

Table 1. Potential explanatory variables explored in univariate meta-regression

Variable	Levels*
Targeting of psychological interventions	‘non-selected population (including not reported)’, ‘population with clinically established psychological disorder’
Mode of intervention delivery	‘individual (including not reported)’, ‘group or mix of individual & group’
Family involvement in intervention	‘no (including not reported)’, ‘yes’
Cardiac risk factor education included as part of the intervention	‘no (including not reported)’, ‘yes’
Behaviour change for cardiac risk factors included as part of the intervention	‘no (including not reported)’, ‘yes’
Psychological treatment targets	
Depression	‘no (including not reported)’, ‘yes’
Anxiety	‘no (including not reported)’, ‘yes’
Stress management	‘no (including not reported)’, ‘yes’
Type A behaviour	‘no (including not reported)’, ‘yes’
Psychological components	
Relaxation	‘no (including not reported)’, ‘yes’
Cognitive techniques	‘no (including not reported)’, ‘yes’
Emotional support and/or client-led discussion	‘no (including not reported)’, ‘yes’
Adjunct pharmacology	‘no (including not reported)’, ‘yes’

* First level coded ‘0’, second level coded ‘1’ in regression models

Table 2. Study, participant, and intervention characteristics

Study characteristics (35 Studies)	n studies
Study location	
Europe	19
North America	12
Australia	4
China	1
Median sample size (range)	123 (42, 2481)
Duration of follow-up, months (range)*	12 (6, 128)
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<i>Population characteristics</i>	
Median of study mean ages, years (range)	59.6 (53, 67)
Median proportion of males (range)	77 (0, 100)
Cardiac indication on referral, %	
MI	65.7
Revascularisation procedure	27.4
Psychological disorder present at baseline	
All sample (inclusion criterion)	12
Mixed (observed, not required)‡	11
None (exclusion criterion)	3
Not reported	11
<i>Intervention characteristics</i>	
Setting†	

	Hospital	9
	Clinic	7
	Home-based	4
	Mixed (inpatient, other support)	2
	Not reported	13
Median treatment contact hours (range)		12 (2, 96)
Mode of delivery		
	Group	20
	Individual (including not reported)	10
	Mixed (group/individual)	5
Family involvement with treatment		
	Yes	11
	Not reported	24
Psychological treatment aims/components		
	Multiple aims/components	23
	Single aim/component	12
Treatment aims		
	Stress	22
	Depression	17
	Anxiety	16
	Type A behaviour (including anger/hostility)	12
	Improving disease adjustment	11
Treatment components		
	Relaxation techniques	20

Self-awareness and self-monitoring	20
Cognitive challenge or restructuring	19
Emotional support or client-led discussion	15
Treatment co-interventions	
Behavioral change for cardiac risk factors	19
Awareness of cardiac risk factors	16
Psycho-pharmacological prescribing	3

* The length of follow-up of clinical events; psychological outcomes were often followed-up for shorter periods within the overall assessment schedule.

† Clinical settings can include cardiac rehabilitation units, hospital out-patient clinics or community centres.

‡ Includes 2 studies where the inclusion criterion was a confirmed psychopathology and/or another indicating condition.

Table 3. Results from the pooled analysis of mortality and cardiovascular morbidity

Outcome (median follow-up)	Number of Participants (Studies)	Number of events		RR (95% CI)	Statistical Heterogeneity I ² (p-value)	GRADE Quality of Evidence
		Intervention	Comparator			
Total mortality (13 months)	7776 (23)	319/3899	352/3877	0.90 (0.77, 1.05)	2% (0.43)	Moderate*
Cardiovascular mortality (57 months)	4792 (11)	140/2561	161/2231	0.79 (0.63, 0.98)	0% (0.76)	Low*†
Revascularisation (CABG/PCI) (12 months)	6822 (13)	395/3429	412/3393	0.94 (0.81, 1.11)	8% (0.36)	Moderate*
Non-fatal MI (30 months)	7845 (13)	340/4114	355/3731	0.82 (0.64, 1.05)	41% (0.07)	Low*‡

*Random sequence generation, allocation concealment or blinding of outcome assessors poorly described in $\geq 50\%$ of included studies.

†Egger tests suggests evidence of asymmetry. ‡ 95% confidence intervals includes both no effect and appreciable benefit or harm (i.e. 95% confidence interval <0.75 or >1.25).

GRADE: moderate = further research is very likely to have an important effect in confidence of the estimated effect, and may change the estimate; low = further research is very likely to have an important effect in confidence in the estimated effect and is likely to change the estimate.

Table 4. Results from the pooled analysis psychological outcomes

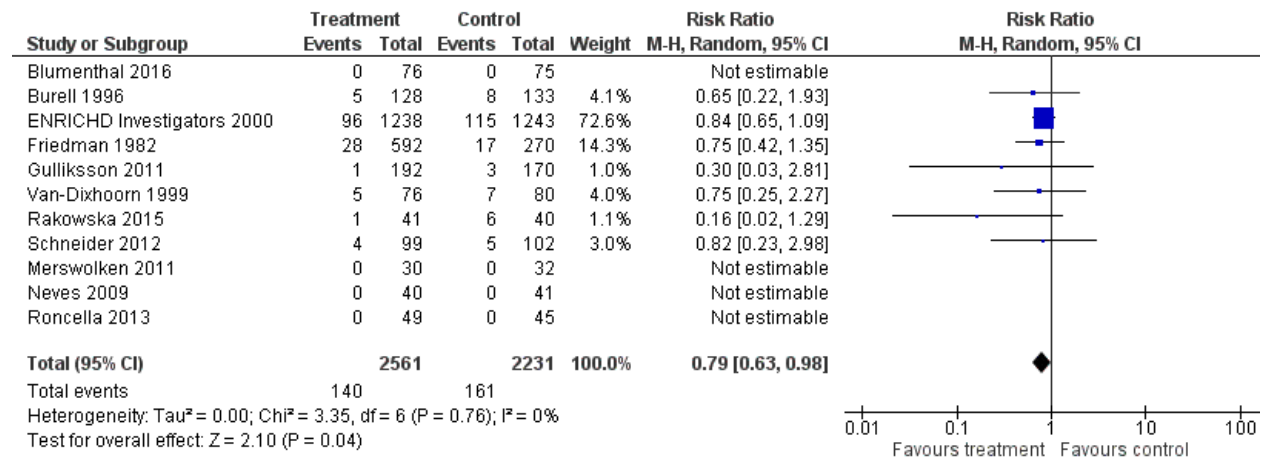
Outcome (median follow-up)	Number of Participants (Studies)	SMD (95% CI) (Intervention – Comparator)	Statistical Heterogeneity I ² (p-value)	GRADE Quality of Evidence
Depression (12 months)	5829 (19)	-0.27 (-0.39, -0.15)	69% (<0.001)	+++ Low*‡
Anxiety (12 months)	3165 (12)	-0.24 (-0.38, -0.09)	47% (0.03)	+++ Low*†
Stress (12 months)	1255 (8)	-0.56 (-0.88, -0.24)	86% (0.<0.001)	+++ Very low*‡§

* Random sequence generation, allocation concealment or blinding of outcome assessors were poorly described in $\geq 50\%$ of included studies.

† Egger tests suggests evidence of asymmetry. ‡ Moderate heterogeneity (I² >50%). § 95% CIs around the SMD did not include the value of a +5 at either lower or upper limits (indicative of clinical significance).

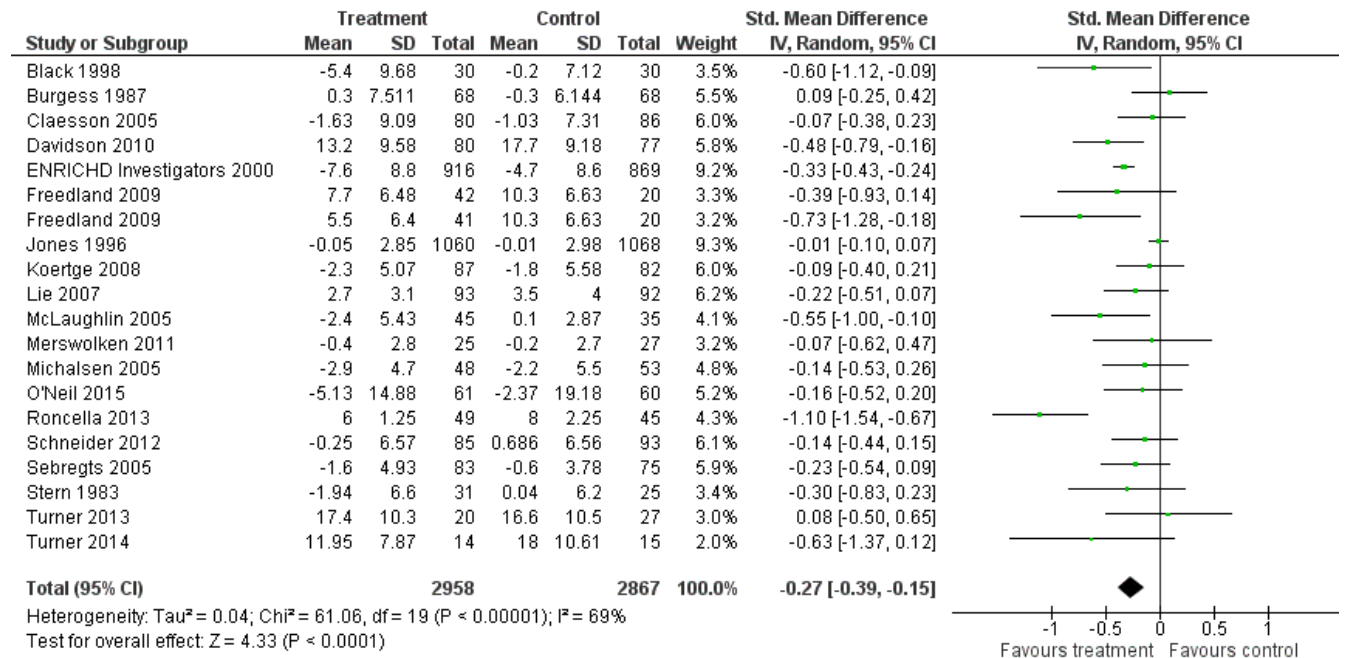
GRADE: moderate = further research is very likely to have an important effect in confidence of the estimated effect, and may change the estimate; low = further research is very likely to have an important effect in confidence in the estimated effect and is likely to change the estimate; very low quality= the estimate is very uncertain.

Figure 1. Forest plot of psychological intervention versus usual care: cardiovascular mortality



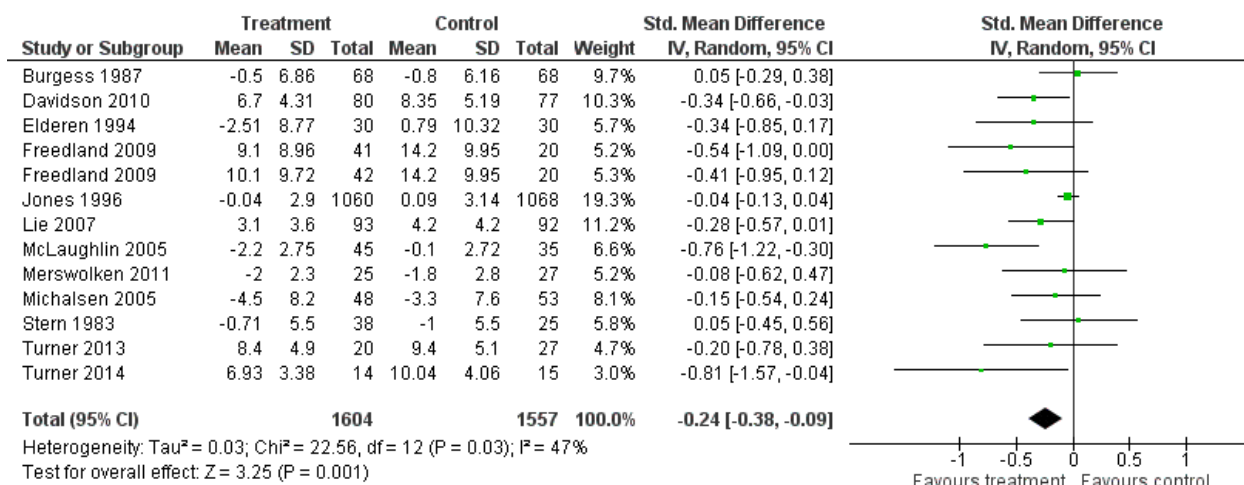
Legend: Reproduced from Richards *et al* (2017)⁸

Figure 2. Forest plot of psychological intervention versus usual care: depression



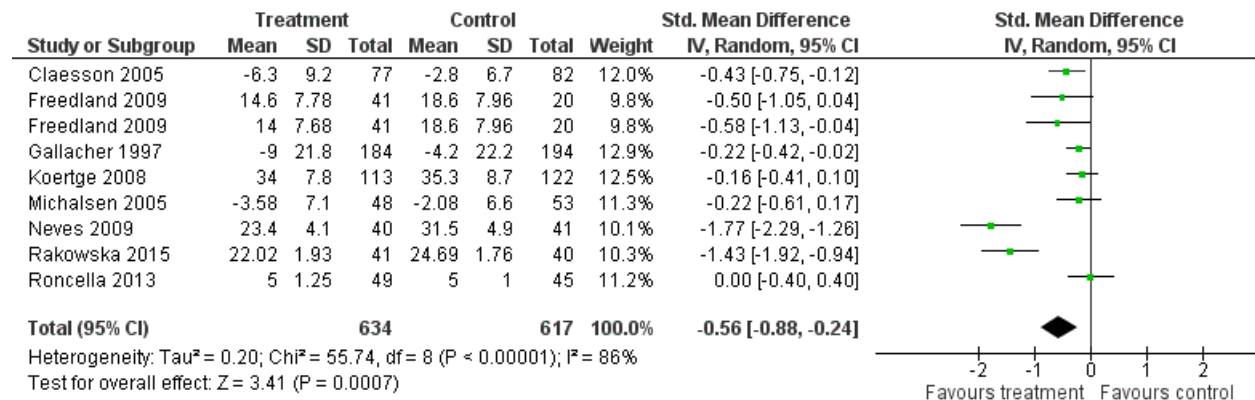
Legend: Reproduced from Richards *et al* (2017)⁸

Figure 3. Forest plot of psychological intervention versus usual care: anxiety



Legend: Reproduced from Richards *et al* (2017)⁸

Figure 4. Forest plot of psychological intervention versus usual care: stress



Legend: Reproduced from Richards *et al* (2017)⁸