

Supplementary file 1

Table S1. Characteristics and Risks of Bias of Included Studies.												
Study	Ref.	City	Follow up duration (week)	Intervention	Delivery format	Num of sessions	Outcome measures*	Sample size	Risk of bias			
									Sequence generation	Allocation concealment	Incomplete data	Selective report
Arvand 2017	1	Tehran	—	music therapy	group	10	BAI	69	?	?	?	?
Asadollahi 2013	2, 3	Isfahan	8	(1) MBCT	group	8	SCL-90 IBS-SSS	30	?	?	?	✓
				(2) spirituality therapy	group	8						
Esmaelzadeh 2017	4, 5	Tehran	—	emotional intelligence training	group	12	BAI	36	?	?	✓	?
Adarvishi 2016	6	Ahvaz	—	problem solving training	group	8	STAI**	46	?	?	✓	?
Poormohseni 2017	7	Ardebil	—	MBCT	group	8	GHQ-28	40	?	?	✓	?
Hazrati 2007	8, 9	Shiraz	12	Bensons' relaxation	audio tape	3 months daily	STAI IBS-QoL	30	×	?	×	?
Haghaegh 2008	10, 11	Isfahan	8	CBT	group	8	BDI IBS-QoL	28	?	?	×	✓
Khoshsorour 2018	12	Tehran	—	neurofeedback	individual	10	STAI IBS-SSS	30	?	?	✓	?
Kheir abadi 2010	13	Isfahan	—	coping training + Bensons' relaxation	group	8	HADS IBS-QoL IBS-SSS	46	?	?	×	✓
Zomorrodi 2014	14-16	Tehran	8	(1) CBT	group	8	IBS-QoL	36	×	?	✓	✓
				(2) mindfulness	group	8						

Soleymani 2015	17, 18	Ardebil	—	cognitive behavioral stress management	group	10	A ROME-III based scale	30	?	?	✓	?
Shafiei 2011	19, 20	Unclear	3	(1) problem solving training	group	8	A ROME-II based scale	45	?	?	✓	✓
				(2) assertiveness training	group	8						
Shahbazi 2013	21	Shahrekord	24	hypnotherapy	Individual	5	IBS-SF (a domestic scale)	34	?	?	?	?
Tabatabaie 2014	22	Mashhad	—	meta cognitive therapy	group	8	HADS	21	?	?	✓	✓
Kamkar 2011	23, 24	Yasooj	12	cognitive behavioral stress management	group	8	BAI BDI IBS-QoL	42	?	?	?	✓
Mohammadi 2017	25	Kermanshah	—	MBCT	group	8	BAI BDI	40	?	?	✓	✓
Mahvi shirazi 2008	26, 27	Tehran	—	CBT	unclear	8	SCL-90 A ROME-II based scale	50	?	?	✓	✓
Hashemi 2016	28	Zahedan	—	MBSR	group	8	IBS-SSS	30	✓	✓	✓	×
Mohammadi 2019	29	Kermanshah	—	(1) dialectical behavioral therapy	group	8	IBS-QoL	74	?	?	✓	?
				(2) MBCT	group	8						
				(3) positive psychotherapy	group	8						
Ghandi 2018	30	Tehran	8	(1) MBSR	group	8	IBS-SSS IBS-QoL	24	?	?	×	?
				(2) emotion regulation therapy	group	8						

MBCT, mindfulness-based cognitive therapy; CBT, cognitive behavioral therapy; MBSR, mindfulness-based stress reduction; BAI, Beck's anxiety inventory; SCL-90, symptom check list-90; IBS-SSS, irritable bowel syndrome-symptom severity scoring; STAI, state and trait anxiety inventory; GHQ, general health questionnaire; SF-36, short form [health survey]-36; IBS-QoL, irritable bowel syndrome-quality of life; BDI, Beck's depression inventory; HADS, hospital anxiety and depression scale; IBS-SF, irritable bowel syndrome-short form.

*It only includes outcome measures included in this meta-analysis.

**In this measure, we only used the state subscale, which is sensitive to change, recommended to use in clinical trials,⁶⁹ and is comparable to other anxiety scales.

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