APPENDIX 13: CLINICAL STUDIES CHARACTERISTICS TABLES

1.1 INTEGRATED SERVICE MODELS

1.1.1 Characteristics of included studies

BURNAM1995

Methods	Allocation: randomised (no further description)*. Blindness: not stated. Duration: 9 months. Setting: community, residential. Raters: not clear if independent or blind*. Country: USA
Participants	Diagnosis: schizophrenia and or major affective disorder with co-occurring substance disorder** N=276. Age: mean ~ 37 years. Sex: 232M, 44F. 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, general community activities. N=67. 2. Non-residential: above model operating 1-9 pm 5 days / week, more case management for basic needs. N=144***. 3. Control group: routine care with no special intervention but free to access other services (shelters, mental health clinics, 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: SCL-90 & PERI (modified version of scales used).
Notes	ITT analysis. *May be prone to bias. **Participants paid $10 for each assessment interview. *** Only residential and control group data used. Non residential intervention did not meet apriori category. Authors kindly provided further data.

CHANDLER2006

Methods	Allocation: randomised (computer-generated). Blindness: not stated. Duration: 36 months. Setting: community and jail. Consent: given. Raters: not applicable (outcomes were administrative). Country: USA
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: 18-78 years. Sex: 131M, 51F. 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 2 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 disorder, family psychoeducation regarding dual disorders, multidisciplinary team, integrated substance abuse specialists, stagewise interventions, time unlimited services, outreach etc. 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.

DRAKE1998

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: USA
Participants	Diagnosis: 53% DSM-III-R schizophrenia with active DSM-III-R substance use disorder (73% alcohol abuse, 42% drug abuse)**. N=223. Age: 18-60 years, mean ~ 34 years. Sex: 165M, 58F. 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 & 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 & vigorously addressing co-occurring substance use. Caseload ~ 25. N=114.
Outcomes	Lost to treatment. Lost to evaluation. Death. Substance use: SATS, Not in remission, progress towards recovery. Other: number of days living in stable community residences, QOLI (General Life Satisfaction Scale). Substance use: AUS, DUS, no of days when misusing (data skewed). Mental state: BPRS (data skewed). Relapse: hospitalisation (data skewed). Unable to use: Other: QOLI (sub-scales).
Notes	Not ITT analysis. *May be prone to bias. Authors have kindly provided further data. **Some participants had more than one dependence.

ESSOCK2006

Methods	Allocation: randomised (using computer-generated tables at 2 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: USA
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: 142M, 56F. 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 two 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 stagewise 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, DUS, SATS, 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	Not ITT analysis. * Some participants had more than one dependence. *Participants paid US $15 for each interview and additional $5 for each urine and saliva sample. ** Refer to correspondence regarding clinical case management team (Kanter 2006). Authors kindly provided additional data.

MORSE2006

Methods	Allocation: randomised (no further description)*. Blindness: not stated. Duration: 24 months. Setting: community. Consent: given. Raters: not clear if independent or blind*. Country: USA
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 1/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 most frequently used drug (34%) cannabis (19%)**. N=196*. Age: 18-66 years, mean ~ 40 years. Sex: 119M, 30F. Ethnicity: 73% Afro-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 Assertive Community Treatment (IACT). N=46. 2. Assertive Community Treatment Team only (ACTO). 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: USS (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	Not ITT analysis *May be prone to bias. Also figures are based on the 149 who received treatment. **Participants paid USD $5 for short and $10 for long interview. ***No usable data, only skewed data reported.

1.1.2 Characteristics of excluded studies

BAKER2002

Reason for exclusion	Minority of participants with schizophrenia

BELLACK2006

Reason for exclusion	<50% of sample had psychosis.

CRAIG2008

Reason for exclusion	Study of training, not service delivery.

HICKMAN1997

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

KEMP2007

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

MALONEY2006

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

NAEEM2005

Reason for exclusion	Psychosis with substance misuse wasn't the primary focus of this study, and people with high level of substance misuse were excluded.

NAGEL 2009

Reason for exclusion	<50% of sample had psychosis.

1.1.3 References to excluded studies

BAKER2002
Baker, A., Lewin, T., Reichler, H., *et al.* (2002) Evaluation of a motivational interview forsubstance 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.

HICKMAN1997

Unpublished data only

Hickman, M.E. (1997) *The effects of personal feedback on alcohol intake indually diagnosed clients: an empirical study of William R. Miller's motivational enhancement therapy.* University Graduate School, Dept. 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. *Australas Psychiatry,15*, 490-493.

MALONEY2006

Unpublished data only

Maloney, M.P. *Reducing criminal recidivism in jail-incarcerated mothers with co-occuring 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.

1.2 PSYCHOLOGICAL AND PSYCHOSOCIAL INTERVENTIONS

1.2.1 Characteristics of included studies

BAKER2006

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-1 diagnosis of abuse or dependence past 12 months (alcohol 69%, cannabis 74%, amphetamine 42%)*. N=130. Age: mean 29 years. Sex: 102M, 28F. Ethnicity: not reported. Inclusion criteria: SCID abuse or dependence for alcohol, cannabis or amphetamine during preceding month, age 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 (10 weekly one hour sessions) + routine care. N=65. 2. Control group: routine care plus self-help books. N=65.
Outcomes	Lost to evaluation. Death. Substance use: 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	Not ITT analysis. Authors report that a separate ITT analysis was run with similar results. *Some participants were dependent on more than one of these. Participants paid AUD $20 for each assessment interview.

BARROWCLOUGH2001

Methods	Allocation: randomised by 3rd party (using computer-generated list). Blindness: single. Duration: 12, 18* months. Setting: own homes. Recruitment: Screened through hospital admission recors from mental health units of 3 NHS hospital trusts in nTameside & Glossop, Stoclport and Oldham. Consent: given. Raters: independent and blind.

	Country: UK
Participants	Diagnosis: ICD-10 & DSM-IV schizophrenia or schizoaffective disorder with DSM-IV substance abuse or dependence. N=36. Age: 18-65 years, mean ? 31 years. Sex: 33M, 3F. Ethnicity: white European. Inclusion criteria: current substance abuse, in current contact with mental health services, min. 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, SFS. Mental state: PANSS (some data skewed). Unable to use: Substance use: ASI - % days abstinent (no mean/sd). Relapse: duration of relapse (only median and range supplied). Other: SFS 18 month (only adjusted means reported).
Notes	Part ITT analysis. *18 month data (see secondary reference Haddock et al 2003).

EDWARDS2006

Methods	Duration: 6 months. Setting: community youth mental health service in Melbourne Consent: given. Blindness : yes, 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: 34M, 13F. Ethnicity: not reported. Inclusion criteria: DSM-IV diagnosis of a psychotic disorder (i.e. schizophrenia, schizophreniform, schizoaffective, delusional disorder, bipolar disorder, major depressive disorder with psychotic features, psychosis not otherwise stated & brief reactive psychosis). informed consent for research participation, adequate English language comprehension and patients continuing to use cannabis at 10 weeks post-initial clinical stabilization
Interventions	1. Cannabis-focused intervention (cannabis and psychosis therapy, CAP) for individuals with first-episode psychosis. CAP 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 EPPIC 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: % of patients using cannabis in the last 4 weeks. Other: SOFAS. Substance use: RTCQ-C (adapted scale), CASUAS (modified SCAN) (all data skewed). Unable to use: Mental state: BDI-SF, SANS (all data skewed), BPRS (some data skewed, unvalidated subscales). Other: out-patient attendance and medication: SURS (data skewed)
Notes	ITT-analysis

GRAEBER2003

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: USA
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: 292M, 1F. 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-emphasized labeling, 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: Abstinance rates. Substance use: BDP (data skewed).
Notes	Not ITT analysis.

HELLERSTEIN1995

Methods	Allocation: randomised (no further description)*. Blindness: not stated. Duration: 8 months. Setting: community, outpatient. Raters: unclear if independent or blind*.

	Country: USA
Participants	Diagnosis: RDC schizophrenia with 74% DSM-III-R psychoactive substance abuse/dependence. N=47. Age: 18-50 years, mean ~ 32 years. Sex: 36M, 11F. 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 & 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	ITT analysis. *May be prone to bias. Further data collected & mentioned in 2001 paper.

JERRELL1995

Methods	Allocation: randomised (using the urn method). Blindness: not stated. Duration: 18 months. Setting: community. Consent: given. Raters: independent and unclear if blind*. Country: USA
Participants	Diagnosis: 62% DSM-III-R schizophrenia with co-occurring substance disorder. N=47 Age: 18-59 years, mean ~ 34 years. Sex: 33M, 14F. Ethnicity: 64% white. Inclusion criteria: substance abuse disorder, previous inpatient or residential psychiatric treatment, plus either poor work / life skill history last 2 years, history of intervention by mental health authorities or police for inappropriate social behaviour.
Interventions	1. Behavioural skills programme: psychoeducational approach with self-management skills, repeated practice & 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 & provided counselling. N=25.
Outcomes	Lost to treatment. Other: RFS (SAS-SMI) Social Adjustment Scale. Substance use: C-DIS-R (data skewed & no author analysis of randomised cohort). Mental state: C-DIS-R (data skewed & no author analysis of

	randomised cohort). Other: SLS (not peer reviewed scale).
Notes	Part ITT analysis. *May be prone to bias. Data reported is for randomised cohort only - kindly supplied by the authors.

KAVANAGH2004

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: 17-31 years, mean: 23 years. Sex: 15M, 10F. Ethnicity: 84% Anglo-Saxon. Inclusion criteria: 16-35 years, consensus diagnosis of a DSM-IV psychotic disorder; a current DSM-IV substance use disorder; <2 previous episodes of psychosis, < 3 years since the first psychotic episode, less than 3 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 (SOS). Brief motivational intervention comprising 3 hours of individual treatment over 6-9 sessions usually completed within 7-10 days as an inpatient, + routine care. N=13. 2. Control group: routine care comprised of pharmacotherapy, access to in-patient 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.
Notes	ITT analysis.

RIES2004

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 center). Recruitment: volunteers from approximately 140 patients who attended the center. Consent: given Raters:clinical team blind to allocation. Country: USA

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: NR Sex: NR Ethnicity: NR 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 percent of potential evaluations) were recorded as substance use unless the patient was in the hospital or jail over the previous and current week.)
Notes	

SCHMITZ2002

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: USA
Participants	Diagnosis: 100% DSM-IV Bipolar disorder and substance use disorder (72% alcohol, 61% cocaine, 26% marijuana, 59% were dependent on more than 1 drug). N=46. Age: 34.6 (6.8) years. Sex: 22M, 24F. Ethnicity: 80% Caucasian. Inclusion criteria: English-speaking adults between the ages of 15 & 55 years, dually diagnosed with BPD and a substance use disorder, free of other axis I diagnoses requiring the 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 (e.g., daily self-monitoring of mood, drug clinics, didactic presentations, handouts and take home materials). N=25. 2. Control group: routine care, Medication Monitoring [MM] consists of 4 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 n's not provided).
Notes	Not ITT analysis. *May be prone to bias.

TRACY2007

Methods	Allocation: randomised. Blindness: NR Duration: 1 month Setting: community (homeless shelter). Recruitment: volunteers from those seeking shelter. Consent: given Raters: NR Country: USA
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: NR Sex: NR Ethnicity: NR 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 breathalyzer)* Substance use (assessed by Addiction Severity Index)
Notes	*Individuals in both conditions received compensation for assessments as follows: $30 for screening, baseline, and termination interviews and $5 for each weekly assessment.

WEISS2007

Methods	Allocation: randomised (no further description)*. Blindness: not stated. Duration: 8 months. Setting: hospital programme. Consent: given. Raters: not blind* Country: USA
Participants	Diagnosis: 100% DSM-IV Bipolar disorder [BPD] and substance dependence. Drug dependence 27% alcohol, 26% marijuana, 16% cocaine, 15% sedatives, 13% opioids, 2% amphetamines, 2% polydrug. N=62.

	Age: 41.9 (10.9) years. Sex: 30M, 32F. Ethnicity: 94% Caucasian. Inclusion criteria: current DSM-IV diagnosis of BPD 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 BPD and SUD. N=31. 2. Control group: group drug counselling: 20 weekly 1 hour group meetings with emphasis on drug counselling only (no BPD 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: HAM-D, Young Mania Rating Scale (no usable data).
Notes	ITT analysis. Prone to bias.

WEISS2009

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: USA
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: 36M, 25F. Ethnicity: 91.8% White. Inclusion criteria: Current diagnosis of BD and substance dependence, substance use within 60 days prior to intake, a mood stabliser regimen for >= 2 weeks, prescribed independently by the patient's own physician, ability to attend group therapy sessions and follow-up research visits, 18 or over.
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 (Addiction Severity Index, 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).
Notes	

1.2.2 Characteristics of excluded studies

BAKER2002

Reason for exclusion	Minority of participants with schizophrenia.

BELLACK2006

Reason for exclusion	<50% of sample had psychosis.

CRAIG2008

Reason for exclusion	Study of training, not psychological intervention.

HICKMAN1997

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

KEMP2007

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

MALONEY2006

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

NAEEM2005

Reason for exclusion	Psychosis with substance misuse wasn't the primary focus of this study, and people with high level of substance misuse were excluded.

NAGEL 2009

Reason for exclusion	<50% of sample had psychosis.

SWANSON1999

Reason for exclusion	<50% of sample were diagnosed with psychosis.

1.2.3 References to excluded studies

BAKER2002
Baker, A., Lewin, T., Reichler, H., *et al.* (2002) Evaluation of a motivational interview forsubstance 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.

HICKMAN1997
Unpublished data only
Hickman, M.E. (1997) *The effects of personal feedback on alcohol intake indually diagnosed clients: an empirical study of William R. Miller's motivational enhancement therapy*. University Graduate School, Dept. 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. *Australas Psychiatry, 15*, 490-493.

MALONEY2006
Unpublished data only
Maloney, M.P. *Reducing criminal recidivism in jail-incarcerated mothers with co-occuring 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.

1.3 EXPERIENCE OF CARE, PSYCHOSIS AND SUBSTANCE MISUSE

1.3.1 Reasons for substance use

Included Studies: Alvidrez *et al.,* 2004; Bradizza & Stasiewicz, 2003; Carey *et al.,* 1999; Charles & Weaver, 2010; Costain, 2008; Healey *et al.,* 2009; Lobban *et al.,* 2010; Warfa *et al.,* 2006

Ref ID	Sampling Strategy	Design/Method	Population/Diagnosis	Results	Limitations
Alvidrez *et al.*, 2004 (USA)	Convenience sampling; recruited from a larger research project (program directors and consumer advocates who participated in the larger study were given recruitment letters). Participants were compensated for their participation.	Open ended interviews	n=24 severely mentally ill adults with substance use problem (self-reported diagnosis). Most with schizophrenia spectrum, depression, or anxiety. Most common substance of use or abuse was alcohol, marijuana and cocaine. Majority of sample was male, from an ethnic minority, single and unemployed.	Problems with using substances/alcohol included interpersonal problems, alienation from family, health problems, financial legal, justice problems, and loss of housing/employment. 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 (e.g. exacerbates paranoia, or relief) Most with schizophrenia found cannabis as acceptable	Participants self-reported their diagnosis and convenience sample was used; both of which may limit generalisability
Bradizza & Stasiewicz, 2003 (USA)	Recruited from 2 dual-diagnosis outpatient programs in the USA. Participants were compensated for their participation.	Focus group interviews each lasting 75-minutes.	n=41 (n=21 females, n=20 men) 55% had a major affective disorder diagnosis (of that,8% bipolar) 45% had a psychotic disorder diagnosis (22% schizophrenia, 17% schizoaffective, 6% psychotic disorder, NOS)	High-risk situations were identified which trigger substance/alcohol use, and they include: Presence of psychological symptoms (paranoia, hallucinations, anxiety/nervousness) Positive and negative affect Social reminders of substance use	

			75% were African American	being around people who use drugs and alcohol consequences of interpersonal conflict which may lead to drug or alcohol use bereavement or loss loss of appetite receiving money so new ability to purchase drugs or alcohol A period of abstinence wherein the participants feels like they want to use or drink again. Those with a comorbid mental illness have different high-risk alcohol and drug situations than do those without a comorbid mental illness.	
Carey *et al.*, 1999 (USA)	Convenience sampling; referral by clinical staff from 3 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 of whom had a schizophrenia-spectrum diagnosis and lifetime substance abuse or dependence. Age range 28-59 (median=38). 90% male sample, 86% Caucasian. N=11 schizophrenia N=8 schizoaffective disorder N=2other 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. (E.g. 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). Physical problems, craving, exacerbation of psychotic symptoms were negative effects. Participants could participate in decision	

				balance exercises, and perceived costs and benefits in multiple domains of their lives related to substance use.	
Charles & Weaver, 2010 (UK)	Participants were drawn from a random sample of CMHT patients interviewed between 2001 and 2002 for another survey study on prevalence (Weaver *et al.,* 2003)	Purposive sampling; Exploratory cross-sectional qualitative study; flexible interviews	N=14 All participants met DSM-IV criteria for drug misuse, had a current psychotic disorder Most were male, polysubstance users were over-represented in the sample (n=13) Diagnosis: N=10 schizophrenia N=3 non-specific psychosis N=1 bipolar disorder.	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. 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 impact on them socially, physically and mentally. N=13 were using cannabis, most perceived drug use to be causal factor in onset of their mental health problems. Many felt drugs had exacerbated their illness, and acknowledge drug use had definitely contributed to relapse and deterioration of MH post-onset. Physical side-effects from antipsychotics frequently cited; illicit drug to alleviate these side effects.	Finding unlikely to represent patterns of drug use amongst wall psychotic patients with comorbid drug use. 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	Unstructured interviews	n=30, age range between 18 and 65 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	Only looked at cannabis use; other substances may have elicited different viewpoints. .

	within the inpatient unit, and through community case managers.			healthcare practitioner views were highlighted. The majority of participants (24 of 30) lacked insight into their schizophrenia (e.g. perceived they did not have a mental health problem)	
Healey *et al.*, 2009	Purposive sampling Patients recruited from outpatients, community mental health teams or specialist drug and alcohol services serving 2 mental health trusts in northwest England	Qualitative semi-structured interviews and thematic analysis Topic guide provided a flexible interview framework starting with patient's course of illness and their experience of substance use. Inductive approach used to get a sense of patients perspective	N=15 patients with bipolar disorder and a current or past history of drug/alcohol use disorders (according to the SCID-DSM-IV diagnosis) N=8 had DSM-IV alcohol or drug use disorders; 1 abstinent and 8 reported occasional or regular moderate alcohol/drug consumption	Patient's reasons for SU and their pattern of use arise out of personal experience. Clinicians advise had little effect on their substance use, confirmatory personal experiences took precedence Early in the course of bipolar disorder or before the diagnosis, substance use was uncontrolled but patients believed they had learnt about the effects of SU from these experiences. Reasons patients with BP consume drugs/alc are often similar to people without mental illness (manage stress, socialise and fit in, feel good)	Sample was purposively selected to provide as wide a range of views as possible; this includes seeking some extreme cases Theoretical rather than statistical approach to sampling (therefore not a representative nor typical sample of patients) Data collection based entirely on patient self-report which was not verified against relative reports or case notes (in terms of consumption)
Lobban *et al.*,2010 (UK)	Purposive sampling method. Participants drawn from an early	Interviews were topic guided and lasted between 1 -1.5 hours.	N=19, age range 18-35, n=4 female, n=15 male, 89% white British, all had psychosis. 53% reported currently misusing	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 he morality of promoting drug	Presentation of data fails to reflect the complexity of the accounts given

	intervention service based in the Northwest of England which supports people aged 14-35 during the 3 years after their first episode of psychosis.		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)	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	
Warfa *et al.*, 2006 (UK)	Recruited from statutory and non-statutory services.	Semi-structured in-depth interviews	N=9 male service users: n=2 African-Caribbean men, n=4 black Africans, n=3 White British men. N=3 with schizophrenia N=2 with psychosis N=1 with bipolar N= 3 other (PTSD, psychological problems, depression) Nearly all were khat or cannabis users.	Cultural capability should be considered within services to engage hard to reach ethnic groups. 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. 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 which could improve mental health services. Cultural capability of practitioners was good	Small sample size

				but could be further improved.	

1.3.2 Access and engagement

Included Studies: Dinos *et al.*, 2004; Johnson, 2000; Padgett *et al.*, 2008a; Penn *et al.,* 2002; Loneck & Way, 1997; Todd *et al.,* 2002; Warfa *et al.,* 2006.

Ref ID	Sampling Strategy	Design/Method	Population/Diagnosis	Results	Limitations
Dinos *et al.*, 2004 (UK)	Purposive sampling; Participants were recruited from mental health user groups, day centres, crisis centres and hospitals in north London.	Individual narrative interviews (45 minutes in duration) ; 2 users of the local mental health services received training in qualitative research and how to conduct narrative interviews.	N=46 with varying psychiatric diagnoses. Diagnosis based on participant self-report N=13 (n=6 men, n=7 women) with a dual diagnosis of psychosis and drug dependence. N=5 (n=2 men, n=3 women) diagnosis of bipolar disorder N=13 (n=8 men, n=5 women) diagnosis of schizophrenia	N=18 with psychosis, n=13 and n=10 with dual diagnoses reported feelings of stigma in absence of any direct discrimination (often related to psych. diagnosis) DD patients spoke about: Personal harassment (verbal. physical) and reported verbal abuse from public. Feeling of being patronised Do not disclose much information to friends, family or prospective employers regarding diagnoses. Expressed relief on getting diagnosed and mentioned positive aspects of DD.	Patient self-reports, no objective way of diagnosing mental illness Narrative instead of structured interviews, so difficult to streamline information and extracts
Johnson *et al.*, 2000 (USA)	Sample consisted of families referred in New Jersey from a family support project over a 3-yr period. Referrals came from – community mental health	Semi-structured interviews.	Families of n=180 patients with serious mental illness Seriously mentally ill defined as having had at least 1 previous hospitalization for a psychotic episode involving mood or thought disorder (DSM-IV) Primary caregivers were mostly parents (70%), with	Family members want to be treated as team members by the professional community; felt excluded and efforts ignored Medication highly significant from standpoint of family members and medical adherence Family members expressed great concern about substance use thus members were grateful for interventions such as professionally led DD groups	Does not distinguish very well between dual-diagnoses patients and those with a mono-morbid diagnosis of a mood or thought disorder Not known how many people use substances or alcohol; difficult to

	centre case management unit, family support group, outpatient clinics, inpatient programs, country jail systems, and the Mercer county branch of NAMI (national alliance for mentally ill)		siblings, spouses and adult children included as well. Substance abuse problems in majority of patients (no % of how much of the sample had problems, however)		generalise to the population in this guideline
Padgett *et al.*, 2008 (USA)	Sample drawn from a group who had completed participation in an earlier experiment (1998-2002) New York housing study. Maximum variation sampling used to ensure inclusion of participants from both "arms" of the earlier experiment	Random assignment to conditions In-depth minimally structured interviewers. 2 interviews a month apart, each lasting 2 hours. Open ended questions and follow-up probing questions. First interview, asked to tell life stories, 2nd interview capturing specific experiences with services (including positive and negative events and reasons for	N=169 DSM-IV axis 1 diagnoses of severe mental illness 90% also had documented histories of substance abuse Most common diagnosis was schizophrenia (56%) bipolar (22%)	Individuals experiencing active symptoms of mental illness more likely to enter treatment – favourable treatment settings, acts of kindness and access to independent housing enhance retention in treatment. Comorbid SU is an impediment to service use as are inflexible program rules and absence of individual therapy and support.	Interviewees were experienced and may have given rehearsed accounts that were less authentic or candid.

		satisfaction/dissatisfaction)			
Penn *et al.*, 2002 (USA)	Convenience sampling; Recruited from original larger study looking at psychological interventions	Focus group conducted with 7 DD women. Project part of a larger 5 year research project evaluating 2 group intensive day treatment approaches: 12 step and CBT, self management and recovery training.	Primary axis 1 thought disorder or persistent affective disorder, and a substance abuse or dependency disorder based on DSM-3-R Schizoaffective disorder, schizophrenia, bipolar disorder	Effective but minimal medications and educational groups that discuss meds needed. Increased time with psychiatrists sensitive to women's issues Welcoming and empathetic therapists (good listener, honest direct, teaching) Client-directed goals, ongoing support and encouragement Informal atmosphere to treatment setting, drop-in centres with social support Vocational rehabilitation needed Negative experiences of treatment include: negative staff attitudes, focusing only on substance issues, lack of follow through, treatment jargon, high staff turnover Child protective services needed Themes emerged Negative treatment experiments Negative system experiences Desirable treatment characteristics Therapeutic client characteristics Life issues influencing treatment engagement	Limited sample size
Loneck & Way, 1997 (USA)	Not mentioned	Repeated focus group with clinical staff to examine perceptions about the relationship between therapeutic process and referral outcome.	N=12 Clinical practitioners (n=2 psychologists, n=2 social workers, n=3 case workers, n=5 addictions counsellors)	Clinician client bond was important. Clinician and clients must agree on goals and tasks. Therapeutic bonds build on support, tolerance, understanding and acceptance of dual diagnosed clients. Too strong of a bond can also be perceived as problematic. Supportive approach in assessments should be used with those with schizophrenia (non-	Not enough information about the participants interviewed so difficult to generalise or interpret the findings.

				judgemental, empathetic) whereas more direct (straightforward) should be used to address the substance use.	
Todd *et al.*, 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 groups size ranged from 4-63 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 health care services may not generalise to UK services.
Warfa *et al.*, 2006 (UK)	Recruited from statutory and non-statutory services.	Semi-structured in-depth interviews	N=9 male service users: n=2 African-Caribbean men, n=4 black Africans, n=3 White British men. N=3 with schizophrenia N=2 with psychosis N=1 with bipolar N= 3 other (PTSD, psychological problems, depression) Nearly all were khat or cannabis users.	Cultural capability should be considered within services to engage hard to reach ethnic groups. 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. 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 which could improve mental health services.	Small sample size

				Cultural capability of practitioners was good but could be further improved.	

1.3.3 Importance of social networks

Included Studies: Bradizza *et al.,* 2003; Carey *et al.,* 1998; Charles & Weaver, 2010; Hawkins & Abrams, 2007; Lobban *et al.,* 2010; Padgett *et al.,* 2008a, Turton *et al.,* 2009; Wagstaff, 2007

Ref ID	Sampling Strategy	Design/Method	Population/Diagnosis	Results	Limitations
Bradizza & Stasiewicz, 2003 (USA)	Recruited from 2 dual-diagnosis outpatient programs in the USA. Participants were compensated for their participation.	Focus group interviews each lasting 75-minutes.	n=41 (n=21 females, n=20 men) 55% had a major affective disorder diagnosis (of that,8% bipolar) 45% had a psychotic disorder diagnosis (22% schizophrenia, 17% schizoaffective, 6% psychotic disorder, NOS) 75% were African American	High-risk situations were identified which trigger substance/alcohol use, and they include: Presence of psychological symptoms (paranoia, hallucinations, anxiety/nervousness) Positive and negative affect Social reminders of substance use being around people who use drugs and alcohol consequences of interpersonal conflict which may lead to drug or alcohol use bereavement or loss loss of appetite receiving money so new ability to purchase drugs or alcohol a period of abstinence wherein the participants feels like they want to use or drink again. Those with a comorbid mental illness have different high-risk alcohol and drug situations than do those without a comorbid mental illness.	
Carey *et al.,* 1999 (USA)	Convenience sampling; referral	Focus groups; semi-structured approach to	n=21, all of whom had a schizophrenia-spectrum	Positive and negative consequences of substance use were outlined.	

	by clinical staff from 3 outpatient psychiatric clinics and a psychosocial club. Participants were compensated for their participation	identify positive and negative effects of using drugs and alcohol and abstaining/reducing consumption.	diagnosis and lifetime substance abuse or dependence. Age range 28-59 (median=38). 90% male sample, 86% Caucasian. N=11 schizophrenia N=8 schizoaffective disorder N=2other psychotic disorder 86% diagnosis of alcohol abuse./dependence Other diagnoses most commonly cited were cannabis, cocaine, amphetamines, hallucinogens and polysubstance use.	Positive consequences included the reduction of negative emotional or cognitive states, and the augmentation of positive states. (e.g. forgetting problems, euphoria feeling)m, 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). Physical problems, craving, exacerbation of psychotic symptoms were negative effects. Participants could participate in decision balance exercises, and perceived costs and benefits in multiple domains of their lives related to substance use.	
Charles & Weaver, 2010 (UK)	Participants were drawn from a random sample of CMHT patients interviewed between 2001 and 2002 for another survey study on prevalence (Weaver *et al.,* 2003)	Purposive sampling; Exploratory cross-sectional qualitative study; flexible interviews	N=14 All participants met DSM-IV criteria for drug misuse, had a current psychotic disorder Most were male, polysubstance users were over-represented in the sample (n=13) Diagnosis: N=10 schizophrenia N=3 non-specific psychosis	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. Critical factors regarding initiation included exposure to drugs in everyday life and influence of social networks. Motivation to use drugs changed over	Finding unlikely to represent patterns of drug use amongst wall psychotic patients with comorbid drug use. Participants were only from inner London areas; limits generalisability Ethnic difference or gender

			N=1 bipolar disorder.	their life course and reflected shifts in lifestyle, attitude, life experience and perception about how substances impact on them socially, physically and mentally. N=13 were using cannabis, most perceived drug use to be causal factor in onset of their mental health problems. Many felt drugs had exacerbated their illness, and acknowledge drug use had definitely contributed to relapse and deterioration of MH post-onset. Physical side-effects from antipsychotics frequently cited; illicit drug to alleviate these side effects.	were not explored due to small sample size
Hawkins & Abrams, 2007 (USA)	Purposive sampling; Participants were selected from a group of 225 respondents who participated in a longitudinal study of homeless mentally ill individuals from 1998-2002. Random assignment to treatment	Social capital framework with cross-case analysis 2 in-depth qualitative interviews about life history occurring a month apart, 2 hours each. Asked questions about major events in life, experiences with MI and SUD, service use, social relationships	N=39 formerly homeless mentally ill men and women who were substance abusers in NYC. 85% reported long-term substance abuse; primary psychiatric diagnoses were schizophrenia (56%) bipolar disorder (22%)	Social networks of individuals with DD are small, but helpful. Limited social capital, many deaths and pushes/pulls network away combined with own problems Social isolation is common Members of social networks of those with DD died at a young age, or participants felt they couldn't cope with social relationships and pushed social network away Social skills raining should be exposure, as should supported employment	Generalisability limited by purposive sampling method and small sample size
Lobban *et al.*, 2010 (UK)	Purposive sampling method.	Interviews were topic guided and lasted	N=19, age range 18-35, n=4 female, n=15 male, 89% white	Participants perceived little stigma attached to drug taking which they saw	Presentation of data fails to reflect the complexity of the

	Participants drawn from an early intervention service based in the Northwest of England which supports people aged 14-35 during the 3 years after their first episode of psychosis.	between 1 -1.5 hours.	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)	as socially acceptable behaviour in their communities. Tension between acceptability of personal drug use and he 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	accounts given
Padgett *et al.*, 2008 (USA)	Participant sample consisted of new enrolees at 4 programs for DD homeless patients in NYC 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-4. 29% schizophrenia, 29% bipolar, 24% schizoaffective; substance abuse reported by 57%, 85% report previous treatment for substance abuse, 39% entered detox or substance abuse rehab 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 relationship because of ongoing struggles with	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

				substance abuse recovery as well as the social environment and service settings in participants moved "Concentrated disadvantage" – confluence of poverty, crime, substance abuse, little social capital or access to valued resources and information	
Turton *et al.*, 2009 (UK)	Purposive sampling to represent range of service-use profiles and a gender balance; Maximum variation sampling approach Participants were compensated for their participation.	Pilot study; face-to-face semi-structured interviews	N=18 (Eating disorders (n=6), forensic (n=6), dual diagnosis (n=6))	Hope, optimism, active engagement in treatment, autonomy all mentioned as important to recovery. Stigma mentioned frequently as barrier to autonomy and insight and seeking help Kindness and empathy important traits to embody when working with, and approaching service users with a dual diagnosis. Clinical recovery differs from conceptualisation of recovery from service user perspective (e.g. participants saw recovery as free from symptoms and get back to "normal")	Population consisted of those with an eating disorder or forensic service users instead so may be difficult to disentangle the specific experience of those with a dual diagnosis of psychosis/substance misuse.
Wagstaff 2007 (UK)	Recruited from an inner city Assertive Outreach Team (UK)	Semi-structured interviews based on case formation Thematic analysis	N=6 all with a diagnosis of psychotic illness (e.g. schizophrenia, schizoaffective disorder, or bipolar affective disorder) a history of drug/alcohol use, and a history of disengagement from mental health services.	Beneficial nature of substance use Absence of polysubstance use Negative attitudes towards hard drugs Refutation of diagnosis (schizophrenia) Issues around physical health	Very small sample size Recruited from an assertive community outreach team, may not be representative of other teams or settings within the UK

			N=4 males N=2 females Mostly crack cannabis and alcohol as primary substances. 5 out of 6 cultural backgrounds other than British.	Lack of social networks Immigration Positive self image	

1.3.4 Experience of Treatment

Included Studies: Costain, 2008; Loneck & Way, 1997; Pollack *et al.,* 1998; Todd *et al.*, 2002; Vogel *et al.,* 1998; Wagstaff, 2007; Warfa *et al.,* 2006

Ref ID	Sampling Strategy	Design/Method	Population/Diagnosis	Results	Limitations
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 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 (24 of 30) lacked insight into their schizophrenia (e.g. perceived they did not have a mental health problem)	Only looked at cannabis use; other substances may have elicited different viewpoints. .
Pollack *et al.,* 1998 (USA)	Data collected from focus group interviews, individual interviews and medical records. Content analysis	Structured interviews given, included introductory questions An 8-item structured questionnaire was developed for the study (individual based) Demographic data collected from med. Records using a 40-item form.	85% had a mood disorder (does not dissociate which ones!), 54% had psychotic features, 15% had schizophrenia 87% reported alcohol abuse, 46% reported cocaine abuse.	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. Excuses for not taking medication were highlighted as well as issues surrounding medication compliance	

				Positive and negative aspects of clinic appointments and self-help meetings Family influences on clinic or meeting attendance positive. Imbalance of internal and external control affecting adherence to treatment	
Todd *et al.*, 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 groups size ranged from 4-63 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 health care services may not generalise to UK services.
Vogel *et al.*, 1998 (USA)	Convenience sample; Recruited from Double Trouble in Recovery meetings in New York City.	Semi-structured ethnographic interviews	N=52 N=8 interviewed, n=6 men, n=2 women, all from an ethnic minority, 46% of sample has been in alcohol treatment or detox, 35% in drug detox (7 days or less), 31% in drug rehab, 46% in drug-free outpatient program,	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. Substance or alcohol use was a way to normalise symptoms, and most	Convenience sample may limit generalisability

			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, street methadone. Most common diagnoses: 44% schizophrenia, 46% unipolar depression, 21% bipolar. 73% male, 45% African American, 22% Hispanic, 33% non-hospital white. Age range 22 to 67.	did not seek treatment until they hit "rock bottom". 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. 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.	
Wagstaff 2007 (UK)	Recruited from an inner city Assertive Outreach Team (UK)	Semi-structured interviews based on case formation Thematic analysis	N=6 all with a diagnosis of psychotic illness (e.g. 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. 5 out of 6 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	Very small sample size Recruited from an assertive community outreach team, may not be representative of other teams or settings within the UK

				Positive self image	
Warfa *et al.*, 2006 (UK)	Recruited from statutory and non-statutory services.	Semi-structured in-depth interviews	N=9 male service users: n=2 African-Caribbean men, n=4 black Africans, n=3 White British men. N=3 with schizophrenia N=2 with psychosis N=1 with bipolar N= 3 other (PTSD, psychological problems, depression) Nearly all were khat or cannabis users.	Cultural capability should be considered within services to engage hard to reach ethnic groups. 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. 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 which could improve mental health services. Cultural capability of practitioners was good but could be further improved.	Small sample size

1.3.5 Carers' perspective

Included studies: Johnson *et al.,* 2000

Ref ID	Sampling Strategy	Design/Method	Population/Diagnosis	Results	Limitations
Johnson *et al.,* 2000 (USA)	Sample consisted of families referred in New Jersey from a family support project over a 3-yr period. Referrals came from – community mental health centre case management unit, family support group, outpatient clinics, inpatient programs, country jail systems, and the Mercer county branch of NAMI (national alliance for mentally ill)	Semi-structured interviews.	Families of n=180 patients with serious mental illness Seriously mentally ill defined as having had at least 1 previous hospitalization for a psychotic episode involving mood or thought disorder (DSM-IV) Primary caregivers were mostly parents (70%), with siblings, spouses and adult children included as well. Substance abuse problems in majority of patients (no % of how much of the sample had problems, however)	Family members want to be treated as team members by the professional community; felt excluded and efforts ignored Medication highly significant from standpoint of family members and medical adherence Family members expressed great concern about substance use thus members were grateful for interventions such as professionally led DD groups	Does not distinguish very well between dual-diagnoses patients and those with a mono-morbid diagnosis of a mood or thought disorder Not known how many people use substances or alcohol; difficult to generalise to the population in this guideline

1.3.6 Employment

Included studies: Strickler *et al.*, 2009

Ref ID	Sampling Strategy	Design/Method	Population/Diagnosis	Results	Limitations
Stickler *et al.*, 2009 (USA)	Participants recruited from community mental health clinics in US, using data collected between 2005-08.	Prospective longitudinal study of people with DD. 90 minute structured interview, focusing on work activity, participants reported competitive or other employment in last 12 months (competitive = community jobs that pay @ least minimum wage that are open to the public) 16 year follow up	N=120 Primary diagnosis 50.8% schizophrenia spectrum disorder, 24.2% schizoaffective disorder, 25% bipolar disorder 79.2% alcohol use disorder, 48.3% drug use disorder	29% were consistent workers over time. Participants explanations of their work histories congregated around 5 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	No comparison group of participants living without DD.

1.3.7 References to excluded studies

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