

APPENDIX 13: CLINICAL STUDY CHARACTERISTICS

TABLES

1.1	<i>INTEGRATED SERVICE MODELS</i>	3
1.1.1	Characteristics of included studies.....	3
	CHANDLER2006	3
	DRAKE1998	4
	ESSOCK2006	5
	MORSE2006	6
1.1.2	Characteristics of excluded studies	7
	BAKER2002	7
	BELLACK2006	7
	CRAIG2008	7
	HICKMAN1997	7
	KEMP2007	7
	MALONEY2006.....	7
	NAEEM2005	7
	NAGEL 2009	7
1.1.3	References of excluded studies	7
1.2	<i>STAFFED ACCOMMODATION</i>	9
1.2.1	Characteristics of included studies.....	9
	BURNAM1995	9
1.3	<i>PSYCHOLOGICAL AND PSYCHOSOCIAL INTERVENTIONS</i>	10
1.3.1	Characteristics of included studies.....	10
	BAKER2006	10
	BARROWCLOUGH2001.....	11
	BARROWCLOUGH2010.....	12
	EDWARDS2006	14
	GRAEBER2003.....	15
	HELLERSTEIN1995	16
	JERRELL1995	17
	KAVANAGH2004.....	18
	RIES2004	19
	SCHMITZ2002	20
	TRACY2007	21
	WEISS2007.....	22
	WEISS2009.....	23
1.3.2	Characteristics of excluded studies	24
	BAKER2002	24
	BELLACK2006	24
	CRAIG2008	24
	HICKMAN1997	24
	KEMP2007	24
	MALONEY2006.....	24

NAEEM2005	24
NAGEL 2009	24
SWANSON1999	24
1.3.3 References of excluded studies	25
1.4 <i>EXPERIENCE OF CARE, PSYCHOSIS AND SUBSTANCE MISUSE</i>	27
1.4.1 Characteristics of included studies.....	27
1.4.2 References of excluded studies	39

1.1 INTEGRATED SERVICE MODELS

1.1.1 Characteristics of included studies

CHANDLER2006¹

Bibliographic reference	Chandler, D. W. & Spicer, G. (2006) Integrated treatment for jail recidivists with co-occurring psychiatric and substance use disorders. <i>Community Mental Health Journal</i> , 42, 405–425.
Methods	Allocation: randomised (computer-generated). Blindness: not stated. Duration: 36 months. Setting: community and jail. Consent: given. Raters: not applicable (outcomes were administrative). Country: US.
Participants	Diagnosis: 66% DSM-IV schizophrenia, schizoaffective disorder, bipolar or psychotic disorder NOS and 100% current substance-use disorder (34% alcohol dependence, 47% drug dependence)*. N = 182. Age: 18 to 78 years. Sex: 131 male, 51 female. Ethnicity: 66% African-American. Inclusion criteria: current serious mental illness and substance-use disorder, US resident, not sentenced to prison, not on parole, not currently enrolled in another program, GAF ≤50, English or Spanish speaking, have at least two jail episodes in 2 years prior.
Interventions	1. In-custody standard care + brief aftercare + integrated dual disorders treatment. Post-custody; motivational interviewing, substance abuse counselling, group treatment oriented to both disorders, family psychoeducation regarding dual disorders, multidisciplinary team, integrated substance abuse specialists, stage-wise interventions, time unlimited services, outreach and so on. n = 103. 2. Control group: In-custody standard care + usual post-custody services + 60 days of post-release case management and housing assistance. n = 79.
Outcomes	Lost to treatment. Lost to evaluation. Relapse: hospitalisation (data skewed). Other: arrests, convictions, felonies, jail days, hours of medication services (data skewed).
Notes.	Not ITT analysis. Authors have kindly provided further data. *Some participants had more than one dependence.

¹ The information contained in this table is derived from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), with additional information extracted from the primary study publication.

DRAKE1998²

Bibliographic reference	Drake, R. E., McHugo, G. J., Clark, R. E., <i>et al.</i> (1998) Assertive community treatment for patients with co-occurring severe mental illness and substance use disorder: a clinical trial. <i>American Journal of Orthopsychiatry</i> , 68, 201-215.
Methods	Allocation: randomised (no further description)*. Blindness: not stated (raters blind to allocation, see below). Duration: 36 months. Setting: community. Consent: given. Raters: independent, blind to group allocation. Country: US.
Participants	Diagnosis: 53% DSM-III-R schizophrenia with active DSM-III-R substance-use disorder (73% alcohol abuse, 42% drug abuse)**. N = 223. Age: 18 to 60 years, mean ~34 years. Sex: 165 male, 58 female. Ethnicity: 96% white. Inclusion criteria: active DSM-III-R substance-use disorder in past 6 months; no other medical conditions or mental retardation.
Interventions	1. Integrated ACT: community-based, high-intensity, direct substance abuse treatment by team members, use of stage-wise dual-disorder model, dual-disorder treatment groups and exclusive team focus on patients for those with dual disorders. Caseload ~12. n = 109. 2. Control group: standard case management: community-based, team working with client's support system and vigorously addressing co-occurring substance use. Caseload ~25. n = 114.
Outcomes	Lost to treatment. Lost to evaluation. Death. Substance use: Substance Abuse Treatment Scale, not in remission, progress towards recovery. Other: number of days living in stable community residences, QOLI (General Life Satisfaction Scale). Substance use: AUS, Clinical Drug Use Scale, number of days when misusing (data skewed). Mental state: BPRS (data skewed). Relapse: hospitalisation (data skewed). Unable to use: Other: QOLI (subscales).
Notes.	<i>Not ITT analysis.</i> <i>*May be prone to bias.</i> <i>Authors have kindly provided further data.</i> <i>**Some participants had more than one dependence.</i>

² The information contained in this table is derived from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), with additional information extracted from the primary study publication.

ESSOCK2006³

Bibliographic reference	Essock, S. M., Mueser, J. K. T., Drake, R. E., <i>et al.</i> (2006) Comparison of ACT and standard case management for delivering integrated treatment for co-occurring disorders. <i>Psychiatric Services</i> , 57, 185–196.
Methods	Allocation: randomised (using computer-generated tables at two sites). Blindness: not stated (raters blind to allocation, see below). Duration: 36 months. Setting: community. Consent: given. Raters: independent, blind to the study condition. Country: US.
Participants	Diagnosis: 76% DSM-III-R schizophrenia, 17% mood disorder with co-occurring DSM-III-R substance-use disorder (74% alcohol abuse, 81% other substances)*. N = 198. Age: mean ~37 years. Sex: 142 adult male, 56 adult female. Ethnicity: 55% African-American, 27% white, 14% hispanic, 4% other. Inclusion criteria: major psychotic disorder and active substance-use disorder within past 6 months, high service use in the past 2 years, homelessness or unstable housing, poor independent living skills, no pending legal charges, no medical conditions or mental retardation that would preclude participation; if inpatient, discharge scheduled.
Interventions	1. Integrated ACT with a direct substance use component. n = 99. 2. Control group: standard case management.** (some services provided directly and teams had training from study authors in integrated treatment, including comprehensive assessment, individual motivational interviewing, group treatments, and stage-wise interventions). n = 99.
Outcomes	Lost to treatment. Lost to evaluation. Death. Relapse: number of patients hospitalised during study. Other: number of days living in stable community residences, QOLI (General Life Satisfaction Scale), GAS (see GAF). Substance use: AUS, Clinical Drug Use Scale, Substance Abuse Treatment Scale, number of days using in the past 6 months (skewed data). Mental state: expanded BPRS hospitalisation: days in hospital and days in hospital or in jail (skewed data).
Notes.	<i>Not ITT analysis.</i> <i>* Some participants had more than one dependence.</i> <i>*Participants paid US\$15 for each interview and additional US\$5 for each urine and saliva sample.</i> <i>** Refer to correspondence regarding clinical case management team (Kanter, J. [2006] Clinical case management, case management and ACT. Psychiatric Services, 57, 578).</i> <i>Authors kindly provided additional data.</i>

³ The information contained in this table is derived from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), with additional information extracted from the primary study publication.

MORSE2006⁴

Bibliographic reference	Morse, G. A., Calsyn, R. J., Klinkenberg, W. D., <i>et al.</i> (2006) Treating homeless clients with severe mental illness and substance use disorders: costs and outcomes. <i>Community Mental Health Journal</i> , 42, 377–404.
Methods	Allocation: randomised (no further description)*. Blindness: not stated. Duration: 24 months. Setting: community. Consent: given. Raters: not clear if independent or blind*. Country: US.
Participants	Diagnosis: DSM-IV 48% schizophrenia, 19% schizo-affective, 11% atypical psychotic disorder, 11% bipolar disorder, 9% major depression-recurrent disorder, 2% other. All had one or more substance-use disorders; 46% substance-dependence disorder for alcohol and/or drugs; 64% substance-abuse disorder for alcohol and/or drugs, 40% an alcohol-only diagnosis, 18% drug-only diagnosis, 42% had both drug and alcohol disorders (cocaine being the most frequently used drug [34%], followed by cannabis [19%])**. N = 196*. Age: 18 to 66 years, mean ~40 years. Sex: 119 male, 30 female. Ethnicity: 73% African-American, 25% caucasian, 2% other. Inclusion criteria: homeless, severe mental illness, DSM-IV substance-use disorder, and not currently enrolled in an intensive case-management program.
Interventions	1. Integrated ACT. n = 46. 2. ACT only. Referred clients to other community providers for outpatient or individual substance abuse services and to 12-step groups. n = 54. 3. Control group: provided with a list of community agencies (mental health and substance abuse treatment) and staff provided linkage assistance to facilitate access. n = 49.
Outcomes	Substance use: Substance Use Severity Scale (data skewed). Number of days in stable housing (data skewed). Unable to use: Lost to treatment (not reported by group). Lost to evaluation (not reported by group). Substance use: number of days using substances (unclear measure). Mental state: BPRS (averaged item scores reported, not totals). Other: client satisfaction (not peer-reviewed scale).
Notes.	<i>Not ITT analysis</i> <i>*May be prone to bias. Also, figures are based on the 149 participants who received treatment.</i> <i>**Participants paid US\$5 for short and US\$10 for long interview.</i> <i>***No usable data, only skewed data reported.</i>

⁴ The information contained in this table is derived from the review developed for the Cochrane Collaboration by Cleary and (2008), with additional information extracted from the primary study publication.

1.1.2 Characteristics of excluded studies

BAKER2002

Reason for exclusion	Minority of participants with schizophrenia.
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BELLACK2006

Reason for exclusion	<50% of sample had psychosis.
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CRAIG2008

Reason for exclusion	Study of training, not service delivery.
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HICKMAN1997

Reason for exclusion	Insufficient information available to assess the risk of bias (unable to contact author).
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KEMP2007

Reason for exclusion	Sample size <10 in one arm of trial.
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MALONEY2006

Reason for exclusion	Insufficient information available to assess the risk of bias (unable to contact author).
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NAEEM2005

Reason for exclusion	Psychosis with substance misuse was not the primary focus of this study, and people with high level of substance misuse were excluded.
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NAGEL 2009

Reason for exclusion	<50% of sample had psychosis.
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1.1.3 References of excluded studies

BAKER2002

Baker, A., Lewin, T., Reichler, H., *et al.* (2002) Evaluation of a motivational interview for substance use within psychiatric inpatient services. *Addiction*, 97, 1329–1338.

BELLACK2006

Bellack, A. S., Bennett, M. E., Gearon, J. S., *et al.* (2006) Randomized clinical trial of a new behavioral treatment for drug abuse in people with severe and persistent mental illness. *Archives of General Psychiatry*, 63, 426–432.

CRAIG2008

Craig, T. K. J., Johnson, S., McCrone, P., *et al.* (2008) Integrated care for co-occurring disorders: psychiatric symptoms, social functioning, and service costs at 18 months. *Psychiatric Services*, 59, 276–282.

Hughes, E., Wanigaratne, S., Gournay, K., *et al.* (2008) Training in dual diagnosis interventions (the COMO study): randomised controlled trial. *BMC Psychiatry*, 8, 1–9. [Secondary reference]

Johnson, S., Thornicroft, G., Afuwape, S., *et al.* (2007) Effects of training community staff for in interventions for substance misuse in dual diagnosis patients with psychosis (COMO study): cluster randomised trial. *British Journal of Psychiatry*, 191, 451–452. [Secondary reference]

HICKMAN1997

Hickman, M. E. (1997) *The effects of personal feedback on alcohol intake in dually diagnosed clients: an empirical study of William R. Miller's motivational enhancement therapy* [unpublished thesis]. University Graduate School, Department of Counseling Psychology, Indiana University.

KEMP2007

Kemp, R., Harris, A., Vurel, E., *et al.* (2007) Stop using stuff: trial of a drug and alcohol intervention for young people with comorbid mental illness and drug and alcohol problems. *Australasian Psychiatry*, 15, 490–493.

MALONEY2006

Maloney, M. P. (2006) *Reducing criminal recidivism in jail-incarcerated mothers with co-occurring disorders* [unpublished data only]. Manuscript kindly provided by Dr Maloney.

NAEEM2005

Naeem, F., Kingdon, D. & Turkington, D. (2005) Cognitive behaviour therapy for schizophrenia in patients with mild to moderate substance misuse problems. *Cognitive Behaviour Therapy*, 34, 207–215.

NAGEL 2009

Nagel, T., Robinson, G., Condon, J., *et al.* (2009) Approach to treatment of mental illness and substance dependence in remote Indigenous communities: results of a mixed methods study. *Australian Journal of Rural Health*, 17, 174–182.

1.2 STAFFED ACCOMMODATION

1.2.1 Characteristics of included studies

BURNAM1995⁵

Bibliographic reference	Burnam, M. A., Morton, S. C., McGlynn, E. A., <i>et al.</i> (1995) An experimental evaluation of residential and non-residential treatment for dually diagnosed homeless adults. <i>Journal of Addictive Diseases</i> , 14, 111-134.
Methods	Allocation: randomised (no further description)*. Blindness: not stated. Duration: 9 months. Setting: community, residential. Raters: not clear if independent or blind*. Country: US.
Participants	Diagnosis: schizophrenia and or major affective disorder with co-occurring substance disorder**. N = 276. Age: mean ~37 years. Sex: 232 adult male, 44 adult female. Ethnicity: 58% white. Inclusion criteria: homeless, substance abuse within past year.
Interventions	1. Integrated mental health and substance use treatment. Residential: educational groups, 12-step programmes including AA or NA, discussion groups, individual counselling, case-management, psychiatric consultation, ongoing medication management and general community activities. n = 67. 2. Non-residential: the above model operated 1 p.m. to 9 p.m., 5 days per week; more case management provided for basic needs. n = 144***. 3. Control group: routine care with no special intervention but free to access other services (shelters, mental health clinics and AA groups). n = 65.
Outcomes	Lost to evaluation. Other: number of days living in independent housing (data skewed) . Unable to use: Substance use: level of alcohol in previous 30 days (modified measure used). Mental state: Symptom Checklist - 90 items and Psychiatric Epidemiology Research Interview Life Events Scale (modified version of scales used).
Notes.	<i>ITT analysis.</i> <i>*May be prone to bias.</i> <i>**Participants paid US\$10 for each assessment interview.</i> <i>***Only residential and control group data used. Non-residential intervention did not meet a priori category.</i> <i>Authors kindly provided further data.</i>

⁵ The information contained in this table is derived from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), with additional information extracted from the primary study publication.

1.3 PSYCHOLOGICAL AND PSYCHOSOCIAL INTERVENTIONS

1.3.1 Characteristics of included studies

BAKER2006⁶

Bibliographic reference	Baker, A., Bucci, S., Lewin, T. J., <i>et al.</i> (2006) Cognitive-behavioural therapy for substance use disorders in people with psychotic disorders. <i>British Journal of Psychiatry</i> , 188, 439–448.
Methods	Allocation: randomised using cards/envelopes. Blindness: not stated, but raters blind (see below). Duration: 12 months. Setting: community. Consent: given. Raters: blind to treatment allocation. Country: Australia.
Participants	Diagnosis: 75% ICD-10 schizophrenia or schizoaffective disorder with SCID-I diagnosis of abuse or dependence past 12 months (alcohol 69%, cannabis 74%, amphetamine 42%)*. N = 130. Age: mean 29 years. Sex: 102 male, 28 female. Ethnicity: not reported. Inclusion criteria: SCID abuse of or dependence on alcohol, cannabis or amphetamine during preceding month, age of at least 15 years, ability to speak English, having a confirmed ICD-10 psychotic disorder, no organic brain impairment and not intending to move from area within 12 months.
Interventions	1. Motivational interviewing and CBT (ten weekly 1-hour sessions) + routine care. n = 65. 2. Control group: routine care plus self-help books. n = 65.
Outcomes	Lost to evaluation. Death. Substance use: Opiate Treatment Index (OTI) (polydrug use only). Other: GAF. Substance use: OTI (alcohol, cannabis, amphetamine – skewed data). Mental state: BPRS, BDI-II (data skewed). Unable to use: Lost to treatment (no control group data).
Notes.	<i>Not ITT analysis. Authors report that a separate ITT analysis was run with similar results.</i> <i>*Some participants were dependent on more than one of these.</i> <i>Participants paid (Australian)\$20 for each assessment interview.</i>

⁶ The information contained in this table is derived from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), with additional information extracted from the primary study publication.

BARROWCLOUGH2001⁷

Bibliographic reference	Barrowclough, C., Haddock, G., Tarrier, N., <i>et al.</i> (2001). Randomised controlled trial of cognitive behavioural therapy plus motivational intervention for schizophrenia and substance use. <i>American Journal of Psychiatry</i> , 158, 1706–1713.
Methods	Allocation: randomised by third party (using computer-generated list). Blindness: single. Duration: 12, 18* months. Setting: own homes. Recruitment: Screened through hospital admission records from the mental health units of three NHS hospital trusts in Tameside and Glossop, Stockport and Oldham. Consent: given. Raters: independent and blind. Country: UK.
Participants	Diagnosis: ICD-10 and DSM-IV schizophrenia or schizoaffective disorder with DSM-IV substance abuse or dependence. N = 36. Age: 18 to 65 years, mean ~ 31 years. Sex: 33 male, 3 female. Ethnicity: white European. Inclusion criteria: current substance abuse, in current contact with mental health services, minimum of 10 hours face-to-face contact with the caregiver per week, no organic brain disease or other serious medical illness or learning disability.
Interventions	1. Family support worker plus motivational interviewing, manualised individual CBT for the participant and CBT for family/caregiver (a total of 29 individual sessions) + routine care. n = 18. 2. Control group: routine care plus family support worker. n = 18.
Outcomes	Lost to treatment. Lost to evaluation. Death. Mental state: PANSS. Relapse: number of participants experiencing relapse. Other: GAF, Social Functioning Scale. Mental state: PANSS (some data skewed). Unable to use: Substance use: ASI – percentage days abstinent (no mean/standard deviation). Relapse: duration of relapse (only median and range supplied). Other: Social Functioning Scale 18-month (only adjusted means reported).
Notes.	<i>Part ITT analysis.</i> <i>*18 month data (see secondary reference, Haddock and colleagues [2003]).</i>

⁷ The information contained in this table is derived from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), with additional information extracted from the primary study publication.

BARROWCLOUGH2010

Bibliographic reference	Barrowclough, C., Haddock, G., Wykes, T., <i>et al.</i> (2010) Integrated motivational interviewing and cognitive behavioural therapy for people with psychosis and comorbid substance misuse: randomised controlled trial. <i>British Medical Journal</i> , 341, c6325. Doi: 10.1136/bmj.c6325
Methods	<p>Allocation: randomised by third party (using computer-generated list; performed with a minimisation algorithm taking into account substance type [alcohol alone; drugs alone; alcohol and drugs], main drug of use [cannabis; amphetamines; opiates; other] and the NHS Trust).</p> <p>Blindness: open.</p> <p>Duration: 12 months (24-month follow).</p> <p>Setting: usually participants own homes.</p> <p>Recruitment: screened through care-coordinator case-notes from six large NHS mental health trusts in the UK covering Greater Manchester, Lancashire and South London. Research assistants then asked potential participants to complete a substance use checklist (those not meeting DSM-IV dependence or abuse criteria for alcohol or an illicit drugs were not eligible to participate in the trial).</p> <p>Consent: given.</p> <p>Raters: independent and blind.</p> <p>Country: UK.</p>
Participants	<p>Diagnosis: 100% clinical diagnoses of schizophrenia, schizophreniform or schizoaffective disorder and DSM-IV diagnoses of drug and/or alcohol dependence or abuse.</p> <p>N = 327.</p> <p>Age: mean 38 years.</p> <p>Sex: 283 adult male, 44 adult female.</p> <p>Ethnicity: 81% white, 11% black.</p> <p>Inclusion criteria: aged over 16 years; in current contact with mental health services; a current clinical diagnosis of non-affective psychotic disorder (ICD-10 and/or DSM-IV); DSM-IV diagnosis of drug and/or alcohol dependence or abuse; meeting minimum levels of alcohol (exceeding 28 units for males and 21 units for females on at least half of the weeks in the past 3 months) or illicit drug use (use on at least 2 days per week in at least half of the weeks in the past 3 months); no significant history of organic factors implicated in the aetiology of psychotic symptoms; English speaking; having a fixed abode (including bed and breakfast accommodation or hostel).</p>
Interventions	<ol style="list-style-type: none"> 1. Motivational interviewing and CBT (26 individual sessions delivered over 12 months) + routine care. n = 164. 2. Control group: routine care. n = 163.
Outcomes	<p>Primary outcome: admission to hospital for a reason related to psychosis or death from any cause, versus not admitted to hospital and alive in the 12-month post-treatment period.</p> <p>Secondary outcomes: case notes were also used to assess frequency and duration of hospital admissions and relapses in the year before the trial, and during the 2-year trial period. Substance use was assessed using TLFB. The Readiness to Change Questionnaire and the Inventory of Drug Use Consequences were used to assess motivation to change substance use and perceived negative consequences of use, respectively. The total score and positive, negative and general subscales of the PANSS were used to assess symptoms. Participants' functioning was assessed using the total score,</p>

	symptoms and functioning subscales of the GAF.
<i>Notes.</i>	-

EDWARDS2006⁸

Bibliographic reference	Edwards, J., Elkins, K., Hinton, M., <i>et al.</i> (2006) Randomized controlled trial of a cannabis-focused intervention for young people with first-episode psychosis. <i>Acta Psychiatrica Scandinavica</i> , 114, 109–117.
Methods	Duration: 6 months. Setting: community youth mental health service in Melbourne. Consent: given. Blindness: single-blind. Raters: independent, blind to the treatment condition. Country: Australia.
Participants	Diagnosis: 72% DSM-IV schizophrenia/schizophreniform, 11% affective psychosis, 17% NOS/delusional/other actively using cannabis. N = 47. Age: mean ~21 years. Sex: 34 male, 13 female. Ethnicity: not reported. Inclusion criteria: DSM-IV diagnosis of a psychotic disorder (that is, schizophrenia, schizophreniform, schizoaffective, delusional disorder, bipolar disorder, major depressive disorder with psychotic features, psychosis not otherwise stated and brief reactive psychosis). Informed consent for research participation, adequate English language comprehension and patients continuing to use cannabis at 10 weeks post-initial clinical stabilisation.
Interventions	1. Cannabis-focused intervention (cannabis and psychosis therapy) for individuals with first-episode psychosis. Cannabis and psychosis therapy consisted of a cognitive-behavioural-oriented program delivered in weekly sessions by trained clinicians over 3 months. n = 23. 2. Active control condition involving psychoeducation plus standard Early Psychosis Prevention and Intervention Centre care. Includes case management, regular psychiatric review and medication, access to mobile assessment and treatment, family work, group programs and a prolonged recovery clinic. n = 24.
Outcomes	Lost to treatment. Lost to evaluation. Substance use: percentage of patients using cannabis in the last 4 weeks. Other: Social and Occupational Functioning Assessment Scale. Substance use: Readiness to Change Questionnaire – C (adapted scale), Cannabis and Substance uSe Assessment Schedule (modified Specialist Clinical Addiction Network) (all data skewed). Unable to use: Mental state: BDI-SF, Scale for the Assessment of Negative Symptoms (all data skewed), BPRS (some data skewed, unvalidated subscales). Other: outpatient attendance and medication: Service Utilization Rating Scale (data skewed).
Notes	<i>ITT analysis</i>

⁸ The information contained in this table is derived from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), with additional information extracted from the primary study publication.

GRAEBER2003⁹

Bibliographic reference	Graeber, D. A., Moyers, T. B., Griffith, G., <i>et al.</i> (2003) A pilot study comparing motivational interviewing and an educational intervention in patients with schizophrenia and alcohol use disorders. <i>Community Mental Health Journal</i> , 39, 189–202.
Methods	Allocation: randomised (in a yoked fashion). Blindness: not stated. Duration: 6 months. Setting: medical centre. Recruitment: from inpatient and outpatient mental health settings. Consent: given. Raters: not blinded*. Country: US.
Participants	Diagnosis: 100% DSM-IV schizophrenia and met criteria for an alcohol use disorder within the 3-month period prior to study enrolment; patients with additional non-alcohol substance use (except active intravenous drug abuse) were eligible for protocol enrolment. N = 30. Age: mean ~42.87 years. Sex: 292 adult male, 1 adult female. Ethnicity: 40% white, 40% hispanic, 20%, African–American. Inclusion criteria: as above.
Interventions	1. Three-session motivational interviewing intervention, focused on personal choice and responsibility and de-emphasised labelling, with the therapist assuming a directive and client-centred style. n = 15. 2. Control group: three-session educational treatment intervention was didactic, focused on the material being delivered with the therapist assuming a directive interpersonal style. n = 15.
Outcomes	Lost to evaluation. Substance use: abstinence rates. Substance use: Brief Drinker Profile (data skewed).
Notes.	<i>Not ITT analysis.</i> <i>*Prone to bias.</i>

⁹ The information contained in this table is derived from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), with additional information extracted from the primary study publication.

HELLERSTEIN1995¹⁰

Bibliographic reference	Hellerstein, D. J., Rosenthal, R. N., & Miner, C. R. (1995) A prospective study of integrated outpatient treatment for substance-abusing schizophrenic patients. <i>American Journal on Addictions</i> , 4, 33-42.
Methods	Allocation: randomised (no further description)*. Blindness: not stated. Duration: 8 months. Setting: community, outpatient. Raters: unclear if independent or blind*. Country: US.
Participants	Diagnosis: RDC schizophrenia with 74% DSM-III-R psychoactive substance abuse/dependence. N = 47. Age: 18 to 50 years, mean ~32 years. Sex: 36 male, 11 female. Ethnicity: 43% African-American, 32% hispanic. Inclusion criteria: psychoactive substance abuse/dependence, desire for substance abuse treatment, no life-threatening medical illness or need for long-term hospitalisation.
Interventions	1. Group outpatient psychotherapy and psychoeducation plus drug treatment all at same site, twice weekly. n = 23. 2. Control group: treatment as usual: comparable levels of psychiatric care and substance abuse treatment from separate sites without formal case-coordination. n = 24.
Outcomes	Lost to treatment. Substance use: ASI-drug (change data). Mental state: ASI-psychiatric (change data). Relapse: days in hospital (data skewed).
Notes.	<i>ITT analysis.</i> <i>*May be prone to bias.</i> <i>Further data collected and mentioned in 2001 paper.</i>

¹⁰ The information contained in this table is derived from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), with additional information extracted from the primary study publication.

JERRELL1995¹¹

Bibliographic reference	Jerrell, J. M. & Ridgely, S. M. (1995) Comparative effectiveness of three approaches to serving people with severe mental illness and substance abuse disorders. <i>The Journal of Nervous and Mental Disease</i> , 183, 566–576.
Methods	Allocation: randomised (using the urn method). Blindness: not stated. Duration: 18 months. Setting: community. Consent: given. Raters: independent and unclear if blind*. Country: US.
Participants	Diagnosis: 62% DSM-III-R schizophrenia with co-occurring substance disorder. N = 47. Age: 18 to 59 years, mean ~34 years. Sex: 33 male, 14 female. Ethnicity: 64% white. Inclusion criteria: substance-abuse disorder, previous inpatient or residential psychiatric treatment, plus either poor work/life-skills history in previous 2 years, history of intervention by mental health authorities or police involvement for inappropriate social behaviour.
Interventions	1. Behavioural skills programme: psychoeducational approach with self-management skills, repeated practice and reinforcement. Weekly group sessions with two licensed clinicians. n = 22. 2. Control group: twelve-step recovery programme: clinical staff (some 'recoverers') offered mock AA meetings within the mental health centre, took or referred clients to community AA meetings, facilitated a sponsor relationship and provided counselling. n = 25.
Outcomes	Lost to treatment. Other: Role Functioning Scale, Social Adjustment Scale for the Severely Mentally Ill. Substance use: C-DIS-R (data skewed and no author analysis of randomised cohort). Mental state: C-DIS-R (data skewed and no author analysis of randomised cohort). Other: Satisfaction with Life Scale (not peer-reviewed scale).
Notes.	<i>Part ITT analysis.</i> <i>*May be prone to bias.</i> <i>Data reported is for randomised cohort only – kindly supplied by the authors.</i>

¹¹ The information contained in this table is derived from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008)., with additional information extracted from the primary study publication.

KAVANAGH2004¹²

Bibliographic reference	Kavanagh, D. J., Waghorn, G., Jenner, L., <i>et al.</i> (2004a). Demographic and clinical correlates of comorbid substance use disorders in psychosis: multivariate analyses from an epidemiological sample. <i>Schizophrenia Research</i> , 66, 115–124.
Methods	Allocation: randomised (permutations table for each site). Blindness: raters blind (see below). Duration: 12 months. Setting: hospital and community. Recruitment: consenting psychiatric inpatients with early psychosis from Royal Brisbane, Logan, or Wolstone Park Hospitals in Australia. Consent: given. Raters: blind to treatment allocation. Country: Australia.
Participants	Diagnosis: 100% DSM-IV psychotic disorder with a current DSM-IV substance-use disorder (88% alcohol, 76% cannabis, 12% inhalants, 8% cocaine or heroin). N = 25. Age: 17 to 31 years, mean: 23 years. Sex: 15 male, 10 female. Ethnicity: 84% Anglo-Saxon. Inclusion criteria: 16 to 35 years, consensus diagnosis of a DSM-IV psychotic disorder; a current DSM-IV substance-use disorder; less than two previous episodes of psychosis, <3 years since the first psychotic episode, less than three previous episodes of psychosis, able to converse in English without an interpreter, no diagnosis of developmental disability or amnesic disorder, not currently receiving other treatment for substance abuse, and, not currently taking heroin or methadone.
Interventions	1. Start Over and Survive. Brief motivational intervention comprising 3 hours of individual treatment over six to nine sessions, usually completed within 7 to 10 days as an inpatient, + routine care. n = 13. 2. Control group: routine care comprised of pharmacotherapy, access to inpatient programmes and aftercare involving either case management or general practice consultations. n = 12.
Outcomes	Lost to evaluation. Substance use: number of participants abstinent or improved on all substances at 12 months.
<i>Notes.</i>	<i>ITT analysis.</i>

¹² The information contained in this table is derived from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), with additional information extracted from the primary study publication.

RIES2004

Bibliographic reference	Ries, R. K., Dyck, D. G., Short, R., <i>et al.</i> (2004) Outcomes of managing disability benefits among patients with substance dependence and severe mental illness. <i>Psychiatric Services</i> , 55, 445–447.
Methods	Allocation: randomised (stratified according to baseline substance use and blocked by case manager). Blindness: raters blind (see below). Duration: 6.5 months. Setting: community (urban mental health centre). Recruitment: volunteers from approximately 140 patients who attended the centre. Consent: given. Raters: clinical team blind to allocation. Country: US.
Participants	Diagnosis: 73% schizophrenia or schizoaffective disorder, 24% major recurrent depression or bipolar disorder, 2% other, and DSM-IV substance misuse disorder with active substance use in the previous 6 months. N = 41. Age: not reported. Sex: not reported. Ethnicity: not reported. Inclusion criteria: severe mental illness plus substance misuse and able to provide written consent.
Interventions	1. Contingency management of supplementary social security income/food vouchers and motivational message. n = 22. 2. Non-contingency management of benefits. n = 19.
Outcomes	Number of weeks of substance misuse, defined by a positive weekly urine drug screen or a positive weekly case manager rating of drug or alcohol use. (Missing weekly substance-use data [about 25% of potential evaluations] were recorded as substance use unless the patient was in the hospital or jail over the previous and current week.)
<i>Notes.</i>	-

SCHMITZ2002¹³

Bibliographic reference	Schmitz, J. M., Averill, P., Sayre, S., <i>et al.</i> (2002) Cognitive-behavioural treatment of bipolar disorder and substance abuse: a preliminary randomized study. <i>Addictive Disorders and Their Treatment</i> , 1, 17-24.
Methods	Allocation: randomised (stratified by sex and diagnosis). Blindness: not stated. Duration: 3 months. Setting: community (study conducted at outpatient treatment research clinic). Recruitment: advertisements put out in the community, or recruited after discharge from inpatient treatment at a local psychiatric hospital. Consent: given. Raters: not clear if independent or blind*. Country: US.
Participants	Diagnosis: 100% DSM-IV Bipolar disorder and substance-use disorder (72% alcohol, 61% cocaine, 26% marijuana, 59% were dependent on more than one drug). N = 46. Age: 34.6 (6.8) years. Sex: 22 male, 24 female. Ethnicity: 80% caucasian. Inclusion criteria: English-speaking adults between the ages of 15 and 55 years, dually diagnosed with bipolar disorder and a substance-use disorder, free of other Axis I diagnoses requiring treatment, without serious legal and medical problems and competent to give informed consent.
Interventions	1. Medication monitoring and CBT (MM+CBT). In addition to receiving MM treatment, this condition included 16 individual therapy sessions provided by trained counsellors. CBT integrates relapse prevention and includes specific skill-training techniques (for example, daily self-monitoring of mood, drug clinics, didactic presentations, handouts and take home materials). n = 25. 2. Control group: routine care, MM consists of four brief clinic visits focused on discussion of medication compliance, side effects, drug use and mood symptoms using the MM interview. The style of MM sessions was more supportive than directive and did not include coping training methods or other CBT. n = 21.
Outcomes	Lost to treatment. Substance use: percentage of participants using drugs and alcohol by 3 months. Other: number of participants compliant with medication. Substance use: days reporting drug and alcohol use (data skewed). Mental state: days reporting depressive and manic symptoms (data skewed, some sub-data analysis significant but numbers of participants not provided).
Notes.	<i>Not ITT analysis.</i> <i>*May be prone to bias.</i>

¹³ The information contained in this table is derived from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), with additional information extracted from the primary study publication.

TRACY2007

Bibliographic reference	Tracy, K., Babuscio, T., Nich, C., <i>et al.</i> (2007) Contingency management to reduce substance use in individuals who are homeless with co-occurring psychiatric disorders. <i>The American Journal of Drug and Alcohol Abuse</i> , 33, 253-258.
Methods	Allocation: randomised. Blindness: not reported. Duration: 1 month. Setting: community (homeless shelter). Recruitment: volunteers from those seeking shelter. Consent: given. Raters: not reported. Country: US.
Participants	Diagnosis: 100% current or lifetime DSM-IV diagnosis of an Axis I psychiatric disorder and current diagnosis of cocaine or alcohol abuse or dependence. N = 30. Age: not reported. Sex: not reported. Ethnicity: not reported. Inclusion criteria: Axis I psychiatric disorder, current diagnosis of cocaine or alcohol abuse or dependence, were seeking shelter and at least 18 years of age.
Interventions	1. Petry's low-cost contingency management with variable ratio reinforcement. n = 15. 2. Assessment-only treatment. n = 15.
Outcomes	Self-reported cocaine use (assessed by Substance Use Calendar and confirmed by urine sample). Alcohol use (assessed by breathalyser)*. Substance use (assessed by ASI).
Notes.	<i>*Individuals in both conditions received compensation for assessments as follows: US\$30 for screening, baseline and termination interviews, and US\$5 for each weekly assessment.</i>

WEISS2007¹⁴

Bibliographic reference	Weiss, R. D., Griffin, M. L., Kolodziej, M. E., <i>et al.</i> (2007) A randomized trial of integrated group therapy versus group drug counselling for patients with bipolar disorder and substance dependence. <i>American Journal of Psychiatry</i> , 164, 100–107.
Methods	Allocation: randomised (no further description)*. Blindness: not stated. Duration: 8 months. Setting: hospital programme. Consent: given. Raters: not blind*. Country: US.
Participants	Diagnosis: 100% DSM-IV bipolar disorder and substance dependence (dependence: 27% alcohol, 26% marijuana, 16% cocaine, 15% sedatives, 13% opioids, 2% amphetamines, 2% polydrug). N = 62. Age: 41.9 (10.9) years. Sex: 30 adult male, 32 adult female. Ethnicity: 94% Caucasian. Inclusion criteria: current DSM-IV diagnosis of bipolar disorder and substance dependence (not nicotine), substance use within the last 60 days, currently on mood stabiliser, 18 years or over, no current psychosis, not a danger to self or others, no concurrent group or residential treatment.
Interventions	1. Integrated CBT: 20 weekly 1-hour group meetings with emphasis on relapse prevention for both bipolar disorder and substance-use disorder. n = 31. 2. Control group: group drug counselling: 20 weekly 1-hour group meetings with emphasis on drug counselling only (no bipolar disorder counselling). n = 31.
Outcomes	Lost to treatment. Substance use: days per month of alcohol and drug use, ASI (skewed data). Unable to use: Mental state: Hamilton Rating Scale for Depression, Young Mania Rating Scale (no usable data).
Notes.	<i>ITT analysis.</i> <i>*Prone to bias.</i>

¹⁴ The information contained in this table is derived from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), with additional information extracted from the primary study publication.

WEISS2009

Bibliographic reference	Weiss, R. D., Griffin, M. L., Jaffee, W. B., <i>et al.</i> (2009) A “community friendly” version of integrated group therapy for patients with bipolar disorder and substance dependence: a randomized controlled trial. <i>Drug and Alcohol Dependence</i> , 104, 212-219.
Methods	Allocation: randomised. Blindness: raters blind. Duration: 6 months. Setting: hospital programme. Recruitment: McLean Hospital treatment programs, advertisements, fliers and clinician referrals. Consent: given. Raters: blind to allocation. Country: US.
Participants	Diagnosis: 100% DSM-IV bipolar disorder and substance dependence (65.6% had both drug and alcohol dependence, 26.2% had alcohol dependence only and 8.2% had drug dependence only; cocaine and marijuana were the most common drugs of abuse). N = 61. Age: 38.3 (11.1) years. Sex: 36 adult male, 25 adult female. Ethnicity: 91.8% white. Inclusion criteria: Current diagnosis of bipolar disorder and substance dependence, substance use within 60 days prior to intake, a mood stabiliser regimen for ≥ 2 weeks, prescribed independently by the patient’s own physician, ability to attend group therapy sessions and follow-up research visits, ≥ 18 years old.
Interventions	1. Integrated CBT: 12 weekly hour-long sessions, employing a cognitive-behavioural model, conducted in an open format, and led by substance-use disorder counsellors. n = 31. 2. Group drug counselling: 12 weekly hour-long sessions, adapted from the treatment delivered in the National Institute on Drug Abuse Collaborative Cocaine Treatment Study. n = 30.
Outcomes	Days of substance use during the past month (ASI, validated by urine toxicology screens). Mood episodes (Longitudinal Interval Follow-Up Evaluation). Additional treatment services received during study (Treatment Services Review). Medication adherence (self-report by interview).
<i>Notes.</i>	-

1.3.2 Characteristics of excluded studies

BAKER2002

Reason for exclusion	Minority of participants with schizophrenia.
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BELLACK2006

Reason for exclusion	<50% of sample had psychosis.
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CRAIG2008

Reason for exclusion	Study of training, not psychological intervention.
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HICKMAN1997

Reason for exclusion	Insufficient information available to assess the risk of bias (unable to contact author).
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KEMP2007

Reason for exclusion	Sample size <10 in one arm of trial.
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MALONEY2006

Reason for exclusion	Insufficient information available to assess the risk of bias (unable to contact author).
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NAEEM2005

Reason for exclusion	Psychosis with substance misuse was not the primary focus of this study and people with high level of substance misuse were excluded.
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NAGEL 2009

Reason for exclusion	<50% of sample had psychosis.
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SWANSON1999

Reason for exclusion	<50% of sample were diagnosed with psychosis.
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1.3.3 References of excluded studies

BAKER2002

Baker, A., Lewin, T., Reichler, H., *et al.* (2002) Evaluation of a motivational interview for substance use within psychiatric inpatient services. *Addiction*, 97, 1329–1338.

BELLACK2006

Bellack, A. S., Bennett, M. E., Gearon, J. S., *et al.* (2006) Randomized clinical trial of a new behavioral treatment for drug abuse in people with severe and persistent mental illness. *Archives of General Psychiatry*, 63, 426–432.

CRAIG2008

Craig, T. K. J., Johnson, S., McCrone, P., *et al.* (2008) Integrated care for co-occurring disorders: psychiatric symptoms, social functioning, and service costs at 18 months. *Psychiatric Services*, 59, 276–282.

Hughes, E., Wanigaratne, S., Gournay, K., *et al.* (2008) Training in dual diagnosis interventions (the COMO study): randomised controlled trial. *BMC Psychiatry*, 8, 1–9. [Secondary reference]

Johnson, S., Thornicroft, G., Afuwape, S., *et al.* (2007) Effects of training community staff for in interventions for substance misuse in dual diagnosis patients with psychosis (COMO study): cluster randomised trial. *British Journal of Psychiatry*, 191, 451–452. [Secondary reference]

HICKMAN1997

Unpublished data only

Hickman, M. E. (1997) *The effects of personal feedback on alcohol intake in dually diagnosed clients: an empirical study of William R. Miller's motivational enhancement therapy*. University Graduate School, Department Counseling Psychology, Indiana University.

KEMP2007

Kemp, R., Harris, A., Vurel, E., *et al.* (2007) Stop Using Stuff: trial of a drug and alcohol intervention for young people with comorbid mental illness and drug and alcohol problems. *Australasian Psychiatry*, 15, 490–493.

MALONEY2006

Unpublished data only

Maloney, M. P. *Reducing criminal recidivism in jail-incarcerated mothers with co-occurring disorders*. Manuscript kindly provided by Dr Maloney.

NAEEM2005

Naeem, F., Kingdon, D. & Turkington, D. (2005) Cognitive behaviour therapy for schizophrenia in patients with mild to moderate substance misuse problems. *Cognitive Behaviour Therapy*, 34, 207-215.

NAGEL 2009

Nagel, T., Robinson, G., Condon, J., *et al.* (2009) Approach to treatment of mental illness and substance dependence in remote Indigenous communities: results of a mixed methods study. *Australian Journal of Rural Health*, 17, 174-182.

SWANSON1999

Swanson, A. J., Pantalon, M. V. & Cohen, K. R. (1999) Motivational interviewing and treatment adherence among psychiatric and dually diagnosed patients. *Journal of Nervous and Mental Disease*, 187, 630-635.

1.4 EXPERIENCE OF CARE

1.4.1 Characteristics of included studies

Reference	Sampling strategy	Design/method	Population/diagnosis	Results	Limitations
Alvidrez and colleagues (2004) (US)	<p>Convenience sampling; recruited from a larger research project (programme directors and consumer advocates who participated in the larger study were given recruitment letters).</p> <p>Participants were compensated for their participation.</p>	Open ended interviews.	<p>N = 24.</p> <p>Severely mentally ill adults with substance-use problem (self-reported diagnosis). Most with schizophrenia spectrum, depression, or anxiety.</p> <p>Most common substances of use or abuse were alcohol, marijuana and cocaine.</p> <p>Majority of sample were male, from an ethnic minority, single, and unemployed.</p>	<p>Problems with using substances/alcohol included: interpersonal problems; alienation from family; health problems; financial and legal/justice problems; and loss of housing/employment.</p> <p>A few participants said that substance use caused their mental illness, while others highlighted the positive and negative effects of drug/alcohol use on their psychiatric symptoms (for example, exacerbated paranoia, or relieved).</p> <p>Most with schizophrenia found cannabis to be acceptable.</p>	Participants self-reported their diagnosis and convenience sample was used; both of which may limit generalisability.
Bradizza & Stasiewicz (2003) (US)	<p>Recruited from two dual-diagnosis outpatient programmes in the US.</p> <p>Participants were compensated for their participation.</p>	Focus group interviews each lasting 75-minutes.	<p>N = 41.</p> <p>n = 21 female. n = 20 male.</p> <p>55% had a major affective disorder diagnosis (of that, 8% bipolar) 45% had a psychotic disorder diagnosis (22% schizophrenia, 17% schizoaffective, 6% psychotic</p>	<p>High-risk situations were identified that trigger substance/alcohol use, and they included: presence of psychological symptoms (paranoia, hallucinations, anxiety/nervousness); positive and negative affect; social reminders of substance use (being around people who used drugs and alcohol); consequences of interpersonal conflict that may lead to drug or alcohol use; bereavement or loss; loss of appetite; receiving money, increasing their ability to purchase</p>	

			disorder, NOS). 75% were African-American.	drugs or alcohol; a period of abstinence wherein the participants feels as though they want to use or drink again. Those with a comorbid mental illness have different high-risk alcohol and drug situations than those without a comorbid mental illness.	
Carey and colleagues (1999) (US)	Convenience sampling; referral by clinical staff from three outpatient psychiatric clinics and a psychosocial club. Participants were compensated for their participation.	Focus groups; semi-structured approach to identify positive and negative effects of using drugs and alcohol, and abstaining/ reducing consumption.	N = 21. All had a schizophrenia-spectrum diagnosis and lifetime substance abuse or dependence. Age ranged 28 to 59 years (median 38 years). 90% male sample; 86% caucasian. n = 11 schizophrenia. n = 8 schizoaffective disorder. n = 2 other psychotic disorder. 86% diagnosis of alcohol abuse/dependence. Other diagnoses most commonly cited were cannabis, cocaine, amphetamines, hallucinogens and polysubstance use.	Positive and negative consequences of substance use were outlined. Positive consequences included the reduction of negative emotional or cognitive states and the augmentation of positive states (for example, forgetting problems, euphoria feeling) and social/interpersonal benefits. Negative reinforcing properties of substance use included easing depression and paranoia, relieving pressure, social problems and isolation (due to substance use). Negative effects were physical problems, craving and exacerbation of psychotic symptoms. Participants could participate in decision balance exercises, and perceived costs and benefits in multiple domains of their lives related to substance use.	
Charles and Weaver (2010) (UK)	Participants were drawn from a random sample of CMHT patients interviewed between 2001 and	Purposive sampling; exploratory cross-sectional qualitative study; flexible interviews.	N = 14. All participants met DSM-IV criteria for drug misuse and had a current psychotic disorder. Most were male; polysubstance users	In almost all cases, onset of drug use was gradual and occurred after first initiation to drug use. All participants were using drugs when they started to experience mental health problems.	Finding unlikely to represent patterns of drug use amongst wall psychotic patients with comorbid drug use.

	2002 for another survey study on prevalence (Weaver <i>et al.</i> , 2003).		were over-represented in the sample (n = 13). Diagnoses: n = 10 schizophrenia. n = 3 non-specific psychosis. n = 1 bipolar disorder.	Critical factors regarding initiation included exposure to drugs in everyday life and influence of social networks. Motivation to use drugs changed over their life course and reflected shifts in lifestyle, attitude, life experience and perception about how substances impacted on them socially, physically and mentally. n = 13 were using cannabis, most perceived drug use to be a causal factor in onset of their mental health problems. Many felt drugs had exacerbated their illness and acknowledged that drug use had definitely contributed to relapse and deterioration of mental health post-onset. Physical side-effects from antipsychotics frequently cited; illicit drugs used to alleviate these side effects.	Participants were only from inner London areas; limits generalisability Ethnic difference or gender were not explored due to small sample size
Costain (2008) (Australia)	Purposive sampling; recruited through staff of a metropolitan community psychiatric service within the inpatient unit, and through community case managers.	Unstructured interviews.	N = 30. Age range between 18 and 65 years who had a DSM-IV comorbid diagnosis of schizophrenia and cannabis abuse.	Cannabis use, in those diagnosed with schizophrenia, helped control symptoms, increase energy levels and improve cognitive function. Contradictions between patient and healthcare practitioner views were highlighted. The majority of participants (n = 24) lacked insight into their schizophrenia (for example, perceived they did not have a mental health problem).	Only looked at cannabis use; other substances may have elicited different viewpoints.
Dinos and colleagues	Purposive sampling;	Individual narrative interviews (45	N = 46.	n = 18 with psychosis; n = 13 and n = 10 with dual diagnoses reported feelings of stigma in	Patient self-reports, no objective way of

(2004) (UK)	Participants were recruited from mental health user groups, day centres, crisis centres and hospitals in North London.	minutes in duration) ; two users of the local mental health services received training in qualitative research and how to conduct narrative interviews.	<p>With varying psychiatric diagnoses.</p> <p>Diagnosis based on participant self-report</p> <p>n = 13 (n = 6 male, n = 7 female) with a dual diagnosis of psychosis and drug dependence.</p> <p>n = 5 (n = 2 male, n = 3 female) diagnosis of bipolar disorder</p> <p>n = 13 (n = 8 male, n = 5 female) diagnosis of schizophrenia</p>	<p>absence of any direct discrimination (often related to psychiatric diagnosis).</p> <p>Dually-diagnosed patients spoke about: Personal harassment (verbal, physical) and reported verbal abuse from public.</p> <p>Feeling of being patronised.</p> <p>Did not disclose much information to friends, family or prospective employers regarding diagnoses.</p> <p>Expressed relief on being diagnosed and mentioned positive aspects of dual diagnosis.</p>	<p>diagnosing mental illness.</p> <p>Narrative instead of structured interviews, so difficult to streamline information and extracts.</p>
Hawkins & Abrams (2007) (US)	<p>Purposive sampling; participants were selected from a group of 225 respondents who participated in a longitudinal study of homeless mentally ill individuals from 1998 to 2002.</p> <p>Random assignment to treatment.</p>	<p>Social capital framework with cross-case analysis.</p> <p>Two in-depth qualitative interviews about life history occurring 1 month apart, 2 hours each.</p> <p>Asked questions about major events in life, experiences with MI and substance-use disorder, service use and social relationships.</p>	<p>N = 39 formerly homeless, mentally ill males and females who were substance abusers in New York City.</p> <p>85% reported long-term substance abuse; primary psychiatric diagnoses were schizophrenia (56%) and bipolar disorder (22%).</p>	<p>Social networks of individuals with dual diagnosis are small but helpful.</p> <p>Limited social capital, many deaths and being 'pushed away'/'pulling back' from social network, combined with own problems.</p> <p>Social isolation is common.</p> <p>Members of social networks of those with dual diagnosis died at a young age, or participants felt they could not cope with social relationships and pushed social network away.</p> <p>Social-skills training should be explored, as should supported employment.</p>	<p>Generalisability limited by purposive sampling method and small sample size.</p>

<p>Healey and colleagues (2009) (UK)</p>	<p>Purposive sampling</p> <p>Patients recruited from outpatients, community mental health teams or specialist drug and alcohol services serving two mental health trusts in northwest England.</p>	<p>Qualitative semi-structured interviews and thematic analysis.</p> <p>Topic guide provided a flexible interview framework starting with patient's course of illness and their experience of substance use.</p> <p>Inductive approach used, to gain a sense of the patient's perspective.</p>	<p>N = 15.</p> <p>With bipolar disorder and a current or past history of drug-/alcohol-use disorders (according to the SCID-DSM-IV diagnosis).</p> <p>n = 8 DSM-IV alcohol- or drug-use disorders. n = 1 abstinent. n = 8 reported occasional or regular moderate alcohol/drug consumption.</p>	<p>Patients' reasons for substance use and their pattern of use arose from personal experience.</p> <p>Clinicians advice had little effect on their substance use, confirmatory personal experiences took precedence.</p> <p>Early in the course of bipolar disorder or before the diagnosis, substance use was uncontrolled, but patients believed they had learned about the effects of substance use from these experiences.</p> <p>Reasons why patients with bipolar disorder consumed drugs/alcohol were often similar to people without mental illness (to manage stress, socialise and fit in, feel good).</p>	<p>Sample was purposively selected to provide as wide a range of views as possible; this included seeking some extreme cases.</p> <p>Theoretical rather than statistical approach to sampling (therefore not a representative nor typical sample of patients).</p> <p>Data collection based entirely on patient self-report, which was not verified against relative reports or case notes (in terms of consumption).</p>
<p>Johnson (2000) (US)</p>	<p>Sample consisted of families referred in New Jersey from a family support project over a 3-year period. Referrals came from community mental health centre case-management unit,</p>	<p>Semi-structured interviews.</p>	<p>Families of N = 180 patients with serious mental illness.</p> <p>Seriously mentally ill defined as having had at least one previous hospitalisation for a psychotic episode involving mood or thought disorder (DSM-IV).</p> <p>Primary caregivers were mostly parents (70%), with siblings,</p>	<p>Family members wanted to be treated as team members by the professional community; felt excluded and efforts ignored.</p> <p>Medication highly significant from standpoint of family members and medical adherence.</p> <p>Family members expressed great concern about substance use, thus members were grateful for interventions such as professionally led dual-diagnosis groups.</p>	<p>Did not distinguish very well between dual-diagnosis patients and those with a mono-morbid diagnosis of a mood or thought disorder.</p> <p>Not known how many people use substances or</p>

	family support group, outpatient clinics, inpatient programs, country jail systems, and the Mercer county branch of the National Alliance for Mentally Ill.		spouses and adult children included as well. Substance-abuse problems in majority of patients (however, there was no percentage of how much of the sample had problems).		alcohol; difficult to generalise to the population in this guideline.
Lobban and colleagues (2010) (UK)	Purposive sampling method. Participants drawn from an early intervention service based in the Northwest of England that supports people aged 14 to 35 years during the 3 years after their first episode of psychosis.	Interviews were topic-guided and lasted between 1 and 1.5 hours.	N = 19. Age range 18 to 35 years. n = 4 female. n = 15 male. 89% white British, all had psychosis. 53% reported currently misusing substances at time of interview, 47% reported current use. All were regular cannabis users and 68% said cannabis was primary drug of use. 58% were polysubstance users. Other drugs commonly used were: amphetamine, cocaine, ecstasy, heroin, methadone and diazepam. Substance-use checklist was used (as well as modules of the SCID).	Participants perceived little stigma attached to drug-taking, which they saw as socially acceptable behaviour in their communities. Tension between acceptability of personal drug-use and the morality of promoting drug use to family or friends. Key reason for reducing or stopping substance misuse was a change in personal life goals (health, disposable income and close family relationships). Social function of drug use is main motivation.	Presentation of data fails to reflect the complexity of the accounts given.
Loneck & Way (1997)	Not mentioned	Repeated focus group with clinical	N = 12 clinical practitioners.	Clinician/client bond was important.	Not enough information about

(US)		staff to examine perceptions about the relationship between therapeutic process and referral outcome.	n = 2 psychologists. n = 2 social workers. n = 3 case workers. n = 5 addictions counsellors.	Clinician and clients must agree on goals and tasks. Therapeutic bonds build on support, tolerance, understanding and acceptance of dual-diagnosed clients. A bond that is too strong can also be perceived as problematic. Supportive approach in assessments should be used with those with schizophrenia (non-judgemental, empathetic) whereas a more direct (straightforward) approach should be used to address the substance use.	the participants interviewed, so difficult to generalise or interpret the findings.
Padgett and colleagues (2008a) (US)	Participant sample consisted of new enrollees at four programs for dually diagnosed homeless patients in New York City that offered treatment services and referral including congregate and independent living. Participants compensated for their participation.	Qualitative in-depth interviews; follow-up longitudinal data obtained.	N = 41 dually diagnosed individuals entertain residential programs to exit homelessness and received needed services. Diagnosis according to DSM-IV. 29% schizophrenia, 29% bipolar, 24% schizoaffective; 57% reported substance abuse, 85% reported previous treatment for substance abuse, 39% entered detoxification or substance-abuse rehabilitation during 12 months of study enrolment.	Family ties are 'good news' and 'bad news'. Participants used 'loner talk' when referring to themselves in relation to others. A lack of trust arising from previous experiences given as reason from isolation. Preference for deferring intimate partnerships until a more stable life was attained; difficulties in achieving positive, lasting social relationships because of ongoing struggles with substance-abuse recovery as well as the social environment and service settings in which participants moved. 'Concentrated disadvantage' - confluence of poverty, crime, substance abuse, little social capital or access to valued resources and information.	Only a one-year study in the gradual process of recovery may not be representative. Other factors in participants past could have affected their ability to seek or avoid social connections
Padgett and colleagues	Sample drawn from a group who	Random assignment to conditions.	N = 169.	Individuals experiencing active symptoms of mental illness more likely to enter treatment -	Interviewees were experienced and may

(2008b) (US)	<p>had completed participation in an earlier experiment (1998 to 2002) New York City Housing study.</p> <p>Maximum variation sampling used to ensure inclusion of participants from both arms of the earlier experiment.</p>	<p>In-depth, minimally structured interviews. Two interviews 1 month apart, each lasting 2 hours. Open-ended questions and follow-up probing questions. First interview: asked to tell life stories; second interview: captured specific experiences with services (including positive and negative events and reasons for satisfaction/dissatisfaction).</p>	<p>DSM-IV Axis 1 diagnosis of severe mental illness.</p> <p>90% also had documented histories of substance abuse.</p> <p>Most common diagnosis was schizophrenia (56%); bipolar (22%).</p>	<p>favourable treatment settings, acts of kindness and access to independent housing enhance retention in treatment.</p> <p>Comorbid substance use is an impediment to service use, as are inflexible program rules and absence of individual therapy and support.</p>	<p>have given rehearsed accounts that were less authentic or candid.</p>
Penn and colleagues (2002) (US)	<p>Convenience sampling; recruited from original larger study looking at psychological interventions.</p>	<p>Focus group conducted with seven dual-diagnosis females.</p> <p>Project part of a larger 5-year research project evaluating two group intensive day treatment approaches: 12-step and CBT, self-management and recovery training.</p>	<p>Primary Axis 1 thought disorder or persistent affective disorder, and a substance abuse or dependency disorder based on DSM-III-R.</p> <p>Schizoaffective disorder, schizophrenia, bipolar disorder.</p>	<p>Effective but minimal medications and educational groups that discuss medications needed.</p> <p>Increased time with psychiatrists sensitive to women's issues.</p> <p>Welcoming and empathetic therapists (good listener, honest direct, teaching).</p> <p>Client-directed goals, ongoing support and encouragement.</p> <p>Informal atmosphere to treatment setting, drop-in centres with social support.</p>	<p>Limited sample size.</p>

				<p>Vocational rehabilitation needed.</p> <p>Negative experiences of treatment included: negative staff attitudes, focusing only on substance issues, lack of follow through, treatment jargon, high staff turnover.</p> <p>Child protective services needed.</p> <p>Themes emerged.</p> <p>Negative treatment experiences.</p> <p>Negative system experiences.</p> <p>Desirable treatment characteristics.</p> <p>Therapeutic client characteristics.</p> <p>Life issues influencing treatment engagement.</p>	
Pollack and colleagues (1998) (US)	<p>Data collected from focus group interviews, individual interviews and medical records.</p> <p>Content analysis.</p>	<p>Structured interviews given, included introductory questions.</p> <p>An eight-item structured questionnaire was developed for the study (individual-based).</p> <p>Demographic data collected from medical records using a 40-item form.</p>	<p>85% had a mood disorder, 54% had psychotic features, 15% had schizophrenia.</p> <p>87% reported alcohol abuse, 46% reported cocaine abuse.</p>	<p>Overall factors affecting aftercare compliance included were problems with housing, transportation, childcare finances, employment and families. As well as low frustration tolerance, difficulty with intrinsic motivation and denial.</p> <p>Excuses for not taking medication were highlighted as well as issues surrounding medication compliance.</p> <p>Positive and negative aspects of clinic appointments and self-help meetings.</p> <p>Family influences on clinic or meeting attendance positive.</p> <p>Imbalance of internal and external control affecting adherence to treatment.</p>	<p>No theory was mentioned in the study to base qualitative findings upon</p> <p>Discussion could have highlighted limitations of the study</p>
Strickler and colleagues	Participants recruited from	Prospective longitudinal study of	N = 120.	29% were consistent workers over time.	No comparison group of participants

(2009) (US)	community mental health clinics in US, using data collected between 2005 and 2008.	people with dual diagnosis. 90-minute structured interview, focusing on work activity; participants reported competitive or other employment in last 12 months (competitive employment is a community job that pays at least minimum wage and is open to the public). 16-year follow-up.	Primary diagnosis: 50.8% schizophrenia spectrum disorder, 24.2% schizoaffective disorder, 25% bipolar disorder. 79.2% alcohol-use disorder, 48.3% drug-use disorder.	Participants explanations of their work histories congregated around five overlapping themes (to increase work activity). Illness management (use of psychiatric medication and controlling substance abuse). Personal evaluation of the impact of employment. Congruence between job preference and actual employment. Personal motivation and job seeking assistance. Conditions nature of working or not working.	living without dual diagnosis.
Todd and colleagues (2002) (New Zealand)	Purposive sampling.	In-depth focus groups.	N = 261 within 12 focus groups. Focus groups consisted of clinicians, consumers and family members, involved with alcohol and drug or mental health agencies. Focus group size ranged from n = 4 to n = 63 participants.	Essence of optimal care: provision of a comprehensive assessment and management plan that considered both urgent and important non-urgent issues. Clinician attitudes were important and served as a barrier to care. Structure and organisation of services within treatment delivery was problematic. Poor communication between the agencies involved.	New Zealand healthcare services may not generalise to UK services.
Turton and colleagues (2009) (UK)	Purposive sampling to represent range of service-use profiles and a gender	Pilot study; face-to-face semi-structured interviews.	N = 18. n = 6 eating disorders. n = 6 forensic. n = 6 dual diagnosis.	Hope, optimism, active engagement in treatment and autonomy all mentioned as important to recovery. Stigma mentioned frequently as barrier to	Population consisted of those with an eating disorder or forensic service users instead, so may be

	<p>balance; maximum variation sampling approach.</p> <p>Participants were compensated for their participation.</p>			<p>autonomy and insight, and to seeking help.</p> <p>Kindness and empathy important traits to embody when working with, and approaching service users with a dual diagnosis.</p> <p>Clinical recovery differs from conceptualisation of recovery from service-user perspective (for example, participants saw recovery as being free from symptoms and getting back to 'normal').</p>	<p>difficult to disentangle the specific experience of those with a dual diagnosis of psychosis/substance misuse.</p>
<p>Vogel and colleagues (1998) (US)</p>	<p>Convenience sample; recruited from Double Trouble in Recovery meetings in New York City.</p>	<p>Semi-structured ethnographic interviews</p>	<p>N = 52.</p> <p>n = 8 interviewed (n = 6 males, n = 2 females) all from an ethnic minority.</p> <p>46% of sample had been in alcohol treatment or detoxification, 35% in drug detoxification (7 days or less), 31% in drug rehabilitation, 46% in drug-free outpatient program, 1.5% in methadone maintenance program, 37% in therapeutic community, 54% in AA meetings. Most commonly used drugs were cocaine, crack, heroin, alcohol, non-prescribed pills, methamphetamines, marijuana and street methadone.</p> <p>Most common diagnoses: 44% schizophrenia, 46% unipolar depression, 21% bipolar.</p>	<p>Background history often included neglectful dysfunctional family with family members also using substances or alcohol, as well as the experience of psychiatric symptoms in early adolescence.</p> <p>Substance or alcohol use was a way to normalise symptoms, and most did not seek treatment until they hit 'rock bottom'.</p> <p>Self-help groups (such as the double trouble in recovery one) allowed service users to feel relieved by being with others with the same experiences - comfort in seeking help for both their dependence and their psychiatric illness.</p> <p>Mutual self help groups targeting dual diagnosis clients has benefits in terms of recovery, feeling connected to others who understand their experience, and provide ongoing support to promote change.</p>	<p>Convenience sample may limit generalisability.</p>

			73% male, 45% African-American, 22% hispanic, 33% non-hispanic white. Age range 22 to 67 years.		
Wagstaff (2007) (UK)	Recruited from an inner city ACT (UK).	Semi-structured interviews based on case formation. Thematic analysis.	N = 6. All with a diagnosis of psychotic illness (for example schizophrenia, schizoaffective disorder or bipolar affective disorder) a history of drug/alcohol use and a history of disengagement from mental health services. n = 4 males. n = 2 females. Mostly crack, cannabis and alcohol as primary substances. Five out of six cultural backgrounds other than British.	Beneficial nature of substance use. Absence of polysubstance use. Negative attitudes towards hard drugs. Refutation of diagnosis (schizophrenia). Issues around physical health. Lack of social networks. Immigration. Positive self image.	Very small sample size. Recruited from an assertive community outreach team, may not be representative of other teams or settings within the UK.
Warfa and colleagues (2006) (UK)	Recruited from statutory and non-statutory services.	Semi-structured in-depth interviews.	N = 9. All male service users: n = 2 African-Caribbean. n = 4 black Africans. n = 3 white British. n = 3 with schizophrenia. n = 2 with psychosis. n = 1 with bipolar. n = 3 other (post-traumatic stress disorder, psychological problems,	Cultural capability should be considered within services to engage hard to reach ethnic groups and cultural context of substance use needs to be recognised. Life events linked to mental distress (migration emerged as a common theme). Majority of participants had interrupted early education, which had an impact on recovery and well-being.	Small sample size.

			depression). Nearly all were khat or cannabis users.	Most noted that meditation worked for them, and spiritual services and culturally specific support groups were very beneficial. Cultural awareness and sensitivity were cited as aspects that could improve mental health services; the cultural capability of practitioners was good, but could be further improved.	
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1.4.2 References of excluded studies

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