Online supplements to Bhui et al. Interventions to improve therapeutic communications between Black and minority ethnic patients and professionals in psychiatric services: systematic review. Br J Psychiatry doi: 10.1192/bjp.bp.114.158899

Online supplement DS1
Inclusion and exclusion criteria
Inclusion criteria
Studies that report evaluations of:
1. Models of therapeutic communication designed to improve assessment, diagnosis, clinical decision-making, treatment and treatment adherence for black and minority ethnicity patients
2. Other aspects of direct communication, e.g. consensual/participatory activities, including participatory aspects of cultural consultation, conflict resolution, cultural competence, consent issues, complaints and grievances, drawing up care plans and crisis plans
3. Tele-consultation services (e.g. NHS Direct, telemedicine, e-mail consultations, etc.).
4. Psychiatric care which involved outreach or referral into services
5. Service user interventions if they assisted with therapeutic communications in specialist mental health care

Exclusion criteria
1. Articles that simply report on translation or interpreter use in clinical assessment
2. Studies of services for populations speaking diverse languages
3. Studies that implemented a construct of therapeutic communication without adapting it to local needs or conditions
4. Evaluations of actual therapeutic communications (e.g. psychological therapies) rather than interventions that might improve therapeutic communications
5. Articles in which ethnic minorities or ethnicity were 'mentioned in passing' and were not a significant focus
6. Evaluations with no specific focus on interventions to improve therapeutic communication with patients receiving psychiatric care
7. During the review we also decided to exclude alcohol-related treatments and treatments for drug misuse, as separate evidence reviews for these had been undertaken previously, and the nature of the interventions and the settings would not match our inclusion criteria
8. The interventions were for the management of chronic diseases or behaviours associated with mental distress or disorder, rather than the mental distress or disorder itself, such as attention–deficit hyperactivity disorder (ADHD) or HIV, or smoking cessation
9. Where no intervention was evaluated, but analysis of routine data led to an inference that modifiable characteristics were those that showed an association with a measure of therapeutic communication; for example, ethnic matching as a derived variable in routine data were not included, whereas studies prospectively matching on an ethnic (or other) characteristic and testing the impact on the outcome were eligible for entry

Online supplement DS2
Search strategy and sources
Published literature
These terms were applied from the earliest possible date to 4 April 2012 and re-run January and February 2013.
The following databases were searched: MEDLINE, PsycInfo, Embase, ASSIA (applied social science index), Cochrane database of systematic reviews, Campbell Collaboration, ACP Journal Club, Cochrane Central Register of Controlled Trials, Cochrane Methodology Register, Allied and Complementary Medicine, CINAHL, British Nursing Index, Health Management Information Consortium, Social Science Citation Index, SocialCareOnline and NHS Evidence collection on ethnicity and health.

Economic papers
A series of systematic Medline searches was undertaken by the information scientist to identify economic materials that were potentially relevant to interventions. All other sources were also assessed for economic elements to the identified sources.

Hand Searches
Hand searches of the following journals were completed for the study period April 2007 to May 2012: *Transcultural Psychiatry*; *Culture, Medicine and Psychiatry*; *International Journal of Social Psychiatry*; *Journal of Cross-Cultural Psychology*; *Ethnicity and Health*; *Ethnicity and Disease*; and *Diversity in Health & Care*. In addition, two special issues of journals were also screened: *Psychotherapy: Theory, Research, Practice, Training*, special issue *Culture, Race, and Ethnicity in Psychotherapy*, Volume 43(4), 377–560, winter 2006; *Journal of Counselling Psychology*, Volume 58(4), 457–646, October 2011.

Recent journals and collections
We used a variety of strategies: 'hand-searching' more recent issues of journals on ethnicity and health (those that had appeared in the past 10 years), and journals on communications; 'cascade-searching'; and searching specialist collections at the Centre for Evidence in Ethnicity, Health and Diversity (CEEHD), King's Fund, NHS library on ethnicity and health, HTA, NICE, Royal College of Psychiatrists and Medical Foundation for the Care of Victims of Torture. We also made use of various web-based sources (e.g. Google, NHS Evidence, JISCmail) to search for reports that were not published in conventional research or professional journals and 'research in progress'.

Theses
We searched all dissertations and theses accepted for higher degrees by universities in Europe and North America up to February 2013.
Conference papers were identified through key term searches of the ProQuest Conference Papers Index from June 2004 to February 2013.

Websites
Websites were searched systematically using key terms. Two further electronic sources were examined; *NHS Evidence and JiscMail Archive.* Websites of research funding bodies were searched to identify projects in progress or those that had been completed. The following sites were included: Clinical Research Network (UKCRN) Study Portfolio, NIHR Evaluation, Trials and Studies Coordinating Centre (NETSCC), MRC and ESRC websites.

Experts
Experts were invited to comment on omissions in the searches and to put forward candidate papers and to volunteer research work that was unpublished or in progress. We consulted with experts known to the research group and/or to the service users. Community groups and charities were also contacted to identify materials in community-based collections. An online questionnaire (www.surveymonkey.com/s/TheracomSurvey) was developed and a personal invitation sent to 37 experts in the field and to 75 organisations for circulation to their members. A reminder was sent to all non-responders after two weeks. Finally, a request was posted on the 'Minority-Ethnic-Health' Jiscmail discussion group.

Online supplement DS3
Quality scoring schema
Core criteria
(1) the clarity with which the intervention was described as improving therapeutic communication directly or by inference or not at all (scoring 1-4)
(2) whether the outcomes of therapeutic communication were directly measured using a reliable and valid scale (scores 1-3)
(3) whether the ethnic groups was described in a manner consistent with a specific classification scheme for ethnicity (not just 'race'; scores 0-5). Core criteria scores ranged from 2 to 12 (scores of zero on the intervention to improve therapeutic communications and on outcome would have lead to exclusion of the study, so studies had to score at least 2 to enter the review.

Specialised for specific study design
For *randomised controlled trials*, used Moncrieff & Drummond's schema.[32] Fifteen items score 0, 1, or 2 (range 0–30).

For the quality assessment of *case-control or cohort studies*, we consulted an HTA evaluation of non-randomised observational studies.[33] From the recommended scales, we selected that created by Reisch *et al*[34] as it considers important confounding factors and differences between groups prior to the intervention; it has a good case-mix adjustment; and it is a validated numeric scale (scores 0–34). We adopted the scoring system developed by the Canadian Institute of Health Economics (IHE).[35] We added a scoring system to the checklist; hence, a 'yes' to a criterion in the checklist would qualify for a score of 1, and 'no' would score 0 (scores range from 0 to 38).

For *case studies, qualitative studies and studies from the grey literature*, we chose the NATCEN quality assessment criteria that score methodological and conceptual quality. We allocated a mark for each question asked and each of the items that might be endorsed to indicate quality, and so the scale offers a range of 0 to 87.[36]

Economic studies were separately scored. These were rated 1–4 on the basis of the type of economic analysis. Cost-effectiveness studies scored 4, impact of interventions and cost–benefit studies scored 3, an intervention being costed scored 1, or the benefits being considered in terms of finances, scored 1. A zero was scored if there was no economic evaluation.

Table DS1: Characteristics of Trials

First Author & Date	Sample Size and Ethnic Groups	Country	Intervention	Study Design
Rathod, 2013	African Caribbean: CaCBTp = 5 vs TAU = 4 Black African: 1 vs 4; Mixed race: 4 vs 6; Pakistani: 3 vs 3; Bangladesh: 2 vs 0; Other (Iranian):1 vs 0	UK	Culturally adapted CBT for psychosis (CaCBTp). Guided by Tseng's framework of philosophical, practical, technical and theoretical adaptation.	RCT in two centres. 35 participants with a diagnosis from schizophrenia group of disorders. CaCBTp participants were offered 16 sessions of CaCBTp with a trained therapists and compared with standard treatment.
Wissow, 2008	418 children 54% white 30% black 12% Latino 4% other ethnicities. .	USA	Brief communication training of three, one-hour discussions using video examples of family/provider communication. Each was followed by practice with standardised patients and self-evaluation. Skills encouraged were of eliciting parent and child concerns, partnering with families, and increasing expectations that treatment would help. Psychiatrists training primary care professionals to work with family, negotiate treatment choice and expectations of treatment.	Cluster randomised RCT. The training was tested with providers at 13 sites. Children (5–16 years of age) on a routine visit were enrolled if they screened "possible" or "probable" for mental disorders on a questionnaire, or if their provider said they were likely to have an emotional or behavioural problem.
Afuwape, 2010	40 black African origin (black African individuals born in sub-Saharan Africa or born in the UK with at least one parent of sub-Saharan descent) and of black Caribbean origin (black patients born in the Caribbean or born in the UK with at least one parent of Caribbean descent).	UK	Needs led stepped-care approach by 6 community health workers with a more experienced therapists. Practical advice, assistance, advocacy for social needs, health education, mentoring, brief therapies base on CBT and brief work focused on solutions. CBT with ethnically matched therapists (Black African and Black Caribbean origin), delivered through multiple social sites with significant flexibility.	RCT: Individuals were randomised to a needs-led package of care ('rapid access') or to a 3-month waiting list control with information on local mental health services ('standard access'). The needs-led package involved practical advice and assistance, advocacy for social needs, health education and mentoring as well as one-to-one brief therapies based on principles of cognitive behavioural therapy and brief solution by ethnically matched therapists; 'rapid access')

Hinton, 2005	Cambodian refugees (n=40) 20 patients in the initial treatment (IT) and 20 in delayed treatment (DT).	USA	Culturally adapted CBT for Cambodianrefugeeswith treatment-resistant posttraumatic stress disorder (PTSD) and panic disorder (PD). Information about PTSD and PD, muscle relaxation and diaphragmatic breathing, culturally appropriate visualisation, relaxation techniques/mindfulness; cognitive restructuring of fear networks; exposure to anxiety-related sensation alongside re-association to positive images to treat panic attacks generated by sensation-activated fear networks. Exposure to and narrativisation of trauma-related memories. Teaching cognitive flexibility, practice set shifting, during the emotional-processing protocol: shifting from acknowledgment of trauma to self and other pity, to kindness and to mindfulness.	RCT: Individual CBT was offered across 12 weekly sessions. Cambodian bicultural workers and a clinician fluent in Cambodian delivered assessment and treatment.
Hinton, 2004	(n=12) non-English speaking Vietnamese refugees.	USA	Culturally adapted cognitive–behaviour therapy for Vietnamese refugees with treatment-resistant posttraumatic stress disorder (PTSD) and panic disorder (PD). Eight core elements highlighted in the sessions: providing information about the nature of PTSD and PD. (As for Hinton 2005).	Pilot of RCT: Individual CBT was offered across 11 weekly sessions. The lead author delivered the CBT while Vietnamese social workers and staff provided translation and cultural consultation.
Chong, 2012	80 intervention and 89 TAU Hispanic patients	USA	Tele-psychiatry intervention for Hispanic patients. Online meeting programme between Hispanic psychiatrists and Hispanic low-income primary care patients seeking consultation. Two Hispanic psychiatrists fluent in English and Spanish; organisational readiness concept; importance of mental health treatment accepted; payment not expected of either group. Patient and psychiatrists sit in front of respective PC using webcam.	RCT: Eligible subjects were randomly assigned to tele-psychiatry using Webcam (WEB) or treatment as usual (TAU). Those assigned to the WEB condition agreed to arrive for tele-psychiatry sessions once a month for 6 months (1 h for intake and six 30-min follow-ups). Those assigned to the TAU were told that their provider would be responsible for their mental health needs.
Alvidrez - 2009	42 clients self identified as Black/African Americans, first time clients of the clinic.	USA	*Getting Mental Health Treatment: Advice from People Who've Been There* was a psychoeducation booklet developed from qualitative interviews revealing Black patients' experiences with mental health treatment and stigma; included information on what consumers wished they had before entering mental health treatment, challenges faced getting or staying in treatment, strategies to deal with challenges, and advice on making treatment work better.	RCT: Comparison with information in two existing brochure on local mental health services, and the services in the outpatient clinic. 22 of 42 assigned to psychoeducation and 20 to general information.

Grote 2009 (pilot data reported in 2007 and included in this paper).	53 non-treatment seeking pregnant African American women (n=33) and white counterparts (n=20).	USA	Short enhanced culturally relevant interpersonal therapy. Brief Interpersonal Psychotherapy (IPT-B) delivered as part of multicomponent care for antenatal depression. Engagement sessions were followed by 8 Brief Interpersonal Psychotherapy sessions before the birth and maintenance IPT up to six months postpartum. IPT was combined with motivational and ethnographic interviews taking account of social isolation, vulnerability and financial strain.	RCT: Fifty-three non–treatment seeking, pregnant African-American and white patients receiving prenatal services were randomly assigned to receive either enhanced IPT-B (N=25) or enhanced usual care (N=28). Participants were assessed before and after treatment.
Acosta - 1983	N = 173 62 Hispanic, 51 black, 60 white	USA	Audio-visual programme instructing patients about psychotherapy. Orientation, role induction, management of expectations assuming knowledge is limiting factor. An audio-visual slide/cassette program titled 'Tell It Like It Is' designed to inform patients from widely diverse ethnic, language, and cultural backgrounds about verbal psychotherapy. Combined simple explanations of the therapy process with presentations of vignettes that model helpful patient behaviours such as self-disclosures and direct statements of patient expectations.	RCT: Patients in each of the three ethnic groups were assigned randomly to one of two experimental groups, (a) oriented; and b) not oriented. The study employed a 2 x 3 x 2 factorial design, with two levels of patient orientation (oriented and not oriented). Three levels of patient ethnicity (Hispanic, black, and white) and two levels of patient sex (male and female). The control patients saw a programme that was neutral with regard to psychotherapy
Kanter 2010	Total - 10 Latino clients. Country of origin: 60% Mexico, 30% Puerto Rico, 10% United States.	US	Behavioural activation therapy adapted for Latino patients (BAL for short). More practical rather than psychological. Language matching in some cases. Adaptations account for the clients' circumstances, and sensitivity to the support resources, including the local community, spiritual traditions, and the extended family; specification of culturally sensitive activation targets, incorporation of Latino-specific cultural values and beliefs, addition of specific strategies to address treatment engagement and retention in the first session.	RCT: 10 people randomly assigned to BAL, 12 to a control condition.

Lambert & Lambert 1984	Matching not expected to improve potency, but if it took place would work against finding significant effects. Ethnic background decided on the basis of 11-item questionnaire. n = 30.	USA	Role induction involved role preparation interview to inform and manage expectations, clarify client and therapist roles, provide rational basis for patient to accept therapy to deal with problems, provide a general outline for the course of therapy with particular emphasis on the clarification of hostile and negative feelings; and convey information designed to create 'more positive and realistic' attitudes.	RCT: 30 immigrant clients were assigned to either role induction (therapy preparation intervention) or a placebo intervention prior to receiving therapy.
Tom , LM 1989	Chinese-Americans: 12 in experimental and 12 in continuing treatment group.	USA	Formation and application of a culturally relevant psychoeducation programme. Incorporated relevant cultural issues including Chinese perceptions of illness, concepts and terms. A lecture format was used with slide show and hand-outs, followed by a question and answer period. Topics included the disparity between Chinese and American views on mental disorders, the major diagnostic categories of mental disorders, symptoms of psychosis, the purpose of medication in treatment, warning signals of relapse, modalities and settings for treatment and roles of mental health professionals.	RCT & Post-test Control Group Design 30 Chinese-American clients were assigned to psychoeducation or a regularly scheduled group. 24 participated in the trial. On trial completion, control group clients were given the option to receive the intervention.

Table DS2: Findings from trials

Study	Outcome Measures	Narrative Summary
Rathod, 2013	Primary outcome: Comprehensive Psychopathological Rating Scale (CPRS) Several subscales were derived and analysed: The Montgomery–Asberg Depression Rating Scale (MADRAS), The Schizophrenia Change Rating Scale (SCS), Brief Rating Instrument for Assessment of Negative Symptoms Scale (BRAINS). Secondary outcome: Insight in Psychosis scale, Patient Experience Questionnaire (PEQ), Medication	CaCBTp was acceptable and effective as evidenced by a significant reduction of symptomology on CPRS total and subscales scores post treatment. The only gains maintained at follow-up were in the MADRAS subscale, although a positive trend towards reduction was noted overall. A sub analysis from the study revealed change in domains two and three (acceptance of illness and re-labelling of psychotic symptoms) as statistically significant when adjusted for baseline scores. The CaCBTp group engaged well when judged by attrition rates, mean number of sessions attended and the scores on the PEQ questionnaire. Overall satisfaction was associated with accessibility, type of therapy, therapist and involvement in decision-making process. The CaCBTp group presented with a significantly higher rate of medication change than the TAU group at the six month follow up.
Wissow, 2008	Parent Mental Health Symptoms-rated on GHQ28. Child Symptoms and Functional Impairment-computed total symptom (range: 0–40) and impairment (range: 0–10) scores from the parent-rated SDQ.	Minority children (black and Latino combined) seeing trained providers had a decrease in impairment compared with white children. For black children, seeing a trained provider was associated with a significantly greater decrease in impairment compared with children seeing control providers. For Latino children, there was a trend toward greater reduction in impairment among those seeing a trained provider. Training was associated with a significantly greater decrease in parent symptom across ethnicities, compared with seeing a control provider. Seeing a trained provider was associated with a significant decrease in symptoms for the parents of children with an enrolment SDQ rating indicating the possibility of having a mental disorder but not for parents of children rated as probable or unlikely to have a mental disorder.
Afuwape, 2010	Primary outcome: At 3 months, GHQ-28 total scores. Secondary outcome: transformed sub-scales of the GHQ-28; Physical Functioning, Role-Physical, Bodily Pain, General Health, Vitality, Social Functioning, Role Emotional, Mental Health, Experience of a severe difficulty from the Life Events and Difficulty. General psychosocial functioning using the GAF; 8 transformed scales of the SF-36 and the Mental and Physical component summary scores; 'fresh start' events and cost of service use.	Access to a needs-led package of care significantly improved mental health among black individuals with depression and anxiety with limited additional cost implications. There was a significant decrease in depression for the rapid access group compared to the control group and positive trends in outcomes for anxiety and insomnia for the rapid assessment group compared to the control group. Fresh start events were significantly associated with symptom improvement. These results were achieved with a study sample consisting of individuals with moderately severe levels of untreated mental illness despite most having contact with some form of NHS service in 3 months prior to baseline.

Hinton, 2005	1. Anxiety Sensitivity Index (ASI) 2. Clinician-Administered 3. PTSD Scale (CAPS) 4. Neck Panic Attack Severity Scale (N-PASS) and 5. Orthostatic Panic Attack Severity Scale (O-PASS) 6. Neck-Panic Flashback Severity Scale (N-FSS) and 7. Orthostatic-Panic Flashback Severity Scale (O-FSS) 8. Symptom Checklist-90-R (SCL) Scales 9. PTSD Status 10. GAD Status. Completed at four time points: (a) pre-treatment (first assessment), (b) after the IT Group had undergone 12 sessions of CBT (second assessment), (c) after the DT Group had undergone 12 sessions of CBT (third assessment), and (d) for both groups, 12 weeks after the completion of therapy (follow-up assessment). At 4-week intervals, the severity of neck- and orthostatic-associated panic (N-PASS and O-PASS), as well as neck- and orthostatic-panic-associated flashbacks (N-FSS and O-FSS) were assessment, starting 4 weeks prior to the IT Group's treatment and continuing until completion of the DT Group's treatment.	Culturally adapted CBT targeting PTSD and comorbid panic attacks for traumatised Cambodian refugees was well accepted and efficacious. This was evidenced by a significant reduction in PTSD and GAD symptomology post intervention. Observed improvements may have been influenced by a 'therapist effect' rather than a 'treatment effect' as the same therapist provided all treatment.
Hinton, 2004	1. The Harvard Trauma Questionnaire (HTQ), translated and validated for the Vietnamese population, 2. The Hopkins Symptom Checklist-25 (HSCL-25), translated and validated for the Vietnamese population, 3. Anxiety Sensitivity Index (ASI), translated and validated for the Vietnamese population 4. The Headache Panic Attack Severity Scale (HPASS) 5. Orthostatic Panic Attack Severity Scale OPASS) Outcomes from HTQ, HSCL-25 and ASI were measured (a) at pre-treatment (first assessment); (b) after Group 1 had undergone 11 sessions of CBT (second assessment); and (c) after Group 2 had undergone 11 sessions of CBT (third assessment). Outcomes from HPASS and OPASS were measured every two weeks 1. The Headache Panic Attack Severity Scale (HPASS) 2. Orthostatic Panic Attack Severity Scale (OPASS) .	Culturally adapted CBT targeting PTSD and comorbid panic attacks for traumatised Vietnamese refugees was well accepted and efficacious. This was evidenced by a significant reduction in PTSD and GAD symptomology post intervention. Observed improvements may have been influenced by a 'therapist effect' rather than a 'treatment effect' as the same therapist provided all treatment. It was not possible to determine whether this combined treatment as opposed to other treatments would be more efficacious as this was a small powered study.
Chong, 2012	1. The Personal Health Questionnaire 9 (PHQ-9), WEB - each session (for six months); TAU - baseline, 3 and 6 months, post-baseline. 2. The Mini International Neuropsychiatric Interview (MINI) - only once for exclusion and inclusion. 3. The Acculturation Rating Scale for Mexican Americans (ARSMA II) 4. Sheehan's Disability Scale (SDS) Patients baseline and 3 and 6 months post-baseline. WEB - monthly. TAU - baseline and 3 and 6 months 5. Visit Specific Satisfaction	Working alliance and visit satisfaction rated as higher for WEB than TAU. More WEB patients used antidepressants. While there was no difference in overall depression score, WEB depression scores improved at a faster rate than TAU. Twice as many web patients were willing to pay more for tele-psychiatry. WEB patients wanted longer sessions, reporting 30 mins as too short, and TAU patients wanted more sessions.

	Questionnaire (VSQ-9) was developed from Rand's Medical Outcomes Study. The VSQ-9 was found to reflect patient–doctor communication if used immediately after the clinical visit. 6. Working Alliance Inventory Short Form rate questions regarding the working relationship between them and the clinician/therapist during the specific clinic visit. It measures three subscales of the alliance that are related to the goal, task, and client–therapist bond. VSQ-9 (doctor patient communication) satisfaction ratings, proportion of completed primary care appointments.	
Alvidrez - 2009	Symptom severity based on Global Severity Score of Brief Symptom Inventory Perceived need for treatment. Treatment concerns. Diagnosis. Stigma-discrimination (devaluation-discrimination scale). Helpfulness of information (questionnaire). Treatment entry and attendance.	Interactions revealed that individuals perceiving themselves to have a greater treatment need, and individuals expressing more uncertainty about treatment, had greater stigma reduction if they received psychoeducation. Individuals with lesser perceived treatment need, and individuals with less uncertainty about treatment, showed greater stigma reduction if they received general information not psychoeducation.
Grote 2009	Baseline, three months later, six months post partum: depression diagnoses, symptoms. EPNDP for screening in, Beck 21 item for depression diagnosis if cut off >10; Beck 21 anxiety measure; social functioning on Social Adjustment Scale's social and leisure domain.	Treatment adherence patients in the IPT-B group showed significantly higher rates of treatment engagement and retention than patients in the usual care group;. Intention-to-treat analyses showed that participants in enhanced IPT-B, compared with those in enhanced usual care, displayed significant reductions in depressive symptoms before childbirth (three months post-baseline) and at six months postpartum and showed significant improvements in social functioning at six months postpartum.
Acosta - 1983	Attitude Toward Psychotherapy; questionnaire is an 8-item questionnaire on 6-point Likert-type scales that ranged from "agree strongly" to "disagree strongly. Knowledge Questionnaire, 10 items with multiple-choice questions.	The orientation program was successful in increasing a patient's information about psychotherapy and a patient's role in that process. While there were no interactions between ethnicity and the orientation main effect, across the groups knowledge of psychotherapy was found to be related to ethnicity with white patients scoring as most knowledgeable, followed by Hispanic and then Black patients. Oriented patients were significantly more positive towards psychotherapy than non-oriented patients. More specifically, oriented patients indicated that they were more willing to make self-disclosures and to discuss problems with their therapists, more willing to be assertive in telling the therapist when they disagreed with him/her, more willing to be direct with the therapist with regard to how many sessions they were willing to attend, and more accepting

		of the concept that talking about problems would be helpful to them.
Kanter 2010	17-item HSRD, a Spanish-speaking version; Spanish BDI-ii, Spanish PRIME-MD. Pan-Hispanic familialism scale, short acculturation scale, multidimensional acculturative stress inventory, and a treatment adherence checklist.	BAL did well with respect to treatment adherence, engagement and retention. BAL was effective in decreasing depression severity evidenced by a significant decrease in symptoms for both completers and intent to treat groups on BD-II and HRSD scales.
Lambert & Lambert 1984	Patient admission form, background information - client; background information - therapist; revised client expectancy inventory, approval seeking, advice seeking; audience-seeking; relationship seeking; psychotherapy questionnaire - Therapy Evaluation Inventory; premature termination; attendance rate measured by the number of scheduled sessions a client failed to attend from the time of his assignment to a therapist through the sixth therapy session.	Role preparation intervention has impact for high-risk clients like immigrants. There was a reduction in premature termination for the experimental participants (EP) group compared to the control participants (CP) group. EP reported greater satisfaction and perceived change in self. The EP group as compared to the CP group saw therapists as more interested, respectful, and accepting.
	Knowledge of mental illness and treatment using modified Knowledge about Schizophrenia Questionnaire. Attitude towards mental illness using. modified Opinions about mental illness Instrument Satisfaction with services using Client Satisfaction Questionnaire Motivation for treatment using staff completed modified Task Check List Questionnaires were administered in a group setting. Oral administration in order to minimise the number of unanswered items	Both groups had entered treatment expecting unrealistically high levels of rational guidance, structure and direction, to have difficulty with verbalising, difficulty in spontaneous self-disclosure, and with developing an egalitarian relationship. In comparison to the CP group, the EP group significantly improved their expectancy scores in relation to advice seeking, audience seeking, and relationship seeking.
Tom, LM 1989		The psychoeducation enhances knowledge of western concepts of mental illness and treatment methods. The experimental group had a greater years of education than the control group, potentially contributing to their higher mean score on KSQ. In the experimental group, individuals who were younger, better educated, or had a longer duration of illness were most knowledgeable about concepts of mental illness and treatment. This suggests that younger more chronic patients with at least a high school level of education would benefit most from psychoeducation.

Table DS3: Characteristics of non-randomised designs

First Author & Date	Sample Size and Ethnic Groups	Country	Study Type	Detail of Intervention
Kohn, 2002	20 African American women. 10 in AACBT group. Comparator 10, demographically matched women who had been treated with CBT. Approximately 83% of these patients (10/12) opted for treatment in the AABCT group. One woman preferred individual to group treatment; another preferred the CBT group. Of 10 African American women who agreed to enter the AACBT , 8 completed therapy and were compared to ten women who were demographically matched on race, age, education, income, diagnosis, referral source, women who had been previously treated in the CBT group.	US	Observational Studies	Culturally adapted cognitive behavioural group therapy for depressed African American women. The CBT consists of three four-session cognitive behavioural modules. After completing each of the three modules patients repeat the first module for a total of 16 sessions. These modules focus on cognitions, activities, and relationship; based on cognitive behavioural treatment for depression. Structural adaptations include limiting the group to African American women, any age, with a diagnosis of Major Depressive Disorder; keeping the group closed to facilitate cohesion; adding experiential meditative exercises during treatment and a termination ritual at the end of the 16-week intervention and; changes in some of the language used to describe cognitive-behavioural techniques. For example, rather than using the term "homework" the group members were asked for suggestions and agreed upon a preferred term "therapeutic exercises." Whenever possible, African American individuals and anecdotes from African American literature were used as examples to illustrate concepts. Didactic adaptations of materials: creating healthy relationships; spirituality; African American family issues; African American female identity. These adaptations represent our attempt to contextualise the therapy manual to address issues relevant to African American women in treatment for depression.

Alvidrez, 2005	All African American. 32 patients recruited to intervention, 37 in the historical control group. Thirty-one participants (97%) completed follow-up interviews. Historical comparison group of 37. The 32 participants did not differ significantly from the 12 patients who were not enrolled in the study. 31 completed follow-up interviews. The historical-comparison group consisted of a consecutive sample of African American patients referred to on-site clinic psychologists for psychotherapy in the 12-month period before study initiation. From a total of 39 African American patients identified, 2 already enrolled in the current study were excluded, resulting in a final comparison group sample of 37.	USA	Observational study	Descriptive pre and post comparison. Historical comparison (historical-control group). The psychoeducation script begins with a brief description of psychotherapy and specific services offered; then six topics: the concerns identified in the focus groups: how a medical-model of psychiatric disorders reduces stigma; illnesses leading to involuntary hospitalisation; the importance of the patient's input in therapy goals and topics; the importance of talking about conflicts, misunderstandings, or dissatisfaction with treatment; differences between therapists and patients and how these can be helpful; receptivity of therapists to discuss religion/spirituality and incorporating into treatment. In the psychoeducation session, the psychoeducator read from the script while the participant followed along with a large-print handout summarising the major points. The session was didactic; participants were encouraged to ask questions and raise concerns about treatment. Psychoeducation intervention is a 15-minute, scripted individual session. Content developed by 22 participants in 3 focus groups, discussing barriers to mental health treatment for older African Americans. Barriers included stigma of receiving, mental health services; fear of hospitalisation or institutionalisation; reluctance to work with a non-African American therapist; feeling pressure to divulge personal information or discuss irrelevant material; the lack of attention to religious beliefs/spirituality by therapists; and dissatisfaction when the therapist does not provide solutions.
Chow, 2010	7 Chinese clients with mean age (sd) of 38.6 (6.5), 2 women (29%). Mean age (sd) of 11 Chinese family members of 64.3 (11.6), 7 women (64%). There were 7 Tamil clients with mean age (sd) of 37.6 (6.4), 1 woman (14%). 9 Tamil family members with mean age (sd) of 55.1 (17.9), with 6 women (67%).	Canada	Case series	Psychosocial conference at a local restaurant to introduce the study, then transport provided to attend MFPG; meeting held at preferred community venues; meetings at weekends following by lunch. 2-hour session once a month for 12 months .2 sessions to listening to concerns around medication and chronic disease needing medication. Provider and client stakeholder input with iterative testing process within a FMAP (formative method for adapting psychotherapies) to create problem-solving therapy for older Chinese clients. The use of community venues, transport, and engagement to recruit to the study are part of the adaptation. 2-hour

				sessions, once a month for 12 months. 2 sessions listening to concerns around medication and chronic disease needing medication. Cultural adaptation using evidence based practice using an interactive stakeholder process and theoretical framework: problem-solving therapy for Chinese older adults. Focus groups and interviews with community providers and a depressed 60 year old Chinese elder to assess feasibility of modification to PST; community providers included 31 para-professionals, or doctoral or masters level clinicians or trainees. Focus groups and interviews 1.5-2 hours each.
Kirmayer - 2003	Descriptive pre/post assessments in a case series with some case studies. Evaluation data: 100 cases, 27% Canadians, 24% immigrants, 41% asylum seekers and refugees. 50 ethnocultural groups (undifferentiated). Four cases involved requests from organisations to discuss issues related to their work with a whole ethnocultural group or community.	Canada	Case series	Cultural consultation of referred patients. Cultural consultation: three types of activity 1) consultant with relevant cultural expertise assessed the patient, preferably with the participation of the referring person. 1-3 meetings with patient, brief written report, phone call or case conference.
Palinski, A., Owiti, J., et al	46 depth consultations. White British 15%, White other 4%, Asian or Asian British Pakistani 4%, Asian or Asian British Bangladeshi 40%, Other Asian background 2%, Black or Black British Caribbean 4%, Black or Black British African 9%, Black or Black British Somali 15%, Mixed White and Black Caribbean 2%, Other Ethnic Background 18%.	UK	Case Series	Cultural consultation model adapted to elicit narratives from service users, carers, staff, and organisational managers. These reconciled to support clinical decisions for patient care. Adapted from Kirmayer 2003, to include the organisational narratives and team narratives and staff narratives. Specialist CCS staff worked alongside existing staff rather than take referrals. Provided a report and advice on management based on documentary analysis, narrative information, and participant and non-participant observations.

Chu, 2012	Case study, participant recruited from primary care setting. Single Chinese older woman to test intervention.	USA	Qualitative	An iterative stake-holder and client input process, the FMAP (formative method for adapting psychotherapies), to adapt Problem Solving Therapy for treatment of depression in Chinese older adults and create the Problem Solving Therapy for Chinese Older Adults (PST-COA) manual. Provider and client stakeholder input using participatory approach, then integrating stakeholder input with literature review, then refining the intervention using an iterative testing process within a FMAP (formative method for adapting psychotherapies) to create problem solving therapy for older Chinese clients.
Chow, 2010	As above for case series Chow 2010	Canada	Qualitative	Psychosocial conference at a local restaurant to introduce the study, then transport provided to attend MFPG; meetings held at preferred community venues; meetings at weekends following by lunch. 2 hour session once a month for 12 months Each session led by a supervisor supported by two group facilitators who spoke the participants' language. 2 sessions were dedicated to listening to concerns around medication and chronic disease needing medication. 10 sessions followed a slightly modified MFPG model.
Grote 2007 (pilot trial data reported in Grote 2009)	A 33 year old unmarried African American woman who lived with her 7 year old son and her physically disabled unemployed boyfriend. Is the primary breadwinner in the family, working at night at a low-wage job in the inventory department of a large store. At the initial intake interview, she was diagnosed with moderately severe level of depressive symptoms on the Beck Depression Inventory. 28 weeks pregnant when she came to the engagement interview.	USA	Case Study	Enhanced Culturally Relevant, Brief Interpersonal Psychotherapy (IPT-B) is a multicomponent model of care designed to treat antenatal depression and consists of an engagement session, followed by eight Brief Interpersonal Psychotherapy sessions before the birth and maintenance IPT up to six months postpartum. Engagement interview includes ethnographic interviewing and motivational interviewing. Ethnography empowers, elicits narrative of patient and experience and meaning-making, and negotiates the treatment, taking account of social systems and resources in the community. The intervention changes the type of interview, in order to improve engagement and better inform the discussion about treatment. Elicit story, treatment interest and hopes, feedback and psychoeducation, eliciting commitment.

Bhui, K - 2004	Psychiatrist and two patients in mental health services in UK	UK	Case Study	2 case histories. Negotiating explanatory models to aid in assessment, and also to facilitate delivery of CBT including a negotiated agreement, but not adapting the CBT content.
Schouler-Ocak 2008	Outpatient trauma clinic	Germany	Case Study	Clinical ethnography to influence decision-making. Transference based psychotherapy but trauma focused, informed by cultural perspectives on coping, an understanding of religious perspectives.

Table DS4 Findings from non-randomised designs

First Author & Date	Main findings
Kohn, 2002	The intervention was acceptable and effective. Women in the culturally adapted (AACBT) group exhibited alleviation of twice the magnitude of women in the usual (CBT) treatment group. Both groups' scores suggested a need for further treatment. In Nietzel's meta-analysis, with a predominantly White, middle class population (n = 28 studies), the post-treatment BDI score was 12; in Organista's outcome study (1994), with a predominantly low-income, public sector population (n = 70), the post-treatment BDI score was 18.0. For low-income, African American women, the post-treatment score was 21.8 in the AACBT condition (n = 8) and 24.4 in the regular CBT condition (n = 10). This suggests that CBT for depression may work best in the population for which it was developed, and becomes less effective as groups differ.
Alvidrez, 2005	An equal proportion (75%) of patients in each group started therapy. Therapy entry and attendance, in the 3- month period after the psycho-education session: 24 of the 32 study participants (75%) attended at least one psychotherapy session (range 1 to 10). Therapy entry was not related to an African American psycho-educator (71%) or not (76%; p=0.8), nor were there significant differences in the number of sessions attended (mean: 3.3, SD: 2.9 vs 4.2, 1.9; Mann-Whitney U 36.0; exact p=0.45). In the historical-comparison group, 28 of the 37 (76%) attended at least one session (range: 1 to 8). In the 3-month period after referral, the proportion of participants who attended at least one session did not different by intervention status. Psycho-education participants who started therapy attended significantly more sessions. In the follow-up interviews, 25 of the 31 participants reported attending at least 1 psychotherapy session in the 3-month period after the psycho-education session. The majority of participants (84%) found the psycho-education very or somewhat helpful. Just over half (52%) of those who began therapy said that the psycho-education influenced their decision to begin therapy "a great deal." When 6 who did not begin therapy were asked if the psycho-education influenced their decision, all said no except one who reported that the psycho-education influenced her decision "somewhat". 29 of 31 respondents (94%) said ethnicity of psycho-educator made no difference to perceived helpfulness. One respondent who had an African American psycho-educator said the session was more helpful and another who had a non-African American psycho-educator said the session was less helpful because of the ethnicity of the psycho-educator. Experience in therapy: among the 24 patients starting therapy, 60% said the psycho-education addressed many or all of their concerns about treatment. Helpfulness for on-going therapy issues: a majority indicated at least slight helpfulness in all areas. The strongest ratings were given for the role of psycho-education in helping the patient to bring up concerns about treatment and discussing ethnic, cultural, or religious issues with the therapist. Although a majority indicated that the psycho-education helped them deal with stigma concerns, this was endorsed less frequently and less strongly than the other topics.
Chow, 2010	Participation: 57% families in study attended at least half of the session. The mean score of family members' acceptance was significantly increased (64.20 ± 13.90 vs. 76.30 ± 14.72, df = 13, p= 0.01). This acceptance was more pronounced in families, which participated in more than 50% of the sessions (n = 8, 61.38 ± 16.54 vs. 80.05 ± 17.02, df = 7, P = 0.01). A rank order correlation analysis found that attendance was associated with greater reduction in family burden (r = 0.5, P=0.05). No significant changes were found in other SAS variables, but some positive trends were noted: the family members' perceived burden of the client, family members' satisfaction with their own physical health, mental health and health in general.

Kirmayer - 2003	29 referring clinicians (representing 47 cases) completed service evaluation questionnaires. 86% reported that they were satisfied with the consultation and that it had helped them manage their patients. Useful aspects of the consultation included increased knowledge of the social, cultural, or religious aspects of their cases (41%); increased knowledge of the psychiatric or psychological aspects of their cases (21%); improved treatment (48%); improved communication, empathy, understanding, or therapeutic alliance (31%); and increased confidence in diagnosis or treatment (14%). The major difficulties or dissatisfactions with the cultural consultation were the lack of treatment or more intensive follow-up (14%), unavailability or inappropriateness of recommended resources (14%), concerns about the competence of the culture broker (10%), and the impression that there was too much focus on social context, rather than on psychiatric issues (10%). All said they would use the service again and would recommend that their colleagues use it. They reported high rates of concordance with recommendations. In 21 cases, some aspect of the CCS recommendations was not implemented. Reasons for this included patient noncompliance (n =13), lack of staff or other resources (n = 9), and spontaneous improvement (n = 7). Language barriers and cultural complexity prevent adequate diagnosis and treatment for a significant number of patients, including refugees, new immigrants, and members of established ethnocultural communities. A cultural consultation service can respond to these needs in most cases. Assessments, treatment plans, and interventions are well received by referring clinicians. There is a need to train clinicians systematically in the effective use of interpreters, culture brokers, and the cultural formulation.
Palinski, A., Owiti, J., et al	Response rate from clinicians: 78% at baseline and 46% at follow-up. Service users: 61% at baseline and 35% at follow-up. Service level outcomes collected at baseline and follow-up for 36 patients. Clinician-rated clinical outcomes: 36 at baseline and 20 at follow-up. After the cultural consultation process clinicians rated service users as having significantly higher overall functioning compared with ratings before the CCS work, on the Global Assessment of Functioning ($p< 0.02$). No significant changes were found for CANSAS rated needs of service users, nor the clinicians' rating of the therapeutic relationship (measured using the STAR). Non-significant trends include more met needs on the CANSAS and a lower score on the CORE. Quantitative Cultural Competence Assessment: 67 clinicians completed the TACCT questionnaire at baseline and 28 at follow-up. The change between baseline (mean=90.21; sd=19.11) and follow-up (mean=95.4; sd= 18.87) (Mann Whitney U= 635.5; $p<0.02$) was significant. Service level outcomes (n=36 at baseline and follow-up): the level of service receipt (and associated costs) significantly reduced after CCS intervention, with a significant reduction in use of A&E ($p<0.02$), psychiatrists baseline ($p<.001$) and CPNs and case managers ($p<.001$). No significant difference in hospital admissions were found, but this was measured over a 3 month period. Referrals were for perplexing and complex clinical presentations, lack of sufficient knowledge or lack of comprehensive understanding about the cases; concerns about racism and discrimination; lack of engagement or progress and failed treatment alliance; exploration, and resolution, of cultural conflicts, and the impact of social changes on service user's recovery; information requests; defensive practices. The focus of interventions was to minimise miscommunication, provide links with third sector and statutory bodies for support; offer and suggest new interventions / assessments; suggest psychological interventions and services with suitable culturally appropriate models; offer education, empowerment, autonomy and choice; family engagement and mediation; diagnostic clarification
Chu, 2012	Themes emerging form stakeholder feedback, literature review, and pilot testing: a need for flexibility; psychoeducation and de-stigmatising language; managing expectations of the provider-client relationship involving attention to hierarchy, respect, case management, and providing suggestions; visual aids and measurement; and incorporation of acculturative processes. The adapted intervention resulted in a decrease in depressive symptoms for the test participant and improved mood. Community providers evaluated the intervention as cultural appropriate and the pilot participant rated the intervention as satisfactory and effective. .
Chow, 2010	Key themes from content analysis from focus group transcripts: reduced stigma and shame, less isolation among family; increase in understanding of client's condition more support from family; reduced helplessness and hopelessness; improvement in client-family relationships; mutual enhancement of MFPG and ACT; importance of cultural and linguistic matching between clients/family and clinicians.

Grote 2007 (pilot trial data reported in Grote 2009)	Patient engaged, motivated, and completed therapy sessions, with improvements in mood, despite social circumstances.
Bhui, K - 2004	Patient recovery through partial adoption of understanding patient's explanatory model, leading to a jointly formed treatment plan. Consultations that involve culturally grounded explanatory models of illness challenge the professional. Through case studies, a method of reconciling different explanatory models is evaluated.
Schouler-Ocak 2008	The strategies used to deal with symptoms induced by trauma are often culture-specific. There are unique aspects of trauma-focused psychotherapy in patients with a history of migration (trauma focused therapy + explanatory models). Approaches included combining trauma focused therapy including visualisation and reliving experience with massage, physiotherapy, swimming, exercise groups, all used to improve overall wellbeing and develop self-help skills. Religion became important to in one patient's therapy, given its role in preventing suicide, so religious prescriptions were encouraged.

Table DS5: Patient and Carer ranking of interventions

Intervention	High priority	Lowest priority	Selected comments by users
Communication training for doctors and patients	◆◆◆		This is the first access point and if this is done right, pathways to appropriate support can follow. Had some trouble understanding this intervention.
Community workers practical advice & advocacy		◆◆	Seems crisis oriented – too many professionals. How serious or unwell does one really have to be before you get to see the more experienced therapist and psychiatrist'?
'Cultural consultation' team assessment	◆◆◆		I think I dislike the phrase 'consultant with cultural expertise'.
'Explanatory models' of mental illness	◆◆◆		This knowing of what is best must arise out of a dialogue between patient and professional, which is respectful, mutually intelligible, culturally sensitive, and open enough to engage with a wide range of explanatory models and ideas for recovery. People are not afraid of what they know: more information is a must.
Telepsychiatry (Skype) to language competent staff"			Telepsychiatry is important for a client who doesn't want to go out or see anyone face to face.
'Role induction' briefing the user first		◆◆	This intervention sounds like marketing therapy to patients Very important to clarify what to expect. Not in a crisis situation though.
Culturally adapting e.g. CBT to specific cultures		◆◆	This still won't work if the people running it are culturally incompetent.
Ethnographic and motivational interviewing	◆◆◆		A way of validating and working empathetically with individuals Very compelling, but is this interventionist 'style' not what most people expect from ALL therapy and all interviews?
'Ethnic matching' of client and service provider		◆◆	Yes, bi-lingual and bi-cultural (and gender) ethnic matching is important, necessary, and helpful for some. But in other cases, it makes no difference, and for others, it is not appropriate because the therapist is culturally too close to the patient. Must resist simplistic assumptions and generalisations. This has helped me: I know it works..
'Multi-Family Psycho-education Group'		◆◆	Allows in-depth work with user/family and chances for identifying with others to create opportunity to build connections. The multi-family education group is not for me because my family believe mental health is a curse. People don't always have families.

◆◆◆ = three or more votes in support. ◆◆ More than one disagreement on the value of the intervention.