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ASSESSING THERAPIST ADHERENCE TO COGNITIVE-BEHAVIOUR THERAPY FOR PSYCHOSIS

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Abstract. Recently, several RCTs have provided preliminary evidence that cognitive-behavioural therapy (CBT) is effective in the treatment of people suffering from schizophrenia. However, none of these trials has provided complete demonstrations of therapist adherence. Since no suitable scale existed already, the authors devised the Cognitive Therapy for Psychosis Adherence Scale (CTPAS). The main aim of the present research was to test whether the 12 items of this scale could be rated reliably. Ratings were made on 29 sessions of CBT for schizophrenia by two raters independently and their agreement was found to be at least adequate on 10 of the items of the CTPAS. Ratings were also made on relevant items of the Collaborative Study Psychotherapy Rating Scale and agreement was found to be more than adequate for three factor-based subscales derived from these items. The results suggest therapist adherence to CBT for psychosis can be rated reliably and that the CTPAS is likely to be useful in future research on this form of treatment.

Keywords: CBT, schizophrenia, psychosis, therapist adherence, treatment fidelity.

Introduction

During the last decade, several randomized controlled trials have provided preliminary evidence that cognitive-behavioural therapy (CBT) is effective, as an adjunct to pharmacotherapy and community care, in the treatment of people suffering from schizophrenia (Bustillo, Lauriello, Horan, & Keith, 2001; Thornicroft & Susser, 2001). However, the evaluation of this evidence would be enhanced if these trials had provided adequate demonstrations of treatment fidelity.

Treatment fidelity refers to two related but distinct issues (Moncher & Prinz, 1991). One involves the degree to which treatment conditions are implemented as intended. This has two aspects: adherence and competence. Both of them assume the existence of a treatment manual. Adherence refers to the degree to which therapists employ techniques prescribed

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by the manual and avoid proscribed techniques. Competence does not have a widely accepted definition but one influential discussion of the topic refers to the degree to which therapists take into account the relevant aspects of the therapeutic context and respond to the context appropriately (Waltz, Addis, Koerner, & Jacobson, 1993). The second main aspect of treatment fidelity is differentiation, the degree to which a given treatment is distinct from others. As Kazdin (1986) has pointed out, it is possible for treatments to differ but still not be implemented as intended, or for treatments to be implemented as intended but still not be sufficiently distinct.

Since treatment fidelity has implications for the internal, external and construct validity of treatment outcome research (Moncher & Prinz, 1991), it is now a virtual requirement for any treatment trial with a psychosocial aspect, including pharmacotherapy (Carroll, 1997). Despite this, few of the randomized controlled trials of CBT for schizophrenia that have been published have addressed issues of fidelity and none has yet assessed all aspects of fidelity. Therapists in the trials conducted by Kuipers et al. (1997), Buchkremer, Klingberg, Holle, Schulze Monking and Hornung (1997), and Haddock et al. (1999) met regularly for supervision in an effort to ensure adherence to the treatment manual but, it seems, no formal check was made whether or not they had been successful. Turkington and Kingdon (2000) declared that they had confirmed treatment fidelity in their comparison of CBT with a befriending control condition but they provided no details of the method or the results. Tarrier et al. (1998) showed that their form of CBT could be distinguished from supportive counselling with a high level of discrimination but they assessed neither adherence nor competence. The most thorough assessment of fidelity to date has been by Sensky et al. (2000). They used the Cognitive Therapy Rating Scale (CTRS; Vallis, Shaw, & Dobson, 1986), which was designed to assess competence in CBT for depression, to assess recordings of the sessions of their two therapists, both of whom provided both CBT and befriending, and the control condition. They found that an independent assessor was able to assign recordings to the appropriate treatment group with perfect accuracy, thus demonstrating discrimination. They also found that sessions of CBT received mean ratings, which indicated at least an adequate level of technical competence and which were significantly higher than the ratings for sessions of befriending. However, doubts remain that treatment fidelity was adequately demonstrated in this study, mainly because the CTRS was not designed for rating CBT for psychosis.

The clearest way in which CBT for psychosis differs from CBT for non-psychotic disorders is in content; the former requires therapists to address their clients' *psychotic* symptoms and help them to develop a shared understanding of the nature of their *psychotic* disorder. Since the CTRS makes no mention of such content, therapists can score highly on this scale without focusing on psychosis at all if, for example, they focus instead on the depression, anxiety or traumas that often accompany psychotic disorders. Haddock et al. (2001) developed the Cognitive Therapy Scale for Psychosis (CTS-Psy) specifically to ''take into account the non-standard nature of some CBT work with psychotic clients and to take account of the way CBT has been adapted and developed for use with psychotic clients'' (p. 223). Nevertheless, the CTS-Psy does not explicitly focus on psychosis either.

Some treatment manuals also prescribe differences in structure and emphasis. Some of these differences arise because psychotic clients often have radically different views of their problem (and of reality) compared with their therapists and do not see their symptoms as anomalous (Amador et al., 1994). They tend to have an externalizing bias, which leads them

to see their problems as originating outside themselves (Garety & Freeman, 1999). In order to establish and maintain good therapeutic relationships, it is essential to take their views seriously. Thus, according to some manuals, therapists usually need to spend an extended period of time, especially at the outset, clarifying the clients' understanding of their problems and how they developed, identifying what the clients consider to be evidence for their beliefs, and negotiating what the focus of therapy should be (Fowler, Garety, & Kuipers, 1995). Also, therapists often need to help their clients to recognize that they have any problems at all. Problem-solving and homework setting are probably not appropriate, and may be contraindicated, before the focus of therapy has been negotiated, or with those clients who do not accept that they have problems.

Since at least some forms of CBT for psychosis appear to differ in important ways from CBT for non-psychotic disorders, the first and second authors devised the Cognitive Therapy for Psychosis Adherence Scale (CTPAS, see Table 1), the 12 items of which are designed to assess adherence to the manual written by Fowler et al. (1995). The main aim of the present research was to test whether the items of this scale could be rated reliably. It has been found that similar items designed to assess adherence to cognitive-behavioural and psychodynamic therapies for depression can be rated reliably even when sessions of only one mode of therapy are rated (Shapiro & Startup, 1992; Startup & Shapiro, 1993). However, it may be that sessions of CBT for psychosis are harder to understand and therefore harder to rate.

The items of the CTPAS were designed for rating those features of CBT for psychosis that are not already covered by the Cognitive Therapy (CB) and Facilitative Conditions (FC) subscales of the Collaborative Study Psychotherapy Rating Scale (Evans, Piasecki, Kriss, & Hollon, 1984; Hill, O'Grady, & Elkin, 1992), which was designed to assess adherence in the Treatment of Depression Collaborative Research Program (Elkin et al. 1989). Many of the activities described by the items of the CB and FC subscales are prescribed in CBT for psychosis since these items include general CBT activities, such as collaboration and summarizing, as well as more specific CBT activities, such as examining available evidence and searching for alternative explanations. These would be prescribed for any schizophrenic client who was also suffering from depression or anxiety, as well as being appropriate, with some differences of emphasis, for addressing delusional beliefs. A second aim of this study, then, was to test whether the items of these subscales could be rated reliably when applied to sessions of CBT for psychosis.

Method

Participants

Participants were recruits to a controlled trial of CBT. They all met criteria for a diagnosis of schizophrenia, schizophreniform or schizoaffective disorder, and all had been admitted to psychiatric hospitals as a result of suffering acute psychotic episodes. Following a baseline assessment, 43 were assigned at random to a treatment-as-usual (TAU) control group and 47 were assigned to treatment-as-usual plus CBT. The inclusion and exclusion criteria, and the outcomes of this trial, have been described in detail by Startup, Jackson and Bendix (2002). To summarize the outcomes, the CBT group gained significantly greater benefit than the TAU group on all of the outcome measures, including negative, psychotic and

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disorganization symptoms, and social functioning. Moreover, a larger proportion of the CBT group (60%) than the TAU group (40%) showed reliable and clinically important change on a measure of global functioning, and none of them (*vs*. 17%) showed reliable deterioration compared with baseline.

Up to 25 weekly sessions of CBT were available. The duration of sessions was adjusted flexibly, though most were 50–60 minutes. CBT was continued without interruption following discharge from hospital.

Sample for adherence ratings

Although all clients who agreed to participate in this trial also agreed to attend at least 12 sessions of CBT if they were assigned to this condition, 21 of the 47 (45%) dropped out of treatment before session 12. These are regarded as non-engaged clients. Since differences between engaged and non-engaged clients in the conduct of CBT are of theoretical and clinical interest, seven sessions were selected from a random sample of the non-engaged clients and matched by session number with a random sample of engaged clients. Of all the 606 sessions of CBT provided in this trial, 0.35 of them were of sessions 1–5, 0.25 of them were of sessions 6–10, 0.18 of them were of sessions 11–15, 0.14 of them were of sessions 16–20, and 0.08 of them were of sessions 21–25. Thus, recordings of another 15 sessions were selected at random, but with the constraint that each of the selected recordings were for different clients, so that the distribution of session numbers for the selected sessions was proportional to the distribution of all sessions. Adherence ratings were made on the resulting sample of 29 sessions.

Measures

The Cognitive Therapy for Psychosis Adherence Scale (CTPAS) comprises the 12 items shown in Table 1. These were written by the first and second authors (MS and MJ), in consultation with David Fowler, in order to capture the main therapist activities that are designed to meet four of the six major clinical objectives outlined by Fowler et al. (1995) in their manual of CBT for psychosis: facilitating adaptive strategies to cope with psychotic symptoms; developing an understanding of psychosis in collaboration with the client; modifying delusional beliefs and beliefs about voices; relapse prevention and the management of social disability. The two other major clinical objectives, building and maintaining a therapeutic relationship, and treating or managing ingrained patterns of self-defeating thought and behaviour, appeared to be adequately assessed already by the following measure.

Sessions were also rated on slightly modified versions of the 28 items of the Cognitive Therapy (CB) subscale and the eight items of the Facilitative Conditions (FC) subscale of the Collaborative Study Psychotherapy Rating Scale (Evans et al., 1984; Hill et al., 1992). The items were modified, where appropriate, so that mention of depression and depressive symptoms referred equally to psychosis and psychotic symptoms, and mention of negative thoughts referred equally to delusional beliefs. A previous conjoint factor analysis of all of these items (Startup & Shapiro, 1993) found that they form three factors that can be used to construct reliable subscales: Cognitive Focus, Behavioural Focus/Homework and Collaborative Style.

Each item of both adherence scales is rated on a 7-point scale with anchors at four points. Although they vary somewhat from item to item, typical anchors are ''Not at all'' (1), ''Somewhat'' (3), ''Considerably'' (5), and ''Extensively'' (7). Both scales are accompanied by raters' manuals with similar structure and style. That is, the entry for each item contains (where applicable): (a) an elaboration of the item's purpose; (b) definitions of the terms used; (c) general guidelines for rating the item; (d) examples of therapist behaviour that should and should not be considered in rating the item; (e) specific rules for rating the item; and (f) important distinctions to be made between items. With both scales, ratings are made on audio recordings of whole therapy sessions. Copies of the CTPAS manual are available by email on request from the first author.

Table 1. Items of the Cognitive Therapy for Psychosis Adherence Scale

Title	Description[a]
Recognizing problems	. . . help the client to recognize, or encourage the client to acknowledge, that he/she was experiencing problems?
Assessing psychotic experiences	. . . assess the antecedents, consequences, quality and impact of the client's psychotic experiences?
Enhancing self-regulatory strategies	. . . help the client to improve her/his self-regulatory strategies OR review the effectiveness of strategies previously discussed or practised?
Evidence for delusional beliefs	. . . assess the evidence that the client uses to support his/her delusional beliefs?
Columbo style	. . . help the client to explain his/her reasons for holding a belief by apologizing for being confused but then carefully questioning to gain the details?
Developing a narrative perspective	. . . help the client to construct a narrative account of her/his experiences as a meaningful sequence of events, and to develop and explore this narrative?
Verbal challenge of delusions	. . . challenge the client's beliefs through discussion?
Validity testing	. . . encourage the client to (1) engage in specific behaviours for the purpose of testing the validity of her/his beliefs OR (2) make explicit predictions about external events so that the outcomes of those events could serve as tests of those predictions OR (3) review the outcome of previously devised validity tests?
Developing a model of psychosis	. . . work with the client to develop a shared understanding of the nature of the client's psychotic disorder?
Normalizing	. . . help the client to recognize that his/her psychotic symptoms are similar to the experiences of many people who do not have mental illnesses?
Resolving ambivalence	. . . help the client to resolve his/her ambivalence about possible courses of action?
Keeping well	. . . help the client to develop strategies for the active management of his/her psychotic disorder in the future?

[a] The text of every item begins with the phrase ''Did the therapist . . .''

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Adherence raters

All adherence ratings were made by the first author (MS), who is a clinical psychologist and one of the therapists in the trial, and the third author (EP), who is in training on a doctoral programme in clinical psychology. Training consisted of reading the two manuals followed by discussions about the meaning of each item and discussions about appropriate ratings for nine training sessions of treatment. After training all ratings were made independently but the raters continued to meet regularly for anti-drift discussions.

Therapists

CBT was provided by three clinical psychologists. Two of them were employed as specialists in serious mental illness and conducted CBT for psychosis on a routine basis. They had 10 and 2 years of post-qualification experience at the outset of the trial and had 28 and 17 clients, respectively, assigned to them for treatment in the current trial. The third therapist had recently undertaken a one-year specialist training in CBT for psychotic disorders. He had two clients assigned to him in the trial.

Results

The mean and standard deviation for each of the items of the CTPAS, based on the average of the two raters' ratings, are shown in Table 2, together with the inter-rater reliability for each item. The reliabilities were estimated as intraclass correlations (ICCs), for both one and two raters, using Shrout and Fleiss's (1979) Case 1. Since this model treats constant rater biases as error, it estimates agreement rather than mere correlation. Table 2 also shows the proportion of sessions in which the activities described by the items were absent (average rating < 2). It can be seen from the table that the ICCs for two raters were adequate (> 0.7) for nine of the items. Inter-rater reliability for ''Developing a narrative perspective'' was poor and for both ''Validity testing'' and ''Normalizing'' it was inadequate, even with two sets of ratings. It will be noted, however, that all the items for which reliabilities were poor had ratings < 2 on 80% or more of sessions, and had small *SD*s.

When the 12 items of the CTPAS were combined into one scale, the low alpha coefficient ($\alpha = 0.47$) showed the scale is not internally consistent. Therefore, an exploratory principal components analysis with Varimax rotation was conducted. Two factors, accounting for 44% of the variance, provided the best solution. Item loadings > 0.4 on the two factors are shown in Table 2. Factor I has its highest loadings from ''Verbal challenge of delusions'' and ''Evidence for delusional beliefs'' and appears to represent a focus on delusions. Factor II is more complex and is more clearly bipolar. Its positive loadings from ''Enhancing self-regulatory strategies'', ''Developing a model of psychosis'', and ''Keeping well'' suggest a focus on current and future problem-solving. The negative loading from ''Recognizing problems'' is consistent with such an interpretation if it is accepted that clients often resist a problem-solving approach when they do not recognize that they have problems. The negative loading from ''Columbo style'' suggests that the style of interaction described by this item is generally used when clients lack insight into their problems.

It is likely that the sessions of non-engaged clients (i.e. those who dropped out of treatment before their twelfth session) and the matched sessions of engaged clients would differ

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Table 2. Means, *SD*s, reliabilities and factor loadings for items of the CTPAS

Item	Mean	*SD*	Proportion of sessions absent[a]	ICC(1)	ICC(2)	Factor loadings I	II
Recognizing problems	2.03	1.36	.55	.77	.87		−.54
Assessing psychotic experiences	3.19	1.42	.21	.75	.85	.74	
Enhancing self-regulatory strategies	2.31	1.39	.52	.81	.89		.86
Evidence for delusional beliefs	2.00	1.18	.59	.78	.88	.80	
Columbo style	1.45	.85	.79	.55	.71		−.68
Developing a narrative perspective	1.57	.90	.80	.48	.65	.78	
Verbal challenge of delusions	2.17	1.28	.52	.64	.78	.83	
Validity testing	1.12	.37	.90	.28*	.43*		
Developing a model of psychosis	1.83	.97	.55	.64	.78		.58
Normalizing	1.33	.51	.86	.27*	.43*		.41
Resolving ambivalence	2.42	1.66	.42	.76	.86		
Keeping well	1.93	1.12	.60	.68	.81	−.40	.44

[a] Proportion of sampled sessions in which the activity was absent (mean rating < 2 on a scale 1–7)
ICC(1), ICC(2): intraclass correlation for one and two raters respectively.
* ICC not significantly greater than zero. For all other ICCs, $p < .05$

on these factors since therapists are likely to respond to the two types of client differently. There might be little difference between these groups in the extent to which the therapists focused on their client's psychotic symptoms and related cognitions, but it might have been predicted that clients who end up dropping out of treatment prematurely are less likely to recognize and acknowledge that they are facing problems that could be helped by a therapist. Their therapists, as a result, are likely to devote more time to encouraging their clients to recognize their problems, as a prelude to seeking solutions. These ideas were tested using factor scores derived, using the regression method, from the principal components analysis reported above. On the first (Focus on Delusions) factor, the non-engaged ($M = 0.27$, $SD = 0.77$) did not differ significantly from the engaged ($M = 0.17$, $SD = 0.58$), $t(12) = 0.28$, $p = .78$. However, on the second (Focus on Problems) factor, the mean for the non-engaged was negative ($M = –0.29$, $SD = 1.16$) and differed from the positive mean of the engaged ($M = 0.70$, $SD = 0.87$), $t(12) = −1.80$, $p = .10$ (two-tailed), to an extent that would have been significant had it been predicted in advance. Thus there is some preliminary evidence here that therapists do modify their therapeutic endeavours, as would be expected, depending on the commitment of their clients to therapy.

When items with high loadings were combined into factor-based subscales, the Focus on Delusions subscales had an alpha coefficient of 0.76 and an ICC(1) of 0.93, while the Focus on Problems subscale had an alpha coefficient of 0.58 and an ICC(1) of 0.89. Thus, it appears that adequate reliabilities can be attained by single raters using these subscales. The correlation between these subscales was –0.18 ($p > .3$).

Inter-rater reliabilities for the 36 selected items of the Collaborative Study Psychotherapy Rating Scale were also estimated as intraclass correlations (ICCs). ICCs for 20 of the 28 Cognitive Therapy items and three of the eight Facilitative Conditions items were signific-

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Table 3. Means, *SD*s and inter-rater reliabilities for three subscales of the CSPRS

	Subscales of the CSPRS		
	Behavioural/homework	Cognitive focus	Collaborative style
Mean	1.41	1.52	3.82
SD	.31	.55	.80
ICC(1)	.77	.85	.63
ICC(2)	.87	.92	.77

ICC(1), ICC(2): intraclass correlation for one and two raters respectively.

antly greater than zero. Ratings for reliable items were averaged to form three factor-based subscales, using the loadings from the factor analysis published by Startup and Shapiro (1993). Cognitive Focus and Behavioural Focus/Homework each averaged nine items, while Collaborative Style averaged five. The means, *SD*s and inter-rater reliabilities for these subscales are shown in Table 3, where it can be seen that adequate reliabilities were obtained with only one rater for the subscales Cognitive Focus and Behavioural Focus/Homework, though two raters were required for adequate reliability with Collaborative Style.

Discussion

The main aim of the present research was to test whether the items of the Cognitive Therapy for Psychosis Adherence Scale (CTPAS) could be rated reliably. This was a challenging task because ratings applied to sessions of a single therapeutic modality require sensitivity to variations between sessions of the same kind. By contrast, when sessions of two or more therapeutic modalities, such as CBT and Interpersonal Therapy, are considered together, inter-rater reliability can be achieved merely by recognizing the intended modality and then making assumptions about the specific behaviours the therapists are likely to engage in. Despite the inherent difficulty, it was found that the inter-rater reliabilities of all but two of the items of the CTPAS were significantly greater than zero and most of them were high by any standards. Reliabilities for single adherence items have rarely been reported but the average ICC(2) for the items of the CTPAS, at 0.75, compares favourably with the average ICC(2) for the 19 items of the Psychodynamic-Interpersonal subscale of the Sheffield Psychotherapy Rating Scale (Shapiro & Startup, 1992), which was 0.52. The present results also compare very favourably with the pilot phase of the Collaborative Study Psychotherapy Rating Scale (Hollon et al., 1988) where it was found that within-modality reliabilities were inadequate even for whole scales.

The second aim of this study was to test whether the items of the Cognitive Therapy and Facilitative Conditions subscales of the Collaborative Study Psychotherapy Rating Scale could be rated reliably when applied to sessions of CBT for psychosis. It was found that the reliabilities of 23 of these 36 items were significantly greater than zero and, when ratings for reliable items were averaged to form three factor-based subscales, adequate reliabilities were obtained with only one rater for two of the subscales, though two raters were required for adequate reliability with the third. These reliabilities were at least as high as the reliabilities for the same subscales when applied to sessions of CBT for depression in the Second Sheffield Psychotherapy Project (Startup & Shapiro, 1993).

Although the reliabilities of most of the items of the CTPAS were at least adequate, the mean ratings across sessions (Table 2) were rather low; the average of the mean ratings across the 12 items was only 1.95, although the maximum possible is 7. This suggests that the therapists did not engage very extensively in the activities described by the items. However, these results need to be put in perspective; the mean rating on the 28 items of the CB subscale of the Collaborative Study Psychotherapy Rating Scale, when applied to sessions of CBT in the Treatment of Depression Collaborative Research Program, was only 2.39 (Hill et al., 1992, Table 4). One of the reasons why the mean ratings for the items of the CTPAS were even lower is that the focus of some of the sessions in the sample was on the clients' non-psychotic problems. For example, the focus of one of the sessions was largely on the client's obsessional-compulsive problems, and the main focus of another session was on a different client's history of childhood sexual abuse. Since the items of the CTPAS are targetted on psychosis, such sessions cannot earn high ratings. Another reason for the low means is probably that, when treating patients suffering acute psychotic episodes, therapists find that they need to spend much time in non-specific supportive activities. However, further research is needed to clarify this issue.

The reliabilities for two of the items were non-significant. These poor results were almost certainly due to restricted range and limited variability because these were the items with the lowest mean ratings and the smallest *SD*s. They were also the items that described the rarest therapist activities in this sample (absent from more than 85% of sessions). It is the authors' impression that the activities described by ''Validity testing'' were indeed rare, partly because they need to be preceded by a period of verbal challenge (Chadwick, Lowe, Horne, & Higson, 1994), though they can have large impacts when they do occur. However, it is also our impression that our sample has given a misleading impression of the rarity of the activities described by ''Normalizing'' because these are used extensively with some clients, especially those with a strong sense of stigma about their illness.

Factor analyses can be applied to adherence items to identify dimensions underlying variations between sessions in therapist activities (Shapiro & Startup, 1992; Startup & Shapiro, 1993). The sample for the principal components analysis reported above was too small for much confidence to be placed in the two factors that emerged but, if they could be replicated with a larger sample, they could provide valuable insights into the ways in which therapists use interventions in concert to achieve therapeutic goals. For example, when factor scores from this analysis were used to compare the sessions of engaged versus non-engaged clients, preliminary evidence found that sessions for engaged clients obtained a positive mean on the Problem-solving factor while sessions for non-engaged clients obtained a negative mean. Since the direction of causality cannot be established with the available data, this result might indicate that the therapists provoked some clients to terminate therapy prematurely by focusing too little on current and future problem-solving. However, it seems more plausible that the therapists often felt unable to proceed with a problem-solving approach with the non-engaged clients because these clients had insufficient awareness that they were facing problems, and this lack of awareness also led these clients to terminate therapy prematurely.

Once reliable adherence items have been developed, they can be combined in a ''pick and mix'' fashion in order to assess adherence to therapy manuals that differ in content and style (Shapiro & Startup, 1992). Such items can also be used for a variety of purposes apart from assessing adherence in treatment trials. For example, they may be used to assess how

therapist focus changes over the course of treatment (e.g. Startup & Shapiro, 1993), how therapists respond flexibly to client requirements while still adhering to a treatment manual (e.g. Hardy, Stiles, Barkham, & Startup, 1998), how trainees' interventions change over the course of training (e.g. Maguire et al., 1984), or to identify sessions where interventions of a particular kind are especially extensive, as a prelude to intensive process analyses, including qualitative analysis. They might also have a pivotal role in the development of measures of therapist competence in CBT for psychosis since, before one can assess the skilful use of interventions, one needs to be able to identify reliably interventions that are prescribed by the relevant manual.

In conclusion, the results of this research suggest that therapist adherence to CBT for psychosis can be rated reliably and that the CTPAS is likely to be useful in future research on this form of treatment.

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