Supplementary file 4. Simple meta-regression results with changes in anxiety as the outcome.

Comparison	ES (#)	R	R^2	F(p)
Study Characteristics				
- Journal impact factor	16	.22	.05	0.4(0.52)
- Year of publication	**16**	**.75**	**.56**	**51.5(<0.001)***
- Country study conducted (USA vs. other)	16	.13	.02	0.2(0.69)
- Type of control (exposure vs. no exposure)[a]	16	.08	.02	0.01(0.76)
- Matching (yes vs. no)	16	.39	.15	1.2(0.29)
- Random sequencing (high/unclear vs. low)	16	.05	.0003	0.17(0.69)
- Allocation concealment (high/unclear vs. low)	16	.22	.05	0.87(0.37)
- Blinding of participants & personnel (high/unclear vs. low)[b]	NA	NA	NA	NA
- Blinding of outcome assessors (high/unclear vs low)	16	.08	.007	0.43(0.66)
- Incomplete outcome data (high/unclear vs low)	**16**	**.67**	**.45**	**14.4(0.002)***
- Selective reporting (Unclear vs low)	16	.39	.15	4.1(0.06)
- Participants physically inactive (hig4h/unclear vs low)	16	.21	.04	0.75(0.40)
- Sample size estimates provided (no versus yes)	**16**	**.56**	**.32**	**4.6(0.05)***
- Agreed to participate in study (%)	**12**	**.47**	**.22**	**4.9(0.05)***
- Study funded (no versus yes)	**16**	**.34**	**.12**	**15.9(0.001)***
- Type of analysis (abp vs itt)[c]	19	.21	.05	0.89(0.36)
- Test used (STAI and FIQ vs. AIMS)[d,e]	19	.41	.17	2.3(0.14)
Participant Characteristics				
- Exercise dropouts (%)	**15**	**.34**	**.12**	**8.2(0.01)***
- Control dropouts (%)	13	.31	.10	1.3(0.27)
- Age (years)	**14**	**.53**	**.28**	**11.9(.005)***
- Gender (mixed vs. females)	16	.14	.02	.38(0.54)
- AORD (rheumatoid/osteoarthritis vs. fibromyalgia)	16	.10	.01	.15(0.71)
- Rheumatic symptoms (years)	8	.37	.14	1.45(0.27)
- Years since diagnosis	4	.23	.05	.33(0.62)

Exercise Intervention Characteristics				
Exercise modality (aerobic/weight training vs. both)	**16**	**.57**	**.32**	**8.19(0.01)***
Land vs. water-based exercise	16	.30	.09	1.03(0.33)
Length of training (weeks)	16	.16	.51	.44(0.52)
Frequency of training (times/week)	14	.02	.0004	.01(0.92)
Duration of training (min/session)	**12**	**.43**	**.18**	**7.7(0.02)***
Compliance (% of exercise sessions attended)	8	.04	.001	.02(0.90)
Minutes of training per week	**11**	**.61**	**.37**	**33.1(.0003)***
Minutes of training per week (adjusted for compliance)	7	.17	.03	.19(0.68)
Total minutes of training	**11**	**.63**	**.40**	**15.0(0.004)***
Total minutes of training (adjusted for compliance)	7	.22	.05	0.32(0.60)
Supervision status (unsupervised or supervised vs. both)	**16**	**.49**	**.24**	**4.20(0.04)***
Location of exercise (facility or home vs both)	**16**	**.49**	**.24**	**4.20(0.04)***
Participation (group or self vs. both)	**16**	**.49**	**.24**	**4.20(0.04)***
Adverse events (yes vs. no)	5	.23	.05	.17(0.71)
Changes in Secondary Outcomes				
Physical function	12	.26	.07	0.87(0.37)
Pain	15	.09	.008	0.32(0.58)
Depression	**13**	**.35**	**.12**	**7.49(0.01)***
Quality of life	**13**	**.79**	**.63**	**45.8(<0.001)***
VO_{2max} ($ml \cdot kg^{-1} \cdot min^{-1}$)	7	.62	.38	2.27(0.19)
Muscular strength	6	0.30	.09	.30(0.61)

Notes: abp, analysis-by-protocol; itt, intention-to-treat; STAI, State-Trait Anxiety Inventory; FIQ, Fibromyalgia Impact Questionnaire; AIMS, Arthritis Impact Measurement Scale; [a,] Exposure, includes attention control, usual care and other types of exposure while no exposure, includes nonintervention and wait-list controls; [b], NA, not applicable because all studies considered at high risk of bias given the inability to blind participants to exercise interventions;[c,]number of groups exceed 16 because two studies reported results for both abp and itt analysis; [d,] insufficient number of outcomes to include the DASS, HADS, MHI

and VAS; [e,] number of groups exceed 16 because three studies reported anxiety results using two different instruments;