26 Cognitive Behavioural Therapy and Its Role in the Outcome and Recovery from Schizophrenia

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Introduction

Cognitive therapy has been evolving for the last 40 years [1]. From successful treatment for depression and (lesser so) for anxiety disorders, and effective outcomes for bipolar disorder, PTSD, eating disorder and some symptoms of the OCD spectrum disorders, cognitive therapies have also shown results for psychosis in the last 20 years [2]. Cognitive behavioural therapy (CBT) for schizophrenia isn't deliberated to study effectiveness of the therapy on a particular type of schizophrenia, but research has shown improvement in residual symptoms (negative and positive symptoms) of the illness.

Even with best practices in place, there are limitations to the effectiveness of treatments that include medications for this disorder [3]. Relapse rates are high and those with the illness often remain symptomatic, with functional and socio-occupational impairment. Evidence still suggests that individuals with schizophrenia do best with a combination of pharmacological and psychosocial intervention [4]. Treatment planning for persons with schizophrenia has three goals [5]: (1) to reduce or eliminate symptoms, (2) to maximise quality of life and adaptive functioning and (3) to promote and maintain recovery from the debilitating effects of illness to the maximum extent possible. One psychosocial treatment that has received much attention is cognitive behavioural therapy (CBT). CBT has proven to be a successful therapeutic model of treatment for various psychiatric illnesses (major depressive disorders, post-traumatic stress disorder, obsessive-compulsive disorder) that have depression and/or anxiety as focal symptoms. As a treatment modality for psychosis, CBT has been acclaimed as effective by many researchers and experts. CBT involves management of psychosis, not just from the standpoint of a therapist, but has also demonstrable consideration for caregivers' well-being in symptom management and care. In the term of the therapeutic learning, the patient also learns to develop self-care practices through the CBT model.

History of CBT and Its Role in Schizophrenia

In treating people with schizophrenia, using CBT is not an entirely new approach. Beck, in 1952, described successfully treating a delusional belief held by a patient with schizophrenia using CBT [6]. Despite having been encouraged by the work of Beck and Shapiro and Ravenette in the 1950s [7], specific symptom interventions for

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schizophrenia did not appear until much later in the later 1900s. Initial systematic efforts to use CBT for the treatment of schizophrenia focused on the treatment of acute symptoms experienced by inpatients [8]. CBT is a psychotherapeutic model (referred to as a psychosocial model as well) directed toward problem-solving and introducing teaching skills to modify dysfunctional thinking and behaviour in a structured, time-sensitive and here-and-now manner. CBT for schizophrenia is also called CBT for psychosis or CBT-p.

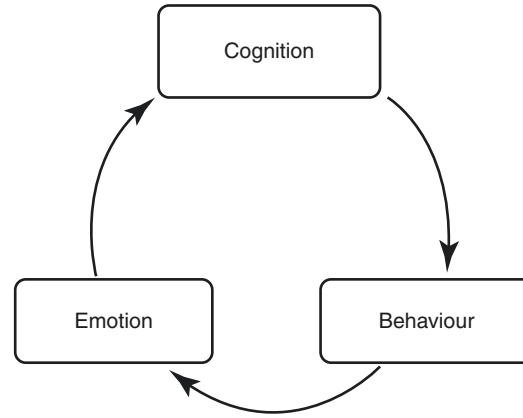

Fig. 26.1 A simplistic representation of the CBT model that was originally presented by A. T. Beck in 1952

CBT-p: A Treatment Modality for Schizophrenia

Treatment modalities for mental illnesses have seen a renewed interest in psychosocial interventions (including psychotherapy) in the treatment of schizophrenia [9]. Adapting cognitive behavioural therapy (CBT) techniques for more severe mental disorders [3] has been one of the more discussed and tried interventions that were previously used in the treatment of mood and anxiety disorders. CBT-p is numerously tried and tested on persons with schizophrenia with varied results obtained [10] depending on the duration of CBT, the level of training and skillset of the therapist conducting the trials, the severity of symptom presentation and phase of illness during which CBT was done with patients. There isn't much evidence to support the implementation of CBT in relation to prodromes, first-episode schizophrenia, acute relapse, forensic patients with psychosis or those with comorbidity such as substance misuse, personality disorder, or learning disability nor for psychosis in adolescence and old age [11]. Positive effects of CBT implementation have been recorded predominantly for residual symptoms of schizophrenia solely.

The core symptoms of schizophrenia, especially negative symptoms, in many people have proven to be resistant to treatment with medication alone and have been targeted for treatment with CBT [12]. CBT has shown improvement in interpersonal relationships and success at work in people with schizophrenia [1]. CBT has also shown effective results in persons with schizophrenia with comorbid mood and anxiety disorders [3]. Moreover, CBT has also been an intervention of interest along with psychoeducation in times of failed rehabilitative treatment programmes and non-compliance of psychopharmacological treatment in patients with schizophrenia [13]. In these instances, CBT (CBT-p) has been implemented and findings have suggested enhanced insight and facilitated coping and adherence to medication. Studies like those conducted by Kemp et al. [14] have shown the effectiveness and durability of CBT in improving compliance to medication, which failed with sole psychopharmacological intervention [15] (Fig. 26.1).

Since the later 1990s, there has been considerable advocacy of cognitive behavioural therapies as treatment modality for schizophrenia—having cited verifiable effects of CBT-p. There are several cognitive therapies that come under the umbrella of CBT that have been studied for interventional purposes for trials in persons with schizophrenia.

Recovery-Oriented CBT: Schizophrenia Treatment Outcomes

The enthusiasm for use of these cognitive therapies precluded dispassionate evaluation of the effectiveness of this treatment. Based on

the cognitive model, recovery-oriented cognitive therapy (abbreviated as CBT-R) is one of the adjuncts to the milieu of CBT [16]. CBT-R involves meeting people where they are (assessing the here and now), accessing their adaptive mode, developing aspirations and steps toward successfully achieving them, strengthening positive beliefs, weakening negative beliefs and developing resiliency in regard to stress and challenges [17]. It is an empirically supported procedure for successfully operationalising and realising recovery for individuals with serious mental illnesses, likewise to the cognitive behavioural model [16, 17].

Recovery-oriented cognitive therapy can lead to lasting improvement among individuals with schizophrenia, even among those with the most chronic illness, according to a study published online [18]. CBT-R is a collaborative treatment approach that prioritises attainment of personally set goals, removal of roadblocks and engagement of individuals in their own psychiatric rehabilitation [16–18]. CBT-R can be implemented in multiple settings—individual, group, or team approach—with barely any effect on treatment outcomes. CBT-R is person-centred, with all interventions based on the individual's cognitive case formulation, tailored for patients who have difficulties with attention, memory and executive functioning and/or who have low motivation [16].

The prevailing belief in the field has been that the observed social withdrawal and inactivity in persons with schizophrenia are based on impaired brain functioning, specifically attention, memory and executive function [19]. After conducting several interviews with individuals experiencing negative symptoms, Beck and Grant concluded that these individuals appeared to have a system of negative beliefs which accounted for their low functioning. They speculated that defeatist and asocial beliefs reduced access to the motivation required to initiate and sustain activity.

A series of studies found (as predicted) that negative attitudes had a direct impact on the negative symptoms, while the impairments in attention, memory and executive functioning impacted only indirectly [20]. It stood to reason that if the disabling attitudes could be modified, then the disabling behaviours could be relieved.

Another study discovered that therapy promoted recovery by targeting these beliefs and included forming an emotional and energising engagement with the individual [21]. Therapy also involved several other aspects such as eliciting their unique meaningful aspirations, breaking down and planning action toward the goals, drawing conclusions regarding the meaning of each success experience and identifying and mastering the obstacles to reaching these goals.

In a randomised controlled trial, individuals with elevated negative symptoms were recruited. Results of the trial demonstrated that recovery-oriented cognitive therapy improved global functioning, reduced amotivation (the inability to see value in an activity), and reduced positive symptoms relative to standard care (medications, targeted case management, etc.) in persons with schizophrenia. Grant and Beck concluded that therapy produced a cycle of recovery in which there was a positive correlation between what individuals were doing and their level of motivation and a negative correlation with the amount of time they had to dwell on hallucinations and delusions [20, 21]. Thus, there was more time to engage in meaningful activities, greater motivation and reduced positive symptoms (hallucinations and delusions).

Findings of CBT (CBT-p) in Schizophrenia Treatment Outcomes

For schizophrenia, cognitive behavioural therapy has shown the most promising outcome in conjunction with medication and with a precondition of considerable insight in the person. As opposed to the failure of psychodynamic psychotherapy and family therapy, cognitive behavioural therapy (including the adjunct cognitive therapies) involves an active participation of the caregivers and the patients to actively control for the psychotic symptoms observed in schizophrenia. Tarrier et al. have shown improvements in both negative and positive symptoms

of schizophrenia, using cognitive behavioural therapy [22]. The therapy primarily facilitates engagement and the establishment of collaborative empiricism, with reality testing based on guided discovery rather than confrontation [23]. Insight is a prerequisite for CBT-oriented outcomes in patients of any disorder. Accordingly, then, people with schizophrenia are (must be) stabilised with medication before they participate in cognitive behavioural therapeutic intervention. It is only when the person stabilises that he or she can learn to manage their symptoms. Hallucinations, delusions, negative symptoms and depression—all of these symptoms have shown to be responsive to CBT. A CBT therapist can help the person identify triggers of their symptoms and how to reduce these triggers or prepare themselves to care for self in the presence of triggers [6, 11–13]. A therapist can review social skills and other problem-solving techniques in session, which the person can practice to manage other situations that may come forth outside the therapy setting and in the future. Thus, CBT can help people with schizophrenia handle their responsibilities and life stresses better. Techniques range from more superficial peripheral questioning of delusional content to deeper work on underlying dysfunctional beliefs about the self (e.g. "I am evil, deficient, damaged" or "I am special, unique, different"). Homework exercises allow patients, often with the help of carers, to begin to make sense of their distressing experiences and to see the effects of working on avoidance, rational responding, or changing coping strategies [16, 17]. Cognitive behavioural therapy is therefore an individualised intervention based on a case formulation which helps the patient to answer the question, "Why have I changed so much?", and to begin to see the point in taking medication and attending social treatment options [23].

One consideration that must be kept in mind while evaluating the effectiveness of outcome of CBT in persons with schizophrenia is the training and skillset of the professional carrying out the intervention with patients. The debate involves discussing the efficacious outcomes of this psychosocial intervention with regard to the trained CBT professionals, who are demonstrated to show better outcomes with CBT used as intervention as compared to psychiatrists, psychiatric nurses and other mental health professionals, all who are less trained to use CBT as treatment modality with persons with schizophrenia [3, 11, 12, 16].

Some considerations for the therapeutic process involving CBT for patients with schizophrenia [3]:

- Anticipating problems with engagement because of mistrust or auditory hallucinations which can typically prevent misunderstandings.
- Immediate concerns (e.g. suicidal thoughts, difficulties in getting to therapy sessions) should be dealt with before an assessment.
- Challenging delusions in the early stages of therapy is not productive; listening and trying to understand the patient's perspective proves more beneficial.
- Occasionally focusing on positive aspects and achievements of the patient can be extremely helpful.

Patients with psychosis often present with low self-esteem, difficulties with trust and fears about others viewing them as "crazy"; unconditional positive regard shown by the clinician can help circumvent these negative self-views that can hinder rapport and therapy engagement.

The clinician should bear in mind the psychological ideas and models and may inquire about the following when in a therapy setting with patients suffering from schizophrenia: [24].

- What is the patient's emotional state?
- What evidence makes the patient believe that the delusional thoughts are accurate?
- What are the kinds of experiences for the patient?
- How does the delusional belief build on the patient's ideas about the self and others?
- What are his beliefs about the hallucinations?
- How do the delusional thoughts or interpretations of hallucinatory experience make sense given the patient's previous life events?
- Are there negative images?

- What is the reasoning style concerning these experiences?
- Are there behaviours (e.g. avoidance) that contribute to the persistence of the thoughts?
- What is the patient doing during the week?

CBT has shown improvement in the levels of insight of patients with schizophrenia [25], which has not just brought relief to the patient but also to the caregivers. Interview studies have documented the course of change in expressions of frustration and guilt to that of being more hopeful in carers of persons with schizophrenia. Additionally, the reduction in relapse of rehospitalisation has also been shown to be a positive outcome as a result CBT being used with persons with schizophrenia [26]. For over the last two decades, CBT has been welcomed by patients and caregivers as intervention for managing the symptoms of schizophrenia. Therapists have shown increasing interest to test trials and develop on the potential of the same further.

CBT has been well tested in relation to the treatment of residual symptoms of schizophrenia and is of proven efficacy and cost-effectiveness [27]. Apart from the several other psychological treatments that have worked with persons with schizophrenia, CBT is the only one that has given results of betterment with proven durability in the shortest span of time [28]. One study has also proven the benefits of CBT being translated into community settings of care. The same was confirmed with a randomised controlled trial over a 10-day period and continued supervision [13]. CBT was effectively used for insight improvement and reduction in overall symptoms of schizophrenia and depression. Turkington in another study showed the effectiveness of brief CBT in reduction of symptomatic complaints in persons with schizophrenia. This was successfully translated in community settings of care (with trained community psychiatric nurses) to achieve symptomatic reduction without increase in suicidality. In the group exposed to CBT, insight development was marked to be clinically significant. As cautionary note, it must be considered that for certain types of psychotic symptoms (e.g. command hallucinations linked to trauma or systematised or grandiose delusions), distressing affects can emerge as the psychotic symptom is worked with [11–13].

CBT-p is a verbal therapy to ease distress by reducing positive symptoms [29]. It does this by mobilising the client's capacity to reflect on and to question delusional or self-evaluative beliefs through a "collaborative empirical" enterprise. The therapist joins forces with the client to question beliefs that limit the achievement of personal life goals. The journey through therapy (usually 20 or so sessions over 6–9 months) allows for the collaborative development of an understanding of distressing psychotic experiences [11, 12]. The clients are then guided to re-evaluate their appraisals of experiences and identify new ways of responding to them. Toward the end of therapy, further collaborative work on maintaining factors is carried out to support the individual to prevent relapse. Usually this involves issues such as reasoning style, self-concept, social isolation, appraisals of psychosis and emotional processes. Models are provided for therapy development [30], and all therapists are expected to cultivate a shared formulation of the relationship between the experiences, the thoughts and the problematic behaviour [31].

When compared with other psychological intervention, meta-analyses have demonstrated far more effectiveness of CBT-p over other modalities, depending on specific factors in interventions and specific targets. CBT-p has been proven more successful over other psychological treatments such as social skills, cognitive remediation, befriending, psychoeducation and supportive counselling. Thus, there are differences in efficacy of psychological treatments for psychosis which can guide treatment choice and which depend on what individual patients select as their main goal.

The effectiveness of CBT-p therapy has been replicated and confirmed by several meta-analyses that have been carried out using randomised controlled trials. Most studies (single-blind, individual assessors being blind to the treatment allocation which was also the most significant predictor of the bias) showed effective outcomes on positive symptoms of hallucinations

and delusions [30–32]. CBT-p has expanded to include targets such as negative symptoms, social outcomes and compliance with command hallucinations, among many others.

Research Findings Related to CBT in Schizophrenia Outcomes

Several randomised control trials have been carried out in the previous two decades that have shown the effectiveness of brief as well as long-term CBT for various associated conditions. Ranging from distressing psychotic symptoms and positive symptoms to reducing the risk for suicidality and significant low readmission rates—all have been demonstrated with CBT as intervention for schizophrenia. Though some studies such as those done by Drury and colleagues claim that brief duration of CBT is ineffective [8], others say that brief CBT has shown efficacious results [1]. Another aspect also discusses the effectiveness of long-term (20 sessions) CBT [30] as treatment modality. Other deliberations also include the "training and expertise" of the therapist to determine the effectiveness of CBT outcome for schizophrenia. It has been demonstrated that more skilled and trained therapists in CBT are required in order to achieve better outcome results for patients with schizophrenia. The literature generated from randomised, controlled trials on the efficacy and effectiveness of cognitive behaviour therapy for medication-resistant schizophrenia is larger than for any other individual psychotherapy of schizophrenia in recent history [12].

The results of the trials carried out by several researchers can be concluded in the following findings [8, 11–13, 30]:

- Randomised controlled trials (RCTs) have shown moderate effect sizes for positive and negative symptoms at the end of therapy, with sustained effects.
- Reduction in relapse rate of rehospitalisation.
- Effective in clinical as well as research settings.
- Improvement in levels of insight.
- Management of depression in persons with schizophrenia.
- Responsive in management of positive symptoms: hallucinations and delusions.
- Negative symptoms respond initially; improvement remains at medium-term follow-up.

Key Research Papers for CBT in Psychosis: Recent Research

After 15 years of the initial substantive trial, CBT has become the first form of psychotherapy to achieve widespread acceptance in schizophrenia.

Candida et al. found numerous systematic reviews support the immediate and long-term efficacy of CBT to reduce positive and negative symptoms in patients with schizophrenia [33]. Brain regions supporting high-level cognitive functions were found to be associated with CBT responsiveness. The review claimed evidence for increase in prefrontal dependence in the top-down modulation of social threat activation as a consequence of CBT implementation.

In a systematic review and meta-analysis of the effectiveness of CBT for schizophrenic symptoms that includes an examination of potential sources of bias, the data were pooled from randomised trials providing end-of-study data on overall, positive symptoms (33 studies) and negative (34 studies) symptoms. It was found that CBT has a therapeutic effect on schizophrenic symptoms in the "small" range. This was seen to reduce further when the sources of bias (particularly masking) were controlled for [32].

A meta-analytic review was conducted to study the effect of CBT on medication-resistant psychosis. The results of the study proposed that for patients who continued to exhibit symptoms of psychosis despite medication, CBT could confer beneficial effects above and beyond the effects of medication. Overall, beneficial effects of CBT for 552 patients were found at post-treatment for positive symptoms and for general symptoms and were maintained at follow-up for both positive and general symptoms [34].

A randomised trial to evaluate the efficacy of cognitive therapy for low-functioning patients with schizophrenia was carried out by Grant, Beck and others. Results showed that patients treated with CBT showed a clinically significant mean improvement in global functioning from baseline to 18 months that was greater than the improvement seen with standard treatment. The study concluded that cognitive therapy can be successful in promoting clinically meaningful improvements in functional outcome, motivation and positive symptoms in low-functioning patients with significant cognitive impairment [19, 20].

In the longitudinal study, baseline asocial beliefs of 23 outpatients diagnosed with schizophrenia or schizoaffective disorder predicted asocial behaviour 1 year later. Asocial beliefs predict poor social functioning in schizophrenia and may be modifiable by psychological interventions like CBT [19].

A growing body of evidence supports the use of CBT for the treatment of schizophrenia. A course of CBT, added to the antipsychotic regimen, is increasingly being considered to be an appropriate standard of care across several countries. Recent studies have proposed to combine CBT with other evidence-based approaches such as supported employment, family psychoeducation, motivational interviewing, social skills training and third-wave cognitive behaviour therapies including acceptance and commitment therapy and brief CBT among others, for long-term positive outcomes. Future progress will depend on the further development of psychological models of psychotic symptom onset and maintenance and on the development of more refined treatment manuals. CBT would appear to have the possibility of an enhanced effect when given with cognitively sparing antipsychotic medication or when combined with cognitive remediation [11, 12, 29]. It will be very interesting to note any functional imaging changes through a course of CBT when psychotic symptoms are improving.

Succinctly, CBT for people with schizophrenia has been used for primary symptoms of illness, the secondary social impairments and comorbid disorders and for enhancing the effectiveness of other treatments and services, such as medication and vocational support. A summary of various recent key studies in psychosis is given in Table 26.1.

Table 26.1 Key studies of CBT in schizophrenia outcome (2000–2018)

Author	No. of subjects	Study characteristics	Duration	No. of sessions	Outcome
Turkington and Kingdon (2000) [35]	64	Each patient 6 sessions over 2 months averaging 20–40 mins. Families were interviewed as available	2 months	24 group sessions	6-month follow-up period of CBT group tended to have a shorter period in hospital
Sensky et al. (2000) [36]	90	RCT to compare the efficacy of manualised CBT developed for schizophrenia vs befriending control	9 months	19 individual sessions	CBT is effective in treating negative and positive symptoms in schizophrenia resistant to standard antipsychotic drugs, with its efficacy sustained over 9 months of follow-up
Lewis et al. (2002) [37]	315	To test the effectiveness of added CBT accelerating remission from acute psychotic symptoms in early-onset schizophrenia	5 weeks	5 weeks CBT programme and routine care	CBT shows transient advantages over routine care alone or supportive counselling in speeding remission from acute symptoms in schizophrenia

(continued)

Table 26.1 (continued)

Author	No. of subjects	Study characteristics	Duration	No. of sessions	Outcome
McGorry et al. (2002) [38]	59	Needs-based intervention compared with specific preventive intervention comprising low-dose Risperidone therapy and CBT	6 and 12 months	Treatment provided for 6 months 10–12 sessions of CBT	More specific pharmacotherapy and psychotherapy reduces the risk of early transition to psychosis in young people at ultra-high risk, contributions not determined
Morrison et al. (2004) [39]	58	To evaluate the efficacy of cognitive therapy for the prevention of transition to psychosis	6 months	Therapy provided 6 months, and all patients monitored monthly for 12 months	Cognitive therapy appears to be an acceptable and efficacious intervention for people at high risk of developing psychosis
Addington et al. (2010) [40]	51	CBT versus supportive therapy in reducing the conversion rates and symptom improvement	6 months	Sample was assessed at 6, 12, and 18 months	Significant implications for early detection and intervention in pre-psychotic phase and for designing future treatments
Freeman et al. (2013) [41]	150	Effects of CBT for worry persecutory delusions in patients with psychosis	6 sessions	3 months	CBT might be a beneficial addition to the standard treatment of psychosis
Li et al. (2015) [42]	192	Compare efficacy of CBT and supportive therapy (ST) in schizophrenia	15 sessions of either CBT or ST	84 weeks	CBT significantly more effective than ST on overall, positive symptoms and social functioning of patients with schizophrenia
Naeem et al. (2015) [43]	116	Assess effectiveness of culturally adapted CBT for psychosis in low-middle-income countries	6 individual sessions	4 months	Culturally adapted CBT for psychosis is effective when provided in combination with other treatments as usual

Critical Clinical Issues on CBT Improving Outcomes in Schizophrenia

CBT for people with schizophrenia is used for the management of primary symptoms of illness, secondary social impairments and comorbid disorders and for enhancing the effectiveness of medication and vocational support [3]. Though a few recent reviews and studies have questioned the true effectiveness of CBT for schizophrenia and other severe mental disorders and comorbid conditions, it has been shown to be effective in several study trials [44]. There isn't much evidence to support the implementation of CBT in relation to prodrome, first-episode schizophrenia, acute relapse, forensic patients with psychosis or those with comorbidity (substance misuse, personality disorder, or learning disability) nor for psychosis in adolescence and old age [45]. Positive effects of CBT implementation have been recorded predominantly for residual symptoms (eccentric behaviour, emotional blunting, illogical thinking, or social withdrawal) of schizophrenia solely. The core symptoms in patients with schizophrenia have shown resistance with pure psychopharmacological treatment, which is why psychosocial interventions such as CBT have been incorporated in the treatment plan. CBT as therapy (in study trials) has shown significant improvement in targeted areas such as impairments in major

role function due to negative symptoms (some of which have proved especially obstinate to pharmacologic agents), to improve relationships with family and friends, success at work, with comorbid mood and anxiety disorders, and working upon past traumas [46, 47].

What Techniques of CBT Have Been Used to Improve Outcome in Schizophrenia?

Within the CBT spectrum, there are various techniques that are of greater suitability while measuring for outcomes in schizophrenia. Tarrier and Haddock [48] advocate for specific cognitive and behavioural techniques for:

- Attention switching
- Attention narrowing
- Increased activity levels
- Social engagement and disengagement
- Modification of self-statements
- Internal dialogue
- De-arousing techniques
- Increasing reality or source monitoring
- Belief and attribution modification

Beck and Rector [49] discuss the implication of typical CBT techniques: building trust and engagement; working collaboratively to understand the meaning of symptoms; understanding the patient's interpretation of past and present events, especially those that the patient feels are related to the development and persistence of current problems; normalising these experiences and educating the patient about the stress-vulnerability model; and socialising the patient to the cognitive model, including the relationship between thoughts, feelings and behaviours. The primary strategic techniques that therapists may consider are:

- Patient's perspective is crucial for developing therapeutic alliance.
- Developing alternative explanations of schizophrenia symptoms.
- Attempting to reduce the impact of positive and negative symptoms.
- Offer alternatives to address medication adherence.

Peripheral questioning is a technique that questions to understand the origin of the delusional beliefs. This technique is deployed by therapists to reduce positive symptoms in patients. It is also linked with graded reality testing to introduce doubt and postulate other explanations.

Behavioural self-monitoring, activity scheduling, mastery and pleasure ratings, graded task assignments and assertiveness training are several other techniques that can monitor negative symptoms such as amotivation, anergia, anhedonia and social motivation.

Birchwood [50] suggests that CBT might specifically focus upon the following:

- Reduction of distress, depression and problem behaviour associated with beliefs about psychotic symptomatology in schizophrenia
- Emotional and interpersonal difficulty in individuals at high risk of developing psychosis
- Relapse prodromes to prevent relapse in psychosis
- Comorbid depression and social anxiety, including the patient's appraisal of the diagnosis and its stigmatising consequences
- General stress reactivity and increasing resilience to life stress and preventing psychotic relapse
- Increasing self-esteem and social confidence in people with psychosis

The overall goal of CBT treatment (along with medication) is symptom reduction, improvement in functioning and remission of the disorder, so the patient becomes an active participant in a collaborative problem-solving process. Modern CBT refers to a family of interventions that combine a variety of cognitive, behavioural and emotion-focused techniques [51]. These strategies augment cognitive factors and physiological, emotional and behavioural components for the role that they play in the maintenance of the disorder.

Can CBT Improve Outcomes in Schizophrenia?

Tai and Turkington [1] summarise the results of the CBT studies:

- Randomised controlled trials (RCTs) have shown moderate effect sizes for positive and negative symptoms at the end of therapy and with sustained effects.
- CBT has been effective in clinical as well as research settings.
- Hallucinations and delusions respond to CBT.
- Negative symptoms respond initially, and improvement remains at medium-term follow-up.

On the other hand, they also acknowledge:

- CBT is not as effective when people do not view themselves as having a mental health problem, have delusional systems, or have extreme primary negative systems.
- CBT can be less effective when people have comorbid disorders, such as substance misuse, as it becomes difficult to engage and treat them.

Drury et al. [52] have outlined various factors that may predict improvement with CBT, and these factors have been identified in several studies. These factors encompass early work with acutely psychotic inpatients, female gender, shorter duration of illness and shorter duration of untreated illness predicting better outcomes. Tarrier and his group [53] also found shorter duration of illness and less severe symptoms predicted the greatest improvement with CBT-p.

Conclusively, results from clinical trials of CBT-p have shown effective implications on patients and family members of these patients, making CBT a compelling treatment to consider as an integral part of early psychosis intervention and management.

Is CBT a Stand-Alone Treatment in Schizophrenia or Does It Work Better When Combined with Pharmacotherapy?

The combination of pharmacotherapy and psychosocial intervention has been recommended for treatment of schizophrenia by practice guidelines for psychiatrists [54]. Patients in early stage of the illness (schizophrenia) receiving medications and psychosocial intervention have reported a lower rate of treatment discontinuation or change, lower risk of relapse and improved insight, quality of life and social functioning [55].

CBT for psychosis (CBT-p) is best implemented with reduced/controlled acute symptoms and when the patient can be successfully engaged in treatment. The goals of CBT intervention are to reduce stress on the patient, enhance the patient's ability to rehabilitate into the community, provide support to minimise relapse rate and facilitate continued reduction in symptoms and consolidation of remission.

What Other Psychosocial and Psychotherapeutic Treatments Can Be Used to Augment CBT?

Psychotherapy is a constantly evolving therapeutic area which may be individual, group and cognitive behavioural [56]. Controlled study trial evidence suggests no clear advantage of CBT over other therapies for people with schizophrenia [57].

There are several other psychotherapeutic interventions incorporated within the treatment modality for schizophrenia, either along with CBT or independently. Some of the considerable ones are enlisted below [58].

Psychoeducation Teaching patients and caregivers about the symptoms, treatment and course of mental illness and afford patients and family members the opportunity to ask questions about psychiatric disorders and treatment options.

Family Intervention Developing collaboration with the family; teaching patients and their families to cope with stressful situations and the illness; teaching patients and their families to detect signs of relapse and intervene in crises; and enhancing family communication.

Social Skills Training Modules on medication management and symptom self-management, dealing with stigma, social problem-solving and independent living skills.

Cognitive Remediation Developing cognitive rehabilitation programmes to increase memory capacity, attention and high-level problem-solving skills.

Assertive Community Training Involving psychiatrists as well as other mental health clinicians. This team approach allows for integration of medication management, rehabilitation and social services, along with encouragement to involve family support.

The Place of CBT in Treatment Algorithms for Schizophrenia

Pharmacotherapy is the mainstay of schizophrenia treatment; however, residual symptoms may persist. For that reason, nonpharmacological treatments, such psychotherapy, are also important [58]. Nonpharmacological treatments should be used as an addition to medications, not as a substitute for them [59]. In the nonpharmacological treatments, CBT and individual supportive therapy are the two major psychotherapeutic intervention modalities. CBT has been shown to be the most tested and relatively successful intervention in the management for schizophrenia. From symptom management to reduced hospitalisation and relapse rate and greater level of insight in patients, effectiveness of CBT has shown varied patterns within the context of duration of trials, intervention control, severity of symptoms and professional skillset involved.

Limitations of Implementing CBT with Psychosis

CBT-p as a trial intervention in several randomised control studies has shown results for both short-term and long-term therapy sessions. Where, on one hand, CBT has several positive outcomes in the treatment for persons with schizophrenia, there are limitations to the approach. There were several factors that potentially affected the effectiveness and outcome of CBT-p as a treatment modality. They include [1–3, 11, 12, 15]:

- There has not been one standardised model of CBT that has been developed or validated to be implemented as therapeutic treatment modality for patients with schizophrenia. Thus, variations in the intervention interfere with findings reported in the randomised control studies.
- Professionals implementing CBT to persons with schizophrenia were not skilled in delivering the therapy.
- The duration of therapy has varied from short term (six to seven sessions) to long term (20 sessions), which has affected the outcome of treatment effectiveness in persons with schizophrenia.
- It is a prerequisite that the person must have some level of insight in order for CBT to be started off as an intervention.
- Persons with schizophrenia with residual symptoms are shown to be most benefitted by CBT-p as opposed to those in the acute phase, prodromal phase, first episode, relapse, forensic patients with psychosis, or those with a comorbid disorder (substance abuse, personality disorder, or learning disability) neither for adolescents and geriatric population with psychosis (Table 26.2).

Table 26.2 Cognitive behavioural therapy for schizophrenia: summary

Goals	Replace maladaptive thoughts and beliefs Develop adaptive coping skills
Design of CBT	Combine cognitive restructuring with multiple behaviour methods Focus on perpetuating factors
Efficacy	Brief treatment outcomes for negative symptoms Improvement in insight levels Management of hallucinations and delusions Reduction in relapse of rehospitalisation
Limitations	No standardised model developed or validated Less trained professionals in CBT May or may not be effective in short-term (and long-term) therapy Prerequisite that person must have insight Effective only for residual symptoms

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