

The effect of meditative movement on breathlessness in people with advanced disease: a systematic review and meta-analysis

Online supplement

Methods: Search strategy

CENTRAL and CDSR

- #1 MeSH descriptor: [Yoga] explode all trees
- #2 (yoga* or yogic*):ti,ab,kw (Word variations have been searched)
- #3 MeSH descriptor: [Tai ji] explode all trees
- #4 (tai chi* or taichi* or tai ji* or taiji*):ti,ab,kw (Word variations have been searched)
- #5 MeSH descriptor: [Qigong] explode all trees
- #6 (qi gong* or qi gong* or chi kung* or chi gung*):ti,ab,kw (Word variations have been searched)
- #67(#1 or #2 or #3 or #4 or #5 or #6)
- #8 (advance* near/6 (disease* or illness*)):ti,ab,kw (Word variations have been searched)
- #9 MeSH descriptor: [Neoplasms] explode all trees
- #10 (cancer* or neoplas* or malignan* or carcinoma* or tumor* or tumour* or metasta* or adenocarcinoma* or lymphoma* or leukemia* or leukaemia*):ti,ab,kw (Word variations have been searched)
- #11 MeSH descriptor: [Pulmonary Disease, Chronic Obstructive] explode all trees
- #12 (chronic and obstruct* and (pulmonary or airway* or airflow or lung*)):ti,ab,kw (Word variations have been searched)
- #13 COPD:ti,ab,kw (Word variations have been searched)
- #14 ((pulmonary or respiratory) near/6 disease*):ti,ab,kw (Word variations have been searched)
- #15 MeSH descriptor: [Heart Diseases] explode all trees
- #16 (((cardi* or heart) near/6 (disease* or failure)) or CHF):ti,ab,kw (Word variations have been searched)
- #17 (#8 or #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16)
- #18 (#7 and #17)

MEDLINE (OVID)

1 exp Yoga/

2 (yoga* or yogic*).ti,ab.

3 exp Tai Ji/

4 (tai chi* or taichi* or tai ji* or taiji*).ti,ab.

5 exp Qigong/

6 (qi gong* or qi gong* or chi kung* or chi gung*).ti,ab.

7 1 or 2 or 3 or 4 or 5 or 6

8 (advance* adj6 (disease* or illness*)).ti,ab.

9 exp neoplasms/

10 (cancer* or neoplas* or malignan* or carcinoma* or tumor* or tumour* or metasta* or adenocarcinoma* or lymphoma* or leukemia* or leukaemia*).ti,ab.

11 exp Pulmonary Disease, Chronic Obstructive/

12 (chronic and obstruct* and (pulmonary or airway* or airflow or lung*)).ti,ab.

13 COPD.ti,ab.

14 ((pulmonary or respiratory) adj6 disease*).ti,ab.

15 exp heart diseases/

16 (((cardi* or heart) adj6 (disease* or failure)) or CHF).ti,ab.

17 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16

18 7 and 17

Embase (OVID)

1 yoga/

2 (yoga* or yogic*).ti,ab.

3 Tai Chi/

4 (tai chi* or taichi* or tai ji* or taiji*).ti,ab.

5 qigong/

6 (qi gong* or qi gong* or chi kung* or chi gung*).ti,ab.

7 or/1-6

8 (advance* adj6 (disease* or illness*)).ti,ab.

9 exp neoplasm/

10 (cancer* or neoplas* or malignan* or carcinoma* or tumor* or tumour* or metasta* or adenocarcinoma* or lymphoma* or leukemia* or leukaemia*).ti,ab.

11 chronic obstructive lung disease/

12 (chronic and obstruct* and (pulmonary or airway* or airflow or lung*)).ti,ab.

13 COPD.mp.

14 ((pulmonary or respiratory) adj6 disease*).ti,ab.

15 exp heart disease/

16 (((cardi* or heart) adj6 (disease* or failure)) or CHF).ti,ab.

17 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16

18 7 and 17

19 random\$.tw.

20 factorial\$.tw.

21 crossover\$.tw.

22 cross over\$.tw.

23 placebo\$.tw.

24 (doubl\$ adj blind\$).tw.

25 (singl\$ adj blind\$).tw.

26 assign\$.tw.

27 allocat\$.tw.

28 volunteer\$.tw.

29 Crossover Procedure/

30 double blind procedure.tw.

31 Randomized Controlled Trial/

32 Single Blind Procedure/

33 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32

34 (animal/ or nonhuman/) not human/

35 33 not 34

36 18 and 35

PsycINFO (OVID)

1 yoga.ti,ab.

2 (yoga* or yogic*).ti,ab.

3 tai chi.ti,ab.

4 (tai chi* or taichi* or tai ji* or taiji*).ti,ab.

5 qi gong.ti,ab.

6 (qi gong* or qi gong* or chi kung* or chi gung*).ti,ab.

7 (advance* adj6 (disease* or illness*)). ti,ab.

8 exp neoplasm/

9 (cancer* or neoplas* or malignan* or carcinoma* or tumor* or tumour* or metasta* or adenocarcinoma* or lymphoma* or leukemia* or leukaemia*).ti,ab.

10 chronic obstructive pulmonary disease/

11 (chronic and obstruct* and (pulmonary or airway* or airflow or lung*)).ti,ab.

12 COPD.ti,ab.

13 ((pulmonary or respiratory) adj6 disease*).ti,ab.

14 exp heart disorders/

15 (((cardi* or heart) adj6 (disease* or failure)) or CHF).ti,ab.

16 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15

17 1 or 2 or 3 or 4 or 5 or 6

18 16 and 17

CINAHL (EBSCO)

S18 S7 AND S17

S17 S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 OR S16

S16 (((cardi* or heart) N6 (disease* or failure)) or CHF)

S15 (MH "Heart Diseases+")

S14 ((pulmonary or respiratory) N6 disease*)

S13 COPD

S12 (chronic and obstruct* and (pulmonary or airway* or airflow or lung*))

S11 (MH "Pulmonary Disease, Chronic Obstructive+")

S10 (cancer* or neoplas* or malignan* or carcinoma* or tumor* or tumour* or metasta* or adenocarcinoma* or lymphoma* or leukemia* or leukaemia*)

S9 (MH "Neoplasms+")

S8 (advance* N6 (disease* or illness*))

S7 S1 OR S2 OR S3 or S4 OR S5 OR S6

S6 TI (qi gong* or qi gong* or chi kung* or chi gung*) OR AB (qi gong* or qi gong* or chi kung* or chi gung*)

S5 (MH "Qigong+")

S4 TI (tai chi* or taichi* or tai ji* or taiji*) or AB (tai chi* or taichi* or tai ji* or taiji*)

S3 (MH "Tai Chi+")

S2 TI (yoga* or yogic*) or AB (yoga* or yogic*)

S1 (MH "Yoga+")

Wanfang database

- 1 主题:(气功 OR 十二段锦 OR 八段锦 OR 五禽戏 OR 易筋经 OR 六字诀 OR 太极养生杖 OR 大舞 OR 导引十二法 OR 马王堆导引术)
- 2 主题:(太极 OR 太极拳 OR 太极内功)
- 3 主题:(瑜伽)
- 4 主题:(疾病晚期 OR 晚期疾病 OR 严重疾病)
- 5 主题:(癌症 OR 癌症转移 OR 恶性肿瘤 OR 白血病 OR 淋巴瘤 OR 腺瘤 OR 癌)
- 6 主题:(慢阻肺 OR 慢性阻塞性肺疾病 OR 气流阻塞 OR 慢性支气管炎 OR 阻塞性肺气肿 OR 呼吸衰竭 OR 呼衰 OR 慢性肺部疾病 OR 慢性呼吸道疾病 OR 肺功能障碍)
- 7 主题:(心力衰竭 OR 心衰 OR 心衰竭 OR 心功能障碍 OR 心肌功能障碍 OR 心脏疾病 OR 心脏病)
- 8 主题:(随机对照试验 OR 干预研究 OR 临床试验)
- 9 1 OR 2 OR 3
- 10 4 OR 5 OR 6 OR 7
- 11 8 AND 9 AND 10

主题:(疾病晚期 OR 晚期疾病 OR 严重疾病) or 主题:(癌症 OR 癌症转移 OR 恶性肿瘤 OR 白血病 OR 淋巴瘤 OR 腺瘤 OR 癌) or 主题:(慢阻肺 OR 慢性阻塞性肺疾病 OR 气流阻塞 OR 慢性支气管炎 OR 阻塞性肺气肿 OR 呼吸衰竭 OR 呼衰 OR 慢性肺部疾病 OR 慢性呼吸道疾病 OR 肺功能障碍) or 主题:(心力衰竭 OR 心衰 OR 心衰竭 OR 心功能障碍 OR 心肌功能障碍 OR 心脏疾病 OR 心脏病) and 主题:(气功 OR 十二段锦 OR 八段锦 OR 五禽戏 OR 易筋经 OR 六字诀 OR 太极养生杖 OR 大舞 OR 导引十二法 OR 马王堆导引术) or 主题:(太极 OR 太极拳 OR 太极内功) or 主题:(瑜伽) and 主题:(随机对照试验 OR 干预研究 OR 临床试验)

Using **advanced search** method, and search category '**subject**' and document type '**journals, dissertation**' with no date limit, and **synonym extension function**

Chinese National Knowledge Infrastructure (CKNI)

(SU = (气功 OR 十二段锦 OR 八段锦 OR 五禽戏 OR 易筋经 OR 六字诀 OR 太极养生杖 OR 大舞 OR 导引十二法 OR 马王堆导引术) or SU = (太极 OR 太极拳 OR 太极内功) or SU = (瑜伽)) AND (SU = (疾病晚期 OR 晚期疾病 OR 严重疾病) or SU = (癌症 OR 癌症转移 OR 恶性肿瘤 OR 白血病 OR 淋巴瘤 OR 腺瘤 OR 癌) or SU = (慢阻肺 OR 慢性阻塞性肺疾病 OR 气流阻塞 OR 慢性支气管炎 OR 阻塞性肺气肿 OR 呼吸衰竭 OR 呼衰 OR 慢性肺部疾病 OR 慢性呼吸道疾病 OR 肺功能障碍) or SU = (心力衰竭 OR 心衰 OR 心衰竭 OR 心功能障碍 OR 心肌功能障碍 OR 心脏疾病 OR 心脏病))

Using **professional search** method, and search category '**subject**' and document type '**research article**' with no date limit, and **synonym extension function**

Sinomed

1 (("气功"[常用字段:智能] OR "十二段锦"[常用字段:智能] OR "八段锦"[常用字段:智能] OR "五禽戏"[常用字段:智能] OR "易筋经"[常用字段:智能] OR "六字诀"[常用字段:智能] OR "太极养生杖"[常用字段:智能] OR "大舞"[常用字段:智能] OR "导引十二法"[常用字段:智能] OR "马王堆导引术"[常用字段:智能]) OR ("太极"[常用字段:智能] OR "太极拳"[常用字段:智能] OR "太极内功"[常用字段:智能]) OR "瑜伽"[常用字段:智能]) AND (临床试验[文献类型] OR 随机对照试验[文献类型])

2 ("疾病晚期"[常用字段:智能] OR ("癌症"[常用字段:智能] OR "恶性肿瘤"[常用字段:智能] OR "白血病"[常用字段:智能] OR "淋巴瘤"[常用字段:智能] OR "癌"[常用字段:智能]) OR ("慢阻肺"[常用字段:智能] OR "慢性阻塞性肺疾病"[常用字段:智能] OR "呼吸衰竭"[常用字段:智能] OR "呼衰"[常用字段:智能] OR "肺功能障碍"[常用字段:智能])) AND (临床试验[文献类型] OR 随机对照试验[文献类型]) AND (人类[特征词])

3 (((#1 AND #2) AND (临床试验[文献类型] OR 随机对照试验[文献类型]) AND 人类[特征词])

Using **advanced searching** method, and search category '**常用字段**' and document type '**clinical trails, randomised control trails**' and journal type '**Chinese Medical Association accredited journals**' with no date limit.

Results

Risk of bias

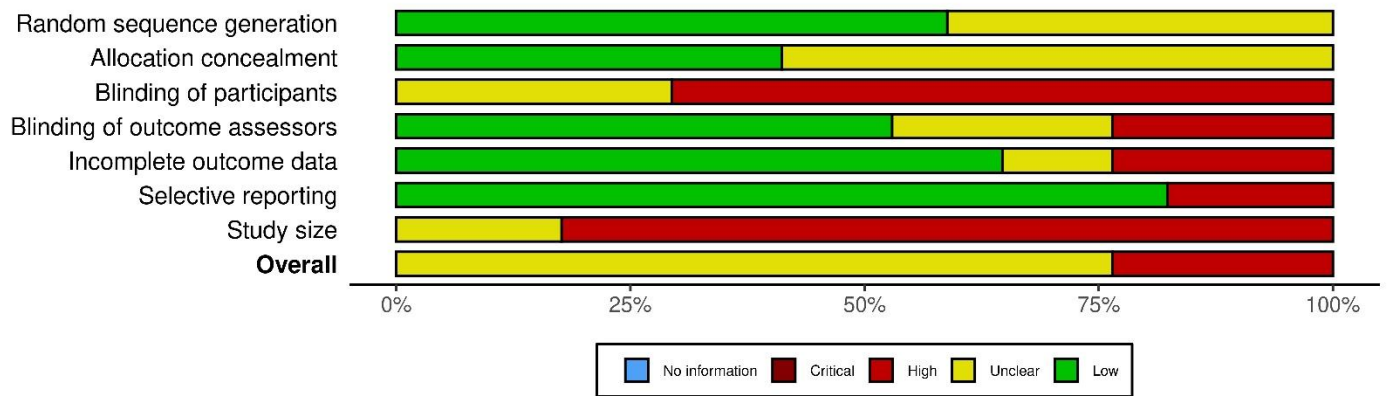


Figure S1. Risk of bias' graph: review authors' judgements about each risk of bias item presented as percentages across all included studies.

		Risk of bias							
		D1	D2	D3	D4	D5	D6	D7	Overall
Study	Yeh et al 2010	+	+	X	+	+	X	X	X
	Yuexia Wang et al 2014	-	-	-	-	+	+	X	-
	Polkey et al 2018	-	-	X	X	+	+	-	-
	Zhu et al 2018	+	-	X	X	+	+	X	-
	Moy et al 2021	+	+	X	+	+	+	X	X
	Cheung et al 2021	+	+	X	+	X	+	X	-
	Donesky Cuenco et al 2009	-	-	X	X	X	+	X	-
	Kaminsky et al 2017	+	-	-	+	+	+	X	-
	Vadiraja et al 2009	+	-	X	X	-	+	X	-
	Dongxin Zhao et al 2011	-	-	-	-	+	+	X	X
	Ng et al 2011	+	+	X	+	X	+	X	-
	Xiao et al 2015	-	-	X	+	+	+	-	X
	Siqin Ji et al 2019	-	-	-	-	+	X	X	-
	Yanchan Zhen et al 2019	-	-	-	-	+	X	X	-
	Vanderbyl et al 2017	+	+	X	+	X	+	X	-
	Molassiotis et al 2021	+	+	X	+	-	+	-	-
Malik et al 2022	+	+	X	+	+	+	X	-	

D1: Random sequence generation
 D2: Allocation concealment
 D3: Blinding of participants
 D4: Blinding of outcome assessors
 D5: Incomplete outcome data
 D6: Selective reporting
 D7: Study size

Judgement
 X High
 - Unclear
 + Low

Figure S2. 'Risk of bias' summary: review authors' judgements about each risk of bias item for each included study

Primary outcome: Breathlessness

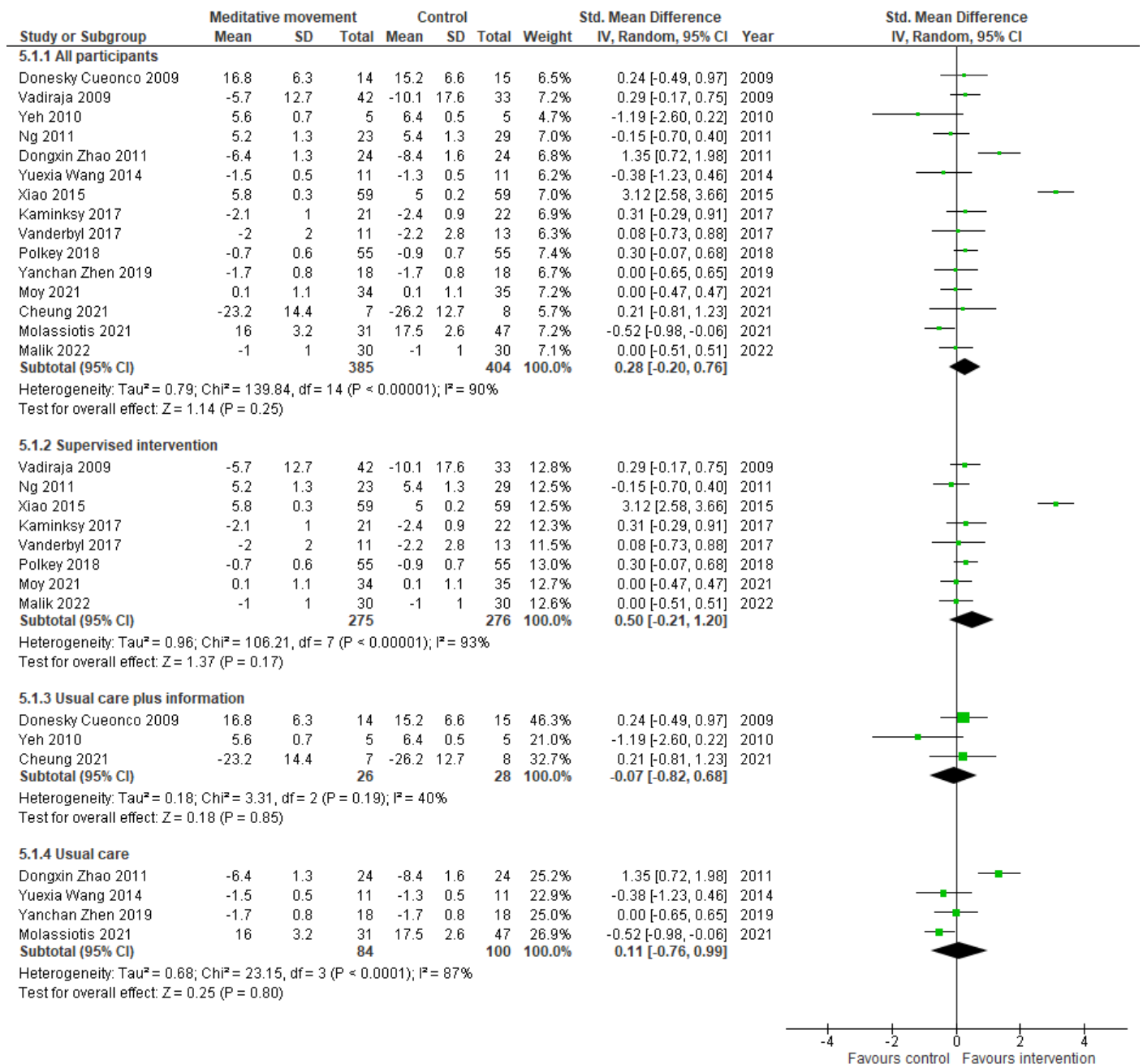


Figure S3. Forest plot comparing meditative movement and control intervention for the primary outcome – breathlessness – for all participants and comparators categorised as supervised intervention, usual care plus information and usual care including the study with outlier data (1).

Abbreviations: CI: Confidence Interval; SD: Standard Deviation.

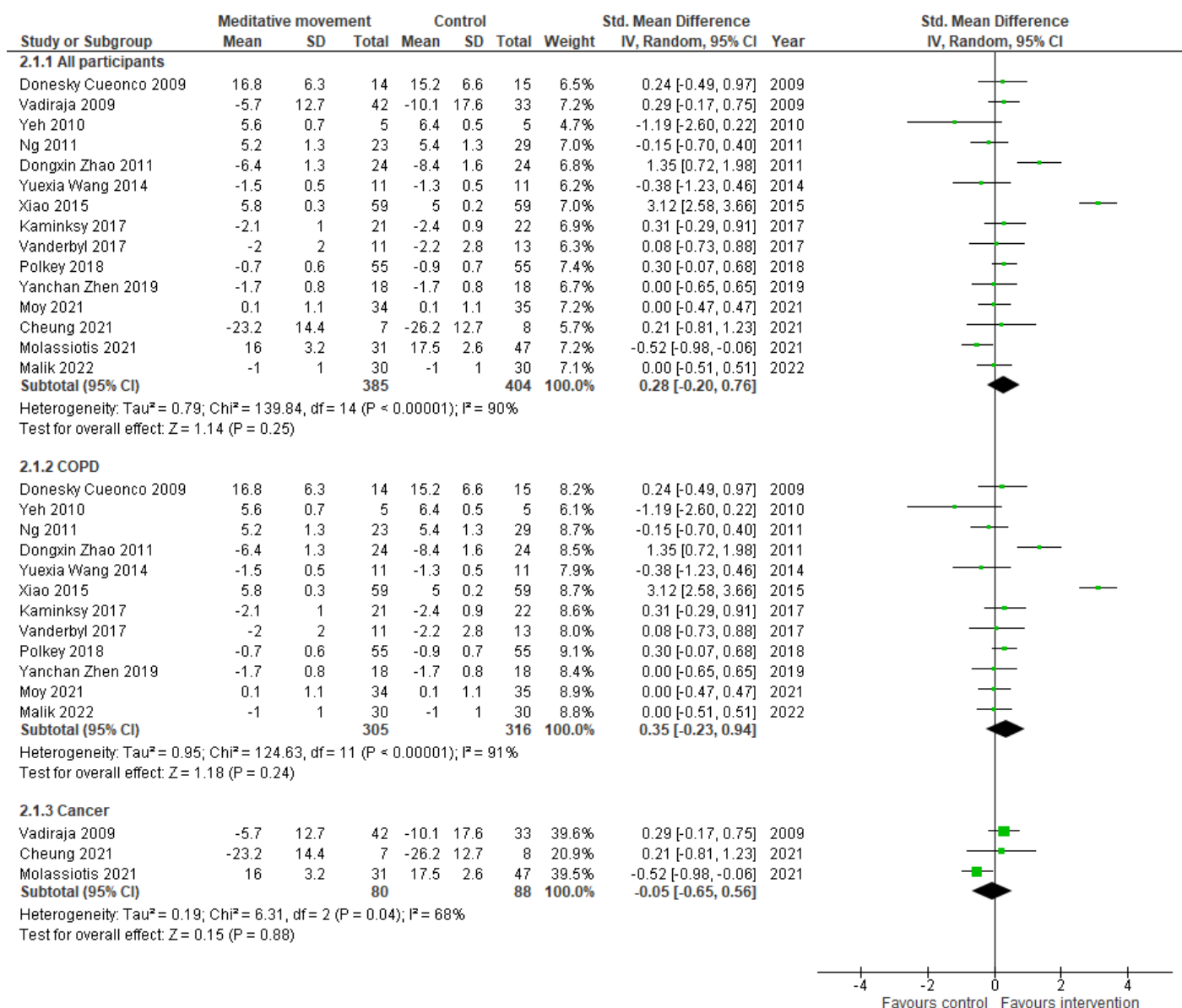


Figure S4. Forest plot comparing meditative movement and control intervention for the primary outcome – breathlessness – for all participants, people with COPD and people with cancer including the study with outlier data (1).

Abbreviations: CI: Confidence Interval; COPD: Chronic Obstructive Pulmonary Disease; SD: Standard Deviation.

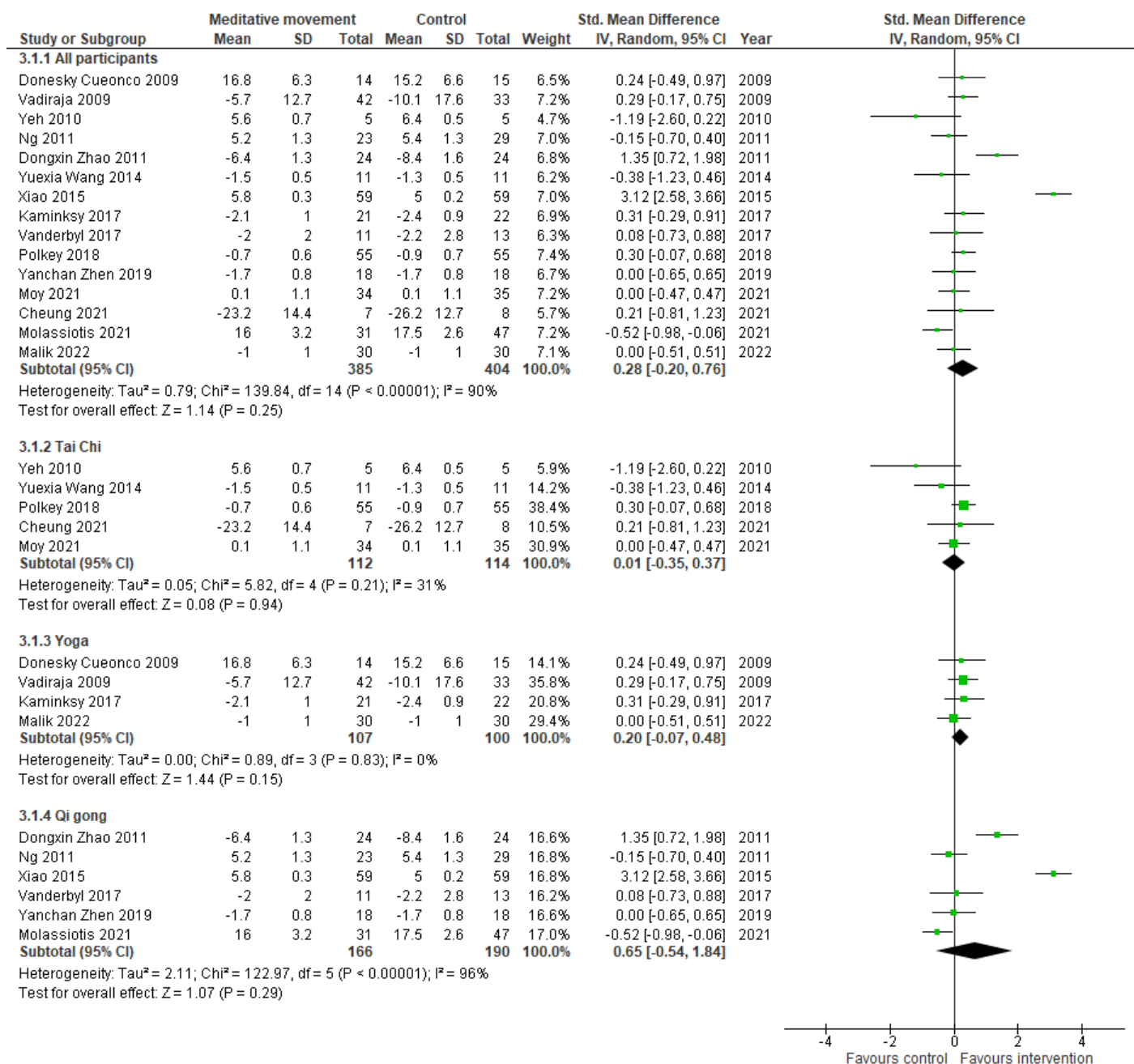


Figure S5. Forest plot comparing meditative movement and control intervention for the primary outcome – breathlessness – for all participants and according to intervention type (Tai Chi, yoga, Qi gong) (including the study with outlier data) (1).

Abbreviations: CI: Confidence Interval; SD: Standard Deviation

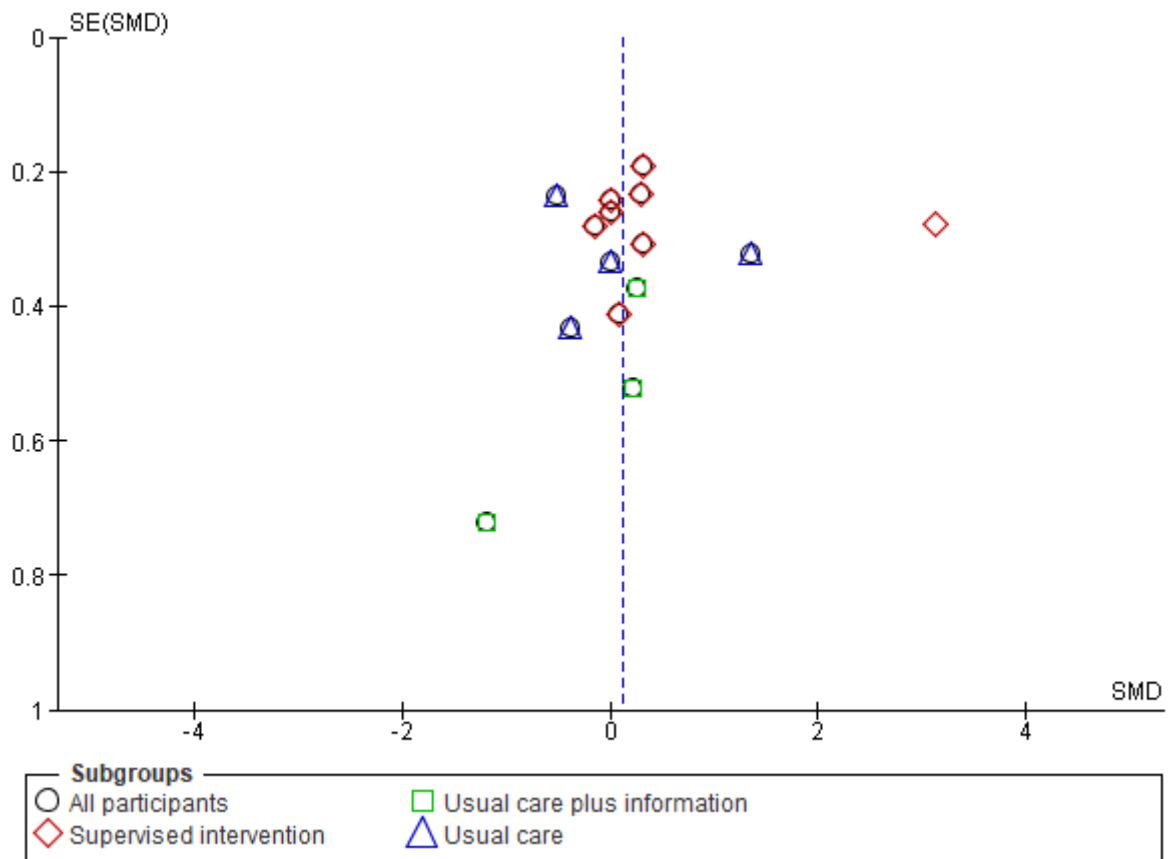


Figure S6. Funnel plot comparing meditative movement and control intervention for the primary outcome – breathlessness – for all participants and comparators categorised as supervised intervention, usual care plus information and usual care (excluding the study with outlier data).

Abbreviations: SMD: Standardised Mean Difference.

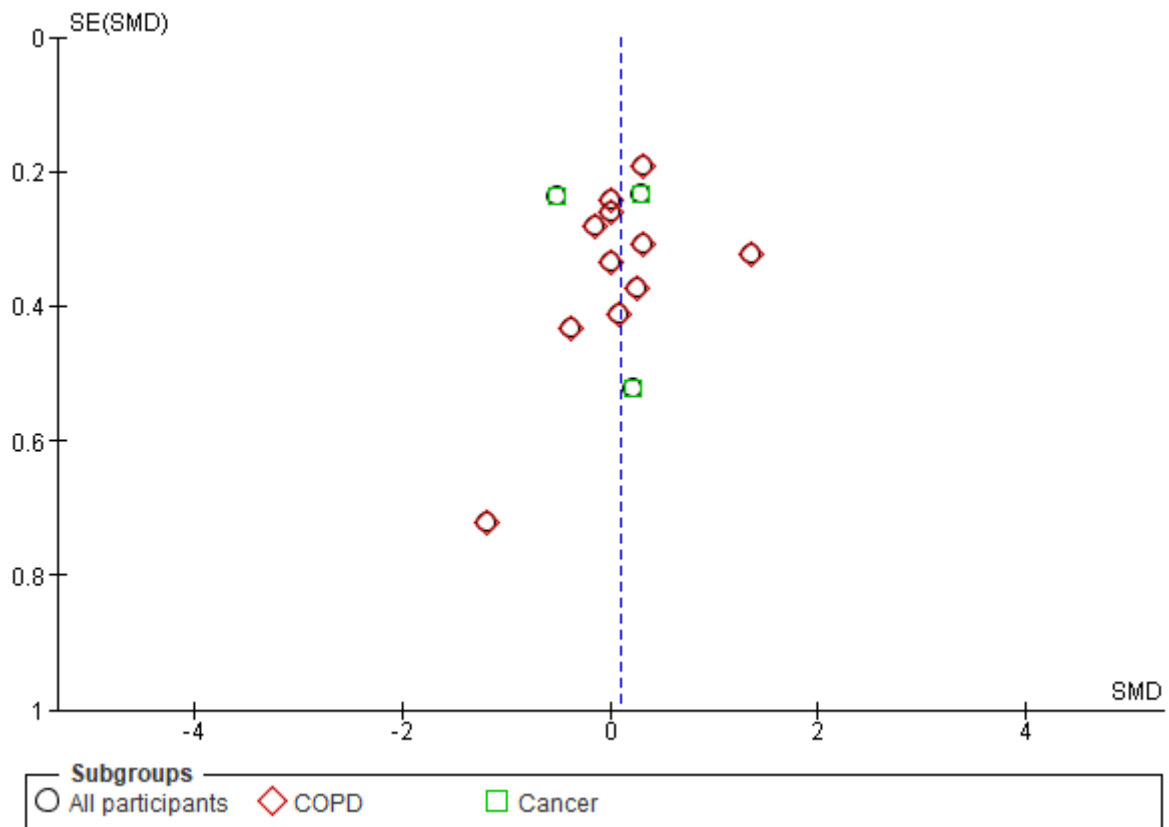


Figure S7. Funnel plot comparing meditative movement and control intervention for the primary outcome – breathlessness – for all participants, people with COPD and people with cancer (excluding the study with outlier data).

Abbreviations: COPD: Chronic Obstructive Pulmonary Disease; SMD: Standardised Mean Difference.

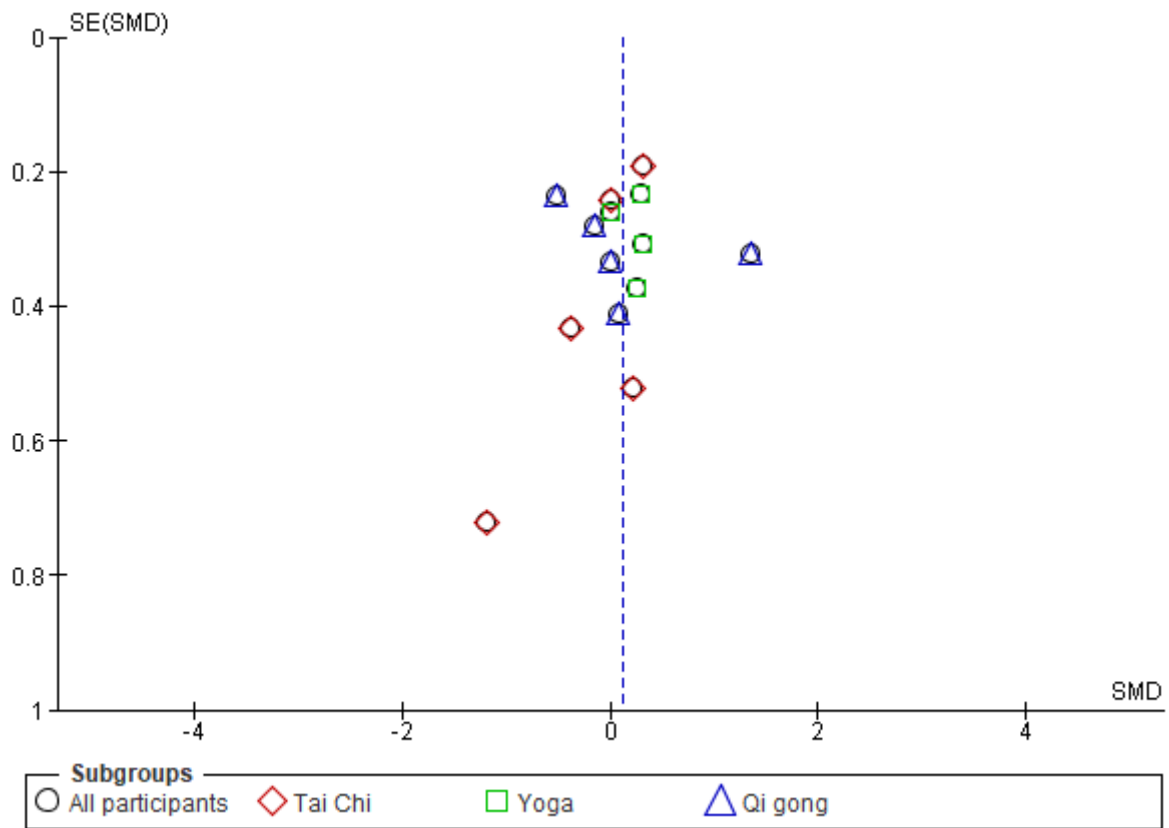


Figure S8. Funnel plot comparing meditative movement and control intervention for the primary outcome – breathlessness – for all participants and according to intervention type (Tai Chi, yoga, Qi gong) (excluding the study with outlier data).

Abbreviations: SMD: Standardised Mean Difference.

Secondary outcome: Health-related quality of life

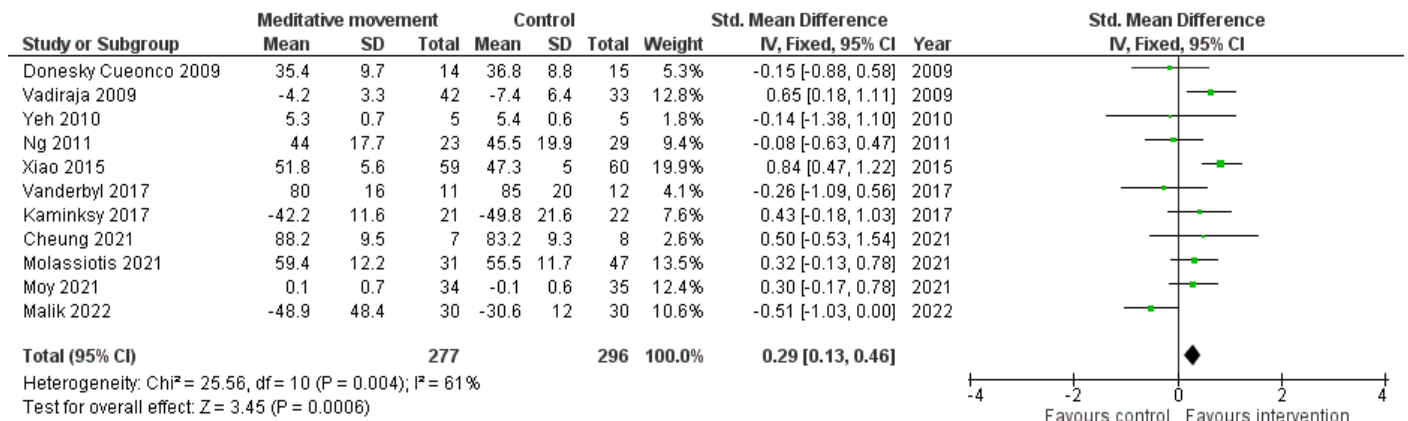


Figure S9. Forest plot comparing meditative movement and control intervention for health-related quality of life including the study with outlier data (Xiao and colleagues) (1).

Abbreviations: CI: Confidence Interval; SD: Standard Deviation.

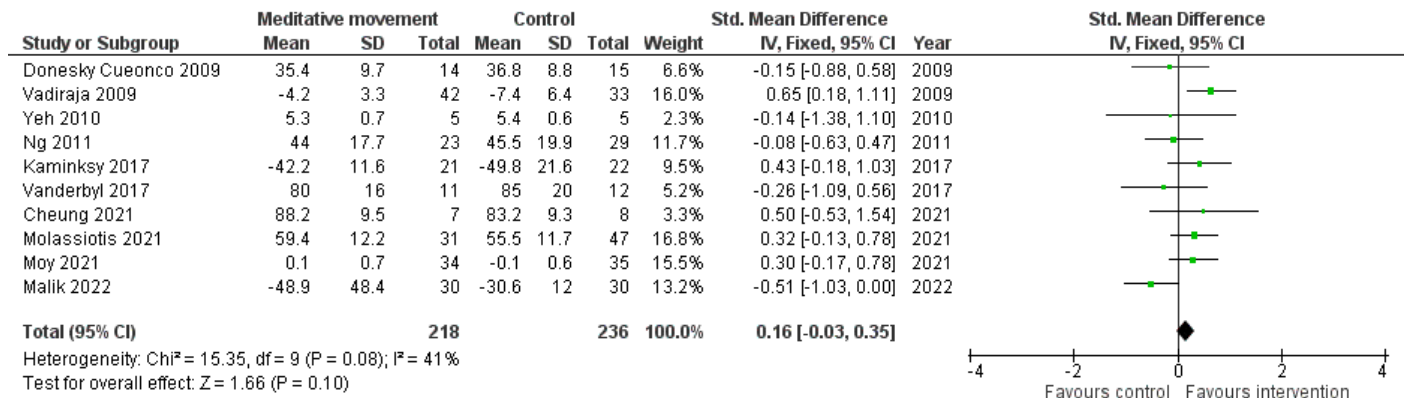


Figure S10. Forest plot comparing meditative movement and control intervention for health-related quality of life (excluding study with outlier data).

Abbreviations: CI: Confidence Interval; SD: Standard Deviation.

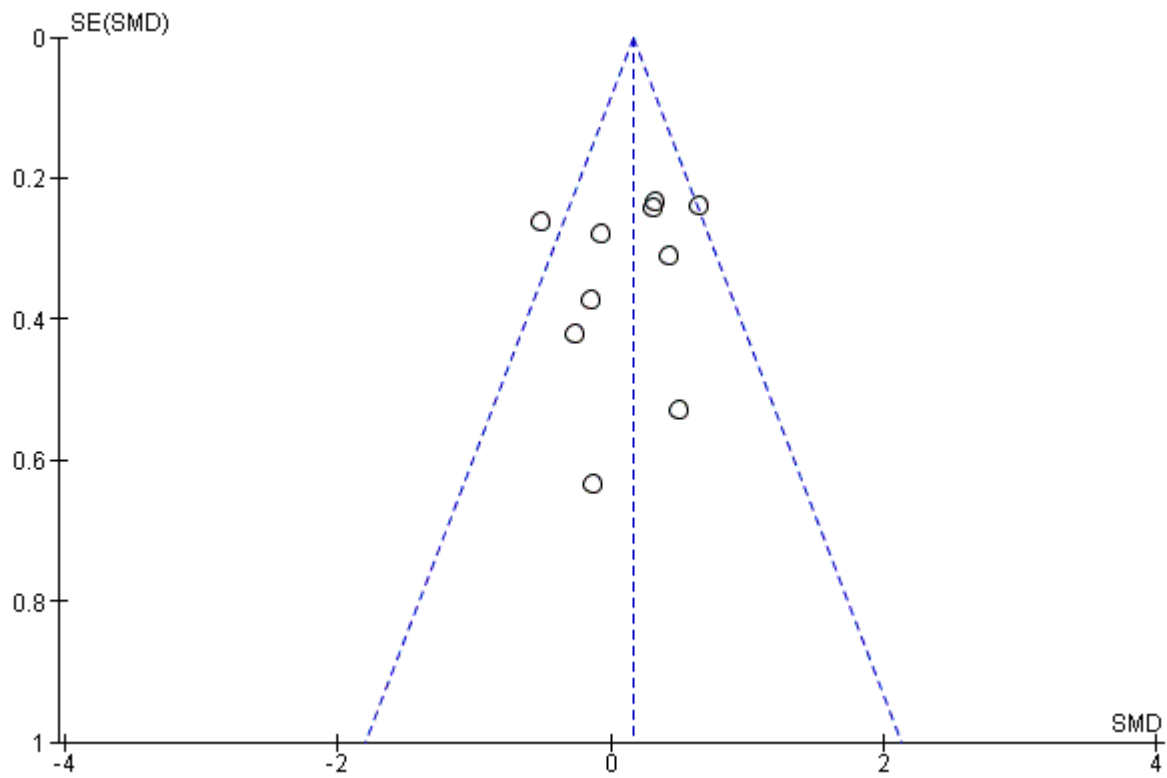


Figure S11. Funnel plot comparing meditative movement and control intervention for health-related quality of life (excluding study with outlier data).

Abbreviations: SMD: Standardised Mean Difference.

Secondary outcome: Exercise capacity

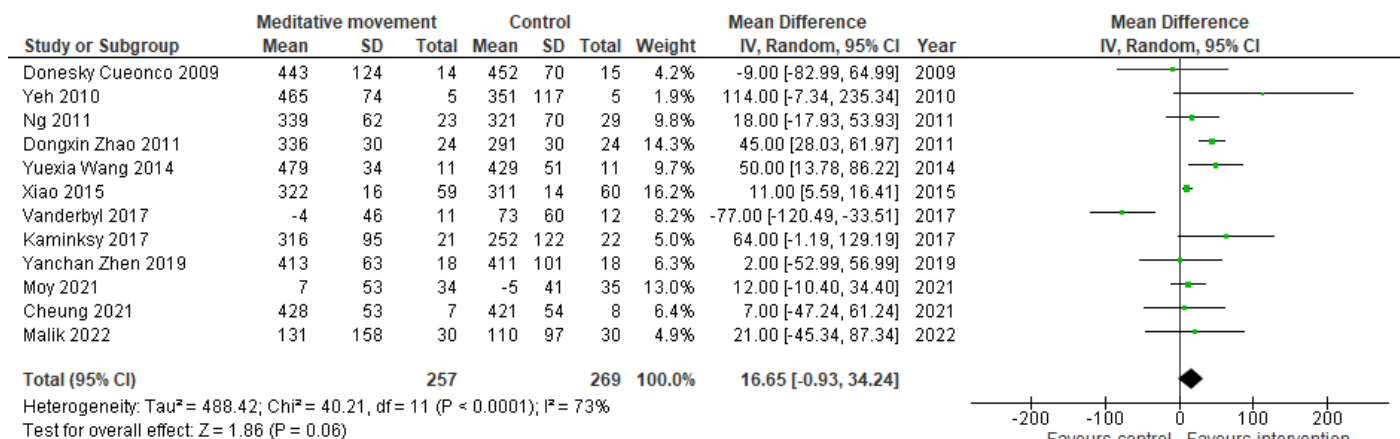


Figure S12. Forest plot comparing meditative movement and control intervention for exercise capacity including the study with outlier data (Xiao and colleagues) (1).

Abbreviations: CI: Confidence Interval; SD: Standard Deviation.

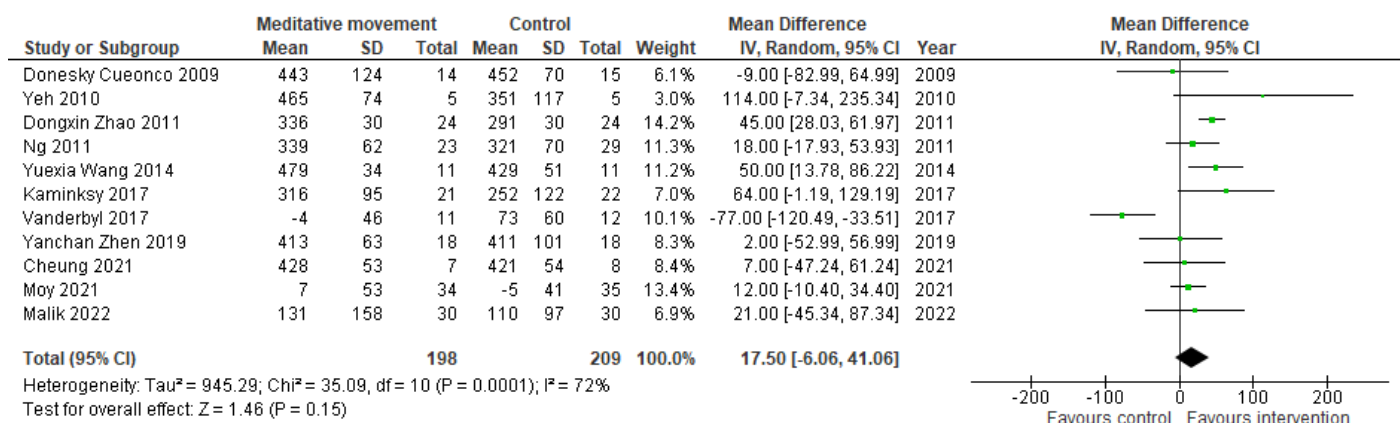


Figure S13. Forest plot comparing meditative movement and control intervention for exercise capacity (excluding study with outlier data).

Abbreviations: CI: Confidence Interval; SD: Standard Deviation.

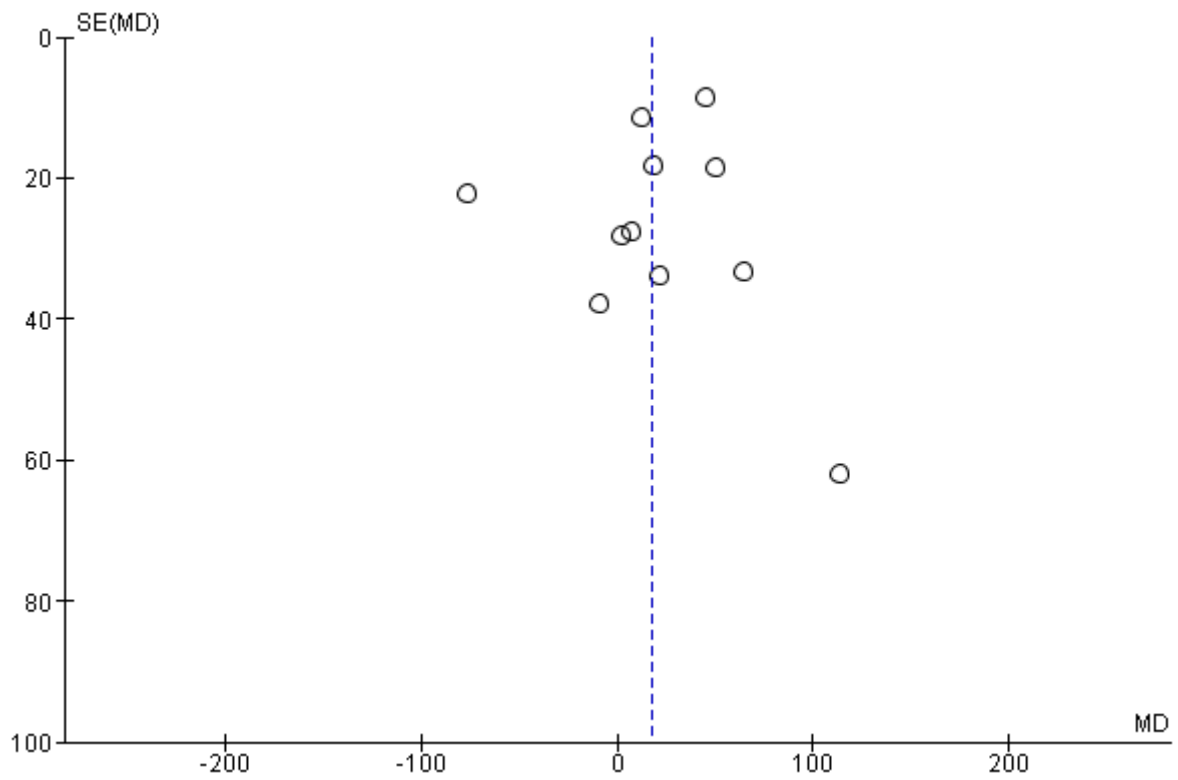


Figure S14. Funnel plot comparing meditative movement and control intervention for exercise capacity (excluding study with outlier data).

Abbreviations: MD: Mean Difference

Table S1. Adverse and serious adverse events

Study information	Adverse events					Serious adverse events					
	Author, Study country	Total no.	No. in IG	Type in IG	No. in CG	Type in CG	Total no.	No. in IG	Type in IG	No. in CG	Type in CG
Intervention: Tai Chi											
Disease: COPD											
Yeh et al 2010, USA (2)	0	0	N/A	0	N/A	0	0	N/A	0	N/A	
Yuxia Wang et al 2014, China (3)	2	1	Chest infection: 1	1	Chest infection: 1	0	0	N/A	0	N/A	
Polkey et al 2018, China (4)	21	15	Chest infection: 15	6	Chest infection: 6	13	6	Hospitalisation: 6 (renal: 2, stroke: 1, COPD exacerbation: 3)	7	Hospitalisation: 7 (COPD exacerbation:3, trauma: 1, cardiac: 1, oedema: 1)	
Zhu et al 2018, China (5)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
Moy et al 2021, USA (6)	45	27	Respiratory: 15 (remaining 12 events not described)	18	Respiratory: 10 (remaining 8 events not described)	NR	NR	NR	NR	NR	
Disease: Cancer											
Cheung et al 2021, Hong Kong (7)	0	0	NA	0	NA	5	2	Deceased	3	Deceased	
Intervention: Yoga											
Disease: COPD											
Donesky Cuenco et al 2009, USA (8)	10	?	COPD exacerbation: 5 Co-morbid illness: 5 Not related to intervention (group allocation not reported)	?	COPD exacerbation: 5 Co-morbid illness: 5 Not related to intervention (group allocation not reported)	1	0	N/A	1	Deceased	
Kaminsky et al 2017, USA (9)	1	?	Anxiety and depression: 1 (group allocation not reported)	?	Anxiety and depression: 1 (group allocation not reported)	1	?	Lung cancer: 1 (group allocation not reported)	?	Lung cancer: 1 (group allocation not reported)	
Malik et al 2022, India (10)	0	0	N/A	0	N/A	0	0	N/A	0	N/A	
Disease: Cancer											
Vadiraja et al 2009, India (11)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
Intervention: Qi Gong											
Disease: COPD											
Dongxin Zhao et al 2011, China (12)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
Ng et al 2011, Hong Kong (13)	NR	NR	NR	NR	NR	9	6	Hospitalised: 1 Deceased: 5	3	Hospitalised: 1 Deceased: 2	

Xiao et al 2015, China (1)	1	0	N/A	1	Poor health: 1	3	2	Hospitalised: 1 Deceased: 1	1	Hospitalised: 1
Siqin Ji et al 2019, China (14)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Yanchan Zhen et al 2019, China (15)	1	1	Chest tightness, breathlessness	0	N/A	NR	NR	NR	NR	NR
Disease: Cancer										
Vanderbyl et al 2017, Canada (16)	NR	NR	NR	NR	NR	15 (in 2- month follow-up period)	?	Deceased: 15 (group allocation not reported)	?	Deceased: 15 (group allocation not reported)
Molassiotis et al 2021, Vietnam (17)	NR	NR	NR	NR	NR	5	3	Deceased	2	Deceased

Abbreviations: CG: Control Group; COPD: Chronic Obstructive Pulmonary Disease; IG: Intervention Group; PR: Pulmonary Rehabilitation; NR: Not Reported.

References

- (1) Xiao C, Zhuang Y. Efficacy of Liuzijue Qigong in individuals with chronic obstructive pulmonary disease in remission. *J Am Geriatr Soc* 2015;63(7):1420-1425.
- (2) Yeh GY, Roberts DH, Wayne PM, Davis RB, Quilty MT, Phillips RS. Tai chi exercise for patients with chronic obstructive pulmonary disease: a pilot study. *Respir Care* 2010;55(11):1475-1482.
- (3) 王月霞, 莫家赐, 成东海, 刘豹, 忽新刚. 太极拳运动对慢性阻塞性肺疾病患者生存质量和 BODE 指数的影响. *中国康复医学杂志* 2014;29(8):745-747.
- (4) Polkey MI, Qiu Z, Zhou L, Zhu M, Wu Y, Chen Y, et al. Tai Chi and pulmonary rehabilitation compared for treatment-naive patients with COPD: a randomized controlled trial. *Chest* 2018;153(5):1116-1124.
- (5) Zhu S, Shi K, Yan J, He Z, Wang Y, Yi Q, et al. A modified 6-form Tai Chi for patients with COPD. *Complement Ther Med* 2018;39:36-42.
- (6) Moy ML, Wayne PM, Litrownik D, Beach D, Klings ES, Davis RB, et al. Long-term Exercise After Pulmonary Rehabilitation (LEAP): a pilot randomised controlled trial of Tai Chi in COPD. *ERJ Open Research* 2021;7(3).
- (7) Cheung DST, Takemura N, Lam TC, Ho JCM, Deng W, Smith R, et al. Feasibility of aerobic exercise and Tai-Chi interventions in advanced lung cancer patients: a randomized controlled trial. *Integrative cancer therapies* 2021;20:15347354211033352.
- (8) Donesky-Cuenco D, Nguyen HQ, Paul S, Carrieri-Kohlman V. Yoga therapy decreases dyspnea-related distress and improves functional performance in people with chronic obstructive pulmonary disease: a pilot study. 2010.
- (9) Kaminsky DA, Guntupalli KK, Lippmann J, Burns SM, Brock MA, Skelly J, et al. Effect of yoga breathing (pranayama) on exercise tolerance in patients with chronic obstructive pulmonary disease: a randomized, controlled trial. *The Journal of Alternative and Complementary Medicine* 2017;23(9):696-704.
- (10) Malik S, Dua R, Krishnan AS, Kumar S, Kumar S, Neyaz O, et al. Exercise Capacity in Patients With Chronic Obstructive Pulmonary Disease Treated With Tele-Yoga Versus Tele-Pulmonary Rehabilitation: A Pilot Validation Study. *Cureus* 2022;14(11).
- (11) Hosakote VS, Rao MR, Nagendra RH, Raghuram N, Mohan R, Nanjundiah V, et al. Effects of yoga on symptom management in breast cancer patients: a randomized controlled trial. *International journal of yoga* 2009;2(2):73.
- (12) 赵东兴, 张挪富. 六字诀呼吸操联合氧疗对 COPD 合并自发性气胸的康复疗效研究. *中国当代医药* 2011;18(12):156-157.
- (13) Ng BH, Tsang HW, Jones AY, So CT, Mok TY. Functional and psychosocial effects of health qigong in patients with COPD: a randomized controlled trial. *The Journal of alternative and complementary medicine* 2011;17(3):243-251.
- (14) 季思勤, 罗功汶, 施克俭, 杨佩兰, 王振伟. 六字诀干预慢性阻塞性肺疾病稳定期患者的临床研究. *收藏* 2019;4.
- (15) Zheng Yanchan. Clinical study of Respiratory Baduanjin in patients with Chronic Obstructive Pulmonary Disease. *Guangzhou University of Chinese Medicine*; 2019.
- (16) Vanderbyl BL, Mayer MJ, Nash C, Tran AT, Windholz T, Swanson T, et al. A comparison of the effects of medical Qigong and standard exercise therapy on symptoms and quality of life in patients with advanced cancer. *Supportive Care in Cancer* 2017;25(6):1749-1758.
- (17) Molassiotis A, Vu DV, Ching SSY. The effectiveness of qigong in managing a cluster of symptoms (breathlessness-fatigue-anxiety) in patients with lung cancer: A randomized controlled trial. *Integrative Cancer Therapies* 2021;20:15347354211008253.

(1) Xiao C, Zhuang Y. Efficacy of Liuzijue Qigong in individuals with chronic obstructive pulmonary disease in remission. *J Am Geriatr Soc* 2015;63(7):1420-1425.

(2) Yeh GY, Roberts DH, Wayne PM, Davis RB, Quilty MT, Phillips RS. Tai chi exercise for patients with chronic obstructive pulmonary disease: a pilot study. *Respir Care* 2010;55(11):1475-1482.

(3) 王月霞, 莫家赐, 成东海, 刘豹, 忽新刚. 太极拳运动对慢性阻塞性肺疾病患者生存质量和 BODE 指数的影响. *中国康复医学杂志* 2014;29(8):745-747.

(4) Polkey MI, Qiu Z, Zhou L, Zhu M, Wu Y, Chen Y, et al. Tai Chi and pulmonary rehabilitation compared for treatment-naive patients with COPD: a randomized controlled trial. *Chest* 2018;153(5):1116-1124.

- (5) Zhu S, Shi K, Yan J, He Z, Wang Y, Yi Q, et al. A modified 6-form Tai Chi for patients with COPD. *Complement Ther Med* 2018;39:36-42.
- (6) Moy ML, Wayne PM, Litrownik D, Beach D, Klings ES, Davis RB, et al. Long-term Exercise After Pulmonary Rehabilitation (LEAP): a pilot randomised controlled trial of Tai Chi in COPD. *ERJ Open Research* 2021;7(3).
- (7) Cheung DST, Takemura N, Lam TC, Ho JCM, Deng W, Smith R, et al. Feasibility of aerobic exercise and Tai-Chi interventions in advanced lung cancer patients: a randomized controlled trial. *Integrative cancer therapies* 2021;20:15347354211033352.
- (8) Donesky-Cuenco D, Nguyen HQ, Paul S, Carrieri-Kohlman V. Yoga therapy decreases dyspnea-related distress and improves functional performance in people with chronic obstructive pulmonary disease: a pilot study. 2010.
- (9) Kaminsky DA, Guntupalli KK, Lippmann J, Burns SM, Brock MA, Skelly J, et al. Effect of yoga breathing (pranayama) on exercise tolerance in patients with chronic obstructive pulmonary disease: a randomized, controlled trial. *The Journal of Alternative and Complementary Medicine* 2017;23(9):696-704.
- (10) Malik S, Dua R, Krishnan AS, Kumar S, Kumar S, Neyaz O, et al. Exercise Capacity in Patients With Chronic Obstructive Pulmonary Disease Treated With Tele-Yoga Versus Tele-Pulmonary Rehabilitation: A Pilot Validation Study. *Cureus* 2022;14(11).
- (11) Hosakote VS, Rao MR, Nagendra RH, Raghuram N, Mohan R, Nanjundiah V, et al. Effects of yoga on symptom management in breast cancer patients: a randomized controlled trial. *International journal of yoga* 2009;2(2):73.
- (12) 赵东兴, 张挪富. 六字诀呼吸操联合氧疗对 COPD 合并自发性气胸的康复疗效研究. *中国当代医药* 2011;18(12):156-157.
- (13) Ng BH, Tsang HW, Jones AY, So CT, Mok TY. Functional and psychosocial effects of health qigong in patients with COPD: a randomized controlled trial. *The Journal of alternative and complementary medicine* 2011;17(3):243-251.
- (14) 季思勤, 罗功汶, 施克俭, 杨佩兰, 王振伟. 六字诀干预慢性阻塞性肺疾病稳定期患者的临床研究. *收藏* 2019;4.
- (15) Zheng Yanchan. Clinical study of Respiratory Baduanjin in patients with Chronic Obstructive Pulmonary Disease. *Guangzhou University of Chinese Medicine*; 2019.
- (16) Vanderbyl BL, Mayer MJ, Nash C, Tran AT, Windholz T, Swanson T, et al. A comparison of the effects of medical Qigong and standard exercise therapy on symptoms and quality of life in patients with advanced cancer. *Supportive Care in Cancer* 2017;25(6):1749-1758.
- (17) Molassiotis A, Vu DV, Ching SSY. The effectiveness of qigong in managing a cluster of symptoms (breathlessness-fatigue-anxiety) in patients with lung cancer: A randomized controlled trial. *Integrative Cancer Therapies* 2021;20:15347354211008253.