APPENDIX 11. FOREST PLOTS

ASSERTIVE COMMUNITY TREATMENT

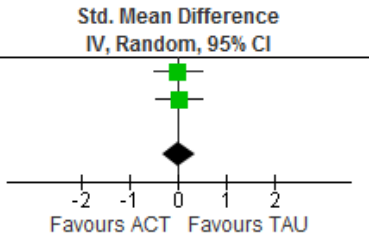
1.1 Assertive community treatment compared with treatment as usual

Mental health

1.1.1 Brief Psychiatric Rating Scale (24-item)

Study or Subgroup	ACT Mean	ACT SD	ACT Total	TAU Mean	TAU SD	TAU Total	Weight	Std. Mean Difference IV, Random, 95% CI
Fletcher 2008a	1.83	0.76	47	1.83	0.62	24	49.0%	0.00 [-0.49, 0.49]
Fletcher 2009b	1.85	0.77	53	1.83	0.62	24	51.0%	0.03 [-0.46, 0.51]
Total (95% CI)			**100**			**48**	**100.0%**	**0.01 [-0.33, 0.36]**

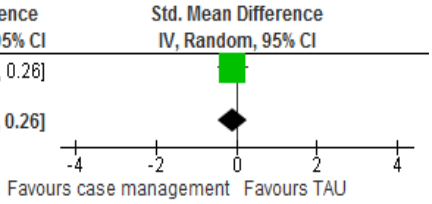
Heterogeneity: Tau² = 0.00; Chi² = 0.01, df = 1 (P = 0.94); I² = 0%
Test for overall effect: Z = 0.08 (P = 0.94)



1.1.2 Depression (Depressive Symptom Scale)

Study or Subgroup	Enhanced case management Mean	SD	Total	TAU Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Striley 2013	3.13	2.04	64	3.35	2.25	56	100.0%	-0.10 [-0.46, 0.26]
Total (95% CI)			**64**			**56**	**100.0%**	**-0.10 [-0.46, 0.26]**

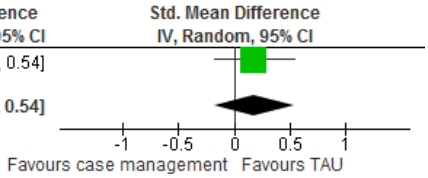
Heterogeneity: Not applicable
Test for overall effect: Z = 0.56 (P = 0.58)



1.1.3 Mental Health Treatment Index (MHTI)

Study or Subgroup	Enhanced case management Mean	SD	Total	TAU Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Striley 2013	0.02	0.07	64	0.01	0.03	56	100.0%	0.18 [-0.18, 0.54]
Total (95% CI)			**64**			**56**	**100.0%**	**0.18 [-0.18, 0.54]**

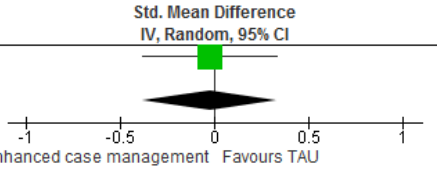
Heterogeneity: Not applicable
Test for overall effect: Z = 0.98 (P = 0.33)



1.1.4 Homicidal-Suicidal Thought Index (HSTI)

Study or Subgroup	Enhanced case management Mean	SD	Total	TAU Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Striley 2013	0.32	0.81	64	0.34	0.75	56	100.0%	-0.03 [-0.38, 0.33]
Total (95% CI)			**64**			**56**	**100.0%**	**-0.03 [-0.38, 0.33]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.14 (P = 0.89)

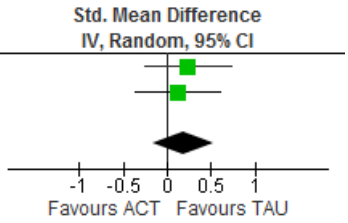


Substance use

1.1.5 Severity of alcohol and drug use

Study or Subgroup	ACT Mean	ACT SD	ACT Total	TAU Mean	TAU SD	TAU Total	Weight	Std. Mean Difference IV, Random, 95% CI
Fletcher 2008a	2.73	1.25	47	2.44	1.2	24	48.9%	0.23 [-0.26, 0.73]
Fletcher 2009b	2.58	1.11	53	2.44	1.2	24	51.1%	0.12 [-0.36, 0.60]
Total (95% CI)			**100**			**48**	**100.0%**	**0.18 [-0.17, 0.52]**

Heterogeneity: Tau² = 0.00; Chi² = 0.10, df = 1 (P = 0.75); I² = 0%
Test for overall effect: Z = 1.00 (P = 0.32)

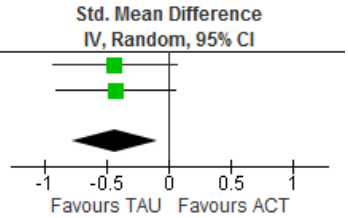


Acceptability of services

1.1.6 Service user satisfaction

Study or Subgroup	ACT Mean	ACT SD	ACT Total	TAU Mean	TAU SD	TAU Total	Weight	Std. Mean Difference IV, Random, 95% CI
Fletcher 2008a	4.2	0.35	47	4.36	0.38	24	49.0%	-0.44 [-0.94, 0.06]
Fletcher 2009b	4.15	0.52	53	4.36	0.38	24	51.0%	-0.43 [-0.92, 0.06]
Total (95% CI)			**100**			**48**	**100.0%**	**-0.44 [-0.78, -0.09]**

Heterogeneity: Tau² = 0.00; Chi² = 0.00, df = 1 (P = 0.98); I² = 0%
Test for overall effect: Z = 2.45 (P = 0.01)

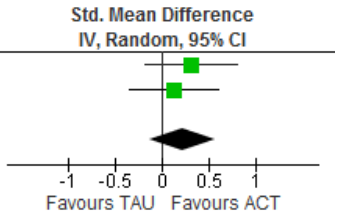


Adaptive functioning

1.1.7 Housing (days living in stable housing)

Study or Subgroup	ACT Mean	ACT SD	ACT Total	Standard care Mean	Standard care SD	Standard care Total	Weight	Std. Mean Difference IV, Random, 95% CI
Fletcher 2008a	15.99	12.49	47	11.81	14.25	24	48.8%	0.32 [-0.18, 0.81]
Fletcher 2009b	13.55	13.45	53	11.81	14.25	24	51.2%	0.13 [-0.36, 0.61]
Total (95% CI)			**100**			**48**	**100.0%**	**0.22 [-0.13, 0.56]**

Heterogeneity: Tau² = 0.00; Chi² = 0.29, df = 1 (P = 0.59); I² = 0%
Test for overall effect: Z = 1.24 (P = 0.22)

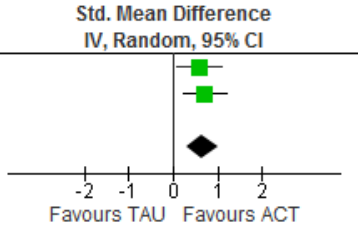


Service utilisation

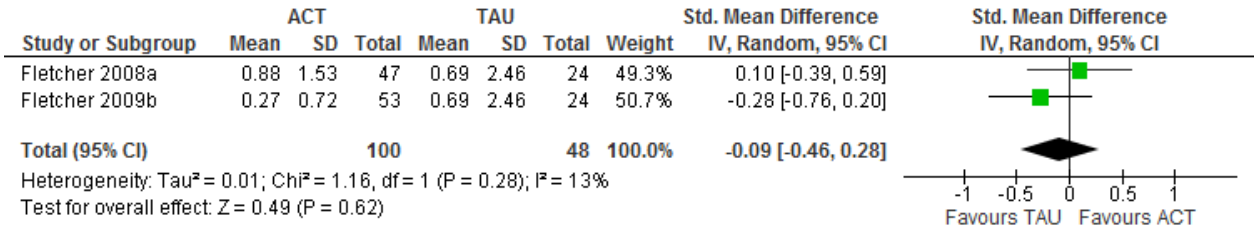
1.1.8 Mean number of days of contact with assigned treatment programme

Study or Subgroup	ACT Mean	ACT SD	ACT Total	TAU Mean	TAU SD	TAU Total	Weight	Std. Mean Difference IV, Random, 95% CI
Fletcher 2008a	4.56	3.48	47	2.45	3.64	24	49.4%	0.59 [0.09, 1.09]
Fletcher 2009b	5.13	3.81	53	2.45	3.64	24	50.6%	0.71 [0.21, 1.20]
Total (95% CI)			**100**			**48**	**100.0%**	**0.65 [0.30, 1.00]**

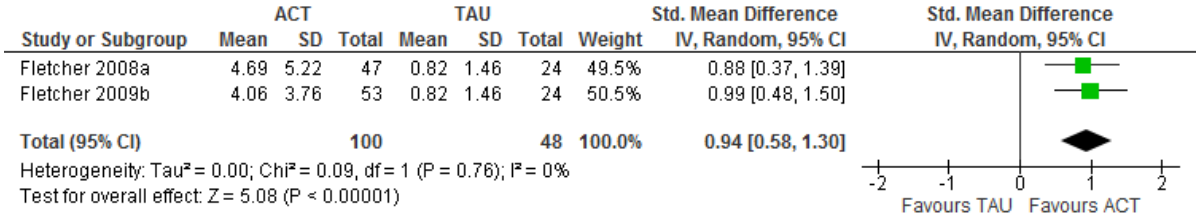
Heterogeneity: Tau² = 0.00; Chi² = 0.10, df = 1 (P = 0.75); I² = 0%
Test for overall effect: Z = 3.61 (P = 0.0003)



1.1.9 Mean number of days discussing substance use problems with assigned programme



1.1.10 Mean number of days they had speaking with assigned programme on the phone

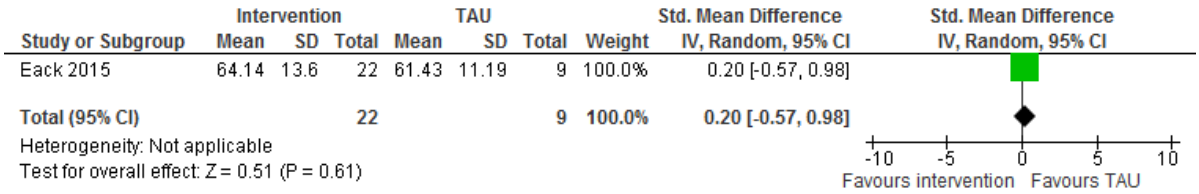


INTEGRATED TREATMENT[1]

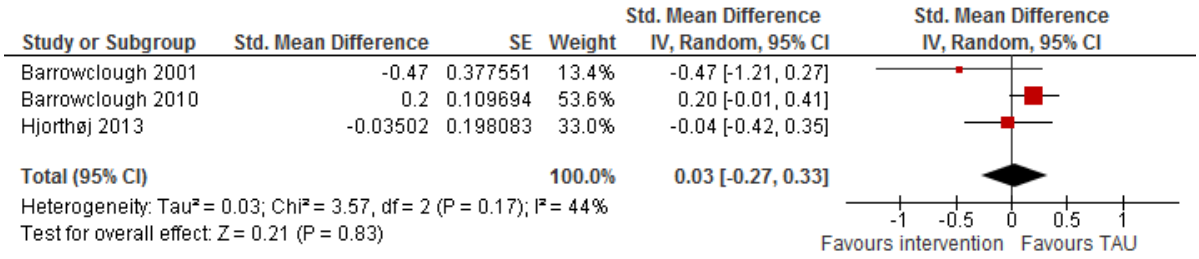
1.2 Integrated treatment compared with treatment as usual

Mental health

1.2.1 Mental health (composite score based on scores from: Brief Psychiatric Rating Scale, Wing Negative Symptom Scale, Raskin Depression Scale and Covi Anxiety Scale)



1.2.2 Psychotic symptoms (PANSS total)

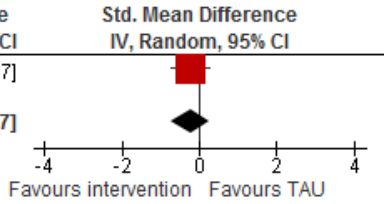


[1] Integrated treatment here refers to any intervention which was delivered in the context of a multidisciplinary team in combination with usual care

1.2.3 Psychotic symptoms (PANSS positive scale)

Study or Subgroup	Std. Mean Difference	SE	Weight	Std. Mean Difference IV, Random, 95% CI
Bonsack 2011	-0.22476	0.254933	100.0%	-0.22 [-0.72, 0.27]
Total (95% CI)			**100.0%**	**-0.22 [-0.72, 0.27]**

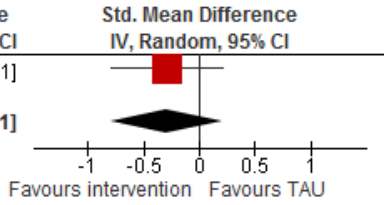
Heterogeneity: Not applicable
Test for overall effect: Z = 0.88 (P = 0.38)



1.2.4 Psychotic symptoms (PANSS negative scale)

Study or Subgroup	Std. Mean Difference	SE	Weight	Std. Mean Difference IV, Random, 95% CI
Bonsack 2011	-0.2952	0.255511	100.0%	-0.30 [-0.80, 0.21]
Total (95% CI)			**100.0%**	**-0.30 [-0.80, 0.21]**

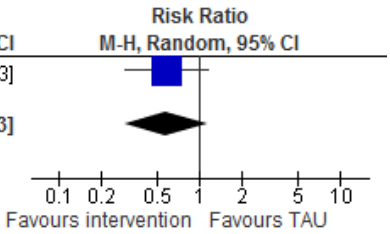
Heterogeneity: Not applicable
Test for overall effect: Z = 1.16 (P = 0.25)



1.2.5 Relapse (number of people with an exacerbation of symptoms for ≥2 weeks or hospital admission)

Study or Subgroup	Intervention Events	Intervention Total	TAU Events	TAU Total	Weight	Risk Ratio M-H, Random, 95% CI
Barrowclough 2001	7	18	12	18	100.0%	0.58 [0.30, 1.13]
Total (95% CI)		**18**		**18**	**100.0%**	**0.58 [0.30, 1.13]**
Total events	7		12			

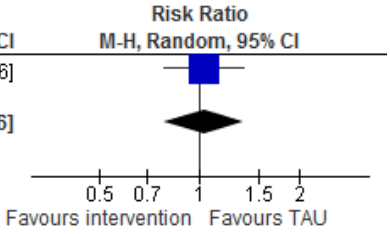
Heterogeneity: Not applicable
Test for overall effect: Z = 1.59 (P = 0.11)



1.2.6 Relapse (number of people with an exacerbation of symptoms for ≥2 weeks)

Study or Subgroup	Intervention Events	Intervention Total	TAU Events	TAU Total	Weight	Risk Ratio M-H, Random, 95% CI
Barrowclough 2010	63	161	61	161	100.0%	1.03 [0.78, 1.36]
Total (95% CI)		**161**		**161**	**100.0%**	**1.03 [0.78, 1.36]**
Total events	63		61			

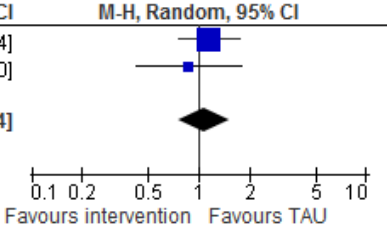
Heterogeneity: Not applicable
Test for overall effect: Z = 0.23 (P = 0.82)



1.2.7 Hospital admission (number of people admitted)

Study or Subgroup	Intervention Events	Intervention Total	TAU Events	TAU Total	Weight	Risk Ratio M-H, Random, 95% CI
Barrowclough 2010	38	163	33	163	75.6%	1.15 [0.76, 1.74]
Bonsack 2011	9	30	11	32	24.4%	0.87 [0.42, 1.80]
Total (95% CI)		**193**		**195**	**100.0%**	**1.08 [0.75, 1.54]**
Total events	47		44			

Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 0.42$, df = 1 (P = 0.51); $I^2 = 0\%$
Test for overall effect: Z = 0.40 (P = 0.69)

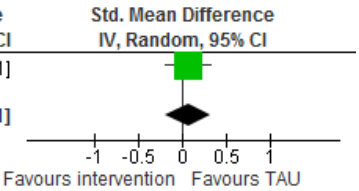


Substance use

1.2.8 Substance use (mean % of days abstinent from main drug)

Study or Subgroup	Intervention Mean	SD	Total	TAU Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Barrowclough 2010	51.29	39.8	129	48.77	39.69	117	100.0%	0.06 [-0.19, 0.31]
Total (95% CI)			**129**			**117**	**100.0%**	**0.06 [-0.19, 0.31]**

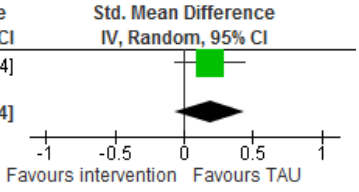
Heterogeneity: Not applicable
Test for overall effect: Z = 0.49 (P = 0.62)



1.2.9 Substance use (mean % of days abstinent from any drug)

Study or Subgroup	Intervention Mean	SD	Total	TAU Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Barrowclough 2010	44.25	38.36	130	37.18	36.89	117	100.0%	0.19 [-0.06, 0.44]
Total (95% CI)			**130**			**117**	**100.0%**	**0.19 [-0.06, 0.44]**

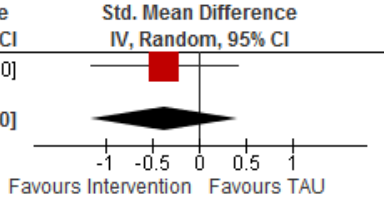
Heterogeneity: Not applicable
Test for overall effect: Z = 1.46 (P = 0.14)



1.2.10 Substance use (abstinence from drugs or alcohol by the end of the study)

Study or Subgroup	Std. Mean Difference	SE	Weight	Std. Mean Difference IV, Random, 95% CI
Eack 2015	-0.37825	0.398589	100.0%	-0.38 [-1.16, 0.40]
Total (95% CI)			**100.0%**	**-0.38 [-1.16, 0.40]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.95 (P = 0.34)

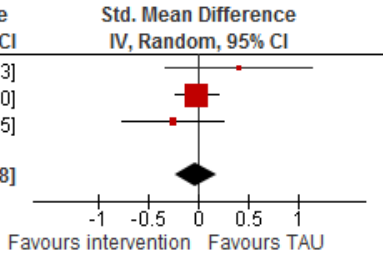


Adaptive functioning

1.2.11 Global assessment of functioning

Study or Subgroup	Std. Mean Difference	SE	Weight	Std. Mean Difference IV, Random, 95% CI
Barrowclough 2001	0.4	0.375	8.0%	0.40 [-0.33, 1.13]
Barrowclough 2010	-0.02	0.112245	75.1%	-0.02 [-0.24, 0.20]
Bonsack 2011	-0.25484	0.255161	16.9%	-0.25 [-0.75, 0.25]
Total (95% CI)			**100.0%**	**-0.03 [-0.24, 0.18]**

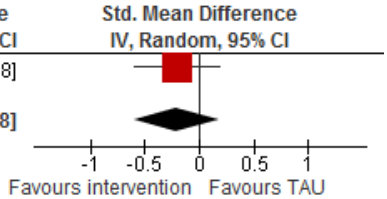
Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 2.10$, df = 2 (P = 0.35); $I^2 = 5\%$
Test for overall effect: Z = 0.24 (P = 0.81)



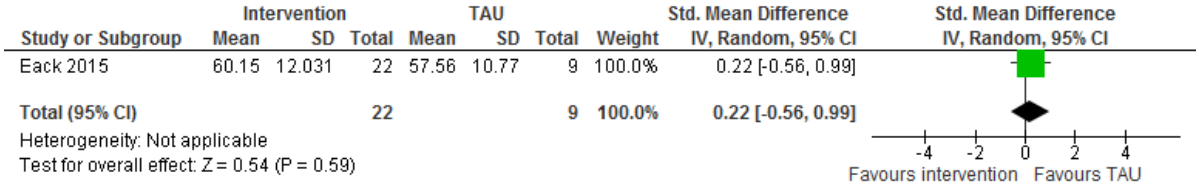
1.2.12 Quality of life (Manchester Short Assessment of Quality of Life)

Study or Subgroup	Std. Mean Difference	SE	Weight	Std. Mean Difference IV, Random, 95% CI
Hjorthøj 2013	-0.2107	0.198616	100.0%	-0.21 [-0.60, 0.18]
Total (95% CI)			**100.0%**	**-0.21 [-0.60, 0.18]**

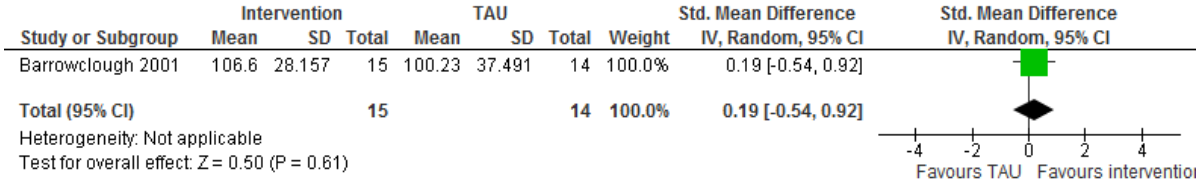
Heterogeneity: Not applicable
Test for overall effect: Z = 1.06 (P = 0.29)



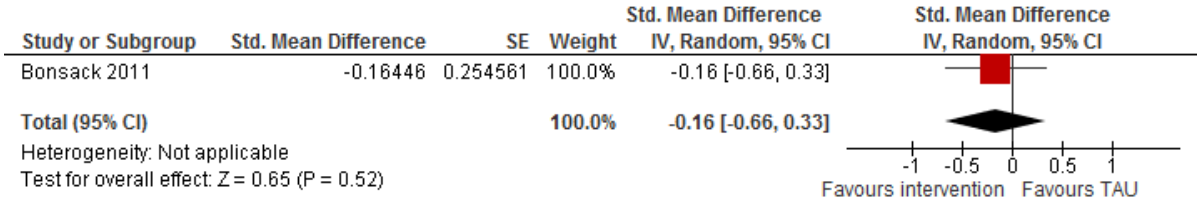
1.2.13 Social functioning (composite score based on scores from: Social Adjustment Scale-II, Major Role Adjustment Inventory and the Global Assessment Scale)



1.2.14 Social functioning (Social Functioning Scale)



1.2.15 Social and occupational functioning (Social and Occupational Functioning Assessment Scale)



OTHER INTERVENTIONS

1.3 Contingency management combined with compensated work therapy compared with compensated work therapy alone

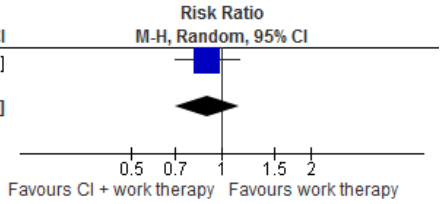
Substance use

1.3.1 Substance use relapse (16 weeks' follow-up)

1.3.2 Substance use relapse (39 weeks' follow-up)

Study or Subgroup	CI + work therapy Events	Total	Work therapy Events	Total	Weight	Risk Ratio M-H, Random, 95% CI
Drebing 2007	34	50	38	50	100.0%	0.89 [0.70, 1.14]
Total (95% CI)		**50**		**50**	**100.0%**	**0.89 [0.70, 1.14]**
Total events	34		38			

Heterogeneity: Not applicable
Test for overall effect: Z = 0.89 (P = 0.38)

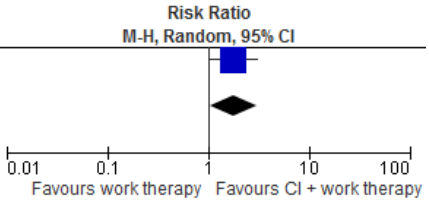


Adaptive functioning

1.3.3 Employment

Study or Subgroup	CI + work therapy Events	Total	Work therapy Events	Total	Weight	Risk Ratio M-H, Random, 95% CI
Drebing 2007	25	50	14	50	100.0%	1.79 [1.06, 3.02]
Total (95% CI)		**50**		**50**	**100.0%**	**1.79 [1.06, 3.02]**
Total events	25		14			

Heterogeneity: Not applicable
Test for overall effect: Z = 2.17 (P = 0.03)



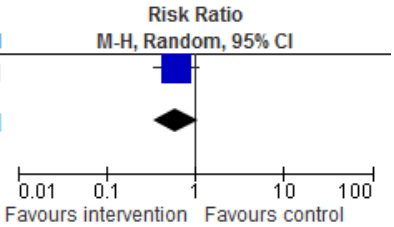
1.4 Time-limited care co-ordination compared with a matched attention control

Substance use

1.4.1 Alcohol use (in the previous 30 days)

Study or Subgroup	Intervention Events	Total	Control Events	Total	Weight	Risk Ratio M-H, Random, 95% CI
Smelson 2012	13	40	14	26	100.0%	0.60 [0.34, 1.07]
Total (95% CI)		**40**		**26**	**100.0%**	**0.60 [0.34, 1.07]**
Total events	13		14			

Heterogeneity: Not applicable
Test for overall effect: Z = 1.73 (P = 0.08)

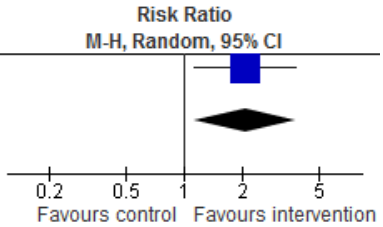


Service utilisation

1.4.2 Attending an outpatient appointment

Study or Subgroup	Intervention Events	Total	Control Events	Total	Weight	Risk Ratio M-H, Random, 95% CI
Smelson 2012	27	39	8	24	100.0%	2.08 [1.14, 3.80]
Total (95% CI)		**39**		**24**	**100.0%**	**2.08 [1.14, 3.80]**
Total events	27		8			

Heterogeneity: Not applicable
Test for overall effect: Z = 2.37 (P = 0.02)



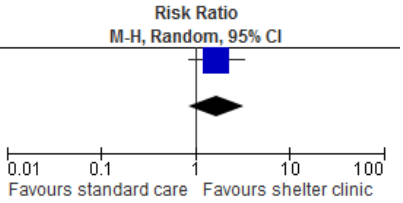
1.5 Shelter-based psychiatric clinic compared with treatment as usual

Adaptive functioning

1.5.1 Employment (number of participants)

Study or Subgroup	Shelter based clinic Events	Total	Standard care Events	Total	Weight	Risk Ratio M-H, Random, 95% CI
Bradford 2005	17	50	10	49	100.0%	1.67 [0.85, 3.27]
Total (95% CI)		**50**		**49**	**100.0%**	**1.67 [0.85, 3.27]**
Total events	17		10			

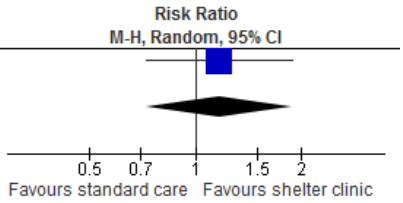
Heterogeneity: Not applicable
Test for overall effect: Z = 1.48 (P = 0.14)



1.5.2 Housing (number of participants)

Study or Subgroup	Shelter based clinic Events	Total	Standard care Events	Total	Weight	Risk Ratio M-H, Random, 95% CI
Bradford 2005	22	49	18	47	100.0%	1.17 [0.73, 1.89]
Total (95% CI)		**49**		**47**	**100.0%**	**1.17 [0.73, 1.89]**
Total events	22		18			

Heterogeneity: Not applicable
Test for overall effect: Z = 0.65 (P = 0.51)

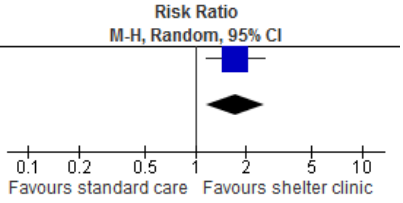


Service utilisation

1.5.3 Attending community mental health appointment (attending ≥1 community mental health appointments)

Study or Subgroup	Shelter based clinic Events	Total	Standard care Events	Total	Weight	Risk Ratio M-H, Random, 95% CI
Bradford 2005	33	51	19	51	100.0%	1.74 [1.15, 2.62]
Total (95% CI)		**51**		**51**	**100.0%**	**1.74 [1.15, 2.62]**
Total events	33		19			

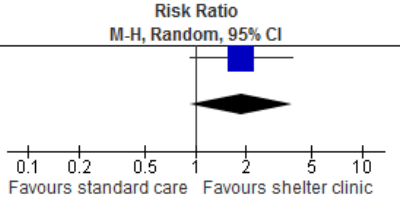
Heterogeneity: Not applicable
Test for overall effect: Z = 2.64 (P = 0.008)



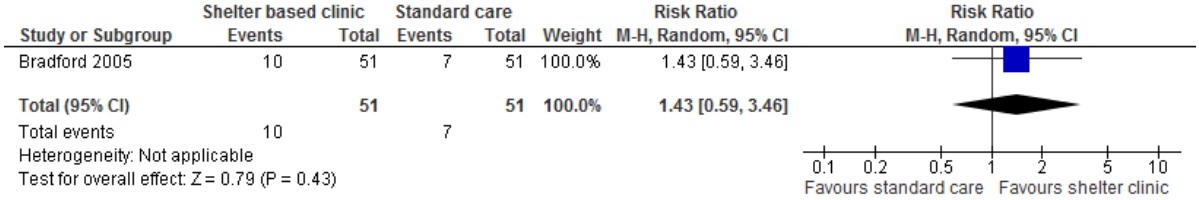
1.5.4 Attending community mental health appointment (attending ≥2 community mental health appointments)

Study or Subgroup	Shelter based clinic Events	Total	Standard care Events	Total	Weight	Risk Ratio M-H, Random, 95% CI
Bradford 2005	17	51	9	51	100.0%	1.89 [0.93, 3.84]
Total (95% CI)		**51**		**51**	**100.0%**	**1.89 [0.93, 3.84]**
Total events	17		9			

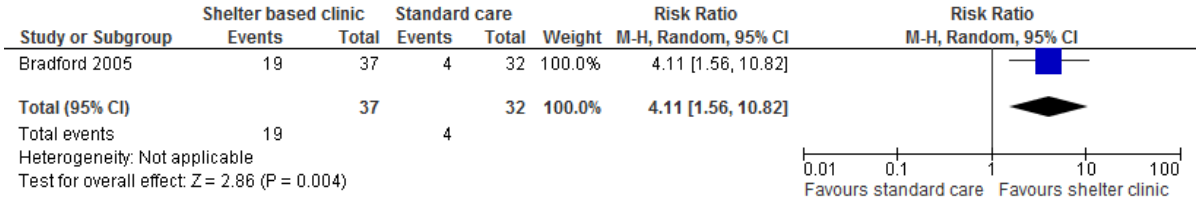
Heterogeneity: Not applicable
Test for overall effect: Z = 1.76 (P = 0.08)



1.5.5 Attending community mental health appointment (attending ≥3 community mental health appointments)



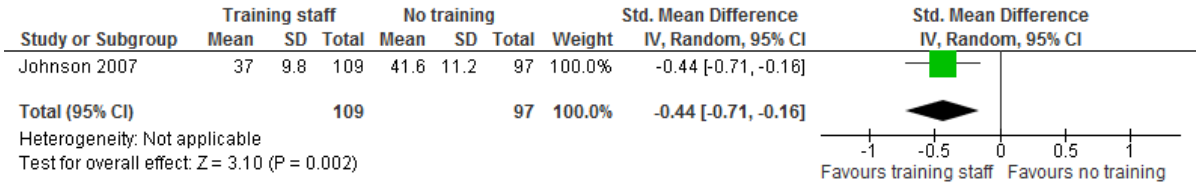
1.5.6 Attending substance use programme (includes only participants who had a substance use disorder)



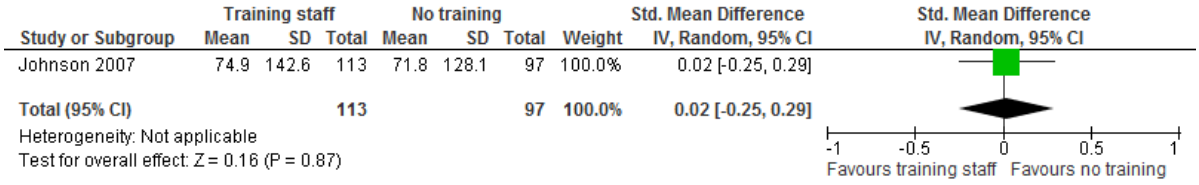
1.6 Staff training compared with no training

Mental health

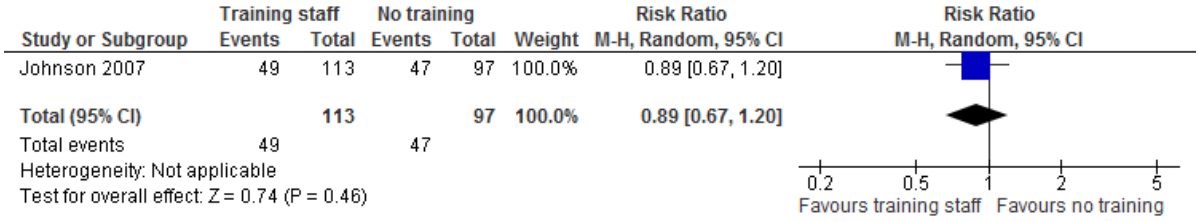
1.6.1 Brief Psychiatric Rating Scale (24-item)



1.6.2 Hospital admission (mean days in hospital)



1.6.3 Hospital admission (number of participants admitted)

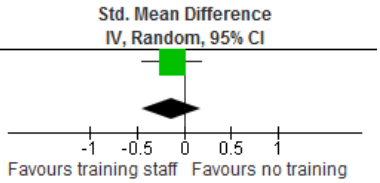


Substance use

1.6.4 Alcohol use (total standard units)

Study or Subgroup	Training staff Mean	SD	Total	No training Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Johnson 2007	104.7	169.4	76	130.4	223.2	76	100.0%	-0.13 [-0.45, 0.19]
Total (95% CI)			**76**			**76**	**100.0%**	**-0.13 [-0.45, 0.19]**

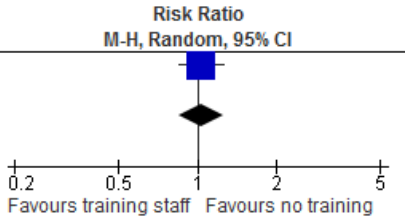
Heterogeneity: Not applicable
Test for overall effect: Z = 0.79 (P = 0.43)



1.6.5 Alcohol use (number of participants using)

Study or Subgroup	Training staff Events	Total	No training Events	Total	Weight	Risk Ratio M-H, Random, 95% CI
Johnson 2007	56	76	54	76	100.0%	1.04 [0.85, 1.26]
Total (95% CI)		**76**		**76**	**100.0%**	**1.04 [0.85, 1.26]**
Total events	56		54			

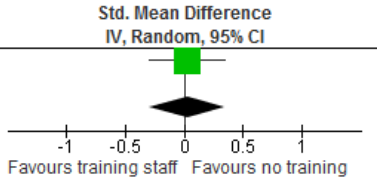
Heterogeneity: Not applicable
Test for overall effect: Z = 0.36 (P = 0.72)



1.6.6 Cannabis use (total monetary value)

Study or Subgroup	Training staff Mean	SD	Total	No training Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Johnson 2007	35.11	70.26	76	32.71	98.07	76	100.0%	0.03 [-0.29, 0.35]
Total (95% CI)			**76**			**76**	**100.0%**	**0.03 [-0.29, 0.35]**

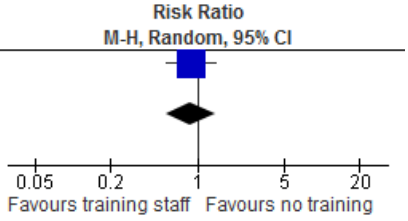
Heterogeneity: Not applicable
Test for overall effect: Z = 0.17 (P = 0.86)



1.6.7 Cannabis use (number of participants using)

Study or Subgroup	Training staff Events	Total	No training Events	Total	Weight	Risk Ratio M-H, Random, 95% CI
Johnson 2007	24	76	27	76	100.0%	0.89 [0.57, 1.39]
Total (95% CI)		**76**		**76**	**100.0%**	**0.89 [0.57, 1.39]**
Total events	24		27			

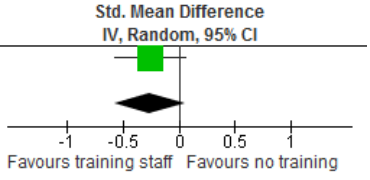
Heterogeneity: Not applicable
Test for overall effect: Z = 0.51 (P = 0.61)



1.6.8 Other drug use (total monetary value)

Study or Subgroup	Training staff Mean	SD	Total	No training Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Johnson 2007	33.36	154.38	76	124.79	470.22	76	100.0%	-0.26 [-0.58, 0.06]
Total (95% CI)			**76**			**76**	**100.0%**	**-0.26 [-0.58, 0.06]**

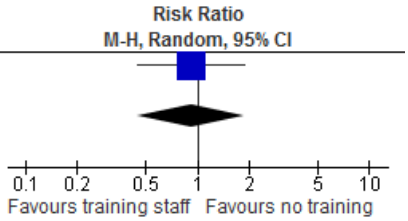
Heterogeneity: Not applicable
Test for overall effect: Z = 1.60 (P = 0.11)



1.6.9 Other drug use (number of participants using)

Study or Subgroup	Training staff Events	Total	No training Events	Total	Weight	Risk Ratio M-H, Random, 95% CI
Johnson 2007	12	76	13	76	100.0%	0.92 [0.45, 1.89]
Total (95% CI)		**76**		**76**	**100.0%**	**0.92 [0.45, 1.89]**
Total events	12		13			

Heterogeneity: Not applicable
Test for overall effect: Z = 0.22 (P = 0.83)

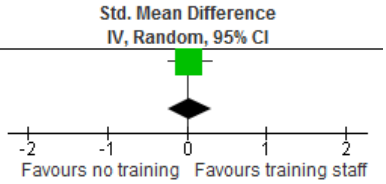


Adaptive functioning

1.6.10 Social functioning (Life Skills Profile)

Study or Subgroup	Training staff Mean	SD	Total	No training Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Johnson 2007	121	16.3	109	120.5	15.8	97	100.0%	0.03 [-0.24, 0.30]
Total (95% CI)			**109**			**97**	**100.0%**	**0.03 [-0.24, 0.30]**

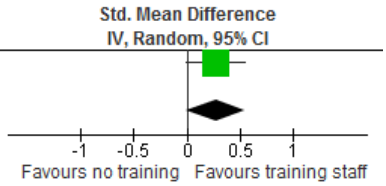
Heterogeneity: Not applicable
Test for overall effect: Z = 0.22 (P = 0.82)



1.6.11 Quality of life (Manchester Short Assessment of Quality of Life)

Study or Subgroup	Training staff Mean	SD	Total	No training Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Johnson 2007	53.4	12.1	109	50	12.8	97	100.0%	0.27 [-0.00, 0.55]
Total (95% CI)			**109**			**97**	**100.0%**	**0.27 [-0.00, 0.55]**

Heterogeneity: Not applicable
Test for overall effect: Z = 1.94 (P = 0.05)

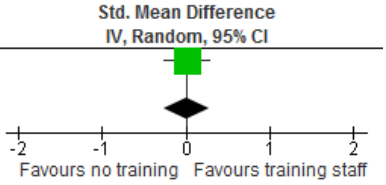


Acceptability of services

1.6.12 Service user satisfaction (Client Satisfaction Questionnaire)

Study or Subgroup	Training staff Mean	SD	Total	No training Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Johnson 2007	23.5	6.5	109	23.4	6.3	97	100.0%	0.02 [-0.26, 0.29]
Total (95% CI)			**109**			**97**	**100.0%**	**0.02 [-0.26, 0.29]**

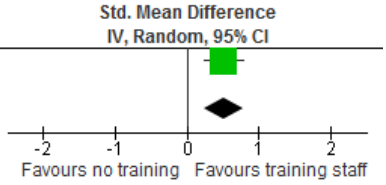
Heterogeneity: Not applicable
Test for overall effect: Z = 0.11 (P = 0.91)



1.6.13 Treatment satisfaction (Treatment Perceptions Questionnaire)

Study or Subgroup	Training staff Mean	SD	Total	No training Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Johnson 2007	21.5	0.8	109	21.1	0.75	97	100.0%	0.51 [0.23, 0.79]
Total (95% CI)			**109**			**97**	**100.0%**	**0.51 [0.23, 0.79]**

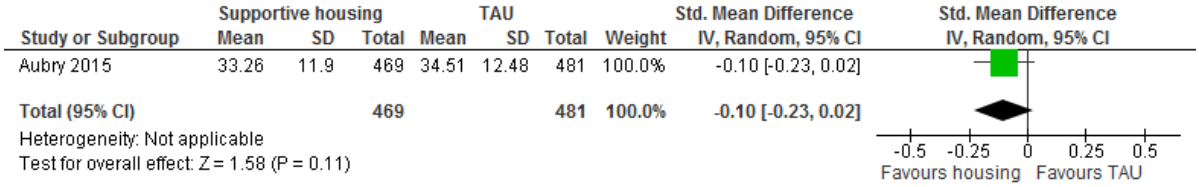
Heterogeneity: Not applicable
Test for overall effect: Z = 3.62 (P = 0.0003)



1.7 Supportive housing compared with treatment as usual

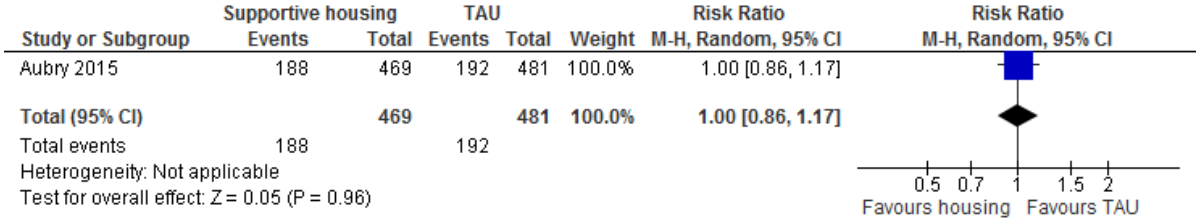
Mental health

1.7.1 Mental health (Colorado Symptom Index)



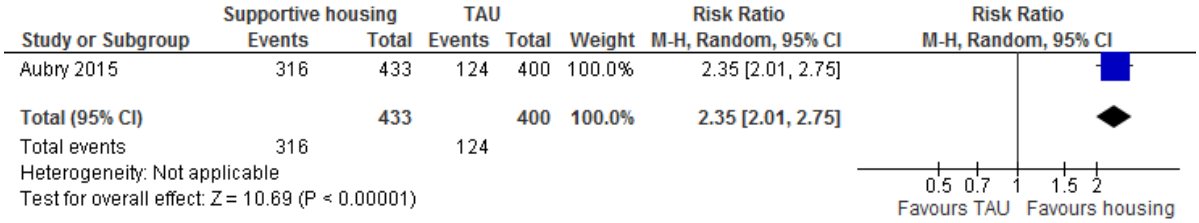
Substance use

1.7.2 Substance use (≥2 substance-use problems in the past month)

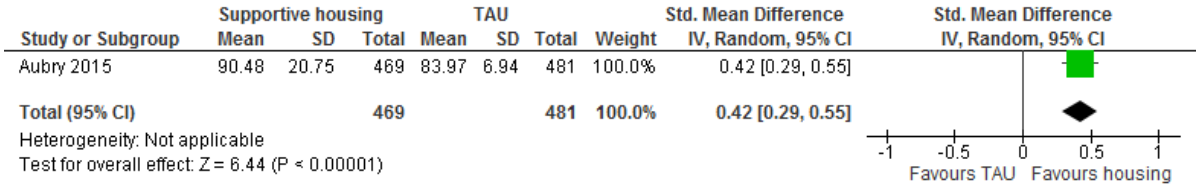


Adaptive functioning

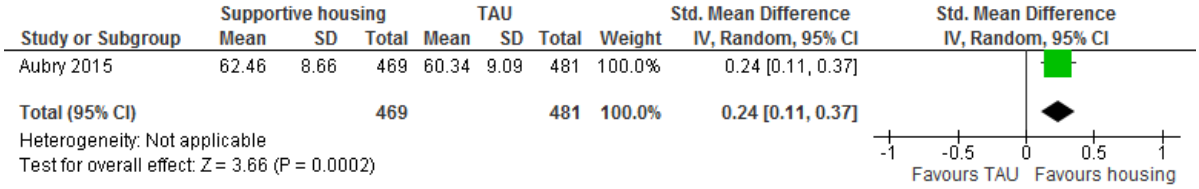
1.7.3 Housing (number of participants in stable housing)



1.7.4 Quality of life (Quality of Life Interview-20)



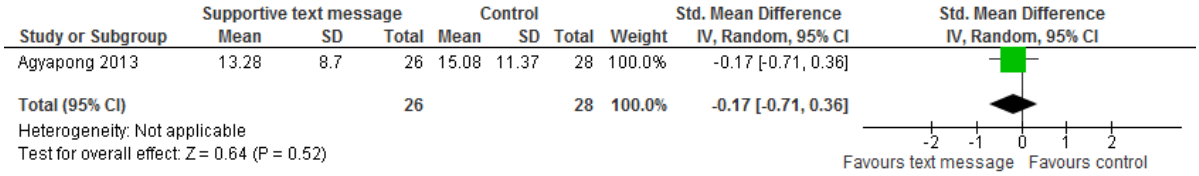
1.7.5 General functioning



1.8 Supportive text messaging compared with control messages

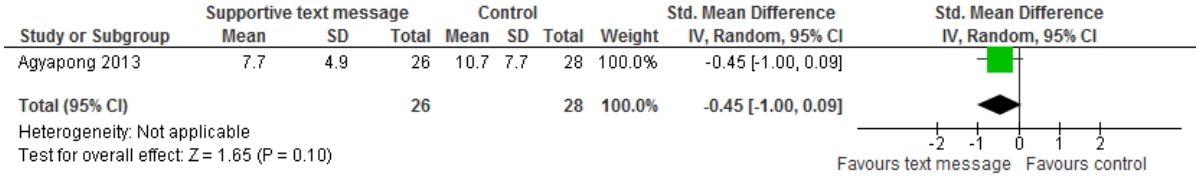
Mental health

1.8.1 Depression (Beck Depression Inventory-II)

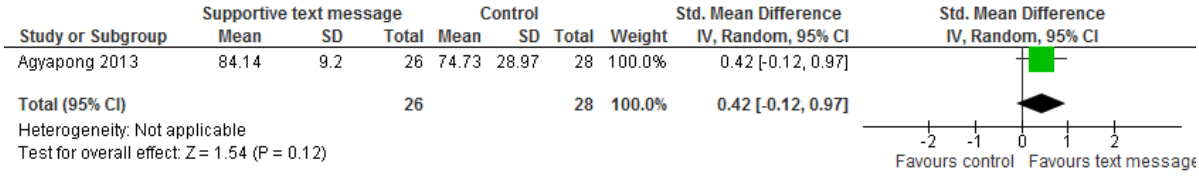


Substance use

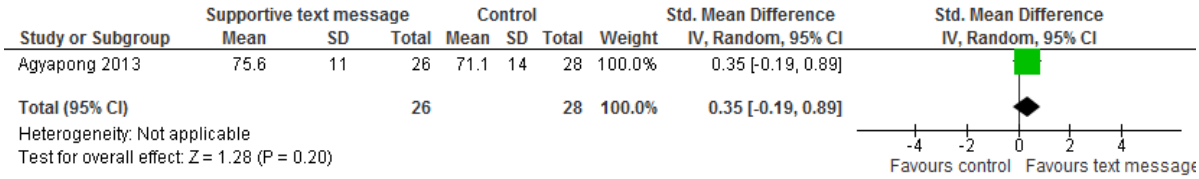
1.8.2 Drink related beliefs (Obsessive-compulsive drinking scale)

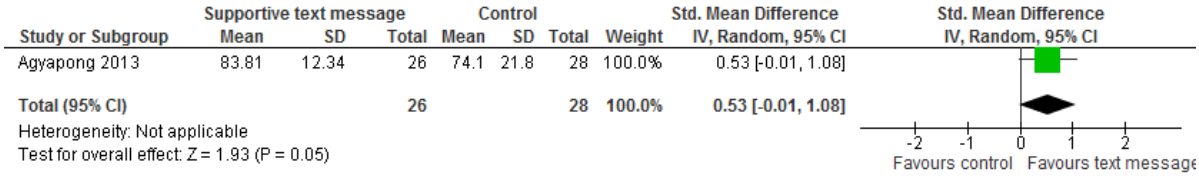


1.8.3 Alcohol use (mean days abstinent)



1.8.4 Confidence in abstaining from alcohol (alcohol abstinence self-efficacy scale)



Adaptive functioning

1.8.5 Global assessment of functioning