#### **Online Data Supplement**

### **DS1: PRISMA Search strategy**

#### PRISMA, database searches only:

9685 records identified through database searching

6486 records after duplicates removed

### 1.1 Databases: Embase, Medline, PreMedline, PsycINFO Interface: OVID SP

Search Strategy

#### # searches

- 1 "explode schizophrenia"/ or (psychosis\$ or psychotic\$).hw.
- 2 1 use emez
- 3 paranoid disorders/ or exp psychotic disorders/ or exp schizophrenia/ or "schizophrenia and disorders with psychotic features"/
- 4 3 use mesz, prem
- 5 exp psychosis/ or exp schizophrenia/
- 6 5 use psyh

((chronic\$ or serious\$ or sever\$) adj2 mental\$ adj2 (ill\$ or disorder\$)).ti,ab,hw,id. or (delusional
7 disorder\$ or hebephreni\$ or oligophreni\$ or psychoses or psychosis or psychotic\$ or schizo\$).ti,ab,id.

- 8 akathisia/ or dyskinesia/ or neuroleptic malignant syndrome/
- 9 8 use emez
- 10 akathisia, drug-induced/ or dyskinesias/ or dyskinesia, drug-induced/ or neuroleptic malignant syndrome/
- 11 10 use mesz, prem
- 12 akathisia/ or exp dyskinesia/ or neuroleptic malignant syndrome/
- 13 12 use psyh

(akathisi\$ or acathisi\$ or (neuroleptic\$ and ((malignant and syndrome) or (movement adj2 14 disorder))) or (tardiv\$ and dyskine\$)).ti,ab,id. or ((parkinsoni\$ or neuroleptic induc\$).ti,ab,id. not (parkinson\$ and disease).ti.)

- 15 or/2,4,6-7,9,11,13-14
- 16 exp self care/ or self evaluation/
- 17 16 use emez
- 18 self administration/ or self care/ or self-help groups/ or self medication/
- 19 18 use mesz, prem
- 20 self care skills/ or self evaluation/ or exp self help techniques/ or self monitoring/ or self regulation/ or self reinforcement/

21 20 use psyh

((self adj (administer\$ or assess\$ or attribut\$ or care or change or directed or efficacy or help\$ or guide\$ or instruct\$ or manag\$ or medicat\$ or monitor\$ or regulat\$ or reinforc\$ or re inforc\$ or

support\$ or technique\$ or therap\$ or train\$ or treat\$)) or selfadminister\$ or selfassess\$ or selfattribut\$ or selfcare or selfchange or selfdirected or selfefficacy or selfhelp\$ or selfguide\$ or selfinstruct\$ or selfmanag\$ or selfmedicat\$ or selfmonitor\$ or selfregulat\$ or selfreinforc\$ or selfreinforc\$ or selfreinforc\$ or selftechnique\$ or selftherap\$ or selftreat\$).ti,ab.

(expert patient\$ or (hearing voices adj2 (group\$ or network\$ or support\$)) or (minimal adj (contact 23 or guidance)) or helpseek\$ or (help\$ adj2 seek\$) or (mutual adj (aid\$ or help or support\$)) or recovery model\$ or smart recovery).ti,ab.

- 24 health education/ or health literacy/ or health promotion/ or patient education/ or psychoeducation/
- 25 24 use emez
- 26 exp consumer health information/ or health education/ or health knowledge, attitudes, practice/ or health promotion/ or patient education as topic.sh.
- 27 26 use mesz, prem
- 28 client education/ or health education/ or health knowledge/ or health literacy/ or health promotion/ or psychoeducation/
- 29 28 use psyh

(booklet\$ or brochure\$ or leaflet\$ or pamphlet\$ or poster\$ or psychoeducat\$ or psycho educat\$ or workbook\$ or work book\$ or ((adult\$ or client\$ or consumer\$ or health or inpatient\$ or outpatient\$

- 30 or participant\$ or patient\$ or service user\$) adj2 (educat\$ or focus\$ or information\$ or knowledge or learn\$ or literac\$ or promot\$ or taught or teach\$)) or empower\$ or ((oral or printed or written) adj3 (material\$ or inform\$))).ti,ab.
- 31 adaptive behavior/
- 32 31 use emez
- 33 exp adaptation, psychological/
- 34 33 use mesz, prem
- 35 adaptive behavior/
- 36 35 use psyh
- 37 (((behav\$ or psychologic\$) adj3 (adapt\$ or adjust\$)) or cope or copes or coping).ti,ab.
- 38 patient participation/
- 39 38 use emez
- 40 exp consumer participation/
- 41 40 use mesz, prem
- 42 client participation/
- 43 42 use psyh
- 44 ((adult\$ or client\$ or consumer\$ or inpatient\$ or outpatient\$ or participant\$ or patient\$ or service user\$) adj2 (involv\$ or participat\$)).ti,ab.
- 45 or/17,19,21-23,25,27,29-30,32,34,36-37,39,41,43-44

- 46 exp "clinical trial (topic)"/ or exp clinical trial/ or crossover procedure/ or double blind procedure/ or placebo/ or randomization/ or random sample/ or single blind procedure/
- 47 46 use emez
- 48 exp clinical trial/ or cross-over studies/ or double-blind method/ or placebos/ or random allocation/ or "randomized controlled trials as topic"/ or single-blind method/
- 49 48 use mesz, prem
- 50 (clinical trials or placebo or random sampling).sh,id.
- 51 50 use psyh
- 52 (clinical adj2 trial\$).ti,ab.
- 53 (crossover or cross over).ti,ab.
- 54 (((single\$ or doubl\$ or trebl\$ or tripl\$) adj2 blind\$) or mask\$ or dummy or doubleblind\$ or singleblind\$ or trebleblind\$ or tripleblind\$).ti,ab.
- 55 (placebo\$ or random\$).ti,ab.
- 56 treatment outcome\$.md. use psyh
- 57 animals/ not human\$.mp. use emez
- 58 animal\$/ not human\$/ use mesz, prem
- 59 (animal not human).po. use psyh
- 60 (or/47,49,51-56) not (or/57-59)
- 61 15 and 45 and 60

# 1.2. Database: CENTRAL Search strategy

### Interface: Wiley

Search strategy:

#1	mesh descriptor: [paranoid disorders] single term only										
#2	mesh descriptor: [schizophrenia and disorders with psychotic features] single term only										
#3	mesh descriptor: [psychotic disorders] explode all trees										
#4	mesh descriptor: [schizophrenia] explode all trees										
#5	((chronic* or sever*) and mental* and (ill* or disorder*)):ti,ab,kw										
#6	("delusional disorder*" or hebephreni* or oligophreni* or psychoses or psychosis or psychotic* or schizo*):ti,ab										
#7	mesh descriptor: [akathisia, drug-induced] single mesh term										
#8	mesh descriptor: [dyskinesias] single mesh term										
#9	mesh descriptor: [dyskinesia, drug-induced] single mesh term										
#10	mesh descriptor: [neuroleptic malignant syndrome] single mesh term										

- #11 (akathisi\* or acathisi\* or (neuroleptic\* and ((malignant and syndrome) or (movement n2 disorder))) or (tardiv\* and dyskine\*)):ti
- #12 (akathisi\* or acathisi\* or (neuroleptic\* and ((malignant and syndrome) or (movement n2 disorder))) or (tardiv\* and dyskine\*)):ab
- #13 mesh descriptor: [movement disorders] explode all trees
- #14 (parkinsoni\* or "neuroleptic induc\*"):ti,ab,kw
- #15 (parkinson\* and disease):ti
- #16 #14 not #15
- #17 #1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13 or #16
- #18 mesh descriptor: [self administration] single mesh term
- #19 mesh descriptor: [self care] single mesh term
- #20 mesh descriptor: [self medication] single mesh term
- #21 mesh descriptor: [self-help groups] single mesh term
- #22 ((self near/1 (administer\* or assess\* or attribut\* or care or change or directed or efficacy or help\* or guide\* or instruct\* or manag\* or medicat\* or monitor\* or regulat\* or reinforc\* or "re inforc\*" or support\* or technique\* or therap\* or train\* or treat\*)) or selfadminister\* or selfassess\* or selfattribut\* or selfcare or selfchange or selfdirected or selfefficacy or selfhelp\* or selfguide\* or selfinstruct\* or selfmanag\* or selfmedicat\* or selfmonitor\* or selfregulat\* or selfreinforc\* or "self re inforc\*" or selfsupport\* or selftechnique\* or selftherap\* or selftrain\* or selftreat\*):ti
- #23 ((self near/1 (administer\* or assess\* or attribut\* or care or change or directed or efficacy or help\* or guide\* or instruct\* or manag\* or medicat\* or monitor\* or regulat\* or reinforc\* or "re inforc\*" or support\* or technique\* or therap\* or train\* or treat\*)) or selfadminister\* or selfassess\* or selfattribut\* or selfcare or selfchange or selfdirected or selfefficacy or selfhelp\* or selfguide\* or selfinstruct\* or selfmanag\* or selfmedicat\* or selfmonitor\* or selfregulat\* or selfreinforc\* or "self re inforc\*" or selfsupport\* or selftechnique\* or selftherap\* or selftrain\* or selftreat\*):ab
- #24 ("expert patient\*" or ("hearing voices" near/2 (group\* or network\* or support\*)) or (minimal near/1 (contact or guidance)) or helpseek\* or (help\* near/2 seek\*) or (mutual near/1 (aid\* or help or support\*)) or "recovery model\*" or "smart recovery"):ti
- #25 ("expert patient\*" or ("hearing voices" near/2 (group\* or network\* or support\*)) or (minimal near/1 (contact or guidance)) or helpseek\* or (help\* near/2 seek\*) or (mutual near/1 (aid\* or help or support\*)) or "recovery model\*" or "smart recovery"):ab
- #26 mesh descriptor: [consumer health information] explode all trees
- #27 mesh descriptor: [health education] single mesh term
- #28 mesh descriptor: [health knowledge, attitudes, practice] single mesh term
- #29 mesh descriptor: [health promotion] single mesh term
- #30 mesh descriptor: [patient education as topic] single mesh term
- #31 (booklet\* or brochure\* or leaflet\* or pamphlet\* or poster\* or psychoeducat\* or "psycho educat\*" or workbook\* or "work book\*" or ((adult\* or client\* or consumer\* or health or inpatient\* or outpatient\* or participant\* or patient\* or "service user\*") near/2 (educat\* or focus\* or information\* or knowledge or learn\* or literac\* or promot\* or taught or teach\*)) or empower\* or ((oral or printed or written) near/3 (material\* or inform\*))):ti
- #32 (booklet\* or brochure\* or leaflet\* or pamphlet\* or poster\* or psychoeducat\* or "psycho educat\*" or workbook\* or "work book\*" or ((adult\* or client\* or consumer\* or health or inpatient\* or outpatient\* or participant\* or patient\* or "service user\*") near/2 (educat\* or

focus\* or information\* or knowledge or learn\* or literac\* or promot\* or taught or teach\*)) or empower\* or ((oral or printed or written) near/3 (material\* or inform\*))):ab

- #33 mesh descriptor: [adaptation, psychological] single mesh term
- #34 (((behav\* or psychologic\*) near/5 (adapt\* or adjust\*)) or cope or copes or coping):ti
- #35 (((behav\* or psychologic\*) near/5 (adapt\* or adjust\*)) or cope or copes or coping):ab
- #36 mesh descriptor: [consumer participation] single mesh term
- #37 ((adult\* or client\* or consumer\* or inpatient\* or outpatient\* or participant\* or patient\* or "service user\*") near/2 (involv\* or participat\*)):ti
- #38 ((adult\* or client\* or consumer\* or inpatient\* or outpatient\* or participant\* or patient\* or "service user\*") near/2 (involv\* or participat\*)):ab
- #39 #18 or #19 or #20 or #21 or #22 or #23 or #24 or #25 or #26 or #27 or #28 or #29 or #30 or #31 or #32 or #33 or #34 or #35 or #36 or #37 or #38
- #40 #17 and #39

### 1.3. Database: CINAHL Search strategy

#### Interface: Ebsco Host

Search strategy:

s30	s9 and s19 and s29
s29	s28 not s27
s28	s20 or s21 or s22 or s23 or s24 or s25 or s26
s27	(mh "animals") not (mh "human")
s26	(pt "clinical trial") or (pt "randomized controlled trial")
s25	ti ( placebo* or random* ) or ab ( placebo* or random* )
s24	ti ( single blind* or double blind* or treble blind* or mask* or dummy* or singleblind* or doubleblind* or trebleblind* ) or ab ( single blind* or double blind* or treble blind* or mask* or dummy* or singleblind* or doubleblind* or trebleblind* )
s23	ti ( crossover or cross over ) or ab ( crossover or cross over )
s22	ti clinical n2 trial* or ab clinical n2 trial*
s21	(mh "crossover design") or (mh "placebos") or (mh "random assignment") or (mh "random sample")
s20	(mh "clinical trials+")
s19	s10 or s11 or s12 or s13 or s14 or s15 or s16 or s17 or s18
s18	ti ( ((adult* or client* or consumer* or inpatient* or outpatient* or participant* or patient* or service user*) n2 (involv* or participat*)) ) or ab ( ((adult* or client* or consumer* or inpatient* or outpatient* or participant* or patient* or service user*) n2 (involv* or participat*)) )

s17	(mh "consumer participation")
	ti ( (((behav* or psychologic*) n3 (adapt* or adjust*)) or cope or copes or coping) ) or ab (
s16	(((behav* or psychologic*) n3 (adapt* or adjust*)) or cope or copes or coping) ) or ab ( (((behav* or psychologic*) n3 (adapt* or adjust*)) or cope or copes or coping) )
s15	(mh "adaptation, psychological")
s14	ti ( (booklet* or brochure* or leaflet* or pamphlet* or poster* or psychoeducat* or "psycho educat*" or workbook* or "work book*" or ((adult* or client* or consumer* or health or inpatient* or outpatient* or participant* or patient* or "service user*") n2 (educat* or focus* or information* or knowledge or learn* or literac* or promot* or taught or teach*)) or empower* or ((oral or printed or written) n3 (material* or inform*))) ) or ab ( (booklet* or brochure* or leaflet* or pamphlet* or poster* or psychoeducat* or "psycho educat*" or workbook* or "work book*" or ((adult* or client* or consumer* or health or inpatient* or outpatient* or participant* or patient* or "service user*") n2 (educat* or focus* or information* or knowledge or learn* or literac* or promot* or taught or teach*)) or empower* or ((oral or printed or written) n3 (material* or inform*))) )
s13	(mh "consumer health information") or (mh "health education") or (mh "patient discharge education") or (mh "patient education") or (mh "patient education") or (mh "nental health promotion (saba ccc)") or (mh "health promotion") or (mh "health promotion (saba ccc)") or (mh "health knowledge") or (mh "health knowledge (iowa noc) (non-cinahl)") or (mh "health knowledge and behavior (iowa noc) (non-cinahl)") or (mh "knowledge: health behaviors (iowa noc)")
s12	ti ( ("expert patient*" or ("hearing voices" n2 (group* or network* or support*)) or (minimal adj (contact or guidance)) or helpseek* or (help* n2 seek*) or (mutual n1 (aid* or help or support*)) or "recovery model*" or "smart recovery") ) or ab ( ("expert patient*" or ("hearing voices" n2 (group* or network* or support*)) or (minimal adj (contact or guidance)) or helpseek* or (help* n2 seek*) or (mutual n1 (aid* or help or support*)) or "recovery model*" or "smart recovery") )
s11	ti ( ((self n1 (administer* or assess* or attribut* or care or change or directed or efficacy or help* or guide* or instruct* or manag* or medicat* or monitor* or regulat* or reinforc* or re inforc* or support* or technique* or therap* or train* or treat*)) or selfadminister* or selfassess* or selfattribut* or selfcare or selfchange or selfdirected or selfefficacy or selfhelp* or selfguide* or selfinstruct* or selfmanag* or selfmedicat* or selfmonitor* or selfregulat* or selfreinforc* or "self re inforc*" or selfsupport* or selftechnique* or selftherap* or selftrain* or selftreat*) ) or ab ( ((self n1 (administer* or assess* or attribut* or care or change or directed or efficacy or help* or guide* or instruct* or manag* or medicat* or monitor* or regulat* or reinforc* or re inforc* or support* or technique* or therap* or train* or treat*)) or selfadminister* or selfassess* or selfattribut* or selfcare or selfchange or selfdirected or selfefficacy or selfned* or selfassess* or selfattribut* or selfcare or selfchange or selfdirected or selfefficacy or selfassess* or selfattribut* or selfcare or selfchange or selfdirected or selfefficacy or selfassess* or selfattribut* or selfcare or selfchange or selfdirected or selfefficacy or selfhelp* or selfguide* or selfattribut* or selfcare or selfchange or selfdirected or selfefficacy or selfhelp* or selfguide* or selfattribut* or selfcare or selfchange or selfdirected or selfefficacy or selfhelp* or selfguide* or selfinstruct* or selfmanag* or selfmedicat* or selfmonitor* or selfregulat* or selfreinforc* or "self re inforc*" or selfsupport* or selftechnique* or selftherap* or selftreat*) )
s10	(mh "self administration") or (mh "self care") or (mh "self care agency") or (mh "self medication")
s9	s1 or s2 or s3 or s4 or s5 or s8
s8	s6 not s7
s7	ti parkinson* and disease
s6	ti ( parkinsoni* or "neuroleptic induc*" ) or ab ( parkinsoni* or "neuroleptic induc*" )
s5	ti ( akathisi* or acathisi* or (neuroleptic* and ((malignant and syndrome) or (movement n2 disorder))) or (tardiv* and dyskine*) ) or ab ( akathisi* or acathisi* or (neuroleptic* and ((malignant and syndrome) or (movement n2 disorder))) or (tardiv* and dyskine*) )
s4	(mh "akathisia, drug-induced") or (mh "dyskinesia, drug-induced") or (mh "dyskinesias") or (mh "movement disorders+") or (mh "neuroleptic malignant syndrome")

s3	ti ("delusional disorder*" or hebephreni* or oligophreni* or psychoses or psychosis or psychotic* or schizo* ) or ab ( "delusional disorder*" or hebephreni* or oligophreni* or psychoses or psychosis or psychotic* or schizo* )
	ti ( ((chronic* or sever*) and mental* and (ill* or disorder*)) ) or ab ( ((chronic* or sever*) and mental* and (ill* or disorder*)) ) or mw ( ((chronic* or sever*) and mental* and (ill* or disorder*)) )
s1	(mh "paranoid disorders") or (mh "psychotic disorders") or (mh "schizoaffective disorder") or (mh "schizophrenia+")

### DS2 Summary of self-management interventions: A typology

In an attempt to develop a preliminary typology of self-management interventions, the common elements (largely dictated by the review's inclusion criteria and previous reviews of self-management (Mueser et al., 2002) as well as distinguishing features of each intervention were synthesised into 4 broad categories of self-management interventions.

Proposed Intervention			Components on criteria		Other defining characteristics				
Types	Psycho- education	<b>Relapse</b> <b>Prevention</b>	Coping skills	Medication Management	Personal Recovery Goals	Peer Delivered	Lifestyle Regulation	Mindfulness	
1.1 Illness management & compliance	$\checkmark\checkmark$	$\checkmark\checkmark$	$\checkmark$	$\checkmark\checkmark$	√	*	-	-	
1.2 Bipolar specific illness management	$\checkmark\checkmark$	$\checkmark \checkmark$	$\checkmark$	$\checkmark\checkmark$	✓	*	$\checkmark\checkmark$	-	
2. Transition to community from ward	$\checkmark\checkmark$	$\checkmark\checkmark$	$\checkmark$	$\checkmark\checkmark$	-	-	-	-	
3. Coping oriented	$\checkmark$	$\checkmark$	$\checkmark\checkmark$	$\checkmark$	$\checkmark$	-	-	$\checkmark$	
4. Recovery oriented	$\checkmark$	$\checkmark\checkmark$	$\checkmark$	$\checkmark$	$\checkmark\checkmark$	$\checkmark\checkmark$	-	-	

Note: ✓✓ Indicates predominant focus of intervention types.

Indicates component is present but not the primary focus of this type of intervention
 \* Only one study in category utilised peer facilitation (Proudfoot et al., 2012; Salyers et al., 2010)

Outcome	Measure
Total Symptoms	Positive and Negative Syndrome Scale (PANSS) Brief Psychiatric Rating Scale (BPRS)
	Psychosis Evaluation Tool for Common Use by Caregivers (PECC) Internal State Scale (ISS)
Depression & Anxiety	Brief Symptom Inventory (BSI)- Depression Psychosis Evaluation Tool for Common Use by Caregivers (PECC)-Depression- anxiety Brief Psychiatric Rating Scale (BPRS)- Depression- anxiety
	Goldberg Anxiety and Depression Scale (GADS)- Depression Hamilton Depression Rating Scale (HAM-D) Hamilton Depression Rating Scale - 6 item (HAM-6) Montgomery and Asberg Depression Rating Scale (MADRS)
	Psychological General Well-Being Scale (PGWB)- Anxiety Global Assessment of Functioning–Disability Scale (GAF-DIS) Structured Clinical Interview (SCID) (DSM-III-R)- Depression
Functioning	REHAB scale; Social Functioning Scale (SFS); Specific Level of Functioning scale (SLOF); Global Assessment of Functioning (GAF); Social Adaptation Self-Evaluation Scale (SASS);
	Social Disability Screening Schedule (SDSS); Social Functioning Interview; Work and Social Adjustment Scale (WSAS); Global Assessment Scale (GAS)
Quality of Life (QoL)	Quality of Life Scale (QOLS); Quality of Life Index; Quality of Life Scale- Abbreviated (QLS-A); Quality of Life Scale (QLS); Quality of Life in BD scale (Brief version) (QoL.BD-Brief); Manchester Short Assessment of Quality of Life; Psychological General Well-Being Scale (PGWB); WHO Quality of Life - BREF: Environmental
Recovery	Recovery Assessment Scale (RAS); Illness Management and Recovery Scales (IMRS); Recovery Attitudes Questionnaire (RAQ); Bipolar Recovery Questionnaire (BRQ); Questionnaire about the Process of Recovery (QPR) Mental Health Recovery Measure (MHRM) Empowerment Scale;
	Dutch Empowerment Scale; International Association of Psychosocial Rehabilitation Services (IAPSRS Toolkit); Adult State Hope Scale Herth Hope Index;
	Coping Efficacy Scale; Self- Efficacy Measure; Self-Efficacy for Managing Chronic Disease Scale, Brief Version (SEMCD); Mental Health Confidence Scale (MHCS)

### **DS3 Outcomes Measures Used in Included Trials**

### DS4

Full Risk of Bias Assessment

	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of participants and personnel (performance bias)	Blinding of outcome assessment (detection bias)	Incomplete outcome data (attrition bias)	Selective reporting (reporting bias)	Other bias
Anzai 2002	?	?	•	•	•	•	•
Atkinson 1996	?	•	•	?	•	•	•
Barbic 2009	?	?	•	•	•	•	•
Chan 2007	•	?	•	•	?	?	•
Chien 2013	•	?	•	•	?	?	•
Chien 2014	•	•	•	•	•	•	•
Chien 2017	•	•	•	•	•	•	•
Colom 2003	•	?	•	•	•	?	•
Cook 2011	•	•	•	•	•	•	•
Cook 2012	•	•	•	•	•	•	•
Cook 2013	•	•		•	?	•	•
Dalum 2018	•	•		•	•	•	•
Eckman 1992	?	?		•	•		•
Fardig 2011	•	?	•	•	•	•	•
Hasson 2007	•	•			?	?	•
Kopelowicz 1998	?	?		?	•	?	•
Levitt 2009	•	?		•	•	?	•
Lin 2013	•	?		•	•	?	•
Monroe-DeVita 2018	?	?	-	-	?	?	
2012 CONTRACTOR C		-	-	-		?	
Perry 1999	-	?	-				
Proudfoot 2012	•	•	•	•	•		•
Sajatovic 2009	•	•	-	-	-	?	•
Salyers 2010	•	-		•	-	?	•
Salyers 2014	?	?	•	•	•		•
Schaub 2016	•	•	•	•	•	?	•
Shon 2002	?	•	•	•	•	•	•
Smith 2011	•	?	•	•	•	•	•
Tan 2017	?	?	•	•	?	?	•
Todd 2014	•	•	•	•	•	•	•
Torrent 2013	•	?	•	•	•	•	•
Van Gestel-Timmermans2012	•	•	•	•	•	•	•
Vreeland 2006	•	?	•	•	?	?	•
Wang 2016	•	•	•	•	•	•	•
Wirshing 2006	?	?	•	•	•	?	•
Xiang 2006	•	?	•	٠	•	?	•
Xiang 2007	?	?	•	•	•	?	•
Zhou 2014	•	?	•	•	•	?	•

### DS5 Forest Plots of Main Analyses Reported in Table 5 (Main Manuscript)

### **5.1 Total Symptoms**

Figure 5.1.1: Forest plot of total symptoms at end of treatment

	Self-n	nanagen	nent	C	ontrol			Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
Anzai 2002	34.1	7.8	15	37.1	6.3	15	4.0%	-0.41 [-1.14, 0.31]	
Chien 2014	24.8	6	36	29.9	6.1	70	6.0%	-0.83 [-1.25, -0.42]	
Chien 2017	74.8	8.9	111	81.5	9	222	7.2%	-0.75 [-0.98, -0.51]	
Dalum 2018	56.6	20.5	99	59.4	19.3	99	6.9%	-0.14 [-0.42, 0.14]	
Fardig 2011	37.3	10.3	21	50.9	14.7	20	4.3%	-1.06 [-1.71, -0.40]	
Levitt 2009	13.8	7.9	52	16.7	9.2	47	6.1%	-0.34 [-0.73, 0.06]	
Lin 2013	13.8	9.1	46	19.5	17.3	39	5.9%	-0.42 [-0.85, 0.01]	
Monroe-DeVita 2018	47.5	21.2	42	44.8	11.8	46	6.0%	0.16 [-0.26, 0.58]	
Salyers 2014	68.5	18.5	44	66.6	14.9	40	5.9%	0.11 [-0.32, 0.54]	
Schaub 2016	43.7	12.6	85	46.1	13.2	83	6.8%	-0.19 [-0.49, 0.12]	
Tan 2017	24.8	1.7	25	37.4	7	25	3.9%	-2.43 [-3.18, -1.69]	←
Todd 2014	119	107.4	52	158	87.6	53	6.2%	-0.40 [-0.78, -0.01]	
Vreeland 2006	30.9	7.5	36	30.8	8.1	25	5.3%	0.01 [-0.50, 0.52]	
Wang 2016	80	10.2	44	87	10.1	87	6.3%	-0.69 [-1.06, -0.31]	
Xiang 2006	21.8	4.3	48	24	5	48	6.1%	-0.47 [-0.87, -0.06]	
Xiang 2007	21.5	4.2	53	21.3	4.8	50	6.2%	0.04 [-0.34, 0.43]	
Zhou 2014	21.2	2	103	21.9	2.3	98	7.0%	-0.32 [-0.60, -0.05]	1.10 Barris
Total (95% CI)			912			1067	100.0%	-0.43 [-0.63, -0.22]	•
Heterogeneity: Tau <sup>2</sup> = 1	0.13; Chi	<sup>2</sup> = 72.84	l. df = 1	6 (P < 0	.00001	); $ ^2 = 7$	8%	-	+ + + +
Test for overall effect: 2	A 100 March 1							Favo	-2 -1 0 1 ours Self-management Favours control

### Figure 5.1.2: Forest plot of total symptoms at follow up

	Self-m	anagen	nent	C	ontrol			Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
Chien 2013	50	14	48	59.4	13.9	48	8.4%	-0.67 [-1.08, -0.26]	
Chien 2014	20.1	5.9	36	30.4	8.3	70	8.2%	-1.35 [-1.79, -0.91]	
Chien 2017	69.9	9.2	111	84.1	12.2	222	9.3%	-1.25 [-1.50, -1.01]	
Fardig 2011	37.7	14.5	19	55.7	11.3	19	6.5%	-1.36 [-2.07, -0.64]	
Levitt 2009	12.3	6.8	44	14.7	10.2	44	8.4%	-0.27 [-0.69, 0.15]	
Lin 2013	13.4	7.5	46	23.5	17.9	39	8.2%	-0.75 [-1.19, -0.31]	
Salyers 2014	61.9	17.1	37	65.3	19.6	33	8.1%	-0.18 [-0.65, 0.29]	
Schaub 2016	36.1	8.8	66	42	11	64	8.8%	-0.59 [-0.94, -0.24]	
Tan 2017	24	0	25	40.2	10.2	25		Not estimable	
Wang 2016	70	10	44	90.9	12.2	87	8.3%	-1.80 [-2.23, -1.38]	
Xiang 2006	21.1	2.7	48	24.9	3.5	48	8.3%	-1.21 [-1.64, -0.77]	
Xiang 2007	22.2	4.1	53	22	4	50	8.6%	0.05 [-0.34, 0.44]	
Zhou 2014	19.4	1.6	99	21.4	1.6	95	9.0%	-1.25 [-1.55, -0.94]	
Total (95% CI)			676			844	100.0%	-0.88 [-1.19, -0.57]	•
Heterogeneity: Tau <sup>2</sup> =	0.26; Ch	i <sup>2</sup> = 82.6	i9, df = 1	11 (P <	0.0000	)1); I <sup>2</sup> =	87%		
Test for overall effect:	Z= 5.52	(P < 0.0	0001)					Favo	ours Self-management Favours control

### 5.1.3 Positive Symptoms: End of Treatment

	Self-ma	anagen	nent	Co	ontro	I	5	Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
Anzai 2002	13.5	5.2	15	18.3	5.1	15	8.1%	-0.91 [-1.66, -0.15]	
Chien 2017	17.1	6.5	111	20.1	7.3	222	16.4%	-0.42 [-0.66, -0.19]	
Fardig 2011	6.3	3.2	21	9.6	5.2	20	9.7%	-0.75 [-1.39, -0.12]	· · · · · · · · · · · · · · · · · · ·
Salyers 2014	14.1	6.2	44	12.6	4.9	40	13.0%	0.26 [-0.17, 0.69]	
Vreeland 2006	16.6	6	36	14.2	5.3	25	11.5%	0.41 [-0.10, 0.93]	+
Wang 2016	20.8	6.8	44	25.3	8.2	87	14.1%	-0.58 [-0.95, -0.21]	
Xiang 2006	9	2.7	48	9.5	3.5	48	13.5%	-0.16 [-0.56, 0.24]	
Xiang 2007	8.7	2.5	53	8.3	4	50	13.8%	0.12 [-0.27, 0.51]	
Total (95% CI)			372			507	100.0%	-0.22 [-0.51, 0.07]	•
Heterogeneity: Tau <sup>2</sup> =	= 0.12; Chi	<sup>2</sup> = 26.0	)9, df = `	7 (P = 0	.0006	5); $ ^2 = 7$	'3%	F	
Test for overall effect								-2 Favou	2 -1 0 1 rs [Self-Management] Favours [control]

### 5.1.4 Positive Symptoms: Follow Up

#### 5.1.5 Negative Symptoms: End of Treatment

### 5.1.6 Negative Symptoms: Follow Up

### Figure 5.1.7 Forest plot of depression and anxiety symptoms post treatment

	Self-m	anagem	ent	C	ontrol			Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
Dalum 2018	5.6	4.5	69	5.7	3.9	77	27.2%	-0.02 [-0.35, 0.30]	
Fardig 2011	7.75	4.09	21	11.74	4.99	20	11.6%	-0.86 [-1.50, -0.22]	
Levitt 2009	8.31	5.48	52	9.21	5.86	47	22.3%	-0.16 [-0.55, 0.24]	
Todd 2014	58.96	59.76	52	85.23	59.18	53	22.8%	-0.44 [-0.83, -0.05]	· · · · · · · · · · · · · · · · · · ·
Vreeland 2006	11.6	2.9	36	11.9	2.3	25	16.2%	-0.11 [-0.62, 0.40]	
Total (95% CI)			230			222	100.0%	-0.26 [-0.51, -0.01]	•
Heterogeneity: Tau <sup>2</sup> =	0.03; Cł	ni² = 6.69	, df = 4	(P = 0.1	5); I <sup>2</sup> =	40%		H	2 -1 0 1
Test for overall effect:	Z = 2.04	(P = 0.04	4)						urs [Self-Management] Favours [control]
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
Chien 2017	18.5	5.2	111	20.2	10.6	222	17.6%	-0.19 [-0.41, 0.04]	
Fardig 2011	8.8	4.2	19	15.1	4.2	19	9.3%	-1.47 [-2.19, -0.74]	
Salyers 2014	16.7	6.8	37	18.5	6.7	33	13.3%	-0.26 [-0.74, 0.21]	· · · · · · · · · · · · · · · · · · ·
Schaub 2016	27.3	20.2	66	34.4	19.9	64	15.6%	-0.35 [-0.70, -0.01]	
Wang 2016	14.8	5.2	44	19.8	9.4	87	15.2%	-0.60 [-0.97, -0.23]	
Xiang 2006	11.1	2.9	48	15.5	4.8	48	14.1%	-1.10 [-1.53, -0.67]	
Xiang 2007	12	2.9	53	12.2	4	50	14.9%	-0.06 [-0.44, 0.33]	
Total (95% CI)			378			523	100.0%	-0.51 [-0.82, -0.21]	•
Heterogeneity: Tau <sup>2</sup> =	= 0.13; C	hi <sup>2</sup> = 26.5	50, df =	6 (P = 0	.0002)	$ ^2 = 77$	%	7.	
Test for overall effect	7 = 3.28	P = 0.0	01)	魏	1				-2 -1 U 1 2 Irs [Self-management] Favours [control]

### Figure 5.1.8 Forest plot of depression and anxiety symptoms follow up

	Self-m	nanagen	nent	(	Control			Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
Cook 2011	50.7	10.6	220	52.4	11.7	228	39.9%	-0.15 [-0.34, 0.03]	
Fardig 2011	7.74	4.58	19	11.63	4.8	19	4.8%	-0.81 [-1.48, -0.15]	
Levitt 2009	7.2	4.71	44	8.75	6.2	44	11.3%	-0.28 [-0.70, 0.14]	
Proudfoot 2012	5.06	3.93	134	5.86	3.64	139	28.6%	-0.21 [-0.45, 0.03]	
Sajatovic 2009	16.02	11.73	41	14.39	10.87	39	10.4%	0.14 [-0.30, 0.58]	
Smith 2011	9.1	8.4	17	11.1	13.6	20	5.1%	-0.17 [-0.82, 0.48]	10 10 10 10 10 10 10 10 10 10 10 10 10 1
Total (95% CI)			475			489	100.0%	-0.19 [-0.33, -0.04]	•
Heterogeneity: Tau <sup>2</sup> =	= 0.01; Cł	ni <sup>z</sup> = 5.91	. df = 5	(P = 0.3)	31); I <sup>2</sup> = 1	15%			
Test for overall effect			10 C 1					Fav	-2 -1 0 1 2 /ours [Self-management] Favours [control]

### 5.2 Readmission and length of hospitalisation

### 5.2.1 Mean number of Readmissions to acute care at end of treatment

	Self-ma	anagen	nent	Co	ontro	I		Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
Chien 2014	2.4	1.3	36	2.5	1.2	70	20.3%	-0.08 [-0.48, 0.32]	
Chien 2017	2.5	1.5	111	2.8	1.5	222	22.3%	-0.20 [-0.43, 0.03]	
Dalum 2018	0.6	1.1	99	0.6	1.7	99	21.8%	0.00 [-0.28, 0.28]	
Salyers 2014	0.3	0.5	44	0.2	0.5	40	20.0%	0.20 [-0.23, 0.63]	
Tan 2017	0	0.2	25	1.4	0.8	25	15.6%	-2.36 [-3.10, -1.63] 🛛 🛨 🛨	
Total (95% CI)			315			456	100.0%	-0.39 [-0.89, 0.11]	•
Heterogeneity: Tau <sup>2</sup> =	0.28; Chi	<sup>2</sup> = 38.7	2, df =	4 (P < 0	.0000	01); I <sup>z</sup> =	90%	20-	
Test for overall effect:	Z=1.52 (	P = 0.1	3)	9 <u>1</u>		20		Favours (se	-2 -1 U 1 2 elf-management] Favours [control]

#### Self-management Std. Mean Difference Control Std. Mean Difference Total Weight Study or Subgroup Mean SD Total Mean SD IV, Random, 95% CI IV, Random, 95% CI Chien 2013 2.8 48 3.6 1.9 48 21.0% -0.51 [-0.92, -0.10] 1.1 Chien 2014 2.1 0.9 36 2.7 1.1 70 21.0% -0.57 [-0.98, -0.16] Chien 2017 2.2 1.5 111 2.9 2 222 22.0% -0.38 [-0.61, -0.15] Salvers 2014 0.3 0.7 0.2 0.6 20.5% 0.15 [-0.32, 0.62] 37 33 Tan 2017 0.04 0.2 25 11 03 25 15.5% -4.09 [-5.10, -3.09] Total (95% CI) 257 398 100.0% -0.92 [-1.63, -0.21] Heterogeneity: Tau<sup>2</sup> = 0.58; Chi<sup>2</sup> = 57.74, df = 4 (P < 0.00001); l<sup>2</sup> = 93% Test for overall effect: Z = 2.53 (P = 0.01) Favours [Self-management] Favours [control]

### 5.2.2 Mean number of Readmissions to acute care at follow-up

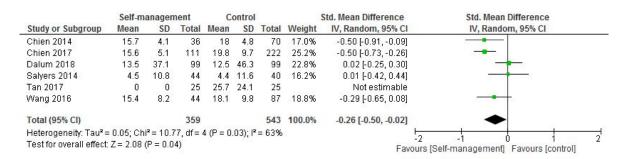
### 5.2.3 Total number of participants readmitted at end of treatment

	Self-manage	ement	Cont	lo		Risk Ratio	Risk	Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Rand	lom, 95% Cl
Colom 2003	9	60	8	60	39.8%	1.13 [0.47, 2.72]		
Wang 2016	8	44	23	87	60.2%	0.69 [0.34, 1.41] 👘		
Total (95% CI)		104		147	100.0%	0.84 [0.48, 1.46]		
Total events	17		31					
Heterogeneity: Tau <sup>2</sup> =	= 0.00; Chi <sup>2</sup> = 0	.72, df =	1 (P = 0)	40); I <sup>2</sup> =	0%	84		
Test for overall effect:	Z=0.63 (P=	0.53)				Favour	0.5 0.7 s [Self-management]	Favours [control]

#### 5.2.4 Total number of participants readmitted at follow up

	Self-manage	ement	Contr	Ior		<b>Risk Ratio</b>	Risk Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% Cl	M-H, Random, 95% Cl
Chan 2007	6	44	8	37	9.8%	0.63 [0.24, 1.65]	
Colom 2003	14	60	21	60	16.8%	0.67 [0.38, 1.18]	
Fardig 2011	0	19	2	19	1.5%	0.20 [0.01, 3.91]	
Levitt 2009	8	44	8	43	10.9%	0.98 [0.40, 2.37]	
Perry 1999	12	33	15	35	16.4%	0.85 [0.47, 1.53]	
Salyers 2010	18	49	15	73	16.7%	1.79 [1.00, 3.20]	
Wang 2016	5	44	28	87	11.0%	0.35 [0.15, 0.85]	
Wirshing 2006	7	29	9	28	11.6%	0.75 [0.32, 1.74]	
Xiang 2006	1	45	4	46	2.7%	0.26 [0.03, 2.20]	
Xiang 2007	1	49	4	45	2.7%	0.23 [0.03, 1.98]	10 - 12 x
Total (95% CI)		416		473	100.0%	0.75 [0.51, 1.08]	•
Total events	72		114				
Heterogeneity: Tau <sup>2</sup> =	= 0.13; Chi <sup>2</sup> = 1	5.05, df =	= 9 (P = 0	.09); I <sup>z</sup>	= 40%		
Test for overall effect:			91.			Fav	0.01 0.1 1 10 100 ours [Self-management] Favours [control]

#### 5.2.5 Length of admission at end of treatment



### 5.2.6 Length of admission at follow-up

	Self-m	anagen	nent	C	ontrol		-	Std. Mean Difference	Std. Mea	n Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Rand	om, 95% Cl
Chien 2013	11.8	4.1	48	18.2	5.8	48	14.1%	-1.26 [-1.70, -0.82]		
Chien 2014	13	3.6	36	18.4	5.4	70	14.2%	-1.10 [-1.53, -0.67]		
Chien 2017	12	7	111	19.3	9.6	222	15.9%	-0.83 [-1.06, -0.59]		
Salyers 2010	16.4	55.3	49	9	46.5	73	14.9%	0.15 [-0.22, 0.51]		
Salyers 2014	5.7	15.1	37	4.7	15.6	33	13.9%	0.06 [-0.40, 0.53]	1.00	-
Tan 2017	0.1	0.4	25	21.6	20.1	25	12.2%	-1.49 [-2.12, -0.86]		
Wang 2016	14.4	8.9	44	18.6	10.9	87	14.8%	-0.41 [-0.77, -0.04]		-
Total (95% CI)			350			558	100.0%	-0.68 [-1.10, -0.25]	+	
Heterogeneity: Tau <sup>2</sup> =	0.28; Ch	i <sup>2</sup> = 49.7	6, df = 6	6 (P < 0	.00001	); l <sup>2</sup> = 8	38%	13-		
Test for overall effect:	Z= 3.12	(P = 0.0	02)	81.		10		Favour	-2 -1 rs [Self-management	1 Eavours [control]

### 5.3 Self-rated recovery outcomes

Figure 5.3.1 Total self-rated recovery at end of treatment

	Self-ma	anagem	ent	C	ontrol			Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
Barbic 2009	-168.8	20.11	16	-149.11	22.09	17	8.1%	-0.91 [-1.63, -0.19]	
Dalum 2018	-69.5	15.3	59	-69.2	18	57	10.0%	-0.02 [-0.38, 0.35]	+
Fardig 2011	-3.82	0.46	21	-3.93	0.52	20	8.7%	0.22 [-0.39, 0.83]	
Hasson 2007	-3.8	0.45	119	-3.5	0.59	91	10.3%	-0.58 [-0.86, -0.30]	+
Levitt 2009	-3.74	0.5	52	-3.53	0.55	47	9.8%	-0.40 [-0.80, 0.00]	-
Monroe-DeVita 2018	-163.2	25.4	42	-162.7	20.8	46	9.7%	-0.02 [-0.44, 0.40]	+
Salyers 2014	-3.1	0.4	44	-3.1	0.4	40	9.7%	0.00 [-0.43, 0.43]	+
Tan 2017	-59.2	3	25	-29.96	6.1	25	4.9%	-5.99 [-7.33, -4.65]	
Todd 2014	-2,446.9	465.7	52	-2,111.3	396.89	53	9.8%	-0.77 [-1.17, -0.37]	+
Vreeland 2006	-28.6	4.1	33	-26.8	5.5	23	9.1%	-0.38 [-0.91, 0.16]	
Wang 2016	-41.5	10	44	-36.7	6.2	87	9.9%	-0.62 [-0.99, -0.25]	
Total (95% CI)			507			506	100.0%	-0.62 [-1.03, -0.22]	•
Heterogeneity: Tau <sup>2</sup> = I	0.39; Chi <sup>z</sup> =	89.30, 0	df = 10 (	P < 0.000	01); I <sup>2</sup> = 8	9%		20	
Test for overall effect: 2	Z = 3.03 (P =	= 0.002)						Favou	rs [Self-management] Favours [control]

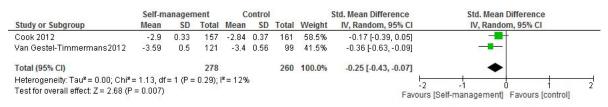
	Self-n	nanagen	nent	C	ontrol			Std. Mean Difference		Std. Mea	n Differen	nce	
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI		IV, Rand	om, 95%	CI	
Cook 2011	-93.7	14.7	217	-91.2	13.1	222	16.9%	-0.18 [-0.37, 0.01]			-		
Cook 2012	-96.1	12.76	157	-91.97	14.5	161	16.8%	-0.30 [-0.52, -0.08]					
Fardig 2011	-3.9	0.32	19	-3.9	0.47	19	14.4%	0.00 [-0.64, 0.64]			+	12	
Levitt 2009	-3.8	0.5	44	-3.7	0.57	44	15.8%	-0.18 [-0.60, 0.23]					
Salyers 2014	-3.1	0.4	37	-3.1	0.5	33	15.5%	0.00 [-0.47, 0.47]		5.5	÷		
Tan 2017	-60.1	2.3	25	-27.8	3.2	25	4.5%	-11.41 [-13.80, -9.01]	•				
Wang 2016	-47.2	10.4	44	-37.3	7.5	87	16.0%	-1.15 [-1.54, -0.76]					
Total (95% CI)			543			591	100.0%	-0.81 [-1.40, -0.22]					
Heterogeneity: Tau <sup>2</sup> =	0.53; CH	ni <sup>z</sup> = 105	.09, df=	6 (P < 0	0000.	1); I <sup>z</sup> = !	94%		<u> </u>		<u> </u>		
Test for overall effect				8				Fav	-2 /ours	-1 Self-managemeni	U ] Favou	1 rs [contro	2 I]

### Figure 5.3.2 Total self-rated recovery at end of treatment

Figure 5.3.3 Empowerment at end of treatment

	Self-m	anagen	nent	Co	ontrol			Std. Mean Difference	Std. Mean	Difference	
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Rando	om, 95% Cl	
Barbic 2009	-61.96	10.43	16	-14.93	7.33	17	27.5%	-5.12 [-6.60, -3.64]			
Van Gestel-Timmermans2012	-3.55	0.48	136	-3.38	0.53	117	36.8%	-0.34 [-0.59, -0.09]			
Vreeland 2006	-3	0.4	35	-3.1	0.4	25	35.7%	0.25 [-0.27, 0.76]		+	
Total (95% CI)			187			159	100.0%	-1.44 [-2.97, 0.08]	•	-	
Heterogeneity: Tau <sup>2</sup> = 1.63; Chi <sup>2</sup>	= 44.89, d	if = 2 (P	< 0.000	01); I <sup>2</sup> =	96%						10
Heterogeneity: Tau <sup>2</sup> = 1.63; Chi <sup>2</sup> : Test for overall effect: Z = 1.86 (P		if = 2 (P	< 0.000	01); I² =	96%			-10 Favours	) -5 s (Self-management)	0 5 Favours (control	1

### Figure 5.3.4 Empowerment at follow-up



### Figure 5.3.5 Hope at end of treatment

	Self-m	anagen	nent	C	ontrol			Std. Mean Difference		Std. Mean Differ	rence	
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI		IV, Random, 95	5% CI	
Dalum 2018	-32.6	8.3	68	-31.8	10	71	35.9%	-0.09 [-0.42, 0.25]				
Van Gestel-Timmermans2012	-2.91	0.47	132	-2.79	0.53	118	64.1%	-0.24 [-0.49, 0.01]				
Total (95% CI)			200			189	100.0%	-0.18 [-0.38, 0.01]		•		
Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup>		= 1 (P =	: 0.47);	l²=0%					-2	-1 0	1	2
Test for overall effect: Z = 1.81 (P	r = 0.07							Fav	ours [S	elf-management] Favo	ours [control]	

### Figure 5.3.6 Hope at follow-up

	Self-m	anagen	nent	C	ontrol			Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% Cl
Cook 2011	-22.76	4.68	212	-22.16	4.21	222	37.3%	-0.13 [-0.32, 0.05]	
Cook 2012	-23.24	3.92	155	-22.66	4.71	161	33.9%	-0.13 [-0.35, 0.09]	
Van Gestel-Timmermans2012	-2.97	0.46	120	-2.73	0.48	97	28.8%	-0.51 [-0.78, -0.24]	
Total (95% CI)			487			480	100.0%	-0.24 [-0.46, -0.02]	•
Heterogeneity: Tau <sup>2</sup> = 0.02; Chi <sup>2</sup>	= 5.74, df:	= 2 (P =	0.06);1	<sup>2</sup> = 65%				H	
Test for overall effect: Z = 2.16 (F	9 = 0.03)							Favours	[Self-management] Favours [control]

### Figure 5.3.7 Self-efficacy at end of treatment

	Self-m	anagen	nent	C	ontrol			Std. Mean Difference		Std. I	Mean Diffe	rence	
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI		IV, F	Random, 95	5% CI	
Hasson 2007	-3.25	0.95	119	-3.09	0.87	91	32.6%	-0.17 [-0.45, 0.10]			-		
Shon 2002	-22.06	2.754	18	-18	4.92	20	10.0%	-0.98 [-1.66, -0.30]	23-	(=)	2		
Todd 2014	-32.08	12.31	51	-26.13	11.84	52	22.3%	-0.49 [-0.88, -0.10]			-		
Van Gestel-Timmermans2012	-4.65	0.81	134	-4.35	0.97	116	35.1%	-0.34 [-0.59, -0.09]		5	-		
Total (95% CI)			322			279	100.0%	-0.38 [-0.62, -0.15]		-	•		
Heterogeneity: Tau <sup>2</sup> = 0.02; Chi <sup>2</sup>	= 5.42, df	= 3 (P =	0.14);1	<sup>2</sup> = 45%					<u> </u>	<del></del>		1	
Test for overall effect: Z = 3.18 (P	= 0.001)							Fav	-z ours [S	elf-manager	nent] Fav	ours [control]	2

### Figure 5.3.8 Self-efficacy at follow up

	Self-m	anagen	nent	C	ontrol			Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
Van Gestel-Timmermans2012	-4.71	0.93	121	-4.4	0.88	100	100.0%	-0.34 [-0.61, -0.07]	-
Total (95% CI)			121			100	100.0%	-0.34 [-0.61, -0.07]	•
Heterogeneity: Not applicable Test for overall effect: Z = 2.50 (P	= 0.01)							Favou	2 -1 0 1 urs [Self-management] Favours [control]

#### **5.4 Functioning**

### Figure 5.4.1 Functioning post-treatment

	Self-M	lanagem	ent	C	ontrol			Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
Anzai 2002	-32.5	13	16	-18.2	22.7	16	5.2%	-0.75 [-1.47, -0.03]	
Atkinson 1996	-2.4	1.3	52	-2.6	1.3	62	6.9%	0.15 [-0.22, 0.52]	
Chien 2014	-155	20.1	36	-135.9	21.9	70	6.7%	-0.89 [-1.31, -0.47]	
Chien 2017	-158	18.1	111	-140.1	19.5	222	7.4%	-0.94 [-1.18, -0.70]	
Dalum 2018	-46.4	14.6	99	-44	13.3	99	7.3%	-0.17 [-0.45, 0.11]	12
Monroe-DeVita 2018	-46.2	13.1	42	-44	11.4	46	6.7%	-0.18 [-0.60, 0.24]	
Schaub 2016	-61.28	13.9	85	-58.6	13.28	83	7.2%	-0.20 [-0.50, 0.11]	
Tan 2017	-77.04	6.1	25	-54.2	8.3	25	4.6%	-3.09 [-3.93, -2.25]	•
Todd 2014	-38.29	8.95	52	-33.75	7.94	53	6.8%	-0.53 [-0.92, -0.14]	
Torrent 2013	-27.29	12.94	82	-26.11	12.34	80	7.2%	-0.09 [-0.40, 0.22]	
Vreeland 2006	-47.6	13.2	36	-53.7	11.5	25	6.2%	0.48 [-0.04, 1.00]	
Wang 2016	-162	13.8	44	-145.6	13.6	87	6.8%	-1.19 [-1.58, -0.80]	
Xiang 2006	-6	1.7	48	-4.2	2.2	48	6.7%	-0.91 [-1.33, -0.49]	
Xiang 2007	-5.39	1.61	53	-5.11	2.85	50	6.9%	-0.12 [-0.51, 0.27]	
Zhou 2014	-12.6	3.1	103	-10.2	2.7	98	7.3%	-0.82 [-1.11, -0.53]	<del></del>
Total (95% CI)			884			1064	100.0%	-0.56 [-0.85, -0.28]	•
Heterogeneity: Tau <sup>2</sup> =	0.27: Chi <sup>a</sup>	<sup>2</sup> = 121.2	5. df = 1	4 (P < 0)	.00001)	: <b>I<sup>2</sup> = 8</b> 8	3%	1	
Test for overall effect: 2	Contractor South		10.0			8			-2 -1 0 1 2 urs [Self-Management] Favours [control]

## Figure 5.4.2 Functioning Follow Up

	Self-M	Control				Std. Mean Difference	Std. Mean Difference				
Study or Subgroup	Mean	SD	Total	Mean	Mean SD		Weight	IV, Random, 95% CI	IV, Random, 95% CI		
Atkinson 1996	-2	1.1	50	-2.5	1.2	58	7.3%	0.43 [0.05, 0.81]	-		
Chien 2013	-148.8	19.5	48	-137.2	21.1	48	7.3%	-0.57 [-0.97, -0.16]			
Chien 2014	-168.2	20	36	-133.2	25	70	7.2%	-1.48 [-1.93, -1.03]			
Chien 2017	-177.9	20.1	111	-140.1	21.9	222	7.5%	-1.77 [-2.03, -1.50]			
Perry 1999	-3.91	2.62	34	-3.27	3.03	35	7.1%	-0.22 [-0.70, 0.25]			
Proudfoot 2012	-3.93	1.76	134	-3.54	2.49	139	7.6%	-0.18 [-0.42, 0.06]			
Sajatovic 2009	-63.7	12.66	40	-64.51	15.9	39	7.2%	0.06 [-0.39, 0.50]			
Schaub 2016	-73	20.62	66	-66.37	19.9	64	7.4%	-0.33 [-0.67, 0.02]			
Smith 2011	-70.8	14.8	17	-65.9	21.8	20	6.6%	-0.25 [-0.90, 0.40]			
Fan 2017	-81.1	5	25	-52.2	8	25	5.5%	-4.26 [-5.30, -3.23] 4			
Vang 2016	-175.8	13	44	-144.9	17.6	87	7.2%	-1.89 [-2.33, -1.46]			
(iang 2006	-5.9	1.2	48	-3.6	2.1	48	7.2%	-1.33 [-1.78, -0.89]			
(iang 2007	-5.72	1.64	53	-4.78	2.52	50	7.3%	-0.44 [-0.83, -0.05]			
Zhou 2014	-12.7	2.6	99	-9.4	3.3	95	7.5%	-1.11 [-1.41, -0.81]			
			805			1000	100.0%	-0.90 [-1.34, -0.45]			

### 5.5 Quality of Life

Figure 5.5.1 Quality of life at end of treatment

	Self-m	anagen	(	Control			Std. Mean Difference	Std. Mean Difference			
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	I IV, Random, 95% CI		
Atkinson 1996	-68.5	18.9	53	-60.3	16.6	61	13.0%	-0.46 [-0.83, -0.09]			
Barbic 2009	-21.6	3.4	16	-22.3	4.9	17	3.9%	0.16 [-0.52, 0.84]			
Fardig 2011	-55.7	7.6	21	-52.9	10.02	20	4.8%	-0.31 [-0.93, 0.31]			
Levitt 2009	-3.1	1.1	52	-2.9	1.04	47	11.6%	-0.19 [-0.58, 0.21]			
Monroe-DeVita 2018	-3.1	1.2	42	-2.5	1.1	46	10.0%	-0.52 [-0.94, -0.09]			
Salyers 2014	-3.3	1.1	44	-3.3	1.1	40	9.9%	0.00 [-0.43, 0.43]			
Todd 2014	-40.7	10.3	52	-36.3	10.02	53	12.1%	-0.43 [-0.82, -0.04]			
Van Gestel-Timmermans2012	-4.5	0.96	124	-4.4	1.1	114	27.9%	-0.10 [-0.35, 0.16]			
Vreeland 2006	-75.9	17	36	-73.1	15.4	25	6.9%	-0.17 [-0.68, 0.34]			
Total (95% CI)			440			423	100.0%	-0.23 [-0.37, -0.10]	•		
Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup>	= 7.83, df	= 8 (P =	0.45);1	<sup>2</sup> = 0%							
Test for overall effect: Z = 3.38 (P	= 0.0007	)						Fav	-2 -1 U 1 2 ours [Self-management] Favours [control]		

## Figure 5.5.2 Quality of life at follow-up

	Self-management				Control			Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
Atkinson 1996	-67.9	20.7	51	-58.2	19	57	10.8%	-0.49 [-0.87, -0.10]	
Cook 2011	-14.1	2.8	212	-13.4	3	219	44.1%	-0.24 [-0.43, -0.05]	
Fardig 2011	-53.9	7.7	19	-49.5	10.1	19	3.8%	-0.48 [-1.13, 0.17]	
Levitt 2009	-3.4	0.8	44	-3.2	1.1	44	9.0%	-0.21 [-0.63, 0.21]	
Salyers 2014	-3.5	1	37	-3.3	1.3	33	7.2%	-0.17 [-0.64, 0.30]	
Smith 2011	-256.6	52.7	17	-259.2	63.2	20	3.8%	0.04 [-0.60, 0.69]	
Van Gestel-Timmermans2012	-4.6	1	111	-4.4	1.1	97	21.3%	-0.19 [-0.46, 0.08]	
Total (95% CI)			491			489	100.0%	-0.25 [-0.37, -0.12]	•
Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup>	= 3.07, df =	= 6 (P =	0.80); P	<sup>2</sup> = 0%				L	
Test for overall effect: Z = 3.84 (P	(1) 10.000 (million)							-2 Favours [	-1 U 1 2 Self-management] Favours [control]

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#### **DS6 Full Heterogeneity and Sensitivity Analyses**

Seventeen of the twenty-two meta-analyses had high levels of heterogeneity as assessed by an I<sup>2</sup> greater than 50% and/or a significant X<sup>2</sup> test. The one- study-removed method<sup>17</sup> was utilised to explore sources of statistical heterogeneity. Although high heterogeneity was identified in a range of meta-analyses, evaluation of clinical and methodological characteristics resulted in the decision to not remove any of the included studies.

#### **Symptoms**

For total symptoms at end of treatment, removal of Tan (2017) reduced heterogeneity ( $I^2 = 65\%$ ), however it still remained high. The effect size and 95% CI were -0.34 [-0.51, -0.18] (k=16), favouring self-management, as was the case when this study was included. This study is one of the smaller studies in the review which may have contributed to heterogeneity through an overestimation of effect. The small change to heterogeneity does not warrant its removal. At follow up heterogeneity was particularly high, however systematic removal of studies did not significantly reduce heterogeneity for this outcome.

For positive symptoms there was no change to heterogeneity or effect size at the end of treatment or follow up. For negative symptoms, removing Vreeland (2006) at end of treatment, reduced heterogeneity ( $I^2 = 33\%$ ) and effect size remained significant. This was one of two studies in this analysis that favoured control, which would account for the heterogeneity. At follow up there was no change to heterogeneity or effect size.

### Relapse

For mean hospital readmission at follow up, removal of Tan (2017) reduced heterogeneity substantially ( $I^2 = 51\%$ ). The effect size and 95% CI reduced to -0.35 [-0.61, -0.09] (k= 4), still favouring self-management. While there is not a clear rationale to exclude, the results for most outcomes reported by Tan and colleagues (2017) had significantly larger effects than the other studies in this meta-analysis. This may be due to the small sample size in this study or other factors. The effect size of 0.35 is likely more representative of the true effect on relapse.

For length of hospitalisation, heterogeneity was high at both end of treatment and follow up. At end of treatment removal of Dalum (2018) reduced heterogeneity to  $I^2=36\%$  still favouring selfmanagement. The overall quality of the study appeared good, with a low risk of bias and as such does not warrant removal.

At follow up, systematic removal of each study did not impact on heterogeneity which remained high.

### Self-rated recovery

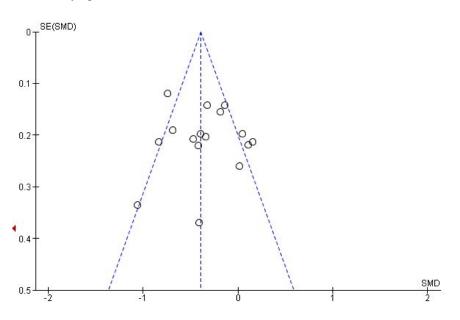
Again, the removal of Tan (2017) reduced the heterogeneity substantially, although it remained high at both end of treatment ( $I^2=60\%$ ) and follow up ( $I^2=78\%$ ) The respective standard mean differences (-0.35 95% CI [-0.56, -0.13]; and -0.32 95% CI [-0.61, -0.03]) still favoured self-management on this outcome. Although there was no clear rationale justifying the removal of this study, the authors support a more conservative estimate of a small to moderate effect of self-management on self-rated recovery.

#### Functioning

For the functioning outcome at both end of treatment and follow up, heterogeneity was high and remained high after the systematic removal of each study. Although heterogeneity could not be accounted for by differences at the study level it is possible that factors such as cognitive function, not measured in the studies included in this review, may well be a mediating factor contributing to heterogeneity in this outcome.

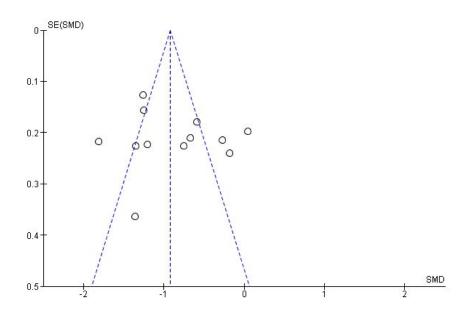
In sum, although high heterogeneity was identified in a range of meta-analyses, evaluation of clinical and methodological characteristics resulted in the decision to not remove any of the included studies.

### DS7 Funnel Plots for assessment of Publication Bias (of analyses with 10 or more studies)

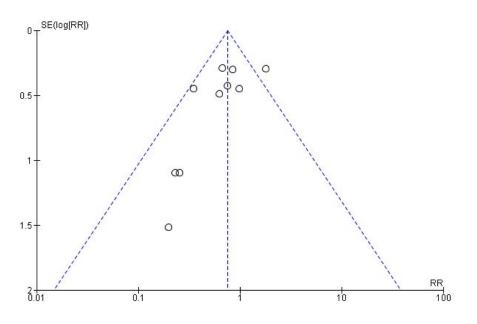




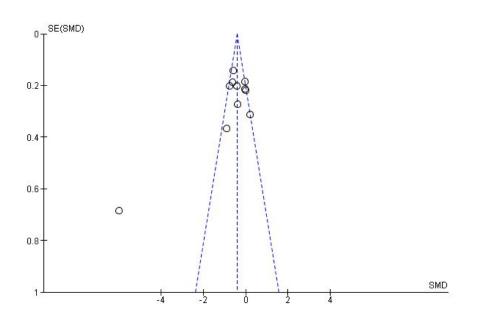
7.2 Total Symptoms: Follow Up



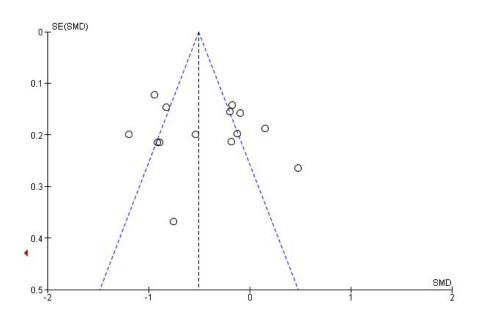
7.3 Readmissions (total events): Follow up



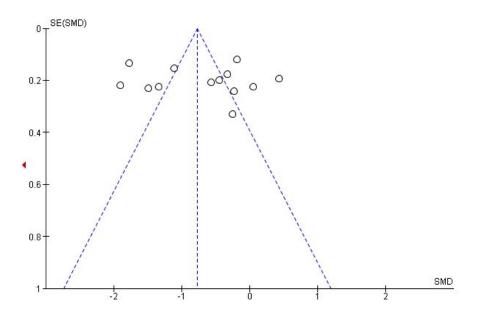
7.4 Recovery total: post treatment



## 7.5 Functioning: post-treatment



7.6 Functioning: Follow Up



### DS8 Post-hoc subgroup analysis of treatment as usual and active control groups for main outcomes

					Participants				Heterogeneity	
	Outcome	Time of data collection	Group	Trials (k)	SM/control	Estimate	Summary of estimate [95% CI]	<b>Z</b> , <i>p</i>	Q test	I <sup>2</sup> (%
Symptoms	(1) Tetel Surgeture	End of treatment	All TAU Active	17 9 5	912/1067 476/452 436/615	SMD	-0.43 [-0.63, -0.22] -0.47 [-0.79, -0.14] -0.40 [-0.67, -0.14]	4.12, <i>p</i> <.0001* 2.82, <i>p</i> = 0.005* 3.04, <i>p</i> = 0.002*	$\begin{array}{l} Q = 72.84, p < 0.0001 \\ Q = 44.36,  \mathrm{df} = 8 \; (\mathrm{P} < 0.00001); \; \mathrm{I}^2 = \% \\ Q = 5.31,  p = 0.26 \end{array}$	78† 82† 25
dimke	(1) Total Symptoms	Follow-up	All TAU Active	13 6 7	676/844 281/270 395/574	SMD	-0.88 [-1.19, -0.57] -0.84 [-1.23, -0.45] -0.91 [-1.38, -0.43]	5.52, <i>p</i> <.0001* 4.18, <i>p</i> < 0.0001* 3.75, <i>p</i> = 0.0002*	$\begin{array}{c} Q = 82.69, p < 0.0001 \\ Q = 16.39, p = 0.003 \\ Q = 65.72, p < 0.00001 \end{array}$	87† 76† 91†
Relapse	(2) <b>Mean</b> number of Readmissions to acute care	End of treatment	All TAU Active	5 2 3	315/456 124/124 191/332	SMD	-0.39 [-0.89, 0.11] -1.16 [-3.47, 1.16] -0.08 [-0.30, 0.13]	1.52, p = 0.13 0.98, p = 0.33 0.76, p = 0.45	Q = 38.72, p < 0.0001 Q = 34.73, p < 0.0001 Q = 2.59, p = 0.27	90† 97† 23
		Follow-up	All TAU Active	5 2 3	257/398 73/73 184/325	SMD	-0.92 [-1.63, -0.21] -2.27 [-5.78, 1.24] -0.30 [-0.64, 0.05]	2.53, <i>p</i> = 0.01* <b>1.27</b> , <i>p</i> = <b>0.20</b> <b>1.66</b> , <i>p</i> = <b>0.10</b>	Q = 57.74, p < 0.0001 Q = 42.06, p < 0.0001 Q = 5.55, p = 0.06	93 <sup>1</sup> 98 <sup>1</sup> 64 <sup>1</sup>
	<b>Length</b> of hospitalisation throughout treatment / follow-up	End of treatment	All TAU Active	6 2 4	359/543 124/124 235/419	SMD	-0.26 [-0.50, -0.02] 0.02 [-0.25, 0.30] -0.35 [-0.57, -0.14]	2.08, <i>p</i> = 0.04* <b>0.17</b> , <i>p</i> = <b>0.87</b> 3.23, <i>p</i> = 0.001*	Q = 10.77, p = 0.03 N/A Q = 4.70, p = 0.20	63 <sup>-</sup> N/A 36
		Follow-up	All TAU Active	7 3 4	350/558 122/146 228/412	SMD	-0.68 [-1.10, -0.25] -0.85 [-1.93, 0.23] -0.58 [-1.01, -0.15]	3.12, <i>p</i> =0.002* <b>1.54</b> , <i>p</i> = <b>0.12</b> 2.65, <i>p</i> = 0.008*	Q = 49.76, p < 0.0001 Q = 32.64, p < 0.0001 Q = 16.93, p = 0.0007	88 <sup>†</sup> 94 <sup>†</sup> 82 <sup>†</sup>
Recovery	(3) Recovery - Total	End of treatment	All TAU Active	11 9 2	507/506 419/379 88/127	SMD	-0.62 [-1.03, -0.22] -0.73 [-1.23, -0.23] -0.32 [-0.93, 0.29]	3.03, <i>p</i> = 0.002* 2.87, <i>p</i> = 0.004* <b>1.03</b> , <i>p</i> = <b>0.30</b>	Q = 89.3, p < 0.0001 Q = 84.39, p < 0.0001 Q = 4.63, p = 0.03	89† 91† 78†
	(3) Kecovery - 10tal	Follow-up	All TAU Active	7 5 2	543/591 462/471 81/120	SMD	-0.81 [-1.40, -0.22] -0.97 [-1.73, -0.21] -0.58 [-1.71, 0.54]	2.68, <i>p</i> = 0.007* 2.52, <i>p</i> = 0.01* <b>1.01</b> , <i>p</i> = <b>0.3</b> 1	$Q = 105.09 \ p < 0.0001$ $Q = 84.84, \ p < 0.0001$ $Q = 13.61, \ p = 0.0002)$	94† 95† 93†

				Trials	Participants	te			Heterogeneity	
	Outcome	Time of data collection	Group	(k)	SM/control	Estima	Summary of estimate [95% CI]	<b>Z</b> , <i>p</i>	Q test	I <sup>2</sup> (%)
					<u>(n)</u>					
ning	(4) Functioning	End of treatment	All TAU Active	15 8 7	884/1064 491/488 393/576	SMD	-0.56 [-0.85, -0.28] -0.45 [-0.88, -0.01] 0.71 [-1.02, 0.20]	3.90, p < 0.0001* 2.02, p = 0.04* 4.20, p < 0.0001*	Q = 121.25, p < 0.0001 Q = 73.59, p < 0.0001 Q = 20.86, p < 0.0001	$88^{\dagger} \\ 90^{\dagger} \\ 81^{\dagger}$
Function		Follow-up	All TAU Active	14 7 7	805/1000 313/320 492/680	SMD	-0.71 [-1.03, -0.39] -0.90 [-1.34, -0.45] -0.75 [-1.44, -0.05] -1.05 [-1.64, -0.46]	4.30, p < 0.0001* 3.97, p<0.0001* 2.10, p = 0.04* 3.50, p = 0.0005*	Q = 30.86, p < 0.0001 $Q = 237.9, p < 0.0001$ $Q = 97.36, p < 0.0001$ $Q = 122.69, p < 0.0001$	95† 94† 95†
		End of treatment	All TAU Active	9 8 1	440/423 396/383 44/40	SMD	-0.23 [-0.37, -0.10] -0.26 [-0.40, -0.12] 0.00 [-0.43, 0.43]	3.38, <i>p</i> = 0.0007* 3.56 P = 0.0004* <b>0.00</b> , <i>p</i> = <b>1.00</b>	Q = 7.83, p = 0.45 Q = 6.57, p = 0.47 N/A	0 0 N/A
QoL	(5) Quality of Life	Follow-up	All TAU Active	7 6 1	491/489 454/456 37/33	SMD	-0.25 [-0.37, -0.12] -0.25 [-0.38, -0.12] -0.17 [-0.64, 0.30]	3.84, <i>p</i> =0.0001* 3.78, <i>p</i> =0.0002* <b>0.72, <i>p</i>=0.47</b>	Q = 3.07, p = 0.80 Q = 2.96, p = 0.71 N/A	0 0 N/A

\*Statistically significant finding (p<0.05); † Indicates high heterogeneity: I<sup>2</sup> exceeds 50% and/or P value less than 0.10. Results in **bold** are different to main combined analysis.