



Delivery of cognitive-behaviour therapy for psychosis: A service user preference trial

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Delivery preferences for CBT for psychosis

Delivery of cognitive-behaviour therapy for psychosis: A service user preference trial

Abstract

Background: Clinical guidelines recommend cognitive behaviour therapy (CBT) for people with psychosis, however, implementation is poor and not everyone wishes to engage with therapy.

Understanding service user (SU) preferences for receiving such treatments is a priority for services.

Aims: To explore SU preferences and outcomes of different methods of delivering CBT for psychosis.

Method: SUs experiencing psychosis could choose between treatment as usual (TAU); TAU plus telephone-delivered CBT with self-help, CBT recovery manual (TS); high support CBT (HS - TAU plus TS plus group sessions); or randomisation. Participants received their option of choice and were followed up on several outcomes over nine and 15 months.

Results: Of 89 people recruited, three chose to be randomised and 86 expressed a treatment preference (32 chose TAU, 34 chose TS, 23 chose HS). There were few differences between those that chose therapy compared to those that chose TAU. Those who had more positive impacts from their symptoms were significantly more likely to choose TAU.

Conclusions: Most people had strong preferences about treatment delivery and a substantial number did not wish to receive additional therapy. These findings have to be considered when planning and allocating resources for people with psychosis.

Declaration of interest: None

Keywords: schizophrenia, CBT, treatment preference, psychosis, preference trial

1 Delivery preferences for CBT for psychosis

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3 Clinical guidelines recommend psychological therapies, such as cognitive–behaviour therapy (CBT),
4
5 to support recovery for individuals with psychosis or schizophrenia (American Psychiatric
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7 Association, 2004; National Institute for Health and Care Excellence, 2014). However,
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10 implementation of CBT for psychosis (CBTp) is poor (Haddock et al., 2014; Prytys et al., 2011) and
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12 there are significant barriers to delivery within services, such as workforce capacity (Berry &
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14 Haddock, 2008), service structure and service user (SU) preferences. The evidence base for CBTp
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16 has mainly been for face to face CBT (individual or group), although we know that CBT delivered by
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18 telephone is effective and acceptable as face-to-face delivery (Lovell et al., 2006). Despite this,
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20 preferences for delivery of CBTp are not well researched, although preferences about treatment
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22 have been explored for other mental health problems. This work has suggested that therapy may
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24 be more acceptable and credible than pharmacological interventions (Landreville et al., 2001;
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26 Lundervold & Lewin, 1990; Rokke & Scogin, 1995; Unützer et al., 2002), and that there are better
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28 outcomes for those receiving a treatment of choice (Swift & Callahan, 2009).
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36 Although little research has been done on preferences for CBTp, some studies suggest that people
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38 have strong opinions about therapy and how it is delivered (Sumner et al, 2014; Byrne et al, 2010;
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40 Byrne et al, 2014). In one study, which explored hypothetical preferences about delivery of CBTp,
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42 SUs were asked, if they were to be offered a treatment, how they would prefer therapy to be
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44 delivered with four possible options: CBTp by telephone, telephone CBTp plus group sessions, both
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46 including the support of a CBTp-focused guided self-help manual, ‘no therapy’ (TAU) or ‘no
47
48 preference’ (randomly allocated to any treatment; Sumner et al., 2014). All were also asked
49
50 whether they would be willing to take part in a trial. Of 81 participants, 97% were willing to be
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52 involved in such a trial, however, 57% were not be willing to be randomised and had preferences
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54 about how they would like to receive CBTp. Twenty two per cent chose TAU alone, 43% chose
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1 Delivery preferences for CBT for psychosis

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3 telephone CBT, and 27% preferred telephone therapy plus group sessions. Only one participant had
4
5 no preference suggesting important considerations for service deliverers. For example, SUs may
6
7 refuse treatment in case they do not receive their preferred option, or, they may drop out because
8
9 they are unhappy with their allocation. In addition, although there were no sociodemographic or
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11 clinical differences between preference groups in the Sumner et al study, other studies have shown
12
13 that preferences about treatment are associated with patient characteristics (Yung et al, McHugh et
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15 al, 2013). More information about this may help services to plan delivery of treatment based on
16
17 specific characteristics.
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24 To take account of treatment preferences, partially randomised Patient Preference Trial (PPT)
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26 designs are used (Brewin & Bradley, 1989). People with treatment preferences are allowed their
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28 treatment without randomisation and those without a preference are randomised in the usual way.
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30 There are methodological problems with this design, e.g. any comparison that uses non-
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32 randomised groups is potentially unreliable because of unknown confounds. However, there are
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34 ways of reducing the impact of this by performing a comparison of the randomised participants
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36 alone, collecting information on confounds and adjusting for these in the analysis and using
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38 randomisation status as a covariate in analyses (Torgerson & Sibbald, 1998). Prospective
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40 investigations to ascertain expected numbers in each arm, and presenting information to
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42 participants about choices in a standardised way to minimise expectancy bias can help inform the
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44 design of such a trial. This methodology was chosen in the current study on the basis that the
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46 potential benefits outweighed the methodological problems. Benefits included the likelihood that
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48 we might recruit people who would otherwise refuse to take part in a traditional Randomised
49
50 Controlled Trial (RCT), thus the sample would be more representative. Also, a PPT might improve
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52 the external validity of the trial i.e. be more commensurate with routine practice. We currently
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1 Delivery preferences for CBT for psychosis

2
3 have little information about treatment preferences in mental health and initiatives to bring parity
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5 for mental health care with physical health suggests that services should offer psychological
6
7 therapy to everyone with psychosis (see National Institute for Health and Care Excellence - Quality
8
9 Standard, 2015). Data on the likely uptake of therapy is important as to facilitate modelling of
10
11 capacity and demand even though research data is not able to completely model 'real' service
12
13 delivery. This information may help to overcome problems with implementation of psychological
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15 treatments for people with psychosis (Haddock et al., 2014). Hence, we aimed to examine SU
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17 characteristics in relation to treatment choice within the context of a real trial (in contrast to the
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19 hypothetical study of Sumner et al, 2014) and explore how this related to feasibility and
20
21 acceptability of treatment, and explore outcomes following choice on recovery, symptoms and
22
23 functioning. We anticipated that the characteristics of those choosing different options may vary
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25 which may allow us to deliver treatments matched to service user characteristics.
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33 **Materials and Methods**

34 ***Participants***

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36 Participants were recruited from three National Health Service mental health trusts in the North
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38 West of England. Inclusion criteria were: ICD-10 (World Health Organisation, 1992) diagnosis of a
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40 schizophrenia spectrum disorder; 18-65 years; under care of a mental health team; use of a
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42 telephone, able to read English and provide informed consent, and stable symptoms for at least
43
44 one month (defined as an absence of acute exacerbations of symptoms requiring hospitalisation or
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46 change in medication).
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52 ***Randomisation and masking***

1 Delivery preferences for CBT for psychosis

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3 Following baseline assessment, participants took part in a semi-structured interview to ascertain
4 preferences for treatment following presentation of a short description of each option. Participants
5 were offered TAU alone (TAU), TAU plus telephone delivered CBT plus a supported self-help manual
6 (TS), TAU plus TS plus recovery focused CBT group sessions (HS) or randomisation to any option.
7
8 Options were presented in a counterbalanced order to remove order effects. Participants were
9 asked about reasons for choice and the strength of choice (1-10, 10 being strongest). Participants
10 were then allocated to their preferred option. Randomisation was conducted remotely by an
11 independent clinical trials unit using random permuted blocks.
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24 ***Procedures***

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26 Ethical approval for the study was provided by NRES Committee North West – Greater Manchester
27 North (09/H1011/81; ISRCTN50487713). Participants were given £10 for each assessment at
28 baseline, post-therapy (9 months) and at 15 months. All assessments were carried out by research
29 assistants blind to allocation.
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38 ***Intervention***

39 Further details of each treatment option:

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43 1. Treatment as usual (TAU) consisted of care from a multi-disciplinary mental health team,
44 prescriptions for antipsychotic medication, supportive information about medication and
45 regular review.
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50 2. Telephone support (TS) comprised weekly, telephone delivered CBTp with a supported self-
51 help Recovery Guide delivered over 9 months. One initial and final face-to-face meeting
52 were also offered. The Recovery Guide had two core chapters (Meaning of recovery from
53 psychosis and goals, resources and understanding development of problems) and two
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Delivery preferences for CBT for psychosis

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3 further chapters with optional sections (anxiety, paranoia, low self-esteem) or reaching
4
5 wider recovery goals (employment, healthy living, social networks). The guide was
6
7 developed by academics, clinicians and service user researchers. Participants could work on
8
9 the guide independently, and within telephone sessions with a dedicated therapist who
10
11 carried out a CBTp intervention. The intervention was intended to provide an equivalent
12
13 amount of therapy as that which be carried out in usual face to face CBT for psychosis and
14
15 was based on CBT psychosis interventions used in previous trials by the authors (Lewis et al,
16
17 2002; Barrowclough et al, 2010; Haddock et al, 2009) which informed UK, NICE guidelines
18
19 for the delivery of CBT for people with psychosis (NICE, 2014). Telephone delivery was based
20
21 on procedures developed in a CBT equivalence trial carried out by the first author (Lovell et
22
23 al, 2006). All seven therapists met British Association for Behavioural and Cognitive
24
25 Psychotherapies minimum training standards for CBT. Treatment fidelity was ensured
26
27 through a detailed therapy manual, fortnightly group supervisions, individual therapist
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29 supervision and assessment of audio taped therapy sessions using a therapy fidelity scale
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31 (Hartley et al., 2014).
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39 **3.** High Support (HS) consisted of TAU plus telephone delivered CBTp therapy as above plus 12
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41 recovery focused CBTp group sessions delivered over six months, fortnightly, lasting two
42
43 hours. Groups were run by a CBT therapist and a researcher with lived experience of
44
45 psychosis. The sessions were CBT-based and matched chapters in the guide. Groups were
46
47 aimed at encouraging participants to identify areas they would like to change and facilitated
48
49 discussion around key CBT strategies. The treatment protocols closely matched that of
50
51 traditional CBTp in groups (Barrowclough et al, 2006). Therapy adherence to the group
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53 intervention was ensured through using a detailed manual and supervision sessions as
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55 above.
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1 Delivery preferences for CBT for psychosis
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5 In addition, some participants were offered peer support sessions delivered by service user-
6 consultants. Up to six peer support sessions were offered, the first in person and the rest by
7 telephone. However, due to resources, these sessions were only offered to the first 21 participants
8 (13 = TS, 8 = HS).
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14 **Outcomes**

15 Participants' choice and their ratings on strengths of choices (using Likert scales) were recorded
16 during interview by the researcher. Reasons for choices were recorded verbatim. Data on take up
17 of therapy sessions, time spent in therapy and therapeutic alliance were recorded. Demographic
18 characteristics of participants and details of symptoms were recorded.
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32 **Self-report mental health measures**

- 33 1. Questionnaire about the Process of Recovery (QPR; Neil et al., 2009): two sub-scales relating
34 to interpersonal and intrapersonal recovery (22 items).
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- 37 2. Subjective Experiences of Psychosis Scale (SEPS; Haddock et al., 2011): three subscales
38 assessing the impact of psychotic symptoms, external factors and severity of psychotic
39 symptoms (45 items).
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48 **Secondary measures**

49 Structured interviews were used to measure symptom severity using the Positive and Negative
50 Syndrome Scale (three subscales covering positive, negative and general symptoms, and a total
51 score; PANSS; Kay et al., 1987) and Psychotic Symptom Rating Scales (an auditory hallucinations and
52 delusions subscale score and a total score; PSYRATS; Haddock et al., 1999). Functioning was
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1 Delivery preferences for CBT for psychosis

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3 measured by the total score of the informant rated Personal and Social Performance Scale (PSP;
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5 Morosini et al., 2000). Depression was assessed using the total score of informant rated Calgary
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7 Depression Scale (Addington et al., 1993) The self-report Beck Anxiety Inventory (BAI; Beck et al.,
8
9 1988) and Self Esteem Rating Scale (Lecomte et al., 2006) total scores assessed anxiety and
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11 depression. All outcome measures have been widely used in psychosis samples and have good
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13 psychometric properties.
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19 In addition, socio-demographic information (ethnicity, living arrangements, employment, education,
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21 marital status, religious beliefs) were assessed at baseline. Therapeutic alliance was measured by
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23 the self-report, client and therapist version of the Working Alliance Inventory (WAI; Horvath &
24
25 Greenberg, 1989) after the third telephone session. This has been widely used in psychosis samples
26
27 and has good psychometric properties.
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33 All assessors received training in the measures to a gold standard. The gold standard was developed
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35 in two previous trials of CBT for psychosis (Lewis et al, 2002 Barrowclough et al, 2010). Assessors
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37 had monthly supervision, where rating ambiguities were discussed and agreed. Inter-rater
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39 reliability was assessed quarterly using randomly selected cases. Average intraclass correlations
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41 from these analyses were .85 for the PANSS, .98 for the PSYRATS, .98 for the PSP and .92 for the
42
43 CDS. All symptom measures were administered by blind assessors at baseline, nine months (end of
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45 treatment) and 15 months (follow-up).
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52 ***Statistical analysis***
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1 Delivery preferences for CBT for psychosis

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3 Reasons for treatment choices were analysed using content analysis (Hsieh & Shannon, 2005)
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5 involving categorising participants' reasons into mutually exclusive themes. This was carried out by
6
7 two researchers including one with lived experience of psychosis.
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11 We performed analyses on participant demographic characteristics (age, gender, diagnosis, living
12
13 arrangements, service type, employment), baseline PANSS, PSYRATS, SEPS, PSP and whether they
14
15 had experienced previous psychological therapy in relation to treatment preferences. We used
16
17 exploratory analysis to look at differences in therapy uptake between therapy groups, and also
18
19 examined therapeutic alliance (TA), using therapist and participant reported WAI (reported in
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21 Mulligan et al., 2014).
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29 The outcome analysis evaluated the effects of the interventions and assessed whether they were
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31 unaffected by the mechanism of treatment selection. As only 3 participants chose randomisation,
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33 this was not carried out. Outcome data were analysed using appropriate regression models to
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35 assess effects of treatment receipt, regardless of the method of treatment selection, using several
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37 baseline covariates (baseline value of the outcome measure being analysed, baseline PANSS
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39 Positive, PSP totals, sex, age, and education) to allow for possible confounding effects. Analyses
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41 were carried out using Stata version 11 (StataCorp, 2009). These outcomes are reported in full in
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43 Morrison et al (2016).
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50 **Results**

51 **Sample**

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53 244 participants were identified as eligible, and, of those, 206 were approached by their care
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55 coordinator to discuss participation (see Figure 1).
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Delivery preferences for CBT for psychosis

[Insert Figure 1 here]

Of these, 163 people agreed to be approached by the researcher, 25 did not respond to invitation to discuss participation, 43 refused to take part, leaving 95 people recruited. Of those, six withdrew from the study prior to therapy allocation. Demographic information is provided in Table 1.

[Insert Table 1 here]

Preferences for delivery of psychological therapy

Only three participants wished to be randomly assigned. A substantial proportion chose to receive TAU alone. The majority chose the TS option whilst a slightly smaller proportion chose the HS option (see Table 2). There were no significant differences in the strength of preferences between any of the three groups (see Table 3).

[Insert Tables 2 and 3 here]

Reasons for choice

All reasons for choice were analysed using content analysis and categorised independently by two raters (SH and LP) into mutually exclusive themes using the coding framework reported by Sumner and colleagues (2014) as a guide. The percentage agreement between raters was calculated representing the proportion of statements where total agreement was reached. The agreement for each of the categories was: willingness to participate - 84.4%, unwillingness to participate - 69.2%,

1 Delivery preferences for CBT for psychosis

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3 preference for TAU - 70.6%, preference for TS - 91.2%, preference for HS - 73.8%, willingness to be
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5 randomised - 76.7%, and unwillingness to be randomised - 84.4% (see Table 4).
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10 [Insert Table 4 here]
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14 In relation to choice of HS, reasons related to offering the opportunity to engage with others with
15 similar mental health problems or for social contact. For others, HS was seen as an opportunity to
16 get more therapy. For TS, reasons related to convenience of delivery e.g. being able to take
17 advantage of therapy but not having to travel to clinics. Some reported that, while they wanted
18 therapy, their problems were not severe enough to require additional group sessions. Others
19 reported a dislike for groups, whilst still wishing to receive therapy. Those that chose TAU alone
20 reported that therapy was unnecessary and expressed satisfaction with current services. Some
21 cited reasons for choice directly related to mental health problems e.g. paranoia making it difficult
22 to attend groups. Other cited reasons such as wanting to understand their illness and learning to
23 relax as motivators for therapy. A small number reported that they wished to be involved in
24 research for altruistic reasons but did not wish to take part in therapy.
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43 ***Preferences, demographics and symptoms***

44 ***Differences between those who chose therapy (LS + HS) and TAU***

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46 We examined the differences in demographic characteristics between those who chose therapy
47 versus TAU (i.e., age; gender; ICD-10 diagnosis; living arrangement; relationship status; type of
48 previous and current therapy received (none vs. CBT); service type (early intervention vs.
49 community care); employment status; and clinical measures (baseline QPR, BAI, BHS, SERS, SEPS,
50 CDS, PANSS, and PSYRATS). There were no significant differences between participants'
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1 Delivery preferences for CBT for psychosis

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3 demographic characteristics and their treatment preference. However, there were significant
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5 differences in BAI, SEPS negative scale, CDS, and PANSS negative scale scores. Those who chose
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7 therapy, rather than TAU, had more negative impact from psychosis symptoms (SEPS; $U = 565.5$, p
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9 $= .01$), were more anxious (BAI; $U = 570$, $p = .01$), more depressed (CDS; $U = 533$, $p = .004$), and
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11 experienced more negative symptoms of psychosis (PANSS; $U = 624$, $p = .04$). There were no
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13 significant differences between those who choose TS and those who chose HS on demographic or
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15 clinical measures.
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22 **Therapy uptake**

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24 Descriptive statistics for therapy uptake are in Table 5. The TS group completed significantly more
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26 telephone sessions overall compared to the HS group ($F(1,55) = 4.72$, $p = .034$). There was a high
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28 level of variability in therapy attendance, with a range of 1–30 telephone support sessions attended
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30 and a range of 0–11 group sessions attended.
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36 Therapeutic alliance (TA) was comparable to previously reported in other CBTp trials. Consistent
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38 with previous studies (Barrowclough et al., 2010), therapist alliance scores were significantly lower
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40 than client-rated alliance (see Mulligan et al., 2014).
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45 [Insert Table 5 here]
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50 **Recovery and symptom outcomes following preferential allocation**

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52 Linear regression models were fitted to estimate the treatment differences adjusted for age, sex,
53
54 education and baseline scores for PANSS positive, PSP and corresponding baseline. There was no
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56 evidence of an overall treatment effect for the QPR total at nine months ($p = .58$) and 15 months (p
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Delivery preferences for CBT for psychosis

= .82) or on any comparisons between the groups at either point. The same analyses were performed on SEPS. The only significant finding was for the SEPS negative impacts outcome at 15-month follow-up, where there was an estimated difference in adjusted means comparing HS to TAU of 16.85 units (95% CI 1.36 to 32.35, $p = .03$) in favour of the control group. However, given multiple testing, this must be interpreted with caution. Similarly, there were no other secondary outcome differences between groups. (see Morrison et al., 2016 for a full description).

Discussion

Participants had strong preferences about treatment with most expressing a preference about treatment, rather than randomisation. Given the paucity of patient preference trials with people with psychosis, it is unclear whether this finding is generalizable, although other mental health trials have found higher rates of participants willing to be randomised (Bedi et al, 2000). This is important, given that little choice is usually offered for people with psychosis. Although the finding may be limited to CBTp, it suggests that preferences for other treatments may be an important topic for future research in this client group. The preferences varied slightly from those reported by Sumner and colleagues (2014) who found that 43% of participants were willing to be randomised, compared to just 3% in the present study, suggesting that asking people hypothetical questions about treatment preferences is not useful if we wish to know real figures for the purposes of a trial or service planning. We also found more people who opted for TAU rather than therapy, although overall treatment choices were similar across the three options.

The finding that a significant number of people did not choose to have therapy is important as the drive to improve access to CBTp assumes people all want it but cannot get it. There may have been other reasons for their refusal which we are not aware of, hence, fuller exploration of this may be

1 Delivery preferences for CBT for psychosis

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3 needed. However, it may suggest that more indirect working is warranted e.g. ensuring that
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5 individual's care is psychologically informed without providing one-to-one therapy. This has been
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7 shown to have some value in influencing outcomes (Berry & Haddock, 2008; Berry et al., 2015). In
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9 addition, any participants who were in services were offered the opportunity to take part without
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11 consideration of whether they had been requesting therapy or not. This may well have influenced
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13 the findings. A future trial may examine choice and preference in a help seeking population which
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15 may provide different results.
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21 Participants had varied reasons for their preferences and they were often strongly endorsed. Some
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23 of these related to personal preferences such as feeling satisfied with their current treatment or
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25 wanting someone to talk to. However, others expressed more external reasons, such as a desire to
26
27 contribute to the research, rather than a desire to gain treatment. Clearly, the reasons for an
28
29 individual's choice of treatment need to be carefully discussed with them. This may be an
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31 important consideration for rolling out CBTp interventions within routine services where SU
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33 treatment preferences are not always considered. This may result in poor take up of treatments
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35 which could, in part, account for the poor implementation of recommended psychological
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37 treatments for psychosis.
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45 There were also no significant relationships between SU characteristics (e.g. diagnosis, age) and
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47 treatment preferences suggesting SUs' treatment choices cannot be easily predicted. It may
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49 therefore be important to offer treatment choices to SUs with psychosis on an individual basis, as
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51 the same modes of therapy may not be suitable for everyone.
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57 ***Outcome from treatment***
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1 Delivery preferences for CBT for psychosis

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3 There were no differences between groups in terms of treatment outcome. Group averages
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5 suggested that people within the study remained stable through to the 15 month follow-up,
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7 without significant improvement or deterioration, although this was variable with a wide range of
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9 outcomes across groups (see Morrison et al, 2016). It is possible that the sample recruited differed
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11 from those who would normally be recruited into psychological treatment trials, given that they
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13 were aware that they could choose their treatment option. What is unknown, is the effect of having
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15 treatment choice on outcomes. As such a small number chose to be randomised, it was not possible
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17 to fully explore outcomes against participants who were assigned to the treatment they may not
18
19 have wanted. Hence, we do not know whether the outcomes would be different between those
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21 who received their choice compared to those who did not. This could only be overcome by having
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23 two samples i.e. one with randomisation only and one sample with choices.
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31 **Limitations**

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33 The findings are limited due to the PPT design and the low numbers choosing to be randomised,
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35 limiting the potential to make comparisons between groups. As a result, the findings are purely
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37 observational and, although conclusions can be made in relation to some aspects of the results,
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39 such as those relating to choice, it is not possible to make conclusions about specific outcomes from
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41 treatment. However, this method may be good for observational studies of clinical decision-making,
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43 especially if we consider the drive to improve delivery of psychological therapy i.e., we may be able
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45 to plan the provision of therapy just to those who want it. Hence, determining how many people
46
47 want therapy and what is best suited to whom, is important. This could be enhanced by not just
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49 exploring uptake and engagement in therapy, but by exploring why people drop out or withdraw
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51 from therapy. In addition, we offered CBTp by telephone and group in this study, rather than
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53 traditional face to face therapy. Whilst, we know that telephone therapy has demonstrated
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1 Delivery preferences for CBT for psychosis

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3 equivalence to face to face therapy in other patient groups, it's possible that this may not be the
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5 case in this sample. Further research could ensure this was explored together with other delivery
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7 options e.g. CBT delivered via internet or via app.
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12 Finally, although we wished to deliver peer support as part of the treatment package, estimates of
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14 resources required to deliver this was below that which was actually required, resulting in this not
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16 being delivered to all participants as planned. As peer support is suggested in some guidelines (e.g.
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18 NICE), careful thought needs to be given to the resources required.
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24 ***Implications***

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26 This study was the first of its kind with people experiencing psychosis and one of few conducted in
27
28 mental health. It showed that SUs have strong preferences about treatment which are difficult to
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30 anticipate on participant characteristics alone. Although there were no significant differences
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32 between therapy groups in outcomes, the TS group was the most popular choice which may
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34 indicate that a similar format could be beneficial if refined and evaluated in a manner that
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36 permitted unconfounded analysis of treatment effects. Although telephone delivery of CBT has
37
38 been little evaluated with this group, the findings showed it was acceptable and feasible with a
39
40 similar therapeutic alliance to that observed in face-to-face CBT. Further research should explore
41
42 several issues highlighted. For example, the effectiveness of telephone CBT in an RCT, feasibility
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44 and acceptability of peer support and its value in addition to CBT, and further exploration of patient
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46 preferences and their impact on implementation.
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52 **Disclaimer**

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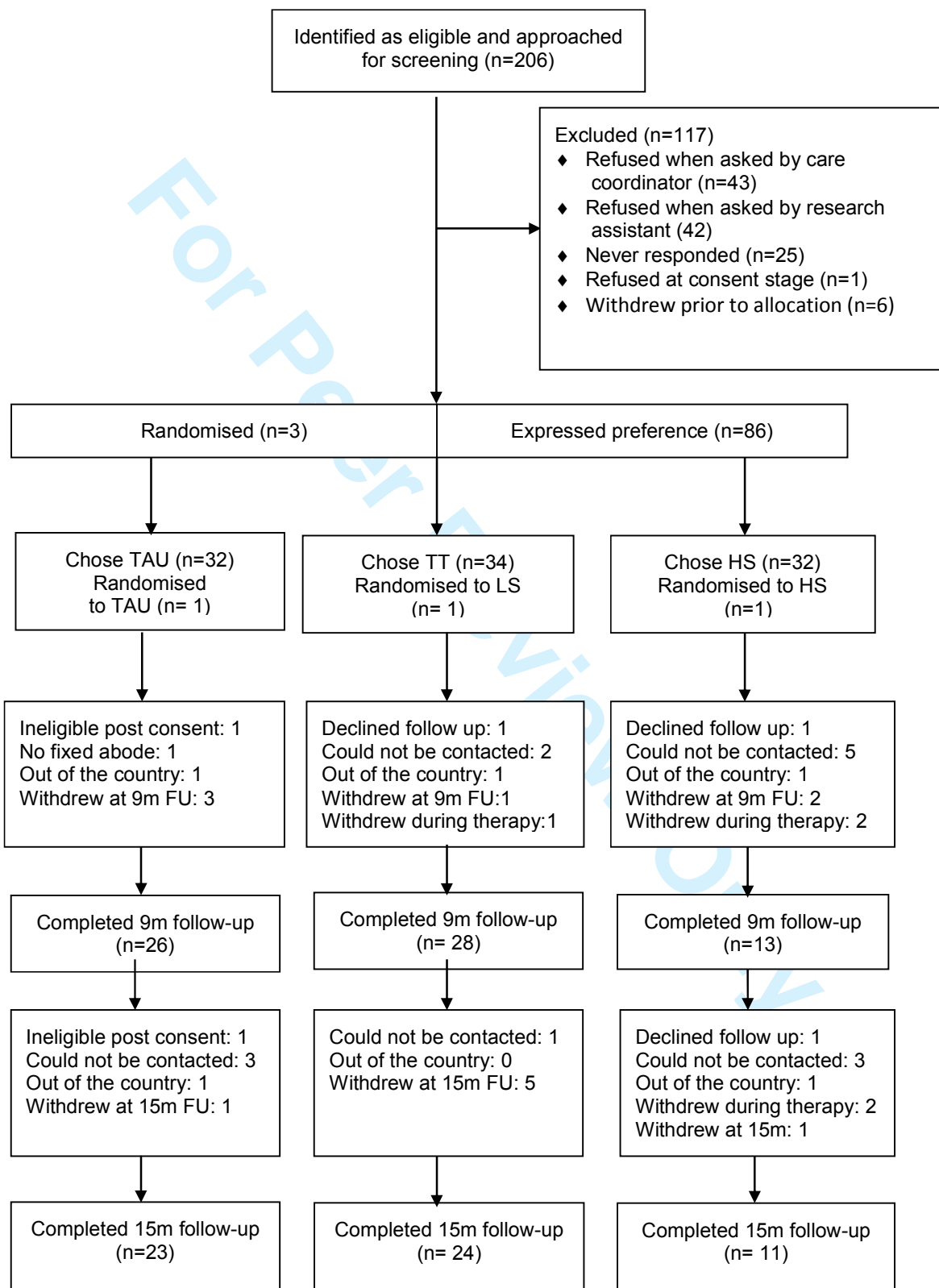
1 Delivery preferences for CBT for psychosis
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3 The authors wish to recognise that the terms and language used in this article such as service
4 user/client/psychosis are not universally endorsed by all. Where differences of opinion arose in
5 preparation of this work, the authors decided to use the term that was agreed by the majority,
6 while also respecting the views of others.
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Delivery preferences for CBT for psychosis

Figure 1: CONSORT diagram to show participant flow throughout the trial. TAU – treatment as usual; TS – Telephone Therapy; HS – High Support therapy.



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Table 1: Sample demographics

Participant characteristics at the time of consent		Total		TAU		TS		HS	
		N	%	N	%	N	%	N	%
Age	<i>Mean (SD)</i>	36 (10.9)		35 (11.2)		38 (9.7)		33.3 (10.6)	
Gender	Male	60	63	25	28.1	20	22.5	14	15.7
	Female	35	37	8	9	13	14.6	9	10.1
Ethnicity	White	76	80	26	29.2	26	29.2	21	23.6
	Black/ Minority Ethnic Group	13	14	7	7.9	4	4.5	3	3.4
	Mixed race	4	4	0	0	3	3	1	1
	Not reported	2	2	-	-	-	-	-	-
Occupation	Employed/studying	24	73	9	10	6	7	6	7
	Not working/studying	69	25	24	27	27	30	17	19
	Not reported	2	2	-	-	-	-	-	-
Education	Post-16 education	51	44	19	21.3	18	20.2	11	12.4
	No post-16 education	42	54	14	15	15	17	12	13
	Not reported	2	2	-	-	-	-	-	-
Living Arrangements	Alone	60	63	21	2	18	20.2	19	21.3
	With family members/ partner	31	33	12	13.5	14	15.7	4	4.5
	Supported accommodation	2	2	0	0	1	1.1	0	0
Marital status	Not reported	2	2	-	-	-	-	-	-
	Married/civil partnership/ cohabiting	10	11	4	4.5	4	4.5	2	2.2
	Single	83	87	29	32.6	29	32.6	21	23.6
Diagnosis	Not reported	2	2						
	Schizophrenia	39	41	15	17	14	15.9	7	8
	Schizoaffective disorder	12	13	2	2.3	5	5.7	2	2.3
	Psychosis NOS	35	36	13	14.8	13	14.8	10	11.4
	Delusional disorder	3	3	0	0	2	2.3	1	1.1
Diagnosis	Paranoid schizophrenia	6	6	2	2.3	1	1.1	3	3.4
	Bipolar disorder	1	1	0	0	0	0	0	0

Delivery preferences for CBT for psychosis

Table 2: Therapy preferences and allocation

Allocations	Frequency (%)
Not allocated	6 (6)
TAU	31 (33)
Low support	33 (35)
High support	22 (23)
Randomised	3 (3)

Delivery preferences for CBT for psychosis

Table 3: Strength of Preferences

Treatment Group	Strength of option preference			Strength of therapy preference		
	Mean	SD	Range	Mean	SD	Range
TAU	8.58	1.38	5 – 10	n/a	n/a	n/a
TS	8.3	1.31	5 – 10	8.19	2.02	2 – 10
HS	8.34	1.19	5 – 10	8.24	1.09	5 – 10

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Table 4: Themes arising from analysis of reasons for treatment preference

Major themes (frequency of statements)	Examples
TAU (35)	
1. Dislike of/lack of desire for aspect of therapy/ therapy in general (16)	‘I don’t want telephone therapy and wouldn’t like a group’ ‘I don’t like it on the phone, would prefer face to face’
2. Therapy viewed as unnecessary at present (8)	‘I feel I’m doing so well, feel I don’t need any other support at the moment’ ‘Feel I’m doing ok at the moment, don’t want to jinx it’
3. Satisfaction with current support (10)	‘What I’m getting at the moment is good, in the past I didn’t want help, now I receive a lot of help and this is working’ ‘I’m getting enough support at the moment- helping with practical support like finding work. Want to get out of psychiatric services’
4. Assist the research (1)	‘Because I don’t mind doing the questionnaires’

LS (39)

1. Dislike of/lack of desire for group support (23)	‘Sounds like the group might be a lot of travelling and too much time’ ‘I’m very paranoid- don’t like meeting new people so I wouldn’t like the group’
2. Desire to receive therapy/ therapy viewed as helpful (13)	‘I don’t usually go out of the house so phone support might be good’ ‘The CBT calls- I can talk through problems’ useful’
3. Desire to receive self-help manual (1)	‘Get to do the Recovery Guide because I think it might be helpful’
4. Group support unnecessary (2)	‘I would have chosen high support but I’m more well now- I’m past that stage, I don’t need it.’ ‘...the high support would be a bit too much time for me’

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Major themes (frequency of statements)	Examples
HS (74)	
1. Social aspect/ normalising/ sharing experiences (11)	It's a chance to meet people and discuss what support they have and share problems' 'It would be good to meet other people who have similar experiences- I don't know anyone who has gone through the same things'
2. Benefits to self/highest level of support is most beneficial (8)	'More stuff to help me' 'Want to try and stabilise me- deal with the pressure of
3 To gain knowledge/ information/ understanding (1)	'I want to understand it more- what triggers my illness, how to relax- want to get well'
4. For an experience/activity/ out of interest (4)	'High support will get me out doing something within group sessions' 'Don't usually get involved but like the idea of it an psychological support'
5. Desire for group support (2)	'I want to try out the group sessions' 'It's got the most activities to be involved in'

Delivery preferences for CBT for psychosis

Table 5: Therapy uptake

	Therapy Group	
	Telephone mean (<i>SD</i>)	High Support mean (<i>SD</i>)
Number of telephone sessions attended	15.82 (10.77)	9.78 (9.54)
Number of group sessions attended	n/a	2.96 (3.60)
Total number of all sessions attended*	13.39 (10.64)	12.68 (12.92)
Total number of telephone session DNAs	4.35 (4.96)	4.48 (4.88)
Average telephone session length (minutes)	40.56 (9.23)	39.55 (1.32)

* Group + telephone sessions.