

Supplementary Online Content

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eFigure 1. Flowchart of Study Selection

eFigure 2. Funnel Plot of Hedges d Effect Sizes vs Study Standard Error

eTable 1. Individual Scores on Amended Detsky Quality Assessment

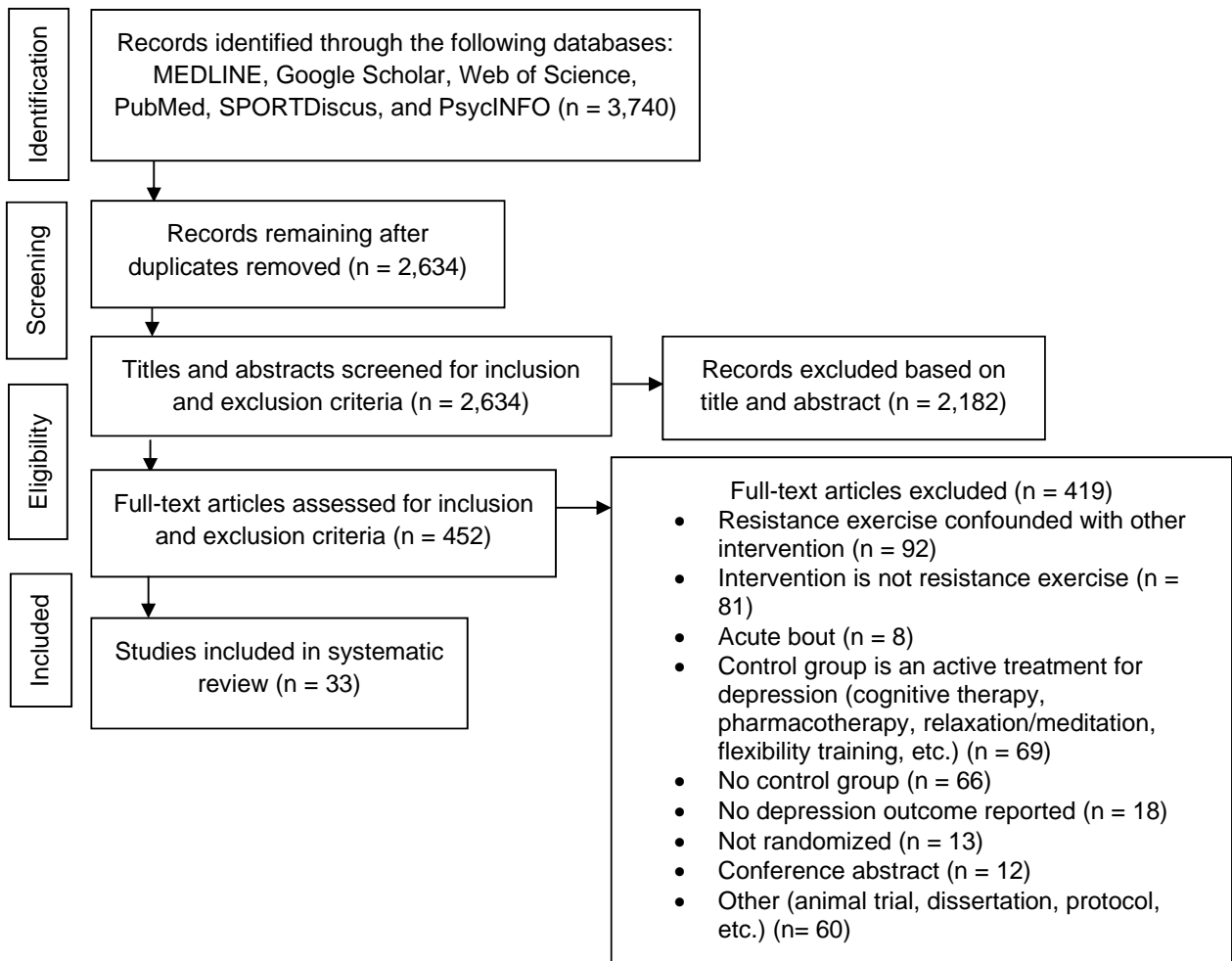
eTable 2. Values Used to Calculate Hedges d Effect Size and Primary Moderator Values

eTable 3. Definitions for Each Moderator and Associated Levels

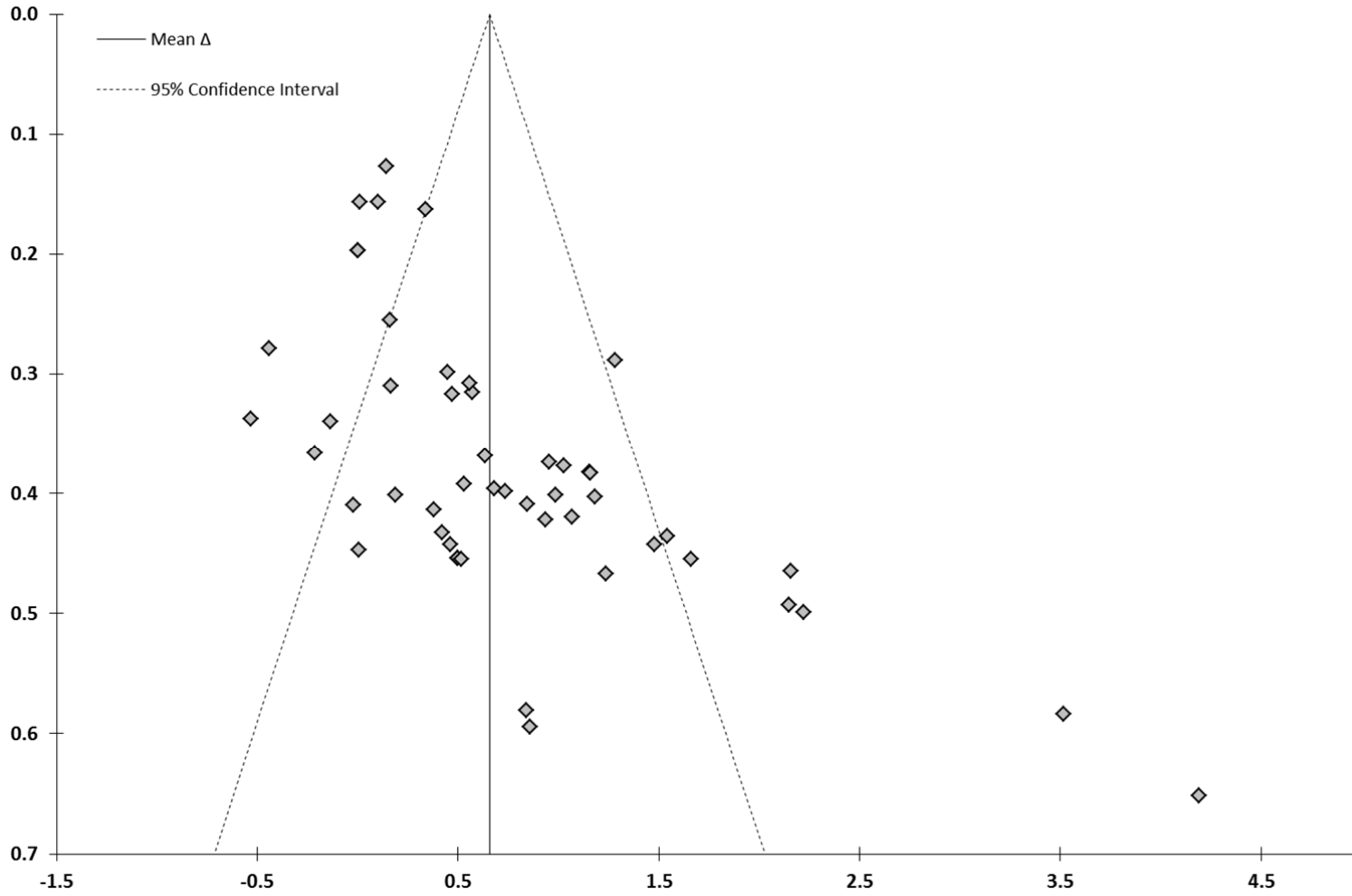
eReferences

This supplementary material has been provided by the authors to give readers additional information about their work.

eFigure 1. Flowchart of Study Selection



eFigure 2. Funnel Plot of Hedges d Effect Sizes vs Study Standard Error



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eTable 1. Individual Scores on Amended Detsky Quality Assessment*

Study	Blinded Allocation	Blinded assessment	Described outcomes	Objective outcomes	Defined inclusion	Report n excluded	RET clearly described	Control clearly described	Statistical analysis provided	P value provided	Analysis appropriate	Justify Sample Size	Adherence Compliance Reported	Total
Aidar et al. ^{e7}	1	0	1	1	1	0	1	1	1	1	1	0	0	9
Abrahao et al. ^{e6}	0	1	1	1	1	1	1	1	1	1	1	1	0	11
Alves et al. ^{e8}	1	1	1	1	1	1	1	1	1	1	1	1	1	13
Ansai et al. ^{e9}	1	0	1	1	1	1	1	1	1	1	1	1	1	12
Courneya et al. ^{e10}	1	0	1	1	1	1	1	1	1	1	1	1	1	12
Dalgas et al. ^{e11}	1	1	1	1	1	1	1	1	1	1	1	0	1	12
Damush et al. ^{e12}	0	0	1	1	0	0	1	1	1	1	1	0	0	7
Doyne et al. ^{e15}	0	1	1	1	1	1	1	1	1	1	1	0	0	10
Geliebter et al. ^{e16}	0	1	1	1	1	0	1	1	1	1	1	0	0	9
Goldfield et al. ^{e17}	0	1	1	1	1	1	1	1	1	1	1	1	1	12
Häkkinen et al. ^{e22}	0	0	1	1	1	0	1	1	1	1	1	0	0	8
Herring et al. ^{e18}	1	1	1	1	1	1	1	1	1	1	1	1	1	13
Herring et al. ^{e4}	1	0	1	1	0	1	1	1	1	1	1	1	0	10
Karahan et al. ^{e23}	1	1	1	1	1	1	1	1	1	1	1	1	0	12
Lau et al. ^{e5}	0	0	1	1	0	1	1	1	1	1	1	0	0	8
Levinger et al. ^{e3}	1	0	1	1	1	1	1	1	1	1	1	0	1	11
Lincoln et al. ^{e24}	0	1	1	1	1	1	1	1	1	1	1	0	0	10
Martins et al. ^{e19}	0	0	1	1	1	0	1	1	1	1	1	0	0	8
Norvell et al. ^{e25}	0	0	1	1	1	1	1	1	1	1	1	0	0	9
Nyberg et al. ^{e26}	1	1	1	1	1	1	1	1	1	1	1	1	0	12
O'Reilly et al. ^{e27}	1	0	1	1	1	1	1	1	1	1	1	1	0	11
Penninx et al. ^{e20}	1	1	1	1	1	1	1	1	1	1	1	1	0	12
Pilu et al. ^{e28}	0	0	1	1	1	0	0	1	1	1	1	0	0	7
Putiri et al. ^{e29}	0	0	1	1	1	1	0	1	1	1	1	0	0	8

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Study	Blinded Allocation	Blinded assessment	Described outcomes	Objective outcomes	Defined inclusion	Report n excluded	RET clearly described	Control clearly described	Statistical analysis provided	P value provided	Analysis appropriate	Justify Sample Size	Adherence Compliance Reported	Total
Sims et al. ^{e30}	1	0	1	1	1	1	1	1	1	1	1	1	1	12
Singh et al. ^{e1}	1	1	1	1	1	1	1	1	1	1	1	1	1	13
Singh et al. ^{e31}	1	1	1	1	1	1	1	1	1	1	1	1	1	13
Sparrow et al. ^{e2}	1	1	1	1	1	1	1	1	1	1	1	1	1	13
Tapps et al. ^{e14}	0	0	1	1	1	0	1	1	1	1	1	0	0	8
Van der Kooi et al. ^{e32}	1	1	1	1	1	1	1	1	1	1	1	1	0	12
Vizza et al. ^{e33}	1	0	1	1	1	1	1	1	1	1	1	0	1	11
Zanuso et al. ^{e13}	0	0	1	1	1	1	1	1	1	1	1	0	0	9

*Amended to include randomization and blinding methods, description of RET and control, and reporting of adherence and/or compliance

eTable 2. Values Used to Calculate Hedges *d* Effect Size and Primary Moderator Values

Study	RET Pre Mean	RET Pre SD	RET Post Mean	Control Pre Mean	Control Baseline SD	Control Post Mean	Hedges' <i>d</i>	Lower 95%CI	Upper 95%CI	Blind	Total Volume RET	Health Status	Strength Improved
Abrahao et al. ^{e6}	19.40	5.00	17.30	19.10	5.60	20.10	0.57	-0.04	1.19	Yes	1800	Ill	No
Aidar et al. ^{e7}	17.70	8.20	13.90	16.90	8.60	16.40	0.38	-0.43	1.19	No	2160	Ill	Yes
Alves et al. ^{e8}	3.92	2.39	3.00	3.46	2.37	3.00	0.19	-0.60	0.97	Yes	960	healthy	No
Alves et al. ^{e8}	3.92	2.39	2.22	3.46	2.37	4.06	0.93	0.11	1.76	Yes	1920	healthy	No
Alves et al. ^{e8}	2.50	1.74	1.64	2.00	1.83	1.92	0.42	-0.43	1.27	Yes	960	healthy	No
Alves et al. ^{e8}	2.50	1.74	0.30	2.00	1.83	2.10	0.124	0.32	2.15	Yes	1920	healthy	No
Ansai et al. ^{e9}	3.90	2.60	3.20	3.30	2.20	3.70	0.45	-0.14	1.03	Yes	2880	healthy	No
Courneya et al. ^{e10}	13.80	10.10	10.60	13.90	9.70	10.80	0.01	-0.30	0.32	Yes	NR	Ill	Yes
Courneya et al. ^{e10}	13.80	10.10	12.60	13.90	9.70	13.70	0.10	-0.21	0.41	Yes	NR	Ill	Yes
Dalgas et al. ^{e11}	10.30	6.10	7.90	8.80	4.42	9.90	0.64	-0.09	1.36	Yes	NR	Ill	Yes
Damush et al. ^{e12}	79.50	20.20	81.60	84.30	18.50	83.20	0.16	-0.34	0.66	No	720	healthy	Yes
Doyne et al. ^{e15}	19.50	9.18	10.96	16.06	5.12	15.72	1.07	0.25	1.89	Yes	NR	Ill	No
Doyne et al. ^{e15}	16.51	4.32	9.13	15.81	2.88	16.57	2.15	1.18	3.11	Yes	NR	Ill	No
Doyne et al. ^{e15}	13.80	3.82	7.78	12.58	4.58	10.23	0.84	0.04	1.65	Yes	NR	Ill	No
Doyne et al. ^{e15}	19.50	9.18	5.93	16.06	5.12	15.25	1.66	0.77	2.55	Yes	NR	Ill	No
Doyne et al. ^{e15}	16.51	4.32	8.01	15.81	2.88	12.92	1.48	0.61	2.35	Yes	NR	Ill	No
Doyne et al. ^{e15}	13.80	3.82	5.13	12.58	4.58	13.58	2.22	1.24	3.20	Yes	NR	Ill	No
Geliebter et al. ^{e16}	8.30	6.20	4.70	9.70	6.80	7.20	0.17	-0.44	0.77	Yes	NR	Ill	No
Goldfield et al. ^{e17}	2.70	2.65	1.70	2.80	2.62	2.70	0.34	0.02	0.66	Yes	3872	Ill	No
Häkkinen et al. ^{e22}	6.40	5.00	3.60	6.60	4.90	7.50	0.72	-0.17	1.60	No	NR	Ill	Yes
Herring et al. ^{e18}	17.50	8.15	10.00	20.40	13.14	18.60	0.50	-0.39	1.39	Yes	184	Ill	Yes
Herring et al. ^{e18}	17.50	8.15	10.40	20.40	13.14	19.00	0.50	-0.39	1.39	Yes	368	Ill	Yes
Herring et al. ^{e18}	17.50	8.15	8.10	20.40	13.14	16.90	0.52	-0.37	1.40	Yes	552	Ill	Yes
Herring et al. ^{e4}	9.50	3.70	5.50	7.90	2.30	5.40	0.46	-0.41	1.33	Yes	2160	Ill	No
Karahan et al. ^{e23}	11.00	5.70	6.90	11.20	5.60	9.80	0.47	-0.15	1.09	Yes	720	Ill	Yes
Lau et al. ^{e5}	4.73	3.70	6.27	5.56	2.30	5.38	-0.53	-1.19	0.13	No	1080	Ill	No
Levinger et al. ^{e3}	82.60	21.27	67.80	62.90	17.82	67.90	0.99	0.20	1.77	Yes	1800	Ill	No
Levinger et al. ^{e3}	65.50	23.88	65.00	67.90	22.35	66.90	-0.02	-0.82	0.78	Yes	1800	healthy	No
Lincoln et al. ^{e24}	11.50	7.50	3.10	11.10	7.40	12.40	1.28	0.72	1.85	Yes	2160	Ill	No
Martins et al. ^{e19}	0.80	1.00	1.10	1.10	0.80	1.00	-0.44	-0.99	0.10	No	2160	healthy	No
Norvell et al. ^{e25}	53.86	8.32	45.21	52.40	6.02	52.53	1.18	0.39	1.97	No	960	healthy	No
Nyberg et al. ^{e26}	3.50	2.37	2.80	3.20	0.79	3.50	0.56	-0.05	1.16	Yes	1440	Ill	Yes
O'Reilly et al. ^{e27}	4.58	2.91	4.01	4.79	2.91	4.90	0.23	-0.07	0.53	Yes	NR	Ill	No

Study	RET Pre Mean	RET Pre SD	RET Post Mean	Control Pre Mean	Control Base SD	Control Post Mean	Hedges' <i>d</i>	Lower 95%CI	Upper 95%CI	Blind	Total Volume RET	Health Status	Strength Improved
Penninx et al. ^{e20}	*	*	*	*	*	*	0.14	-0.11	0.39	Yes	2160	Ill	No
Pilu et al. ^{e28}	20.50	7.10	8.10	19.30	5.70	16.70	1.54	-0.69	2.40	No	3840	Ill	No
Putiri et al. ^{e29}	5.20	2.60	2.60	5.00	3.10	5.10	0.86	-0.31	2.02	No	2160	Ill	No
Sarsan et al. ^{e21}	13.95	7.27	10.80	14.85	9.25	15.85	0.49	-0.14	1.12	Yes	NR	Ill	Yes
Sims et al. ^{e30}	15.43	7.49	15.13	22.37	8.86	20.62	-0.17	-0.76	0.41	Yes	NR	Ill	No
Singh et al. ^{e28}	21.30	7.42	9.80	18.40	6.58	13.80	0.95	0.22	1.69	Yes	1500	Ill	Yes
Singh et al. ^{e28}	5.20	1.65	2.00	4.60	1.55	3.30	1.16	0.41	1.91	Yes	1500	Ill	Yes
Singh et al. ^{e28}	16.90	6.60	8.60	13.90	5.42	12.00	1.03	0.29	1.77	Yes	1500	Ill	Yes
Singh et al. ^{e28}	12.30	3.71	5.30	11.40	3.87	8.90	1.16	0.41	1.91	Yes	1500	Ill	Yes
Singh et al. ^{e31}	19.90	6.73	11.20	18.00	7.21	14.20	0.68	-0.09	1.46	Yes	900	Ill	Yes
Singh et al. ^{e31}	16.20	6.36	9.10	13.70	5.77	11.20	0.73	-0.05	1.51	Yes	900	Ill	Yes
Singh et al. ^{e31}	11.60	3.74	7.20	11.20	4.33	9.00	0.53	-0.24	1.30	Yes	900	Ill	Yes
Sparrow et al. ^{e2}	3.80	4.30	4.70	5.00	6.30	5.90	0.00	-0.39	0.39	Yes	2160	healthy	No
Sparrow et al. ^{e2}	3.80	4.30	4.60	5.00	6.30	5.80	0.00	-0.39	0.39	Yes	4320	healthy	No
Tapps et al. ^{e14}	8.27	2.33	6.73	1.55	1.37	3.91	2.16	1.28	3.07	No	360	healthy	No
Tapps et al. ^{e14}	8.27	2.33	2.73	1.55	1.37	2.36	3.52	2.33	4.66	No	720	healthy	No
Tapps et al. ^{e14}	8.27	2.33	1.73	1.55	1.37	2.58	4.19	2.91	5.47	No	1080	healthy	No
van der Kooi et al. ^{e32}	2.40	2.80	1.90	2.20	2.71	1.10	-0.21	-0.93	0.51	Yes	4680	Ill	No
van der Kooi et al. ^{e32}	0.70	2.91	0.70	1.90	2.87	1.50	-0.14	-0.80	0.53	Yes	4680	Ill	No
Vizza et al. ^{e33}	10.80	6.80	5.40	12.70	9.60	14.70	0.84	-0.30	1.98	Yes	2880	Ill	No
Zanuso et al. ^{e13}	40.93	1.73	40.04	41.34	5.98	40.48	0.01	-0.87	0.88	No	5040	healthy	No

Abbreviations: RET, Resistance exercise training; 95%CI, 95% confidence interval; NR, not reported. BDI, Beck Depression Inventory; BRUMS-D, Brunel Mood Scale Questionnaire-depression; CDS, Cardiac Depression Scale; CESD, Center for Epidemiologic Studies Depression Scale; DACL, Depression Adjective Checklist; DASS-21, Depression, Anxiety and Stress Scale; DSM, Diagnostic Statistics Manual-IV symptoms; GDS, Geriatric Depression Scale; HADS, Hospital Anxiety and Depression Scale; SCL-90-D, Hopkins Symptom Checklist-depression; HRSD, Hamilton Rating Scale for Depression; MDI, Major Depression Inventory; MHFI, Mental Health Functioning Index-depression; POMS-D, Profile of Mood States-depression, wk, weeks. *Age presented as mean ± SD if reported, if not, age range is presented.

*Effect sizes approximated from exact *p* values reported in manuscript, and confirmed with previous meta-analyses.

eTable 3. Definitions for Each Moderator and Associated Levels

Primary moderators	Definition
Total Volume (continuous variable)	Intervention length x frequency x session duration
Significant improvement in Strength	
Yes	The 95% confidence interval corresponding to the Hedges' <i>d</i> effect size for strength change did not encompass zero
No	Strength was not reported, or the 95% confidence interval corresponding to the Hedges' <i>d</i> effect size for strength change encompassed zero.
Blind	
Yes	Authors reported allocation and/or administration and assessment of outcomes as blinded
No	Authors did not report allocation and/or administration and assessment of outcomes as blinded
Health	
Healthy	Participants did not have a physical or mental illness
Ill	Participants had a physical or mental illness
Secondary moderators	
Sex	
Female	Participants were female only
Mixed	Participants were not female only
Age(years)	
<55	Participant mean age was less than 55 years of age
55+	Participants mean age was 55 years of age or older
Mental Health	
Mental Illness	Participants had a diagnosed mental illness [GAD, depression]
No Mental Illness	Participants did not have a diagnosed mental illness
Physical Health	
Physical Illness	Participants had a physical illness [cancer, obesity, lupus, etc.]
No Physical Illness	Participants did not have a physical illness
Control condition	
Attention placebo control	The comparison condition involved an attention placebo control
No attention placebo control	The comparison condition did not involve an attention placebo control
Comparison type	
Wait list	The comparison condition involved waiting to participate in the intervention
Patient education	The comparison condition involved an education program
No treatment	The comparison condition involved no treatment
Usual care	The comparison condition involved usual medical care
Placebo or second treatment	The comparison condition involved a placebo or second treatment that was added to the intervention group as well.
Program	
<12 weeks	The program lasted less than 12 weeks
12+ weeks	The program lasted 12 weeks or more
Session	
<45 minutes	The exercise session lasted less than 45 minutes
45+ minutes	The exercise session lasted 45 minutes or more
Frequency	
2 days/week	The exercise program was conducted 2 times per week
3 days/week	The exercise program was conducted 3 times per week
Secondary moderators	
Intensity	

Low to moderate	Relative intensity: <80% 1RM, 12-16 RPE or authors reported exercise was of a low/moderate intensity
Vigorous	Vigorous intensity: ≥80% 1RM, >16 RPE, or authors reported exercise was of a vigorous intensity
Supervision	
Combination of supervised and unsupervised	The program was not fully supervised
Yes	The program was fully supervised
Primary Outcome Depression	
Yes	The primary outcome of the study was depression
No	The primary outcome of the study was not depression

Abbreviations: GAD, generalized anxiety disorder; RM, repetition maximum; RPE, rate of perceived exer

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