

Supplemental Digital Content

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Supplemental Digital Appendix 1

PRISMA Checklist^a

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	2, 3
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	4 - 6
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	6
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	6
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	7,8
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	7
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	Supplemental Digital Appendix 2
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	8
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from	8,9

		investigators.	
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	8,9
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	9
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	10,11
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	10,11
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	9,10
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	11
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	11,12 & Figure 1
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	12,13 & Appendix 1
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	14,15 Supplemental Digital Appendix 8, 9
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	Figure 2 & Figure 3
Synthesis of results	21	Present the main results of the review. If meta-analyses are done, include for each, confidence intervals and measures of consistency	13
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	15
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	14

DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	15-19
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	17
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	17-19
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	21

^aMoher D, Liberati A, Tetzlaff J, Altman D, PRISMA Group. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. Ann Intern Med. 2009;151(4):264-269. doi:[10.7326/0003-4819-151-4-200908180-00135](https://doi.org/10.7326/0003-4819-151-4-200908180-00135)

Supplemental digital content for Fendel JC, Bürkle JJ, Göritz AS. Mindfulness-based interventions to reduce burnout and stress in physicians: A systematic review and meta-analysis. Acad Med.

Supplemental Digital Appendix 2

Search Strategy for MEDLINE, Embase, PsycINFO, PSYINDEX, Web of Science, CINAHL, and CENTRAL, From Inception to August 8, 2019

Search Strategy in Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily

#	Searches	Results	Type
#1	(mindfulness OR mindfulness-based OR mindful).mp. OR exp Mindfulness/	8,750	Advanced
#2	(intervention* OR training* OR program* OR RCT OR “randomized control trial” OR “randomized controlled trial” OR course* OR curricular* OR trial* OR session*).mp. OR exp Randomized Controlled Trial/	3,903,622	Advanced
#3	#1 AND #2	5,685	Advanced
#4	(MBSR OR “mindfulness-based stress reduction” OR MBCT OR “mindfulness-based cognitive therapy” OR MBST OR “mind-body skill training”).mp.	1,367	Advanced
#5	#3 OR #4	5,838	Advanced
#6	(physician* OR doctor* OR practitioner* OR clinician* OR "medic* intern*" OR resident OR residents OR residency OR “post-graduate year” OR PGY OR PGY-1 OR PGY-2 OR PGY-3 OR “foundation year” OR F1 OR FY1 OR F2 OR FY2 OR SpR OR “house officer*” OR PRHO OR SHO OR anesthesiologist* OR cardiologist* OR dermatologist* OR endocrinologist* OR gastroenterologist* OR “general practitioner*” OR GPs OR gynecologist* OR hematologist* OR hepatologist* OR immunologist* OR internist* OR nephrologist* OR neurologist* OR obstetrician* OR oncologist* OR ophthalmologist* OR otorhinolaryngologist* OR pathologist* OR pediatric* OR podiatrist* OR psychiatrist* OR pulmonologist* OR radiologist* OR respirologist* OR rheumatologist* OR surgeon* OR urologist*).mp. OR exp Physicians/	1,736,267	Advanced
#7	#5 AND #6	993	Advanced

Notes. Mp = title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplem; exp = explore.

Search Strategy in Embase

#	Searches	Results	Type
#1	(mindfulness OR mindfulness-based OR mindful).mp. OR exp mindfulness/	12,873	Advanced
#2	(intervention* OR training* OR program* OR RCT OR “randomized control trial” OR “randomized controlled trial” OR course* OR curricular* OR trial* OR session*).mp. OR exp randomized controlled trial/	5,437,106	Advanced
#3	#1 AND #2	8,752	Advanced
#4	(MBSR OR “mindfulness-based stress reduction” OR MBCT OR “mindfulness-based cognitive therapy” OR MBST OR “mind-body skill training”).mp.	2,162	Advanced

Supplemental digital content for Fendel JC, Bürkle JJ, Göritz AS. Mindfulness-based interventions to reduce burnout and stress in physicians: A systematic review and meta-analysis. Acad Med.

#5	#3 OR #4	8,998	Advanced
#6	(physician* OR doctor* OR practitioner* OR clinician* OR „medic* intern*” OR resident OR residents OR residency OR “post-graduate year” OR PGY OR PGY-1 OR PGY-2 OR PGY-3 OR “foundation year” OR F1 OR FY1 OR F2 OR FY2 OR SpR OR “house officer*” OR PRHO OR SHO OR anesthesiologist* OR cardiologist* OR dermatologist* OR endocrinologist* OR gastroenterologist* OR “general practitioner*” OR GPs OR gynecologist* OR hematologist* OR hepatologist* OR immunologist* OR internist* OR nephrologist* OR neurologist* OR obstetrician* OR oncologist* OR ophthalmologist* OR otorhinolaryngologist* OR pathologist* OR pediatric* OR podiatrist* OR psychiatrist* OR pulmonologist* OR radiologist* OR respirologist* OR rheumatologist* OR surgeon* OR urologist*).mp. OR exp physician/	2,447,870	Advanced
#7	#5 AND #6	1,899	Advanced

Notes. mp: title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplement; exp: explore.

Search Strategy in PsycINFO via Ebsco

#	Searches	Results	Type
#1	TI,AB,SU mindfulness	12,226	Advanced
#2	TI,AB,SU mindfulness-based	3,741	Advanced
#3	TI,AB,SU mindful	4,192	Advanced
#4	OR/ #1-#3	14,412	Advanced
#5	TI,AB,SU intervention*	372,709	Advanced
#6	TI,AB,SU training*	274,132	Advanced
#7	TI,AB,SU program*	413,436	Advanced
#8	TI,AB,SU RCT	7,108	Advanced
#9	TI,AB,SU “randomized control trial”	1,185	Advanced
#10	TI,AB,SU "randomized controlled trial”	16,631	Advanced
#11	TI,AB,SU course*	187,804	Advanced
#12	TI,AB,SU curricul*	74,850	Advanced
#13	TI,AB,SU trial*	181,574	Advanced
#14	TI,AB,SU session*	107,874	Advanced
#15	OR/ #5-#14	1,199,580	Advanced
#16	#4 AND #15	8,485	Advanced
#17	TI,AB,SU MBSR	719	Advanced
#18	TI,AB,SU “mindfulness-based stress reduction”	919	Advanced
#19	TI,AB,SU MBCT	629	Advanced
#20	TI,AB,SU “mindfulness-based cognitive therapy”	812	Advanced
#21	TI,AB,SU MBST	5	Advanced
#22	TI,AB,SU “mind-body skill training”	202	Advanced
#23	OR/ #17-#22	1,644	Advanced
#24	#16 OR #23	8,704	Advanced
#25	TI,AB,SU physician*	79,664	Advanced
#26	TI,AB,SU doctor*	37,988	Advanced
#27	TI,AB,SU practitioner*	88,982	Advanced
#28	TI,AB,SU clinician*	87,123	Advanced
#29	TI,AB,SU "medic* intern*”	755	Advanced
#30	TI,AB,SU resident OR TI, AB,SU residents	45,599	Advanced
#31	TI,AB,SU residency	9,997	Advanced
#32	TI,AB,SU “post-graduate year”	25	Advanced
#33	TI,AB,SU PGY	78	Advanced

Supplemental digital content for Fendel JC, Bürkle JJ, Göritz AS. Mindfulness-based interventions to reduce burnout and stress in physicians: A systematic review and meta-analysis. Acad Med.

#34	TI,AB,SU PGY-1	51	Advanced
#35	TI,AB,SU PGY-2	40	Advanced
#36	TI,AB,SU PGY-3	41	Advanced
#37	TI,AB,SU “foundation year”	61	Advanced
#38	TI,AB,SU F1	1,518	Advanced
#39	TI,AB,SU FY1	16	Advanced
#40	TI,AB,SU F2	1,379	Advanced
#41	TI,AB,SU FY2	7	Advanced
#42	TI,AB,SU SpR	512	Advanced
#43	TI,AB,SU “house officer*”	302	Advanced
#44	TI,AB,SU PRHO	19	Advanced
#45	TI,AB,SU SHO	130	Advanced
#46	TI,AB,SU anesthesiologist*	427	Advanced
#47	TI,AB,SU cardiologist*	540	Advanced
#48	TI,AB,SU dermatologist*	291	Advanced
#49	TI,AB,SU endocrinologist*	284	Advanced
#50	TI,AB,SU gastroenterologist*	186	Advanced
#51	TI,AB,SU “general practitioner*”	11,333	Advanced
#52	TI,AB,SU GPs	5,006	Advanced
#53	TI,AB,SU gynecologist*	944	Advanced
#54	TI,AB,SU hematologist*	76	Advanced
#55	TI,AB,SU hepatologist*	29	Advanced
#56	TI,AB,SU immunologist*	44	Advanced
#57	TI,AB,SU internist*	1,196	Advanced
#58	TI,AB,SU nephrologist*	87	Advanced
#59	TI,AB,SU neurologist*	6,842	Advanced
#60	TI,AB,SU obstetrician*	1,104	Advanced
#61	TI,AB,SU oncologist*	1,395	Advanced
#62	TI,AB,SU ophthalmologist*	415	Advanced
#63	TI,AB,SU otorhinolaryngologist*	31	Advanced
#64	TI,AB,SU pathologist*	3,388	Advanced
#65	TI,AB,SU pediatric*	43,365	Advanced
#66	TI,AB,SU podiatrist*	45	Advanced
#67	TI,AB,SU psychiatrist*	41,092	Advanced
#68	TI,AB,SU pulmonologist*	71	Advanced
#69	TI,AB,SU radiologist*	426	Advanced
#70	TI,AB,SU respirologist*	5	Advanced
#71	TI,AB,SU rheumatologist*	208	Advanced
#72	TI,AB,SU surgeon*	3,891	Advanced
#73	TI,AB,SU urologist*	294	Advanced
#74	OR/ #25-73	380,862	Advanced
#75	#24 AND #74	1,324	Advanced

Notes. TI = title; AB = abstract; SU = subject terms.

Search Strategy in PSYINDEX via Ebsco

#	Searches	Results	Type
#1	TI,AB,SU mindfulness	1,250	Advanced
#2	TI,AB,SU mindfulness-based	332	Advanced
#3	TI,AB,SU mindful	173	Advanced
#4	OR/ #1-#3	1,289	Advanced
#5	TI,AB,SU intervention*	33,513	Advanced
#6	TI,AB,SU training*	30,426	Advanced
#7	TI,AB,SU program*	29,815	Advanced
#8	TI,AB,SU RCT	328	Advanced

Supplemental digital content for Fendel JC, Bürkle JJ, Göritz AS. Mindfulness-based interventions to reduce burnout and stress in physicians: A systematic review and meta-analysis. Acad Med.

#9	TI,AB,SU “randomized control trial”	23	Advanced
#10	TI,AB,SU "randomized controlled trial”	884	Advanced
#11	TI,AB,SU course*	13,475	Advanced
#12	TI,AB,SU curricul*	3,440	Advanced
#13	TI,AB,SU trial*	6,183	Advanced
#14	TI,AB,SU session*	4,609	Advanced
#15	OR/ #5-#14	91,571	Advanced
#16	#4 AND #15	620	Advanced
#17	TI,AB,SU MBSR	70	Advanced
#18	TI,AB,SU “mindfulness-based stress reduction”	89	Advanced
#19	TI,AB,SU MBCT	80	Advanced
#20	TI,AB,SU “mindfulness-based cognitive therapy”	107	Advanced
#21	TI,AB,SU MBST	1	Advanced
#22	TI,AB,SU “mind-body skill training”	7	Advanced
#23	OR/ #17-#22	177	Advanced
#24	#16 OR #23	680	Advanced
#25	TI,AB,SU physician*	5,038	Advanced
#26	TI,AB,SU doctor*	1,507	Advanced
#27	TI,AB,SU practitioner*	1,569	Advanced
#28	TI,AB,SU clinician*	858	Advanced
#29	TI,AB,SU "medic* intern*"	28	Advanced
#30	TI,AB,SU resident OR TI, AB,SU residents	793	Advanced
#31	TI,AB,SU residency	46	Advanced
#32	TI,AB,SU “post-graduate year”	4	Advanced
#33	TI,AB,SU PGY	0	Advanced
#34	TI,AB,SU PGY-1	0	Advanced
#35	TI,AB,SU PGY-2	0	Advanced
#36	TI,AB,SU PGY-3	0	Advanced
#37	TI,AB,SU “foundation year”	3	Advanced
#38	TI,AB,SU F1	122	Advanced
#39	TI,AB,SU FY1	0	Advanced
#40	TI,AB,SU F2	105	Advanced
#41	TI,AB,SU FY2	0	Advanced
#42	TI,AB,SU SpR	21	Advanced
#43	TI,AB,SU “house officer*”	6	Advanced
#44	TI,AB,SU PRHO	0	Advanced
#45	TI,AB,SU SHO	14	Advanced
#46	TI,AB,SU anesthesiologist*	27	Advanced
#47	TI,AB,SU cardiologist*	11	Advanced
#48	TI,AB,SU dermatologist*	27	Advanced
#49	TI,AB,SU endocrinologist*	4	Advanced
#50	TI,AB,SU gastroenterologist*	3	Advanced
#51	TI,AB,SU “general practitioner*”	812	Advanced
#52	TI,AB,SU GPs	140	Advanced
#53	TI,AB,SU gynecologist*	116	Advanced
#54	TI,AB,SU hematologist*	1	Advanced
#55	TI,AB,SU hepatologist*	0	Advanced
#56	TI,AB,SU immunologist*	1	Advanced
#57	TI,AB,SU internist*	555	Advanced
#58	TI,AB,SU nephrologist*	0	Advanced
#59	TI,AB,SU neurologist*	179	Advanced
#60	TI,AB,SU obstetrician*	15	Advanced
#61	TI,AB,SU oncologist*	57	Advanced
#62	TI,AB,SU ophthalmologist*	4	Advanced
#63	TI,AB,SU otorhinolaryngologist*	1	Advanced
#64	TI,AB,SU pathologist*	12	Advanced
#65	TI,AB,SU pediatric*	1,114	Advanced

#66	TI,AB,SU podiatrist*	0	Advanced
#67	TI,AB,SU psychiatrist*	1,534	Advanced
#68	TI,AB,SU pulmonologist*	1	Advanced
#69	TI,AB,SU radiologist*	5	Advanced
#70	TI,AB,SU respirologist*	0	Advanced
#71	TI,AB,SU rheumatologist*	4	Advanced
#72	TI,AB,SU surgeon*	105	Advanced
#73	TI,AB,SU urologist*	11	Advanced
#74	OR/ #25-73	11,887	Advanced
#75	#24 AND #74	21	Advanced

Notes. TI = title; AB = abstract; SU = subject terms.

Search Strategy in Web of Science Core Collection

	Searches	Results	Type
#1	TS=(mindfulness OR mindfulness-based OR mindful)	17,128	Advanced
#2	TS=(intervention* OR training* OR program* OR RCT OR “randomized control trial” OR “randomized controlled trial” OR course* OR curricul* OR trial* OR session*)	5,113,389	Advanced
#3	#1 AND #2	9,480	Advanced
#4	TS=(MBSR OR “mindfulness-based stress reduction” OR MBCT OR “mindfulness-based cognitive therapy” OR MBST OR “mind-body skill training”)	2,024	Advanced
#5	#3 OR #4	9,935	Advanced
#6	TS=(physician* OR doctor* OR practitioner* OR clinician* OR “medic* intern*” OR resident OR residents OR residency OR “post-graduate year” OR PGY OR PGY-1 OR PGY-2 OR PGY-3 OR “foundation year” OR F1 OR FY1 OR F2 OR FY2 OR SpR OR “house officer*” OR PRHO OR SHO OR anesthesiologist* OR cardiologist* OR dermatologist* OR endocrinologist* OR gastroenterologist* OR “general practitioner*” OR GPs OR gynecologist* OR hematologist* OR hepatologist* OR immunologist* OR internist* OR nephrologist* OR neurologist* OR obstetrician* OR oncologist* OR ophthalmologist* OR otorhinolaryngologist* OR pathologist* OR pediatric* OR podiatrist* OR psychiatrist* OR pulmonologist* OR radiologist* OR respirologist* OR rheumatologist* OR surgeon* OR urologist*)	1,666,088	Advanced
#7	#5 AND #6	1,262	Advanced

Notes. TS = topic.

Search Strategy in CINAHL via Ebsco

#	Searches	Results	Type
#1	TI,AB,SU mindfulness	6,126	Advanced
#2	TI,AB,SU mindfulness-based	1,745	Advanced
#3	TI,AB,SU mindful	2,069	Advanced
#4	OR/ #1-#3	7,511	Advanced
#5	TI,AB,SU intervention*	387,098	Advanced
#6	TI,AB,SU training*	183,942	Advanced
#7	TI,AB,SU program*	437,116	Advanced
#8	TI,AB,SU RCT	16,853	Advanced
#9	TI,AB,SU “randomized control trial”	1,788	Advanced

Supplemental digital content for Fendel JC, Bürkle JJ, Göritz AS. Mindfulness-based interventions to reduce burnout and stress in physicians: A systematic review and meta-analysis. Acad Med.

#10	TI,AB,SU "randomized controlled trial"	36,654	Advanced
#11	TI,AB,SU course*	102,353	Advanced
#12	TI,AB,SU curricul*	45,749	Advanced
#13	TI,AB,SU trial*	405,212	Advanced
#14	TI,AB,SU session*	61,557	Advanced
#15	OR/ #5-#14	1,250,786	Advanced
#16	#4 AND #15	3,944	Advanced
#17	TI,AB,SU MBSR	342	Advanced
#18	TI,AB,SU "mindfulness-based stress reduction"	570	Advanced
#19	TI,AB,SU MBCT	179	Advanced
#20	TI,AB,SU "mindfulness-based cognitive therapy"	310	Advanced
#21	TI,AB,SU MBST	3	Advanced
#22	TI,AB,SU "mind-body skill training"	183	Advanced
#23	OR/ #17-#22	881	Advanced
#24	#16 OR #23	4,120	Advanced
#25	TI,AB,SU physician*	212,778	Advanced
#26	TI,AB,SU doctor*	52,352	Advanced
#27	TI,AB,SU practitioner*	89,258	Advanced
#28	TI,AB,SU clinician*	84,355	Advanced
#29	TI,AB,SU "medic* intern**"	612	Advanced
#30	TI,AB,SU resident	41,969	Advanced
#31	TI, AB,SU residents	49,316	Advanced
#32	TI,AB,SU residency	18,858	Advanced
#33	TI,AB,SU "post-graduate year"	74	Advanced
#34	TI,AB,SU PGY	213	Advanced
#35	TI,AB,SU PGY-1	119	Advanced
#36	TI,AB,SU PGY-2	71	Advanced
#37	TI,AB,SU PGY-3	67	Advanced
#38	TI,AB,SU "foundation year"	193	Advanced
#39	TI,AB,SU F1	1,127	Advanced
#40	TI,AB,SU FY1	37	Advanced
#41	TI,AB,SU F2	1,005	Advanced
#42	TI,AB,SU FY2	23	Advanced
#43	TI,AB,SU SpR	344	Advanced
#44	TI,AB,SU "house officer**"	556	Advanced
#45	TI,AB,SU PRHO	72	Advanced
#46	TI,AB,SU SHO	205	Advanced
#47	TI,AB,SU anesthesiologist*	6,043	Advanced
#48	TI,AB,SU cardiologist*	3,434	Advanced
#49	TI,AB,SU dermatologist*	2,372	Advanced
#50	TI,AB,SU endocrinologist*	856	Advanced
#51	TI,AB,SU gastroenterologist*	1,409	Advanced
#52	TI,AB,SU "general practitioner**"	15,544	Advanced
#53	TI,AB,SU GPs	10,451	Advanced
#54	TI,AB,SU gynecologist*	3,237	Advanced
#55	TI,AB,SU hematologist*	418	Advanced
#56	TI,AB,SU hepatologist*	157	Advanced
#57	TI,AB,SU immunologist*	174	Advanced
#58	TI,AB,SU internist*	1,376	Advanced
#59	TI,AB,SU nephrologist*	1,396	Advanced
#60	TI,AB,SU neurologist*	3,852	Advanced
#61	TI,AB,SU obstetrician*	5,197	Advanced
#62	TI,AB,SU oncologist*	6,771	Advanced
#63	TI,AB,SU ophthalmologist*	2,396	Advanced
#64	TI,AB,SU otorhinolaryngologist*	136	Advanced
#65	TI,AB,SU pathologist*	12,939	Advanced
#66	TI,AB,SU pediatric*	144,260	Advanced

#67	TI,AB,SU podiatrist*	2,937	Advanced
#68	TI,AB,SU psychiatrist*	8,160	Advanced
#69	TI,AB,SU pulmonologist*	634	Advanced
#70	TI,AB,SU radiologist*	15,075	Advanced
#71	TI,AB,SU respirologist*	33	Advanced
#72	TI,AB,SU rheumatologist*	1,830	Advanced
#73	TI,AB,SU surgeon*	47,573	Advanced
#74	TI,AB,SU urologist*	1,938	Advanced
#75	OR/ #25-74	656,372	Advanced
#76	#24 AND #75	636	Advanced

Notes. TI = title; AB = abstract; SU = subject terms.

Search Strategy in CENTRAL

#	Searches	Results	Type
#1	(mindfulness OR mindfulness-based OR mindful):ti,ab,kw	4,101	Advanced
#2	(intervention* OR training* OR program* OR RCT OR “randomized control trial” OR “randomized controlled trial” OR course* OR curricular* OR trial* OR session*):ti,ab,kw	1,003,270	Advanced
#3	#1 AND #2	3,841	Advanced
#4	(MBSR OR “mindfulness-based stress reduction” OR MBCT OR “mindfulness-based cognitive therapy” OR MBST OR “mind-body skill training”):ti,ab,kw	1,275	Advanced
#5	#3 OR #4	3,957	Advanced
#6	(physician* OR doctor* OR practitioner* OR clinician* OR “medic* intern*” OR resident OR residents OR residency OR “post-graduate year” OR PGY OR PGY-1 OR PGY-2 OR PGY-3 OR “foundation year” OR F1 OR FY1 OR F2 OR FY2 OR SpR OR “house officer*” OR PRHO OR SHO OR anesthesiologist* OR cardiologist* OR dermatologist* OR endocrinologist* OR gastroenterologist* OR “general practitioner*” OR GPs OR gynecologist* OR hematologist* OR hepatologist* OR immunologist* OR internist* OR nephrologist* OR neurologist* OR obstetrician* OR oncologist* OR ophthalmologist* OR otorhinolaryngologist* OR pathologist* OR pediatric* OR podiatrist* OR psychiatrist* OR pulmonologist* OR radiologist* OR respirologist* OR rheumatologist* OR surgeon* OR urologist*):ti,ab,kw	153,514	Advanced
#7	#5 AND #6	591	Advanced

Notes. ti,ab,kw: title, abstract, keywords.

Supplemental Digital Appendix 3

Excluded Studies With Reasons for Exclusion

Study	First exclusion reason	Other reasons
1. Aita-Levy J, Desselle B, Sandlin C, Watts RG. Initial success of a faculty burnout intervention initiative in an academic pediatric department. <i>J Invest Med</i> . 2018;66(2):619–620.	No intervention focus on mindfulness	No full-text available
2. Amutio A, Martínez-Taboada C, Hermosilla D, Delgado LC. Enhancing relaxation states and positive emotions in physicians through a mindfulness training program: A one-year study. <i>Psychol Health Med</i> . 2014;20(6):720–731.	Neither burnout nor stress measured via validated instruments (outcomes not measured)	/
3. Asuero AM, Queraltó JM, Pujol-Ribera E, Berenguera A, Rodríguez-Blanco T, Epstein RM. Effectiveness of a mindfulness education program in primary health care professionals: a pragmatic controlled trial. <i>J Contin Educ Health Prof</i> . 2014;34(1):4–12.	Mixed sample	/
4. Bu CNN, Cotzias E, Panagioti M. Mindfulness intervention for foundation year doctors: A feasibility study. <i>Pilot Feasibility Stud</i> . 2019;5:61. doi:10.1186/s40814-019-0449-y	Neither burnout nor stress measured via validated instruments (one-item, self-developed stress scale)	/
5. Bullock A, Fox F, Barnes R, et al. Transitions in medicine: trainee doctor stress and support mechanisms. <i>J Workplace Learn</i> . 2013;25(6):368–382.	No intervention focus on mindfulness	No pre-post data Neither burnout nor stress measured via validated instruments
6. Cavanaugh E, Rose M. An 8-week mindfulness-based stress reduction course for OB/GYN residents: A pilot study. <i>Obstet Gynecol</i> . 2017;130(1):45	No pre-post data	No full-text available
7. Chatwal MS, McDowell M, Vinci C, Reich RR, Reagan A, Gray JE. A feasibility study to examine the role of a mindfulness-based wellness curriculum for early clinical trainees. <i>J Clin Oncol</i> . 2018;36(15 suppl):11020. doi:10.1200/JCO.2018.36.15_suppl.TPS11020	No pre-post data available	No full-text available Wrong publication format (study protocol)
8. Chaikos D, Chad-Friedman E, Mehta DH, et al. SMART-R: A prospective cohort study of a resilience curriculum for residents by residents. <i>Acad Psychiatry</i> . 2018;42(1):78–83.	No intervention focus on mindfulness	/
9. Chinai S, Bird S, Lesperance D, et al. Effect of an empathy curriculum on emergency medicine resident burnout and patient perception of empathy: A randomized controlled trial. <i>West J Emerg Med</i> . 2016;17(4.1):12.	No full-text available	Wrong publication format (conference abstract)
10. Cohen E, Matta M, Leonard C, Rowan S, Hashmi M. West Virginia University's department of OB/GYN resident resiliency curriculum: A focus on well-being. <i>Obstet Gynecol</i> . 2017;130(1):53.	No intervention focus on mindfulness	No pre-post data Neither burnout nor stress measured via validated instruments No full-text available

Supplemental digital content for Fendel JC, Bürkle JJ, Göritz AS. Mindfulness-based interventions to reduce burnout and stress in physicians: A systematic review and meta-analysis. Acad Med.

11. Desai A, Bubin A. Mindful moments: Improving resident wellness through a text-message based curriculum. <i>Acad Pediatr.</i> 2018;18(5):e36. doi:10.1016/j.acap.2018.04.099	No intervention focus on mindfulness	No full-text available
12. Dilley N. Meditation and mindfulness sessions as a method of reducing stress and burnout in obstetrics & gynaecology trainees. <i>BJOG.</i> 2018;125(3 suppl):69.	No pre-post data	Neither burnout nor stress measured via validated instruments (unclear instruments) No full-text available
13. Dobkin PL, Bernardi NF, Bagnis CI. Enhancing clinicians' well-being and patient-centered care through mindfulness. <i>J Contin Educ Health Prof.</i> 2016;36(1):11–16.	Mixed sample	/
14. Dossett M, Blake H, Yeh G. Development of a curriculum for internal medicine interns linking the skill of mindfulness with professionalism, humanism, and physician well-being. <i>EXPLORE (NY).</i> 2013;9(5):326–327.	No pre-post data (unclear timing of pre data)	Neither burnout nor stress measured via validated instruments (unclear measurements) No full-text available
15. Duckles A, Tomescu O. A mixed methods evaluation of a mindfulness-based resilience curriculum for medical residents. <i>J Gen Intern Med.</i> 2018;33(2):678.	No pre-post data	Wrong publication format (conference abstract)
16. Eckstein DA, Park HJ, Hanhan SB. Creating a curriculum of health and wellness for radiologists. <i>J Am Coll Radiol.</i> 2018;15(4):681–683.	No intervention focus on mindfulness	Neither burnout nor stress measured via validated instruments (unclear instruments)
17. Fitzmaurice L, Peterson B, Boehm J. Teaching wellness skills: Effect of a curriculum designed to increase physician resilience on obstetrics and gynecology intern burnout, mindfulness and self-compassion. <i>Obstet Gynecol.</i> 2018;132(1 suppl):44S.	No intervention focus on mindfulness	No pre-post data No full-text available
18. Fraiman YS, Cheston C, Michelson CD, Sox CM. Pilot of a novel facilitator-friendly six-month mindfulness curriculum for interns (Research Abstract). <i>Acad Pediatr.</i> 2017;17(5):e45. doi:10.1016/j.acap.2017.04.129	No full text available	/
19. Fraiman YS, Coria A, Cheston C, Allen E, Michelson C, Sox C. Evaluating the feasibility and impact of a new mindfulness curriculum in a large pediatric residency program. <i>Acad Pediatr.</i> 2016;16(6):e9–e10. doi:10.1016/j.acap.2016.05.022	No pre-post data	Neither burnout nor stress measured via validated instruments (unclear measurements) No full-text available
20. Gough R, Dobkin P, Rajotte C. Addressing resident burnout: Results of a mindfulness-based stress reduction program at a family medicine unit in Montreal. <i>Med Educ.</i> 2011;45(1):54.	Mixed sample	No pre-post data Neither

		burnout nor stress measured via validated instruments No full-text available
21. Hassink-Franke LJA. Mindfulness-based stress reduction relieved burnout complaints among general practitioners. <i>Ned Tijdschr Geneeskd</i> . 2016;160(27):40.	No full-text available	/
22. Herres J, Dattner E, Mohiuddin K, et al. Effect of brief mindfulness intervention on emergency medicine resident level of burnout: A pilot study. <i>Acad Emerg Med</i> . 2019;26:145.	No full-text available	/
23. Hoffman A, Goldberg D, Bockian N, Broadwell S, Palmieri MJ. Training medical residents in mindfulness-based stress reduction: A quantitative and a qualitative evaluation. <i>J Invest Med</i> . 1998;46(7):267-267.	No full-text available	/
24. Jong M, Tjaden B, Vliet MV, Battjes-Fries M, Wietmarschen HV. Health promotion through mindfulness training: A study among Dutch primary care physicians. <i>Eur J Public Health</i> . 2018;28(4 suppl):cky214.107. doi:10.1093/euro/cky214.107	No original data (results reported elsewhere)	No full-text available
25. Kenny M. Mindfulness for stress management and well-being in psychiatry. <i>Aust N Z J Psychiatry</i> . 2016;50(1 suppl):20.	No pre-post data	No full-text available Wrong publication format (conference abstract)
26. Lases SS, Lombarts MJMH, Slootweg IA, Arah OA, Pierik EGJM, Heineman E. Evaluating Mind Fitness Training and its potential effects on surgical residents' well-being: A mixed methods pilot study. <i>World J Surg</i> . 2016;40(1):29-37.	Neither burnout nor stress measured via validated instruments (one-item stress scale)	/
27. Lebares CC, Guvva EV, Delucchi KL, Kayser AS, Ascher NL, Harris HW. Mindful surgeon: a pilot feasibility and efficacy trial of mindfulness-based stress resilience training in surgery. <i>J Am Coll Surg</i> . 2018;227(2 suppl):e21. doi:10.1016/j.jamcollsurg.2018.08.051	No pre-post data	Neither burnout nor stress measured via validated instruments (unclear instruments) No full-text available
28. Mache S, Bernburg M, Baresi L, Groneberg D. Mental health promotion for junior physicians working in emergency medicine: Evaluation of a pilot study. <i>Eur J Emerg Med</i> . 2018;25(3):191-198.	No intervention focus on mindfulness	/
29. Mainwaring J. Implementation of a Mindfulness-Based Resilience Training for Anesthesia Providers [dissertation]. New Castle, DE: Wilmington University; 2018.	Mixed sample	No original data (literature review) No full-text available
30. Martin Asuero A, Rodríguez Blanco T, Pujol-Ribera E, Berenguera A, Moix Queralto J. Effectiveness of a mindfulness program in primary care professionals. <i>Gac Sanit</i> . 2013;27(6):521-528.	Mixed sample	/
31. Martín-Asuero A, García-Banda G. The mindfulness-based stress reduction program (MBSR) reduces stress-related psychological distress in healthcare professionals. <i>Span J Psychol</i> . 2010;13(2):897-905.	Mixed sample	/
32. Mirsky J, Dossett ML, Gottlieb B, Mehta D. Development of a novel skills-based resident curriculum to reduce burnout. <i>J Gen Intern Med</i> . 2017;32(2):669-669.	No intervention focus on mindfulness	/

Supplemental digital content for Fendel JC, Bürkle JJ, Göritz AS. Mindfulness-based interventions to reduce burnout and stress in physicians: A systematic review and meta-analysis. Acad Med.

33. O'Shea JT, White M, Dannenfelser M, Moran T, Osborne AD, Lall M. SAEM education summit: Mindfulness training to reduce burnout and stress in emergency medicine residents. <i>Acad Emerg Med</i> . 2019;26:193-194.	No full-text available	/
34. Pateropoulos T. The role of body awareness of emotion in Mindfulness-Based Interventions (MBIs) and relationships with perceived stress and burnout in medical residents [dissertation]. Alhambra, CA: Alliant International University; 2018.	No pre-post data	No full-text available
35. Riall TS. Evaluating the feasibility of stress-resilience training in surgical residency: A step toward improving surgeon well-being. <i>JAMA Surg</i> . 2018;153(10):e182735-e182735. doi:10.1001/jamasurg.2018.2735	No original data (commentary)	Wrong publication format (commentary)
36. Rosdahl JA, Kingsolver K. Mindfulness training to increase resilience and decrease stress and burnout in ophthalmology residents: A pilot study. <i>Invest Ophthalmol Vis Sci</i> . 2014;55(13):5579-5579.	No full text available	/
37. Schneider C, Palmer D, Holt C, Wissink T, Stevens M. A wellness curricular intervention for family medicine residents to reduce depression and burnout. <i>J Altern Complement Med</i> . 2014;20(5):148-149.	No intervention focus on mindfulness	No pre-post data No full-text available Wrong publication format (study protocol)
38. Sood A, Sharma V, Schroeder DR, Gorman B. Stress management and resiliency training (SMART) program among department of radiology faculty: a pilot randomized clinical trial. <i>EXPLORE (NY)</i> . 2014;10(6):358-363.	No intervention focus on mindfulness	/
39. Speckens A, Verweij H, Ravesteijn HV, Lagro-Janssen T. Mindfulness voor artsen in opleiding tot medisch specialist. <i>Tijdschr Psychiatr</i> . 2019;61(3):188-193.	No original data (data published elsewhere)	/
40. Timpane SF, Taylor M, Little EM, et al. Wellness week: An intensified approach for addressing resident burnout. <i>Acad Pediatr</i> . 2016;16(6):e42 doi:10.1016/j.acap.2016.05.105	No intervention focus on mindfulness	No pre-post data Neither burnout nor stress measured via validated instruments no full-text available
41. Tjaden B, Vliet VM, Wietmarschen VH, Jong M. Effects of a mindfulness training on perceived stress, self-compassion and empathy of primary care physicians: A quantitative and qualitative analysis. <i>BMC Complement Altern Med</i> . 2017;17(1 suppl):O31.	No original data (data published elsewhere)	Wrong publication format (conference abstract)
42. Verweij H, van Ravesteijn HJ, van Hooff MLM, Lagro-Janssen ALM, Speckens AEM. Mindfulness-based stress reduction for medical residents: effects on burnout and wellbeing. A randomized controlled trial. <i>Int J Behav Med</i> . 2016;23(1 suppl):S86	No original data (data published elsewhere)	Wrong publication format (conference abstract)
43. Wagner B, Nentin F, Ferrara L. Resident wellness initiative to reduce burnout and mitigate stress. <i>Obstet Gynecol</i> . 2017;130(4):43.	No intervention focus on mindfulness	No full-text available
44. West CP, Dyrbye LN, Rabatin JT, et al. Intervention to promote physician well-being, job satisfaction, and professionalism: A randomized clinical trial. <i>JAMA Intern Med</i> . 2014;174(4):527.	No intervention focus on mindfulness	/

Exclusion order: (1) Mixed Sample (population), (2) No intervention focus on mindfulness (intervention), (3) No pre-post data (comparison), (4) Neither burnout nor stress measured via validated instruments

Supplemental digital content for Fendel JC, Bürkle JJ, Göritz AS. Mindfulness-based interventions to reduce burnout and stress in physicians: A systematic review and meta-analysis. Acad Med.

(outcome), (5) No original data (study), (6) No full-text available, (7) Wrong publication format (review, letter, case control study, conference abstract).

Supplemental Digital Appendix 4

Subgroup Analyses: Effect Sizes and Other Statistics for Different Subgroups of Studies on Burnout

Comparison	Moderator	Subgroup	k	SMD	95% CI	p	I ² (%)	Q
Between-group	Career stage	All	5	-0.26	[-0.50; -0.03]	.03	0	3.54
		Practicing physicians	2	-0.52	[-0.90; -0.04]	.03	0	0.12
		Resident physicians	3	-0.18	[-0.45; 0.10]	.21	0	1.94
		Difference				.22		
	Intervention type	Adapted MBSR	3	-0.38	[-0.79; 0.03]	.07	0	1.15
		MBSR	2	-0.27	[-0.74; 0.20]	.26	48	1.92
		Difference				.73		
	Intervention format	Offline	5	-0.26	[-0.50; -0.03]	.03	0	3.54
	Type control	Active	2	-0.35	[-0.89; 0.18]	.20	12	1.14
		Waitlist	3	-0.25	[-0.55; 0.05]	.10	9	2.19
		Difference				.74		
Pre-post	Career stage	All	21	-0.26	[-0.37; -0.15]	< .001	29	28.19
		Mixed	4	-0.51	[-0.78; -0.23]	< .001	31	4.37
		Practicing physicians	7	-0.25	[-0.41; -0.09]	.02	22	7.67
		Resident physicians	10	-0.17	[-0.33; -0.02]	.03	15	10.62
		Difference				.12		
	Intervention type	Adapted MBSR	8	-0.17	[-0.37; 0.02]	.08	38	11.30
		Adapted MBCT	1	-0.96	[-1.48; -0.45]	< .001	-	-
		MBSR	3	-0.22	[-0.47; 0.02]	.07	31	2.92
		MBST	2	-0.31	[-0.64; 0.01]	.06	0	0.06
		Mindfulness App	1	-0.21	[-0.81; 0.39]	.49	-	-
		Other forms	6	-0.29	[-0.46; -0.13]	< .001	6	5.31
		Difference				.15		
	Intervention format	Mixed	5	-0.19	[-0.37; 0.00]	.046	0	3.64
		Offline	15	-0.28	[-0.42; -0.14]	< .001	41	23.83
		Online	1	-0.21	[-0.81; 0.39]	.49	-	-
		Difference				.72		
	Study design	CBA	3	-0.27	[-0.49; -0.05]	.02	3	2.06
		NCBA	13	-0.27	[-0.41; -0.13]	< .001	24	15.74
		RCT	5	-0.23	[-0.53; 0.08]	.14	61	10.30
		Difference				.97		

Abbreviations. k = number of studies

Supplemental Digital Appendix 5

Subgroup Analyses: Effect Sizes and Other Statistics for Different Subgroups of Studies on Stress

Comparison	Moderator	Subgroup	k	SMD	95% CI	p	I ² (%)	Q
Between-group	Career stage	All	4	-0.55	[-0.95; -0.14]	.01	24	3.94
		Practicing physicians	2	-0.49	[-1.42; 0.45]	.31	72	3.55
		Resident physicians	2	-0.60	[-1.10; -0.10]	.02	0	0.32
		Difference				.83		
	Intervention type	Adapted MBSR	4	-0.55	[-0.95; -0.14]	.01	24	3.94
		Offline	4	-0.55	[-0.95; -0.14]	.01	24	3.94
	Intervention format	Active	2	-0.60	[-1.10; -0.10]	.02	0	0.32
		Waitlist	2	-0.49	[-1.42; 0.45]	.31	72	3.55
		Difference				.83		
Pre-post	Career stage	All	17	-0.41	[-0.61; -0.20]	< .001	69	52.01
		Mixed	3	-0.77	[-1.49; -0.04]	.04	85	13.47
		Practicing physicians	5	-0.44	[-0.80; -0.07]	.02	75	15.74
		Resident physicians	9	-0.26	[-0.51; -0.02]	.04	52	16.76
		Difference				.38		
	Intervention type	Adapted MBSR	8	-0.39	[-0.68; -0.11]	< .01	69	22.58
		Adapted MBCT	1	-1.40	[-2.00; -0.80]	< .001	-	-
		MBSR	1	-0.59	[-1.20; 0.02]	.06	-	-
		MBST	2	-0.49	[-1.31; 0.32]	.24	70	3.28
		Mindfulness App	1	-0.17	[-0.53; 0.19]	.37	-	-
		Other forms	4	-0.25	[-0.69; 0.18]	.26	69	9.81
		Difference				.02		
	Intervention format	Mixed	5	-0.33	[-0.64; -0.02]	.03	58	9.46
		Offline	11	-0.46	[-0.76; -0.17]	< .01	74	39.08
		Online	1	-0.17	[-0.53; 0.19]	.37	-	-
		Difference				.45		
	Study design	CBA	1	0.01	[-0.43; 0.45]	.96	-	-
		NCBA	12	-0.44	[-0.69; -0.20]	< .001	71	37.5
		RCT	4	-0.41	[-0.92; 0.10]	.11	74	11.4
		Difference				.20		

Abbreviations. k = number of studies

Supplemental Digital Appendix 6

Sensitivity Analyses Pertaining to Results of Meta-Analyses at Follow-Up

Outcome	Comparison	k	SMD	95% CI	p	I ² (%)	Q
Burnout	Between	5	-0.26	[-0.50; -0.03]	.03	0	3.54
	Between (fu)	2	-0.58	[-1.70; 0.53]	.30	71	3.46
	Pre-post	21	-0.26	[-0.37; -0.15]	< .001	29	28.19
	Pre-fu	9	-0.46	[-0.80; -0.11]	.01	71	28.01
Stress	Between	4	-0.55	[-0.95; -0.14]	.01	24	3.94
	Between (fu)	3	-0.78	[-1.43; -0.12]	.02	53	4.21
	Pre-post	17	-0.41	[-0.61; -0.20]	< .001	69	52.01
	Pre-fu	9	-0.56	[-1.02; -0.10]	.02	80	40.56

Abbreviations. k = number of studies; fu = follow-up

Supplemental Digital Appendix 7

Sensitivity Analyses Pertaining to Different Correlation Estimates in Pre-Post Analyses

Outcome	Correlation	k	SMD	95% CI	p	I ² (%)	Q
Burnout	0.5	21	-0.26	[-0.37; -0.15]	< .001	29	28.19
	0.3	21	-0.26	[-0.37; -0.15]	< .001	5	21.01
	0.7	21	-0.26	[-0.37; -0.15]	< .001	54	43.11
Stress	0.5	17	-0.41	[-0.61; -0.20]	< .001	69	52.01
	0.3	17	-0.41	[-0.61; -0.20]	< .001	60	39.92
	0.7	17	-0.41	[-0.61; -0.21]	< .001	79	75.44

Abbreviations. k = number of studies

Supplemental Digital Appendix 8

Within Studies' Risk of Bias Assessment for RCTs on Five RoB 2.0 Criteria and Overall Rating

Study	Bias arising from the randomization process	Bias due to deviations from intended intervention	Bias due to missing outcome data	Bias in measurement of the outcome	Bias in selection of the reported result	Overall risk-of-bias
Amutio et al., 2015 ⁶⁵	Some concerns	Some concerns	Low	Some concerns	Low	Some concerns
Franco Justo et al., 2010 ⁶⁴	Some concerns	Some concerns	Low	Some concerns	Low	Some concerns
Ireland et al., 2017 ²⁵	Some concerns	Low	Low	Some concerns	Some concerns	Some concerns
Lebares et al., 2019 ⁴⁰	Low	Low	Low	Some concerns	Low	Some concerns
Schroeder et al., 2016 ³⁶	Some concerns	Some concerns	Low	Some concerns	Low	Some concerns
Verweij et al., 2018 ⁶¹	Some concerns	Some concerns	Low	Some concerns	Low	Some concerns

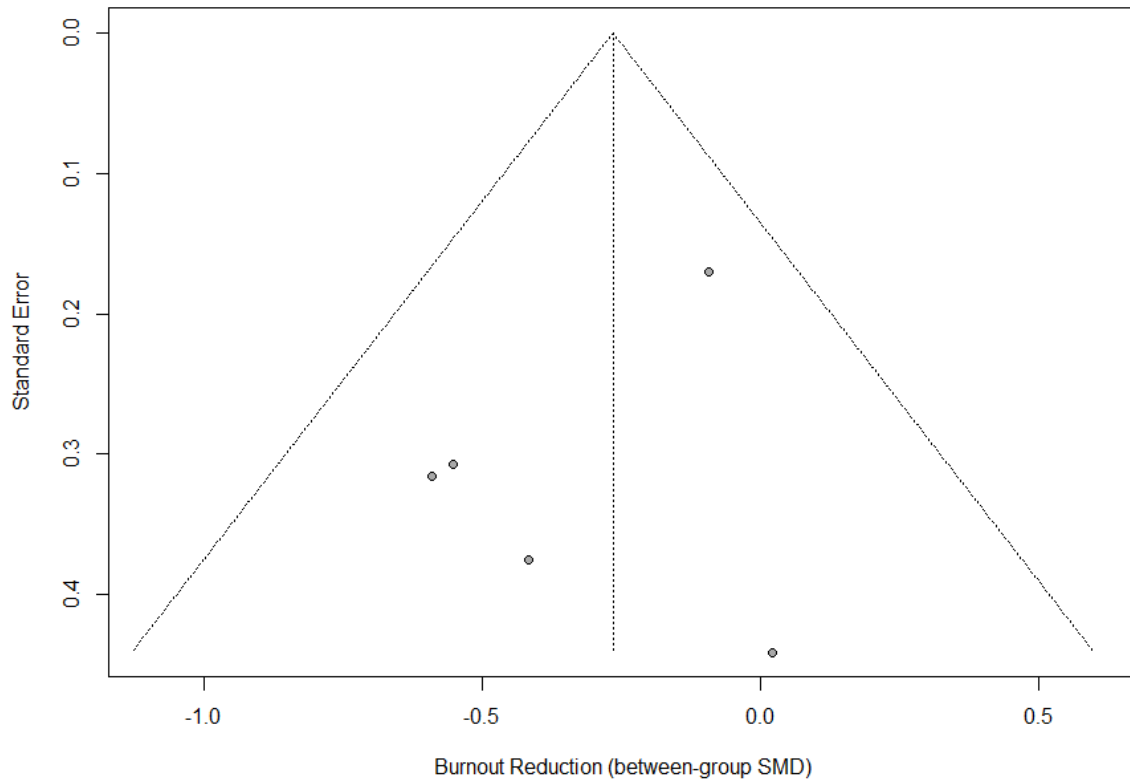
Supplemental Digital Appendix 9

Within Studies' Risk of Bias Assessment for NRTs on Eight EPHPP Criteria and Global Rating

Study	Selection bias	Study design	Confounders	Blinding	Data collection methods	Withdrawals and drop-outs	Intervention Integrity			Analyses				Global rating
							Percentage allocation	Intervention consistency	Unintended intervention	Allocation unit	Analysis unit	Method appropriate	Intention to treat	
Bentley et al., 2018 ⁷³	Weak	Moderate	Weak	Weak	Strong	Strong	80-100%	Yes	Can't tell	organization/institution	organization/institution	Yes	Yes	Weak
Fendel et al., 2019 ³⁷	Weak	Moderate	Weak	Weak	Strong	Strong	80-100%	Yes	Can't tell	organization/institution	organization/institution	Yes	Yes	Weak
Forbes et al., 2020 ³⁸	Weak	Moderate	Weak	Weak	Strong	Moderate	80-100%	Yes	Can't tell	organization/institution	organization/institution	No	Yes	Weak
Goldhagen et al., 2015 ⁶⁸	Weak	Moderate	Weak	Weak	Strong	Moderate	Can't tell	No	Can't tell	organization/institution	organization/institution	Yes	Yes	Weak
Hamilton-West et al., 2016 ⁶⁷	Weak	Moderate	Weak	Weak	Strong	Moderate	80-100%	Yes	Can't tell	organization/institution community	organization/institution community	Yes	Yes	Weak
Hoenders et al., 2016 ⁷¹	Weak	Moderate	Weak	Weak	Strong	Moderate	80-100%	No	Can't tell	organization/institution community	organization/institution community	Yes	Yes	Weak
Kersenaekers et al., 2020 ³⁹	Weak	Moderate	Weak	Weak	Strong	Strong	80-100%	Yes	No	community	community	Yes	Yes	Weak
Krasner et al., 2009 ²⁴	Weak	Moderate	Weak	Weak	Strong	Moderate	80-100%	Yes	Can't tell	community	community	Yes	Yes	Weak
Montero-Marín et al., 2018 ⁶²	Weak	Moderate	Weak	Weak	Strong	Weak	less than 60%	Yes	Can't tell	community	community	Yes	Yes	Weak
Nguyen et al., 2019 ⁴¹	Weak	Moderate	Weak	Weak	Strong	Moderate	less than 60%	Yes	Can't tell	organization/institution	organization/institution	Yes	Yes	Weak
Pflugeisen et al., 2016 ⁶³	Weak	Moderate	Weak	Weak	Strong	Moderate	80-100%	Yes	Can't tell	organization/institution	organization/institution	Yes	Yes	Weak
Razzaque et al., 2015 ⁷²	Weak	Moderate	Weak	Weak	Strong	Strong	80-100%	Yes	Can't tell	community	community	Yes	Yes	Weak
Romcevich et al., 2018 ⁴²	Weak	Moderate	Weak	Weak	Strong	Moderate	80-100%	Yes	Can't tell	organization/institution	organization/institution	Yes	Yes	Weak
Runyan et al., 2016 ⁴³	Weak	Moderate	Weak	Weak	Strong	Moderate	80-100%	Yes	Can't tell	organization/institution	organization/institution	Yes	Yes	Weak
Taylor et al., 2016 ⁷⁰	Weak	Moderate	Weak	Weak	Strong	Weak	Can't tell	No	Can't tell	organization/institution	organization/institution	Yes	Yes	Weak
van Wietmarschen et al., 2018 ⁴⁴	Weak	Moderate	Weak	Weak	Strong	Moderate	Can't tell	No	Can't tell	community	community	Yes	Yes	Weak
Verweij et al., 2016 ⁶⁶	Weak	Moderate	Strong	Weak	Strong	Strong	Can't tell	No	No	organization/institution	organization/institution	Yes	Yes	Weak
Wen et al., 2017 ⁶⁹	Weak	Moderate	Weak	Weak	Strong	Moderate	60-79%	Yes	Can't tell	organization/institution	organization/institution	Yes	Yes	Weak

Supplemental Digital Appendix 10

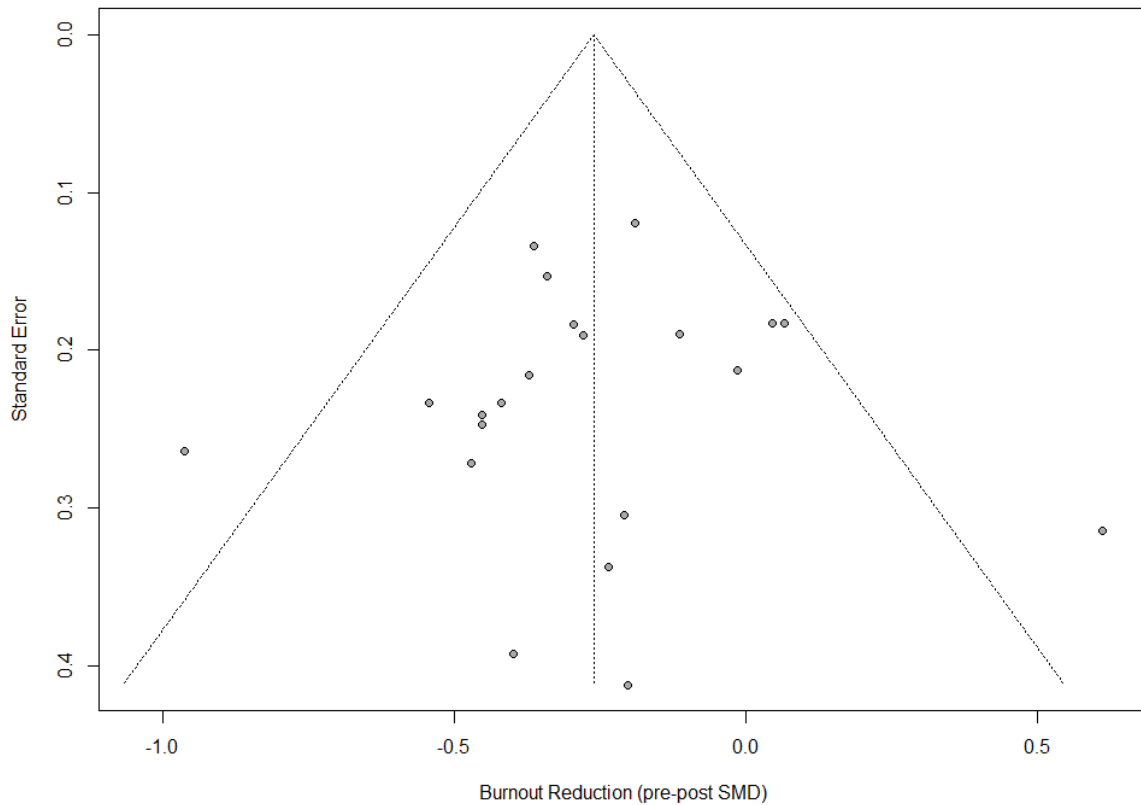
Funnel Plot of Burnout Reduction (Between-Group SMD) vs. Standard Errors



Funnel plot of standardized between-group burnout reduction vs. standard error of burnout scores. The dotted lines indicate the triangular region within which 95% of studies are expected to lie in the absence of publication biases. The funnel plot shows no signs for substantial asymmetry (Egger regression test: $b = -1.20$, $t = -0.98$, $p = .40$)

Supplemental Digital Appendix 11

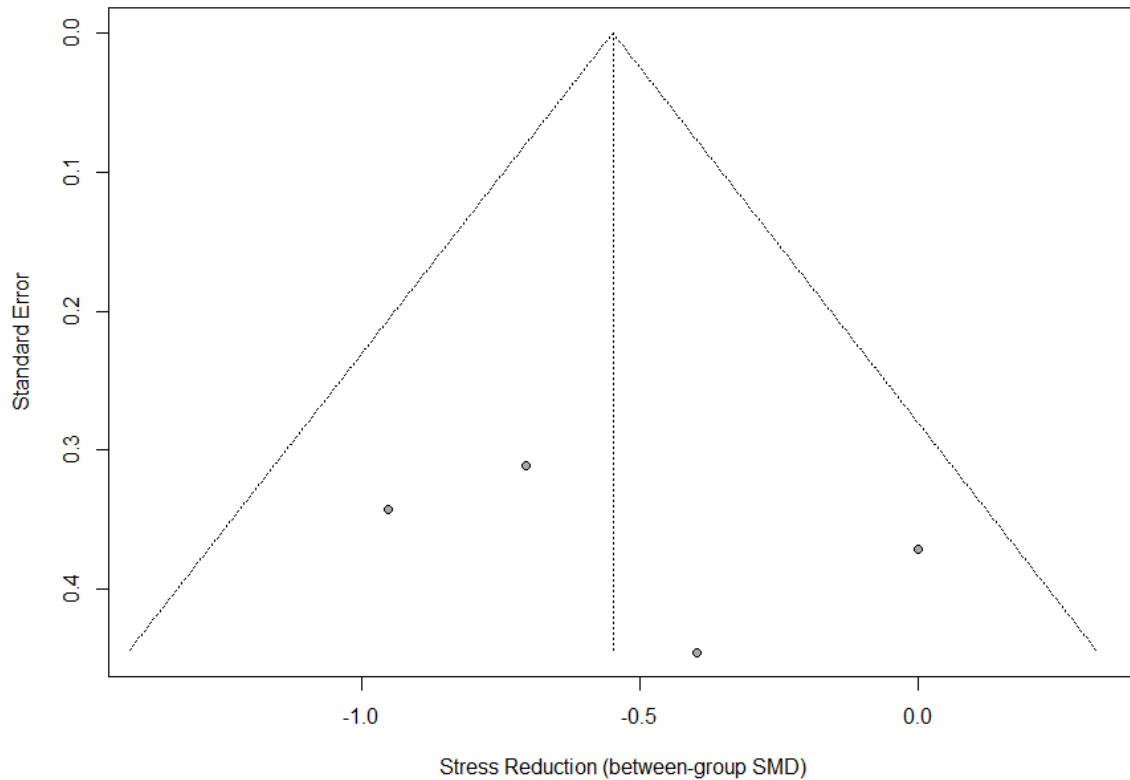
Funnel Plot of Burnout Reduction (Pre-Post SMD) vs. Standard Errors



Funnel plot of standardized pre-post burnout reduction vs. standard error of burnout scores. The dotted lines indicate the triangular region within which 95% of studies are expected to lie in the absence of publication biases. The funnel plot shows no signs for substantial asymmetry (Egger regression test: $b = -0.29$, $t = -0.36$, $p = .74$).

Supplemental Digital Appendix 12

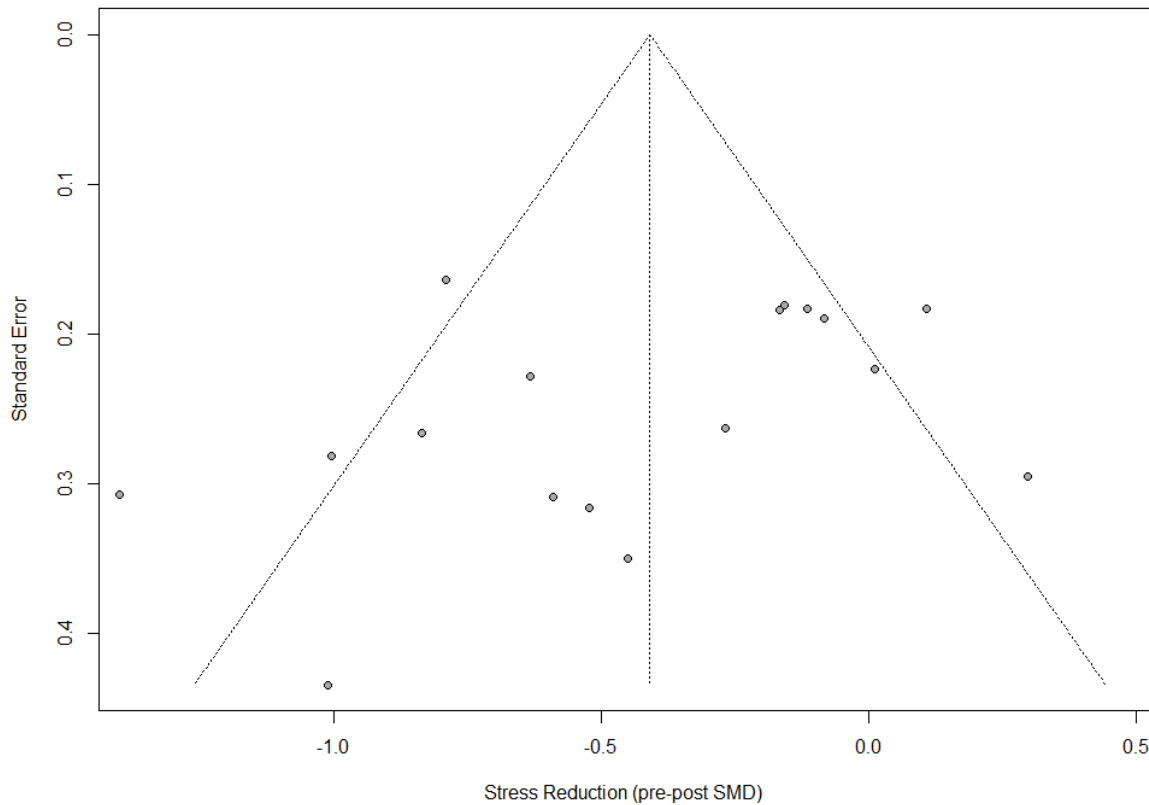
Funnel Plot of Stress Reduction (Between-Group SMD) vs. Standard Errors



Funnel plot of standardized between-group stress reduction vs. standard error of stress scores. The dotted lines indicate the triangular region within which 95% of studies are expected to lie in the absence of publication biases. The funnel plot shows no signs for substantial asymmetry (Egger regression test: $b = 3.89$, $t = 0.81$, $p = .50$).

Supplemental Digital Appendix 13

Funnel Plot of Stress Reduction (Pre-Post SMD) vs. Standard Errors



Funnel plot of standardized pre-post stress reduction vs. standard error of stress scores. The dotted lines indicate the triangular region within which 95% of studies are expected to lie in the absence of publication biases. The funnel plot shows no signs for substantial asymmetry (Egger regression test: $b = -2.63$, $t = -1.62$, $p = .13$).

Supplemental Digital Appendix 14

Overall Quality of Evidence Profile Using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) System

No of studies	Quality assessment							Number of participants		Effect	Quality
	Study designs	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Upgrading factors ^a	MBI	Control		
Burnout reduction. Change from pre to post intervention; between-group comparison											
5	RCT	Serious (-1) (Lack of allocation concealment, lack of blinding)	Not serious	Not serious	Serious (-1) (Low number of participants, CIs include no effect)	Undetected	None	152	136	SMD = -0.26 [-0.50;-0.03]	⊕⊕⊕⊕ = low
Burnout reduction. Change from pre to post intervention; within comparison											
21	RCT, CBA, NCBA	Serious (-1) (Lack of randomization, lack of control, lack of blinding)	Not serious	Not serious	Not serious	Undetected	None	595	n.a.	SMD = -0.26 [-0.37;-0.15]	⊕⊕⊕⊕ = very low
Stress reduction. Change from pre to post intervention; between-group comparison											
5	RCT	Serious (-1) (Lack of allocation concealment, lack of blinding)	Not serious	Not serious	Serious (-1) (Low number of participants)	Undetected	None	70	66	SMD= -0.55 [-0.95;-0.14]	⊕⊕⊕⊕ = low
Stress reduction. Change from pre to post intervention; within comparison											
16	RCT, CBA, NCBA	Serious (-1) (Lack of randomization, lack of control, lack of blinding)	Not serious	Not serious	Not serious	Possible (-1)	Dose response	406	n.a.	SMD = -0.41 [-0.61;-0.20]	⊕⊕⊕⊕ = very low

Overall quality of evidence rating into “high”, “moderate”, “low” or “very low”, reflecting the degree of confidence in the effect estimate. The confidence level starts at high for RCTs and at very low for studies where we analyzed pre-post data. Afterwards, we downgraded the confidence level according to judgements based on the five dimensions (1) risk of bias, (2) inconsistency of results, (3) indirectness of evidence, (4) imprecision of effect size and (5) publication and upgraded the confidence level according to judgements on the three dimensions (6) large magnitude of effect, (7) dose response and (8) effect of all plausible confounding factors.

^aOnly studies with no major threats to validity (i.e. that have not been downgraded elsewhere) can be upgraded.