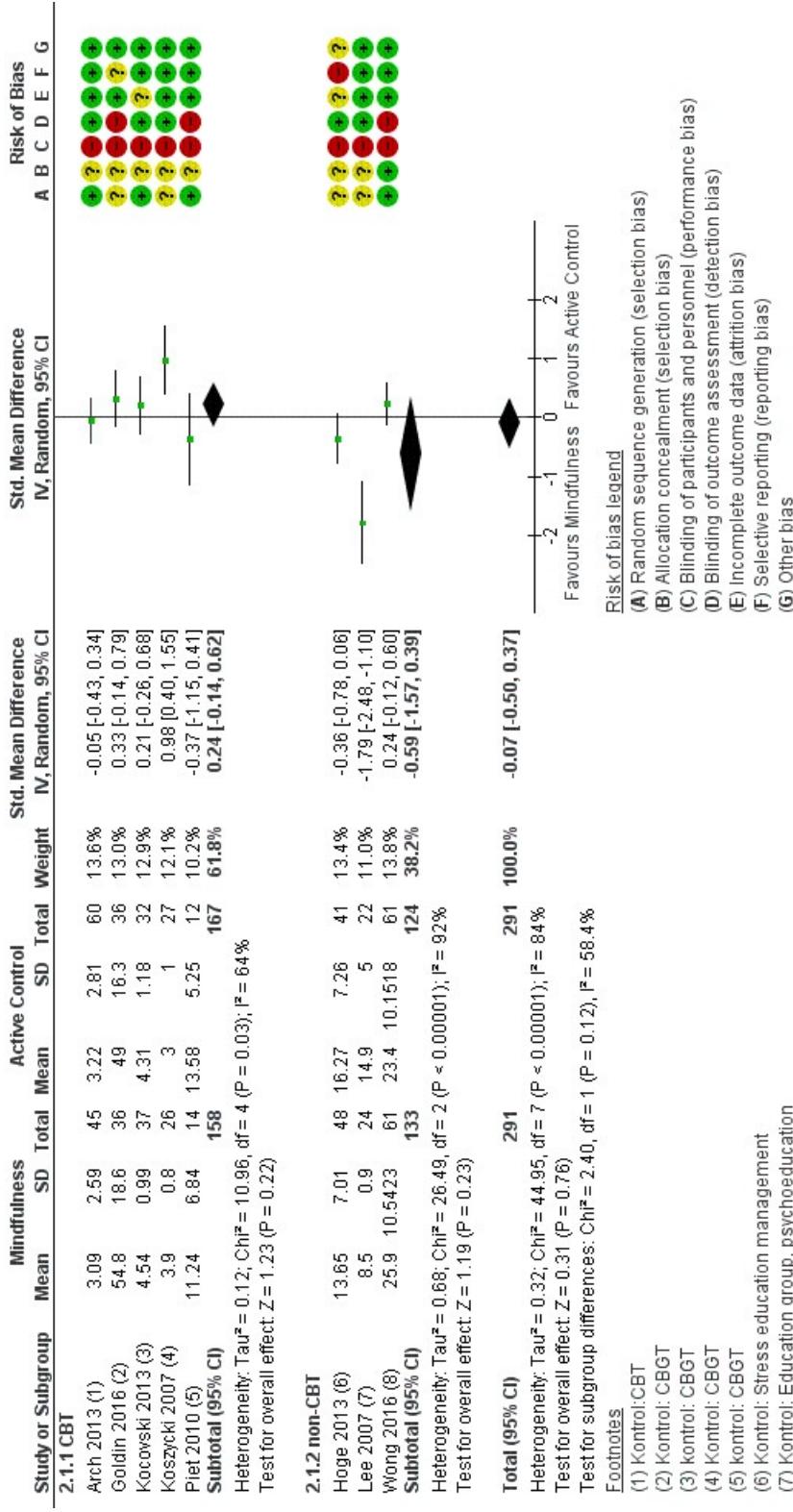
Outcome or Subgroup	Studies	Participants	Statistical Method	Effect Estimate
2.1 Grad af angst (Anxiety severity)	8	582	Std. Mean Difference (IV, Random, 95% CI)	-0.07 [-0.50, 0.37]
2.1.1 CBT	5	325	Std. Mean Difference (IV, Random, 95% CI)	0.24 [-0.14, 0.62]
2.1.2 non-CBT	3	257	Std. Mean Difference (IV, Random, 95% CI)	-0.59 [-1.57, 0.39]
2.3 Funktion (Disability)	5	352	Std. Mean Difference (IV, Random, 95% CI)	-0.11 [-0.55, 0.32]
2.3.1 CBT	3	184	Std. Mean Difference (IV, Random, 95% CI)	0.00 [-0.34, 0.34]
2.3.2 non-CBT	2	168	Std. Mean Difference (IV, Random, 95% CI)	-0.28 [-1.53, 0.97]
2.7 Livskvalitet (Quality of Life)	3	281	Std. Mean Difference (IV, Random, 95% CI)	-0.16 [-0.39, 0.08]
2.8 Undgåelse (Avoidance)	4	257	Std. Mean Difference (IV, Random, 95% CI)	0.28 [-0.32, 0.88]
2.13 Frafald, alle årsager (dropouts, all causes)	8	623	Risk Ratio (M-H, Random, 95% CI)	0.74 [0.54, 1.01]
2.14 Skadesvirkninger, (Adverse events) totale antal SAE og AE)	3	181	Risk Ratio (M-H, Random, 95% CI)	0.75 [0.14, 4.09]

### 8 Mindfulness vs No treatment

Outcome or Subgroup	Studies	Participants	Statistical Method	Effect Estimate
8.1 Grad af angst (Anxiety severity)	5	388	Std. Mean Difference (IV, Random, 95% CI)	-0.70 [-0.93, -0.48]
8.2 Funktion (Disability)	3	232	Std. Mean Difference (IV, Random, 95% CI)	-0.69 [-1.25, -0.13]
8.5 Livskvalitet (Quality of life)	2	201	Std. Mean Difference (IV, Random, 95% CI)	-0.39 [-0.67, -0.11]
8.7 Grad af undgåelse (Avoidance)	3	195	Std. Mean Difference (IV, Random, 95% CI)	-0.96 [-1.56, -0.36]
8.9 Frafald, alle årsager (dropouts, all causes)	5	392	Risk Ratio (M-H, Random, 95% CI)	1.75 [0.73, 4.23]
8.11 Skadesvirkninger (adverse events) Totale antal SAE og AE	2	115	Risk Ratio (M-H, Random, 95% CI)	2.72 [0.29, 25.29]
8.12 Skadesvirkninger (adverse events) Totale antal SAE og AE	2	115	Risk Difference (M-H, Random, 95% CI)	0.03 [-0.03, 0.09]

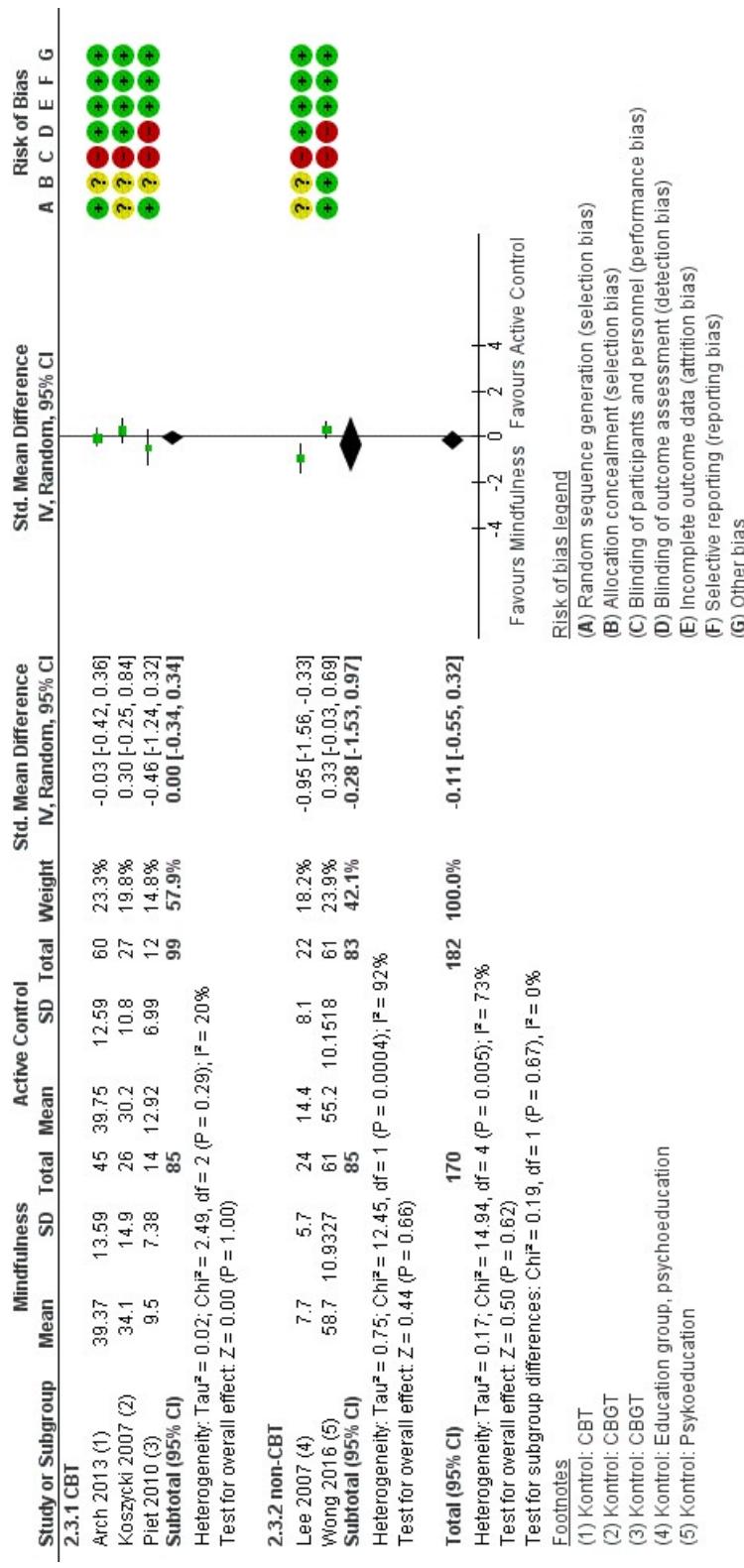
## Figures

**Figure 1 (Analysis 2.1)**



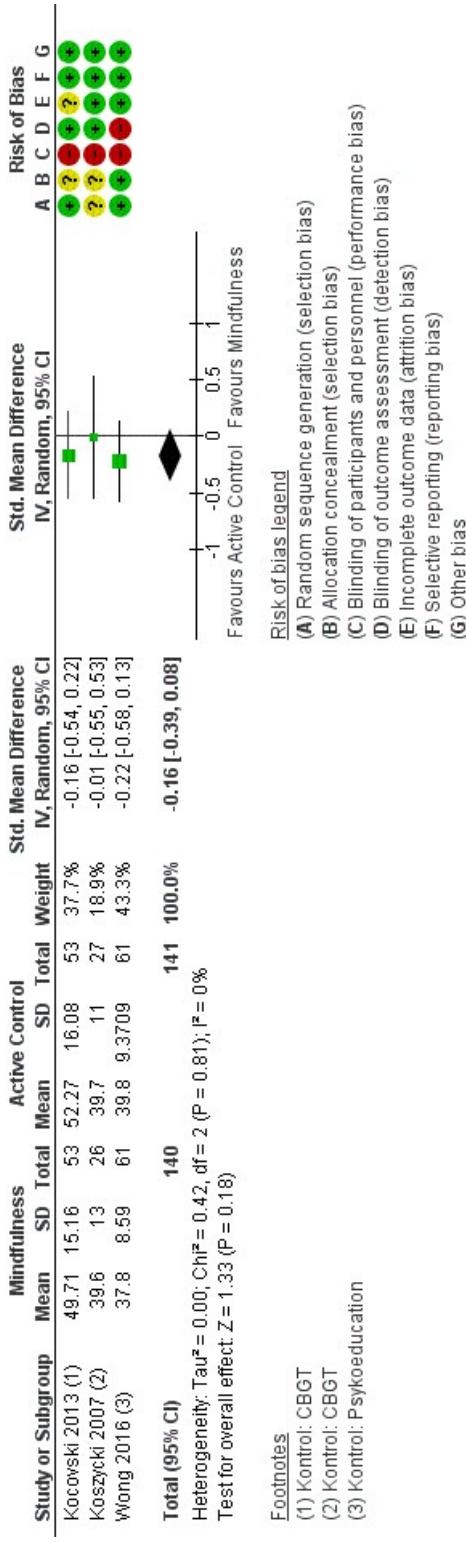
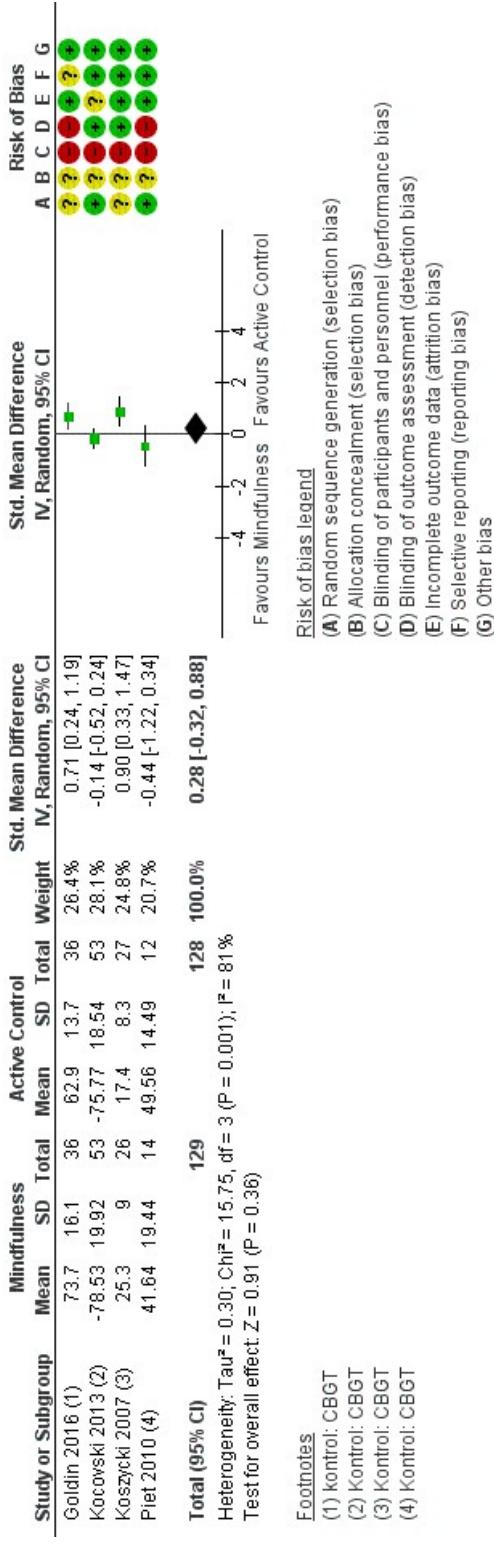
Forest plot of comparison: 2 Mindfulness vs aktiv kontrol, outcome: 2.1 Grad af angst (Anxiety severity).

**Figure 3 (Analysis 2.3)**

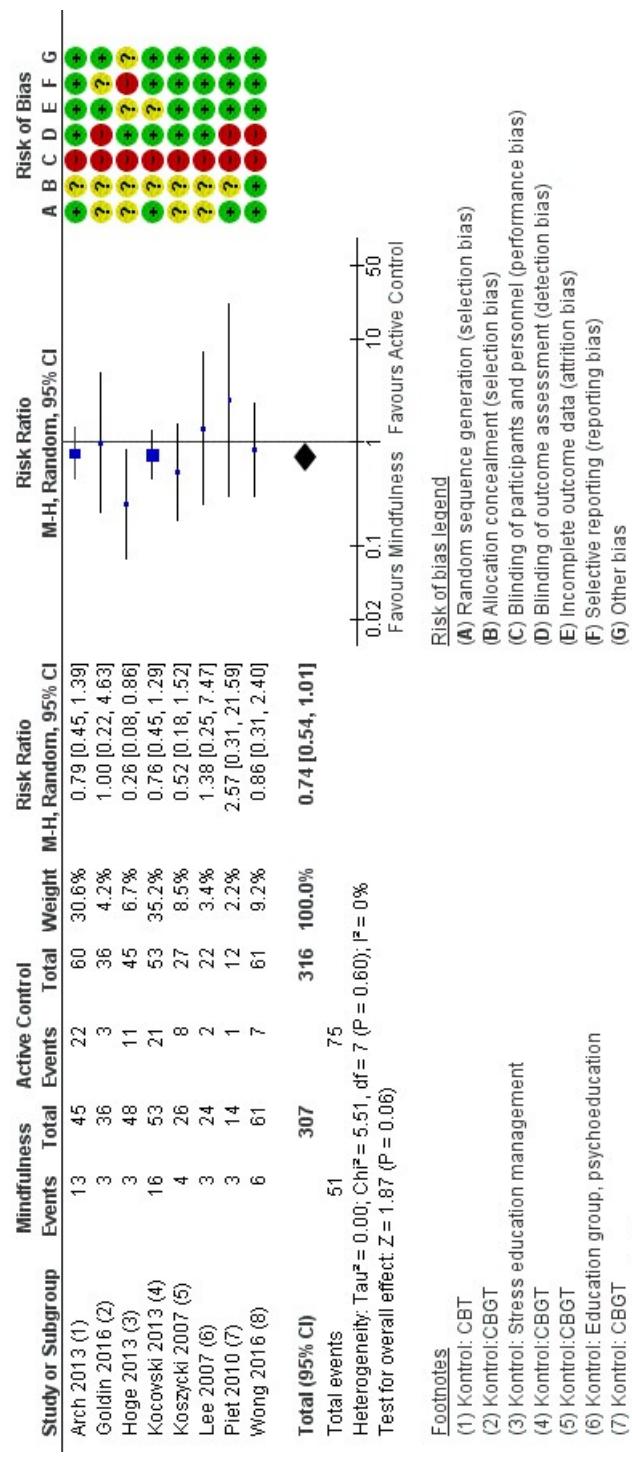


Forest plot of comparison: 2 Mindfulness vs aktiv kontrol, outcome: 2.3 Funktion (Disability).

**Figure 4 (Analysis 2.7)**

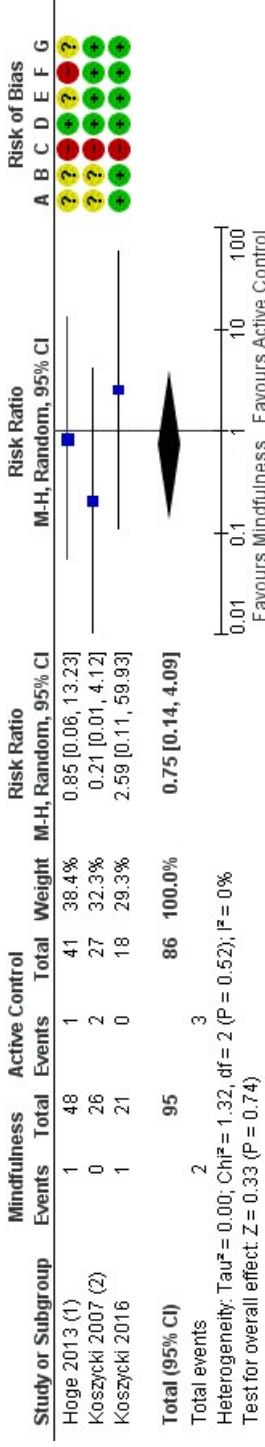
**Figure 5 (Analysis 2.8)**

Forest plot of comparison: 2 Mindfulness vs aktiv kontrol, outcome: 2.8 Undgåelse (Avoidance).

**Figure 6 (Analysis 2.13)**

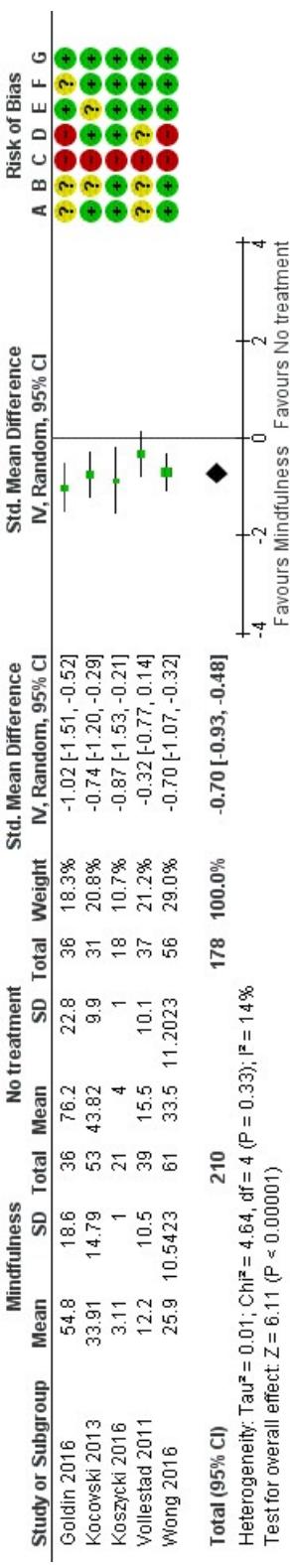
Forest plot of comparison: 2 Mindfulness vs aktiv kontrol, outcome: 2.13 Frafaeld, alle årsager (dropouts, all causes).

**Figure 7 (Analysis 2.14)**

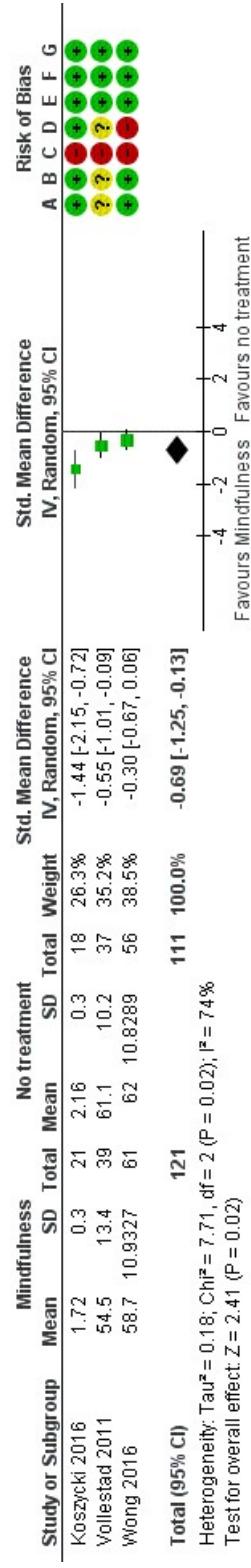


Forest plot of comparison: 2 Mindfulness vs aktiv kontrol, outcome: 2.14 Skadesvirkninger, (Adverse events) totale antal SAE og AE).

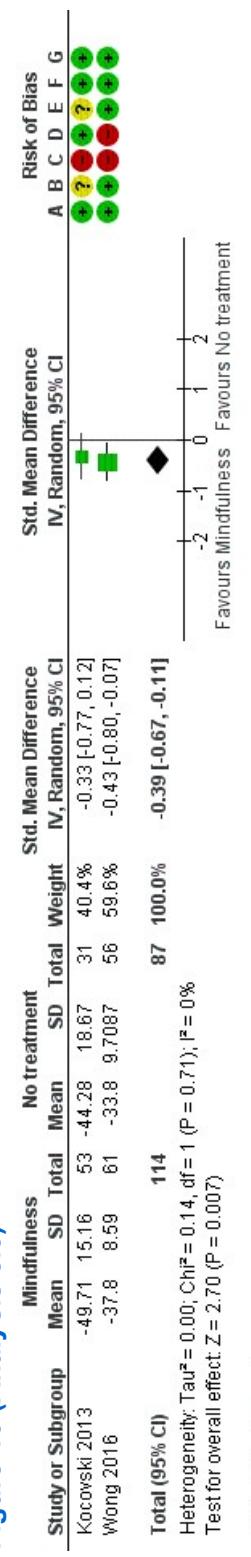
**Figure 8 (Analyses 8.1)**



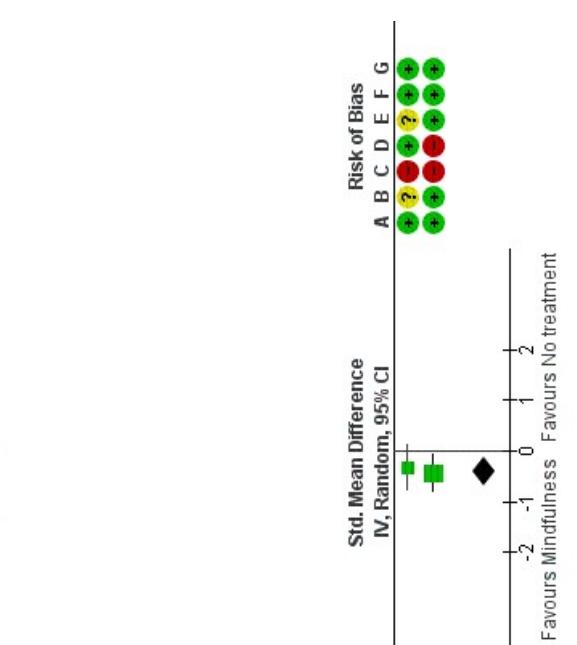
Forest plot of comparison: 8 Mindfulness vs Usual care, outcome: 8.1 Grad af angst (Anxiety severity).

**Figure 9 (Analysis 8.2)**

Forest plot of comparison: 8 Mindfulness vs Usual care, outcome: 8.5 Funktion (Disability).

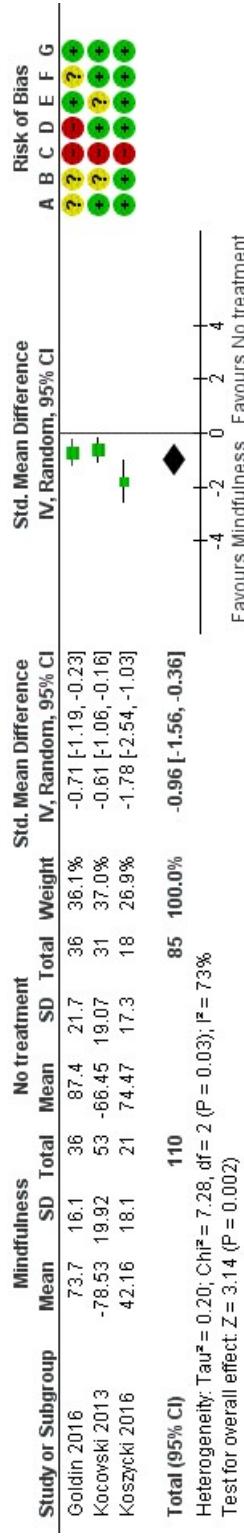
**Figure 10 (Analysis 8.5)**

Forest plot of comparison: 8 Mindfulness vs Usual care, outcome: 8.5 Funktion (Disability).



Forest plot of comparison: 8 Mindfulness vs Usual care, outcome: 8.5 Funktion (Disability).

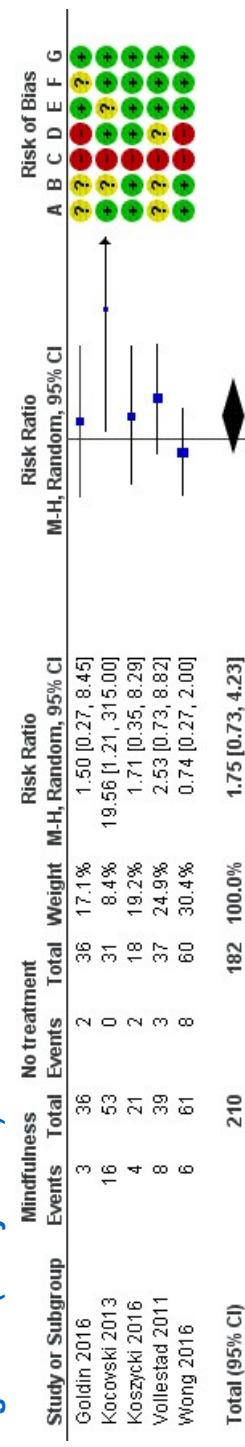
Forest plot of comparison: 8 Mindfulness vs Usual care, outcome: 8.7 Livskvalitet (Quality of life).

**Figure 11 (Analysis 8.7)**

Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

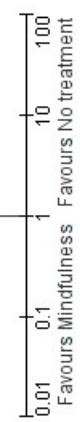
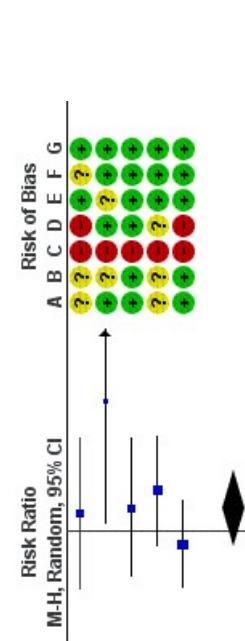
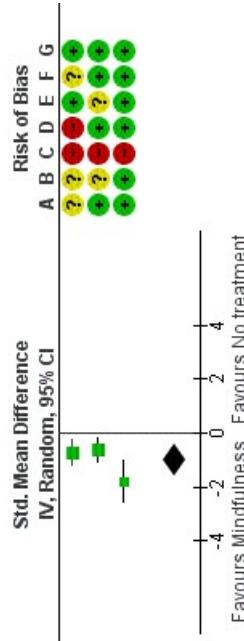
Forest plot of comparison: 8 Mindfulness vs No treatment, outcome: 8.7 Grad af undgåelse (Avoidance).

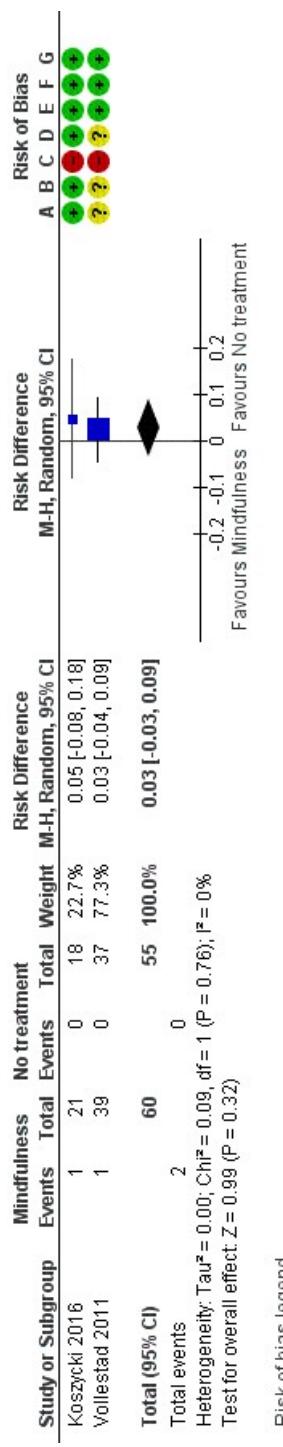
**Figure 12 (Analysis 8.9)**

Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Forest plot of comparison: 8 Mindfulness vs No treatment, outcome: 8.9 Frafald, alle årsager (dropouts, all causes).



**Figure 13 (Analysis 8.12)**

Forest plot of comparison: 8 Mindfulness vs No treatment, outcome: 8.12 Skaddesvirkninger (adverse events) Totale antal SAE og AE.