

Supplemental Material - “The effect of meditation-based interventions on patients with fatigue symptoms: a systematic review and meta-analysis.”

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Supplemental Table 1. Fatigue scales used in the 34 studies included

Number of studies (N=34)	Fatigue scales (Total=17)	Types of fatigue scores measured by the scale
6	Fatigue Symptom Inventory (FSI)	<i>Perceived severity, frequency, and interference with daily functioning (subscales)</i>
4	The Profile of Mood States (POMS)	<i>Fatigue-inertia (1 item)</i>
4	Brief Fatigue Inventory (BFI)	<i>Global fatigue (total score)</i>
2	Checklist Individual Strength (CIS)	<i>Subjective fatigue, Concentration, Motivation, Physical Activity (subscales)</i>
3	Modified Fatigue Impact Scale (MFIS)	<i>Mental, physical, and psychosocial fatigue (subscales)</i>
2	Quality of Life Questionnaire Core 30 Items (QLQ-C30)	<i>Fatigue (1 item)</i>
2	Chalder Fatigue Scale	<i>Physical and mental fatigue (subscales)</i>
2	Fatigue Severity Scale (FSS)	<i>Global fatigue (total score)</i>
2	Patient-Reported Outcomes Measurement Information System (PROMIS)	<i>Fatigue (1 item)</i>
1	FACIT Fatigue scale	<i>Global fatigue (total score)</i>

1	Revised Piper Fatigue scale (PFS)	<i>Behavioral/severity, affective meaning, sensory, and cognitive/mood (subscales)</i>
1	Medical Outcomes Study Short Form 12-Item Health Survey (SF-12)	<i>Vitality-fatigue (1 item)</i>
1	M.D. Anderson Symptom Inventory (MDASI)	<i>Fatigue (1 item)</i>
1	Multidimensional Fatigue Scale Inventory – Short Form (MFSI-SF)	<i>Mental, physical, and psychosocial fatigue (subscales)</i>
1	Functional Assessment in Cancer Therapy-Fatigue (FACT-F) European	<i>Global fatigue (total score)</i>
1	Mental Fatigue Scale (MFS)	<i>Mental Fatigue (total score)</i>

Note. All the studies reported a total score including physical and mental fatigue except one that used Mental Fatigue Scale.

Supplemental Table 2. Types of meditation-based intervention (MeBI) categories

MeBI categories	Total	Used in the meta-analysis
Mindfulness-Based Intervention	18	16
Compassion interventions or Mindfulness and Compassion interventions	7	7
Delivered remotely	6	6
Others (<i>Tibetan Sound Meditation program, Brain Wave Vibration meditation, Mindfulness-Based Art Therapy</i>)	3	3
General total	34	32

Supplemental Table 3. Follow-up data for the 16 studies showing an immediate effect of a meditation-based intervention

Studies (authors, date)	Number of weeks between intervention and follow-up	Effect of the intervention at follow-up
(Blaes et al., 2016) ^b	9	
(Bower et al., 2015b)	13	
(Carlson et al., 2016)	56	
(Cash et al., 2015) ^{a,b}	9	
(Dodds et al., 2015)	4	No
(Gok Metin et al., 2019)	2	
(Hoffman et al., 2012)	6 to 8	
(Liu et al., 2019)	14	
(Witek Janusek et al., 2019)	52	
(Bogosian et al., 2015)	20	
(Grossman et al., 2010)	26	Yes
(Johns et al., 2015)	4	
(Lengacher et al., 2016)	6	

(Meiklejon, 2008)	13
(Rimes & Wingrove, 2013)	9
(Van Der Lee & Garssen, 2012)	26

Note. ^a all groups showed an immediate positive effect of the intervention, with no between-groups difference, ^b all groups showed a positive effect of the intervention at follow-up, with no between-groups difference

Supplemental Table 4. Sensitivity analyses with Knapp-Hartung correction: meta-analyses with and without moderators (without outliers)

Moderators	<i>g</i>	95% CI	Statistic (df)	p-value	Tau²	I²
No moderator	0.38	0.25:0.50	t(25)=6.12	<.0001	.02	27.85
Control group moderator	/	/	F(1,24)=7.96	<.01	.00	0.01
MeBI moderator	/	/	F(3,22)=0.48	0.70	.03	38.73
Pathology moderator	/	/	F(4,21)=1.23	.33	.02	27.52

Note. Meta-analyses on 26 studies. *g*: Hedges' Standardized Mean Difference (effect size, positive value = less fatigue), CI: Confidence Interval, MeBI: Meditation-Based Interventions.

Supplemental Table 5. Sensitivity analysis with Knapp-Hartung correction (subgroups analyses without outliers): specific effect of each moderator (type of control group, MeBI and pathology)

Moderators	Groups	k	g	95% CI	df	p-value	Tau²	I² (%)
Control groups	<i>Passive</i>	19	0.48	0.33:0.63	t(18)=6.65	<.0001	0.02	29.47
	<i>Active</i>	7	0.14	0.02:0.27	t(6)=2.75	<.05	0.00	0.00
Types of interventions	<i>Mindfulness</i>	14	0.44	0.26:0.62	t(13)=5.15	<.001	0.04	44.67
	<i>Compassion or Mindfulness and Compassion</i>	6	0.30	-0.07:0.67	t(5)=2.08	.09	0.05	40.40
	<i>Remotely</i>	4	0.22	-0.35:0.79	t(3)=1.23	.31 ^a	0.00	0.00
	<i>Other</i>	2	0.46	-1.27:2.19	t(1)=3.36	.18 ^a	0.00	0.00
	<i>Cancer</i>	16	0.38	0.19:0.56	t(15)=4.37	<.001	0.04	47.97
Types of pathologies	<i>MS</i>	6	0.29	0.09:0.48	t(5)=3.83	<.05	0.00	0.00
	<i>Fibromyalgia</i>	2	1.05	-2.44:4.55	t(1)=3.83	.16 ^a	0.00	0.00

<i>Acute brain injury</i>	1	0.77	-0.05:1.58	Z=1.84	.07 ^{a,b}	0.00	0.00
<i>Myalgic</i>	1	0.52	0.09:0.93	Z=2.37	<.05 ^{a,b}	0.00	0.00
<i>Encephalomyelitis</i>							

Note. ^a P-values are not reliable when $df < 4$, ^b Hartung-Knapp correction could not be applied. [K: Number of studies; *g*: Hedges' Standardized Mean Difference (effect size, positive value = less fatigue); CI: Confidence Interval; MS: Multiple Sclerosis].