Chapter

Psychosocial Approaches in Schizophrenia

Ulaş Korkmaz and Cicek Hocaoglu

Abstract

Schizophrenia is a chronic mental disorder with unique symptoms and a decrease in all areas of functionality, causing severe disability. Psychosocial interventions are therapeutic interventions that enable individuals with mental disabilities to be taught the necessary skills in their social, professional, educational, and family roles and to provide the necessary support. Due to impairments in psychosocial functionality, patients with schizophrenia often need psychosocial interventions. In order to achieve complete recovery from schizophrenia, it is essential to apply psychosocial interventions in addition to pharmacotherapy. Studies have shown that psychosocial interventions improve patients' functional areas and considerably increase their quality of life. This chapter aims to examine the psychosocial approach, recovery in schizophrenia, therapeutic alliance, and treatment compliance, and then to review psychoeducation, supportive therapies, cognitive remediation therapy, cognitive behavioral therapies, group therapies, family interventions, psychosocial skill training, community-based mental health services, occupational rehabilitation, case management, social supports, and motivational interviewing for substance use disorder, which are among the psychosocial treatment methods.

Keywords: schizophrenia, psychosocial approaches, psychosocial interventions, psychiatric rehabilitation, recovery

1. Introduction

Schizophrenia is a disorder that has a chronic course, is characterized by periods of exacerbation and remission, causes psychosocial problems such as unemployment, housing problems, and high rates of substance use, and significantly impairs functionality [1]. For this reason, individuals with schizophrenia often need rehabilitation services in addition to treatment services [2]. Significant impairment in social, occupational, and self-care functions, which prevents full recovery and reintegration into society, necessitates continuous and regular care [3]. In addition, schizophrenia, which begins at a young age and forces the individual, family, and society to struggle with the symptoms and consequences of the disorder for a significant part of life, causes psychological-social financial losses. Minimizing the costs of schizophrenia to the individual, family, and society is one of the main goals of health policies [4].

Psychiatric rehabilitation is considered an essential component of treatment in terms of recovery from disorders associated with mental disability and improving

the person's quality of life. Psychiatric rehabilitation aims to teach individuals with mental disabilities the necessary skills and provide the necessary support to help them live a more independent and fulfilling life in their social, professional, educational, and family roles [2].

Due to the psychosocial difficulties experienced by schizophrenia patients, psychosocial approaches and interventions have emerged as an essential component within the scope of psychiatric rehabilitation [3]. The role of psychosocial approaches is critical in solving various problems of individuals with schizophrenia, and these approaches have complementary effects on each other [5]. It is stated that psychosocial interventions play an important role in achieving a good quality of life in the long term [6]. Therefore, it is imperative to include scientifically validated psychosocial interventions in the health standards for patients with schizophrenia [5]. The current approach to schizophrenia treatment not only addresses symptoms but also psychosocial problems associated with these symptoms and combines pharmacological treatments with psychosocial interventions [7].

This text examines psychosocial interventions and related concepts and the clinical, psychological, and social consequences of psychosocial interventions.

2. Recovery in schizophrenia

In the early twentieth century, attention was drawn to the progressive and worsening nature of schizophrenia [8]. However, with antipsychotic medications and psychosocial interventions, there was hope for recovery in schizophrenia. Additionally, the definition of the concept of recovery has changed over time [9].

In the past, the main goal in the treatment of schizophrenia was to achieve remission of symptoms. Remission means that the core symptoms of schizophrenia are present at a mild level at most and do not progress significantly beyond this severity for at least 6 months, and these symptoms do not affect the patient's behavior [10]. However, remission in symptoms alone is not sufficient for recovery in schizophrenia. The view that improvement in other areas of functionality is also a fundamental component of recovery has become widespread [11]. Contrary to the traditional view, recent studies emphasize that improvements in areas such as independent living skills, social functionality, employment, education, and interpersonal relationships are essential for recovery rather than attributing recovery only to a decrease in symptom severity [12]. Thus, within the scope of recovery in schizophrenia, the concept of functional remission, as well as symptomatic remission, has developed over time. A satisfactory daily life and normalcy in functionality have become essential elements of recovery [13]. According to the definition of Liberman et al. [14], recovery should include symptomatic remission lasting at least 2 years, being able to engage in productive activity, being able to meet basic daily needs such as self-care, nutrition, money management, participating in enjoyable activities, and maintaining a good family relationship and at least one friend relationship with whom he or she meets regularly.

What is essential in recovery is how well patients can function and achieve social reintegration [15]. Therefore, due to the significant limitations of antipsychotic medications, it is necessary to add psychosocial interventions to the treatment for recovery. Clinical recovery and social functioning are two indispensable dimensions of recovery. Combining pharmacotherapy with psychosocial interventions and environmental

conditions has a crucial role in recovery in schizophrenia. Even if complete remission cannot be achieved, prioritizing functional recovery is essential for patients to regain their living standards [16]. Although the symptoms do not disappear completely, it does not prevent a state of remission from occurring unless the psychotic symptoms have a significant impact on life [17].

With ongoing interventions, it seems appropriate to conceptualize recovery as a process rather than an outcome [13]. Despite the view that schizophrenia is an incurable disorder, it is now thought that almost half of patients can recover [16]. Functional recovery in schizophrenia can be considered as a multidimensional structure that will include improvement in various areas such as symptomatic remission, psychosocial functioning, cognitive functions, quality of life, treatment compliance, relapse, and rehospitalization [18].

3. Psychosocial treatment approaches in schizophrenia

Although antipsychotic drugs are very effective against positive symptoms, their effects on negative symptoms and functionality are limited [19]. Approximately one-quarter of patients experience a relapse within a year despite appropriate medication [20]. Therefore, in addition to the psychopharmacological approach, rehabilitating patients is also extremely important. Rehabilitation is a treatment process planned to maximize the medical, psychological, social, and professional aspects of individuals who have lost some of their abilities as a result of genetic or accidental diseases, accidents, or injuries and to minimize the effects of permanent disability [21]. Rehabilitation refers to a process that aims to maximize the biopsychosocial potential of an individual with some limitations and difficulties adapting to the environment [22].

Within the scope of rehabilitation, it has become necessary to provide psychosocial interventions in addition to pharmacological treatment in the treatment of schizophrenia. Trials of psychological and behavioral interventions in schizophrenia began in the mid-twentieth century. In this context, approaches such as reinforcing target behaviors, arranging the treatment environment like the external social environment, exposing patients to situations they may encounter in society, providing training to patients' relatives, trying to strengthen patients' self-control, and working collaboratively with patients for all these interventions have been suggested [23]. Later, contributions were made to improve patients' positive aspects [24]. Over time, various psychological and social interventions have begun to be used in the treatment of schizophrenia within the scope of different clinical schools. Prominent among these methods are individual therapy, supportive therapy, psychoeducation, group therapy, social skills training, cognitive behavioral therapy (CBT), and family therapy [25]. With the addition of various interventions, psychosocial approaches have yielded many successful results in recent years [26].

The psychosocial approach aims to provide support and education to individuals with severe mental disorders and their families through practices such as CBT, cognitive remediation therapy (CRT), family therapy, psychoeducation, social skills training, and occupational rehabilitation [27]. In addition, these interventions enable better management of the disorder and reintegration of patients and their relatives into society. Although the intervention types differ, psychosocial interventions reduce relapses and symptoms and increase functionality [27].

Another primary function of the psychosocial approach is to integrate it into a collaborative treatment process to strengthen disorder management, psychosocial functioning, and personal satisfaction, focusing on increasing the skills of patients and their families [28]. Thanks to psychosocial approaches, individuals with disabilities due to mental disorders can better adapt to their environment and gain the necessary skills to increase their functionality and quality of life [29].

3.1 Therapeutic alliance

The therapeutic alliance is the collaborative emotional closeness between therapists and patients [30]. This alliance is established through mutual trust, unconditional respect, empathy, warmth, support, valuing, good communication, and interaction between patients and therapists [31]. It includes elements such as collaborating on goals with patients, agreeing on the tasks of the patient and therapist, and establishing an emotional bond between patients and therapists [32]. The quality and strength of the collaborative relationship between therapists and patients indicates the alliance's strength [33].

According to the World Health Organization, a solid therapeutic alliance improves patients' health [34]. In order to increase medication compliance, it is essential to establish a genuine and humane relationship between the therapist and the patient [35]. It is stated that establishing close and sincere communication with patients facilitates monitoring of the patients and increases treatment compliance [28]. It has been determined that the therapeutic relationship affects medication compliance at least as much as the level of insight, and the therapeutic relationship is seen as the first step in encouraging medication compliance [36]. Another positive effect of the therapeutic alliance is that it is associated with a reduction in symptoms. In a study, it was found to be associated with a decrease in general psychiatric symptoms and psychotic symptoms [37].

Providing emotional support, allowing patients to be involved in the treatment process, ensuring that the care staff consists of stable individuals, and accepting and working on transference and countertransference are elements that should be taken into consideration in order to strengthen the alliance and realize the change in collaboration [31, 36].

3.2 Treatment compliance

One of the most basic methods in the treatment of schizophrenia is the use of antipsychotic medication [38]. However, people with mental disabilities may not be able to understand the disorder itself, its severity, and the need for treatment. Problems such as lack of insight and delays in diagnosis and treatment can make recovery difficult [28].

Non-compliance with treatment, which is one of the biggest obstacles encountered in the treatment process of individuals with schizophrenia, causes exacerbations, worsening prognosis, frequent hospitalizations, and increasing costs [39]. Thus, disability increases over time [40]. Additionally, non-compliance with antipsychotic medications has been associated with treatment resistance and poor social adaptation [41].

Although non-compliance with treatment is common, it is not easy to detect it through interviews [42]. Reasons for treatment non-compliance include factors such as lack of insight [43], positive symptoms [39], severe psychopathology, resistance to

treatment, high level of depression, the presence of substance use disorder, executive function impairments [44], multiple antipsychotic medication use and drug side effects [45], inadequate effectiveness of antipsychotic medication [44], stigmatization [46], and lack of social support [47].

The most critical element of reducing treatment non-compliance is providing patients with education and guidance. Regular monitoring and psychoeducation during pre-discharge and outpatient follow-up periods are vital to maximize the treatment plan's success [48]. In the treatment, the approach of explaining to patients in detail the current situation, the recommended treatment method, the possible benefits and harms of this treatment, suitable alternative treatments, and the treatment duration are critical to include and inform patients in the treatment process. Studies show that in order to increase treatment compliance, it is essential for patients to understand the connection between the treatment process and their personal goals [49].

Some initiatives can be taken to increase treatment compliance. For example, choosing antipsychotic drugs with better tolerability can eliminate side effects that disrupt the patients' compliance [50]. Treating extrapyramidal system symptoms that significantly affect the patients' functionality and reducing positive symptoms with appropriate treatment may increase treatment compliance [51]. Providing psychoeducation to patients and their families about the disorder and treatment process and helping patients increase their social support are psychosocial initiatives to increase treatment compliance [52]. Assigning a family member to take and supervise medication has been found to increase treatment compliance [53]. Cognitive behavioral interventions can be made to increase the level of insight [54]. Some studies have found that motivational interviewing [55], adherence therapy [56], and SMS-based interventions [57] are effective. As stated, since oral medication non-compliance is common, long-acting injectable antipsychotics may be recommended to patients [58]. In addition, establishing a therapeutic alliance is critical in treatment compliance [59].

4. Psychosocial interventions for schizophrenia

In this section, psychosocial interventions used in schizophrenia, such as psychoeducation, supportive therapies, CRT, CBT, group therapies, family interventions, psychosocial skill training (PSST), community-based mental health services (CBMHS), occupational rehabilitation, case management, social supports, and motivational interviewing in schizophrenia patients with substance use disorder will be examined.

4.1 Psychoeducation

Psychoeducation is a gradual process generally defined as the education of an individual with a psychiatric disorder about the disorder and its treatment [60]. Psychoeducation in schizophrenia, as a treatment method for individuals with schizophrenia and their families, aims to convey essential information about the disorder, treatment options, details of pharmacological treatment, side effects, the course of the disorder, coping methods, and social and legal rights [61]. Since caregivers' approaches significantly impact the course of the disorder, it is essential to inform patients and caregivers as much as possible [62]. This way, therapists, patients, and patients' relatives can work together. Psychoeducation has emerged as a valuable and effective psychotherapeutic intervention in the treatment of mental illnesses [63].

In the current literature, the essential components of psychoeducation include providing information about etiological factors, common symptoms, early precursors of relapse, long-term course and outcome, helping to cope with stress, conveying biological and psychosocial treatment options, determining when and how treatment can be accessed, increasing compliance with treatment, conveying dos and don'ts to family members, dispelling myths, misconceptions, and stigma about the disorder, increasing awareness and insight. It is aimed at preventing situations such as relapse, crisis, and suicide by ensuring the knowledge and competence of patients and their relatives about the disorder [63].

Psychoeducation includes both cognitive-behavioral and supportive therapeutic elements [60]. It can be applied to both inpatients and outpatients. The first hospitalization is a good time for psychoeducation, but it should be taken into consideration that patients benefit more from psychoeducation as the level of insight increases [64]. It can be applied on an individual, family, group, or community basis. It can be implemented with the active participation of patients and their relatives or passively with brochures, booklets, or various visual/audio materials. Group applications can be carried out in groups of 4–12 people in several sessions ranging from 5 to 24. The length of the sessions is usually 40–60 minutes and is held once a week to ensure good assimilation of the information shared. Subsequently, monthly meetings can be continued. The duration of the education and the amount of information to be given in one session should be structured explicitly according to the patients [65]. In education, the message should be given that schizophrenia is caused by biological factors triggered by stress in order to reduce the self-criticism of families and maintain medication compliance [63]. Normalization and hope-giving are efficient techniques for reducing stigmatization and accelerating healing [66].

Psychoeducation reduces relapse rates and the burden on patients and families. Although it has been reported that long-term interventions have a more positive effect [64], In a recent study, a psychoeducation application consisting of six sessions in a short period of 1.5 months applied to caregivers was found to be effective in reducing the burden and depression levels in the relatives of the patients, preventing relapses in the patients for 12 months, and in terms of the quality of therapeutic alliance [67]. Psychoeducation has also been found to reduce rehospitalization and hospitalization duration [60] and reduce negative attitudes toward medications [68]. During the psychoeducation process, patients and healthcare professionals come together and make joint decisions in treatment planning, allowing patients to take an active role in line with their preferences and direct the treatment process more effectively [69]. Besides all its contributions, psychoeducation can make patients feel more active, energetic, and action-oriented [65].

As a result, psychoeducation allows patients to obtain comprehensive information and consciously participate in treatment processes [70]. Due to its many positive effects, psychoeducation is included as an essential treatment component in schizophrenia treatment guideline recommendations [71].

4.2 Supportive therapies

Supportive therapies aim to maintain patients' current positive state, help improve coping abilities, reduce anxiety, encourage patients, and provide social support [72]. Supportive psychotherapy is one of the most commonly used treatment methods. An integral part of the change that a supportive approach will create is therapeutic alliance. The therapeutic alliance must continue to grow stronger once it is established.

Supportive psychotherapy makes change by helping to improve self-esteem and adaptability skills. During the process, adaptive defenses are further strengthened, thus increasing patients' adaptation to the environment. Their techniques include empathizing, acknowledging, praising, reassuring, rationalizing, reframing, rehearsing, clarifying, and confronting. It focuses on the "Here and Now." Genuine relationships are more on the agenda, with less focus on transference issues than in psychodynamic psychotherapy [73].

The supportive approach helps patients increase their social adaptation by increasing their emotional regulation skills and recognizing sources of stress [3]. Social support is a component that plays a significant role in all dimensions of schizophrenia. People with schizophrenia generally tend to have weaker social networks and generally have fewer people in their immediate environment. Thus, they form weaker social relationships [74]. These positive social relationships, which seem to be missing in schizophrenia patients, can be seen and learned as possible/doable relationships through therapeutic alliance. One of the factors that ensures this is that the therapist treats them as an individual from society, not as a patient. The supportive approach considers the patient's relationship with others and social concerns and works on this. This patient-therapist relationship can increase patients' self-confidence and enable them to have alternative, realistic thoughts about their social environment. The quality of this relationship determines the effectiveness of supportive therapies [3].

In addition to increasing social functionality, supportive therapies have also been found effective in reducing the symptoms of schizophrenia. In some studies, when schizophrenia patients who received only standard treatment were compared with patients who received supportive psychotherapy in addition to standard schizophrenia treatment, it was reported that patients who received supportive psychotherapy showed more improvement in both disorder symptoms and functionality than the other group [75]. It has been found that even 12 sessions of supportive therapy intervention lasting 6–8 weeks is associated with a decrease in positive and negative symptoms and an increase in social functioning within 2 years [76]. In a randomized controlled study with schizophrenia patients with refractory psychotic symptoms, three different groups were examined. One group received CBT and standard treatment, one group received supportive counseling and standard treatment, and the last group received only standard treatment. The treatments lasted 3 months, and after 2 years, the patients were evaluated in terms of positive and negative symptoms, recurrence, and clinical improvement. In all areas, the two groups that received CBT or supportive counseling in addition to standard treatment reported more positive outcomes than those that received only standard treatment [77]. In another study, it was reported that negative beliefs, primarily related to auditory hallucinations, decreased significantly in the supportive therapy group at the 1-year follow-up [78].

4.3 Cognitive remediation therapy

Schizophrenia is a disorder with severe and progressive cognitive impairment. Moreover, cognitive impairment can lead to more disability than negative and positive symptoms [79]. Cognition is one of the strongest determinants of the level of functioning in schizophrenia [80]. As cognitive impairment increases in schizophrenia, many areas of functionality, such as work, independent living, and quality of life, are affected [81].

Unlike other dramatic symptoms, cognitive impairment does not usually improve during remission. Also, it does not respond well to antipsychotic treatment [82].

Moreover, cognitive impairment prevents patients from benefiting from other psychosocial interventions [83]. Therefore, alternative interventions are needed to treat cognitive impairment [84]. For these reasons, CRT was developed. CRT is an intervention that aims to improve cognitive processes such as attention, memory, executive functions, and social cognition/metacognition and usually includes behavioral training elements [85]. Cognitive remediation aims to improve areas of cognitive impairment through cognitive restructuring, correct errors in the learning process, overcome obstacles in daily life activities, create a supportive social environment, and increase functionality. Supporting cognitive areas not impaired and avoiding environments that may cause cognitive impairment form the basis for cognitive remediation [86].

Some strategies used in cognitive rehabilitation include cognitive remediation, supportive rehabilitation, and cognitive training [87]. The cognitive remediation program aims to improve patients' attention and memory by focusing on teaching thinking skills [88]. The supportive rehabilitation program aims to improve functionality and thus overcome cognitive impairments by taking advantage of patients' cognitive areas that have not been impaired [89]. The cognitive training program aims to improve the executive functions of patients through repetitive practices through various computer programs. This program focuses more on perception and attention [90]. CRT interventions include exercise and strategy training *via* computer or paper and pencil. Motivational/cognitive support is provided during the training [91]. Cognitive repair programs using bridge groups and strategy coaching are more cognitively effective [92]. CRT uses various learning strategies, such as errorless learning, positive reinforcement, and information processing. Thanks to these methods, verbalization, dividing the task into small parts, self-monitoring, organization, and planning can be learned [93].

CRT can be divided into two main models: compensatory and restorative [94]. Compensatory interventions aim to compensate for cognitive impairment by using the patients' unimpaired cognitive areas and environmental resources. In order to achieve this, the patients' tasks are simplified by creating an environmental arrangement [95]. Restorative interventions take advantage of the plasticity of the brain. Thus, the impaired cognitive area is assumed to be regained [96]. Restorative interventions use two approaches: bottom-up and top-down. The bottom-up approach follows a path from simple tasks to more complex ones. The top-down approach uses more complex tasks to repair a specific cognitive area [97].

Four essential elements determine the effectiveness of CRT: having a trained therapist, repetitive application of cognitive exercises, structured development of cognitive strategies, and repeating the learned techniques in the outside world [85]. Transferring cognitive gains to the outside world is very important for the effectiveness of the treatment [98].

There is frequent and robust evidence that CRT improves cognitive domains. It has been reported that the most significant effect is in general cognition, verbal learning, working memory, attention, and processing speed following these cognitive areas, and the improvement in problem-solving and judgment areas is relatively low [99]. It has also been found to be associated with permanent improvements in memory functions and increased social functionality [100]. Positive results have also been obtained in patients with treatment-resistant schizophrenia. Therefore, it is recommended in addition to pharmacotherapy in treatment-resistant patients. However, it seems essential to start applying CRT earlier regarding its contributions [101]. Recently, the long-term effects of CRT have been evaluated. It has been determined that cognitive

function and functional recovery in schizophrenia patients who received CRT, in addition to standard rehabilitation services, were preserved even after 10 years, and the importance of continuing standard rehabilitation services after applying CRT was emphasized [102]. It is also stated that CRT can be applied in the clinical high-risk state for psychosis [98].

CRT is a feasible and acceptable intervention [103]. This intervention provides significant benefits in terms of cognitive remediation and functionality. Therefore, it should form part of the treatment of schizophrenia [98].

4.4 Cognitive behavioral therapies

The basic assumption of the cognitive behavioral approach in psychiatric disorders is that information processing towards external and internal stimuli is biased. Therefore, distortions occur in the individual's thought system [104]. This dysfunctional thinking style is called cognitive attentional syndrome. CBT aims to make patients aware of these cognitive distortions, dysfunctional beliefs, and negative schemas and to change them [105].

CBT has a transdiagnostic model [106]. According to the cognitive-behavioral approach, psychotic symptoms depend on the way the patient interprets their perceptions, how they relate to their perceptions, what causality they attribute to their symptoms, what beliefs they form, and how they interpret these beliefs [107]. CBT argues that paranoia in schizophrenia can be likened to anxiety processes, the response to hallucinatory experiences can be likened to rumination processes, and the formation and maintenance of patients' delusions and hallucinations can be formulated with dysfunctional information processing processes. Formulating these cognitive distortions helps the patient understand and make sense of their symptoms [106].

There are some fundamental elements of CBT in schizophrenia. First of all, as in every intervention, it is essential to establish a therapeutic alliance with patients. Then come stages such as developing alternative explanations for psychotic symptoms, reducing the impact of psychotic symptoms on life, and maintaining treatment compliance. An empathetic, unconditionally respectful, and honest attitude is adopted during therapy. There is no focus on whether the beliefs that cause psychotic symptoms are connected to reality. It focuses on connecting patients' emotions, thoughts, and behaviors. The main aim is to reach a consensus on an acceptable explanation for psychotic experiences. In therapy, patients' weaknesses and strengths are determined. With the vulnerability-stress model, the disorder is understood, and possible stress factors are discussed. At this stage, care should be taken to ensure that patients or their relatives do not develop thoughts of blaming themselves for the disorder, or if they do, this idea is discussed [108]. The aim is to reduce the distress and decline in functionality caused by these symptoms by normalizing and giving meaning to patients' psychotic experiences. Patients learn to view their thoughts and interpretations as hypotheses rather than facts during this process. Thus, they can develop alternative thoughts when they experience similar psychotic experiences in the outside world [109]. In addition, behavioral interventions are also applied in therapy to recognize and re-evaluate cognitive errors and improve coping skills. Patients are motivated to test their negative thoughts in the outside world [106].

It has been stated that CBT applied in schizophrenia can vary between 4 and 30 sessions, but the best effect occurs after at least 20 sessions [109]. A formulation is created after a therapeutic alliance is achieved and accompanying depression and

anxiety are treated. Specific techniques are then used to address psychotic symptoms. For example, analysis of the origin of auditory hallucinations, keeping audio diaries, finding alternative explanations for the cause of hallucinations and developing coping skills, and examining delusions with guided discovery and Socratic questioning can be done. The techniques applied in the session are encouraged to be repeated in the outside world. After working on positive symptoms, behavioral activation can be applied to negative symptoms [110].

Many studies conducted in the recent years have shown that CBT, especially in combination with medication, is effective in the treatment of schizophrenia [111]. CBT has been found effective in reducing the symptoms [112], reducing the number of relapses [113], and increasing the level of functionality and insight [114, 115]. CBT is one of the psychosocial interventions with the most evidence for functional recovery [116]. CBT has been found effective in treating both positive and negative symptoms [117], especially auditory hallucinations [118]. Its effectiveness for delusions has increased over time [119]. Most meta-analyses have suggested the effectiveness of CBT compared to standard treatment [118]. In studies conducted with schizophrenia patients resistant to antipsychotic drugs, CBT was found to be effective in reducing positive and negative symptoms [110]. CBT is also effective in reducing symptoms of depression and anxiety in patients with schizophrenia [120]. In another study conducted on a population in the clinical high-risk state for psychosis, it was found that applying CBT to this group reduced both the rates of transition to schizophrenia and attenuated psychotic symptoms [121].

In schizophrenia treatment guidelines, CBT is recommended at all stages of the disease. According to NICE treatment guidelines, CBT should consist of the following elements: Establishing connections between patients' feelings, thoughts, and behavior and their symptoms and functioning; reassessing patients' perceptions, beliefs, and reasoning about their symptoms; monitoring symptom-related feelings, thoughts, and behaviors; and promoting alternative ways to cope with symptoms, reduce symptom distress, and improve functioning [122].

Today, in addition to traditional CBT, third-wave therapies originating from the cognitive behavioral approach used in the treatment of schizophrenia have begun to appear. Metacognitive therapy, mindfulness, and acceptance-commitment therapy can be counted among these therapies [106, 116]. Traditional CBT focuses more on symptom change, but third-wave cognitive behavioral therapies additionally focus on symptom acceptance and achieving life goals. Third-wave therapies aim to reduce cognitive attentional syndrome by increasing cognitive flexibility and changing thoughts about thoughts [106]. Third-wave cognitive behavioral therapies have been reported to be effective in improving functionality in patients with schizophrenia [116].

4.5 Group therapies

Group therapies are defined as the simultaneous treatment of more than one patient by one or more therapists [123], and the interaction between group members is seen as the primary therapeutic factor [124]. Group therapies have begun to play an essential role in the treatment of schizophrenia. In group therapy for schizophrenia, the following three conditions must be met: Group members must rely on verbal communication, group members are the objects of treatment, and the group itself is the primary therapeutic factor. Group therapies generally emphasize the form of treatment, and the content and conduct of the treatment largely depend on the therapist's theoretical orientation [125].

Kanas [126] developed a method designed for schizophrenia patients. In this model, educational, psychodynamic, and interpersonal techniques are used together. According to this model, the supportive and open-to-discussion structure of the model helps patients cope with their psychotic symptoms and improve their interpersonal relationships. Within the group, patients are encouraged to communicate and share their emotions and symptoms, such as delusions and hallucinations. Advice can be given in practical areas. Expressing anger toward other group members is not recommended as it is difficult to tolerate. Topics such as establishing relationships with others, reality testing, expressing emotions, and advice may constitute the group's topics. This type of group is a community where patients can express their feelings and learn to interact with others. The therapist tries to keep the group members focused on the topic in an active and directive way, has a clear, consistent, and concrete attitude, is supportive and accommodating, is open and willing to offer opinions suitable for discussion, is focused on the "Here and Now," and encourages patient-patient interaction.

That day's theme in the session should be determined within the group in the first minutes. A single theme or topic close to the central theme should be covered in each session. A topic that is known to everyone, understandable, and discussable, such as the group members' recent experiences, communications, and preoccupations, may be preferred. It may be directly related to psychotic experiences. The theme is used to compare the psychotic experience and reality. Feedback is received at the session's end, and the emerging feelings and thoughts are discussed [127].

It is recommended that groups consist of 8–12 people and be held frequently every 1–4 weeks, and session durations are around 60–90 minutes. The techniques used in group therapy generally vary depending on the theoretical approach of the therapist and the characteristics of the patients in the group. However, common elements can be listed as improving communication, ensuring trust, and targeting behavioral changes within the group. The therapist's task is to encourage interaction between patients seeking guidance. Although the therapist is quite active in the early days of therapy, this need for the therapist is expected to decrease over time. In the following process, patients communicate freely with each other, independent of the therapist. During the sessions, the therapist asks each patient to express an opinion on the theme. It is essential to be aware of the pressure patients may feel in the early stages of therapy and not to force patients. The therapist may start talking about more concrete topics. An important technique to achieve behavioral change in group therapy is role-playing. For example, patients may be asked to rehearse a situation, such as a job interview. Behavioral methods such as giving rewards can also be used. Having two therapists in the group, that is, the joint therapy team approach, is beneficial for therapists to interact with each other, thus creating a role model for patients. In addition, inexperienced therapists have the opportunity to work with an experienced therapist and improve themselves educationally [128].

Positive symptoms can be addressed within group therapies, and the experiences of members within the group, similarities of positive symptoms, and misconceptions can be restructured [129]. In terms of negative symptoms, changes can be made with the help of other members of the group [130]. In the second half of the twentieth century, Payn [131] stated that providing patients with a socialization experience reduced anxiety, the severity of psychosis, and the necessity for hospitalization. Today, there is increasing evidence regarding the effectiveness of approaches that enable socialization, such as group therapy. In a study conducted over 7 years and 308 group sessions, prospective data reported that individual members tended to

engage in more emotionally meaningful interactions within the group, the severity of depression, anxiety, and psychotic symptoms decreased, and positive characteristics such as humor and insight developed, and individuals' functionality increased [132]. Providing patients with a socialization experience through group practice may reduce anxiety and hospitalization rates, improve reality testing, and increase self-esteem [128]. It has been reported that group therapies contribute to reducing the social isolation and anxiety levels of patients by enabling them to improve their ability to interact [133]. In a study where patients commented on the therapeutic effects, it was highlighted that instilling hope was essential [134].

Group therapies and individual therapies are complementary to each other. A significant benefit of group therapies is that they allow the therapist to see the patient exhibit a wider variety of behaviors over a more extended time and in a different environment than in individual sessions. In this way, drug dose optimization can be quickly done [128].

Group therapies are essential for patients to increase their social functionality. They can be used in conjunction with pharmacotherapy and other psychosocial interventions. They can be applied to both outpatients and inpatients, and patients can generally adapt to group therapies [128].

4.6 Family interventions

Schizophrenia negatively affects individuals' affective states, cognitive processes, perceptual abilities, and behaviors, causing them to have difficulty in performing their functions. While this situation causes individuals to need constant care and support, the families of those affected by the disorder are also indirectly affected [135] Schizophrenia patients usually live with their families, and the families often do not receive any support while caring for the patients [136]. Schizophrenia is a disorder not only of the patients but also of the family as a social structure. For this reason, the lives of families are affected as negatively as the patients' [137].

Family members often need information, help, and support because of the severe challenges they face. At the same time, their behavior and attitudes can have positive or negative effects on the clinical condition of patients [138]. Patients' relatives often experience difficulties due to shame, guilt, helplessness, anxiety, and financial difficulties [139]. Disorder-related symptoms and behaviors, hospitalizations, responsibilities regarding medication compliance, lack of social support, family conflicts, and difficulties in coping with these conflicts create a significant burden for families [140]. Additionally, as the severity of the disorder increases, the burden experienced by the family increases [141]. In addition to the psychosocial problems they experience, psychiatric diagnoses such as anxiety disorders or depression may often occur in patients' relatives [142]. They may experience grief due to a relative being diagnosed with schizophrenia [143].

Families of individuals with schizophrenia often have limited skills in coping with the difficulties they encounter during the disorder process [144]. Family support programs created in line with these demands provide families with information about schizophrenia and support interaction between families by sharing feelings and thoughts. Within the scope of these programs, volunteer family members trained by health professionals transfer the training they receive to other family members [145].

Family interventions include cognitive, behavioral, and supportive elements that aim to include patients' relatives in the treatment and rehabilitation [146]. Interventions with families use methods such as education, counseling, and

developing coping skills [147]. Family interventions are led by a mental health professional [138]. It may vary depending on schools; it may be cognitive-behavioral or psychoanalytically oriented. Education and support groups can be implemented as systemic, strategic family therapies. Various methods can be used, such as developing stress-coping skills and psychodrama [139]. The primary and common goal is to help patients by providing cooperation between patients, their families, and the treatment team [148]. Some common goals are applying psychoeducation, evaluating the behavior of patients and their relatives and creating changes in behavior, providing support, creating order, and reducing high expressed emotion [149]. Crises may be expected in the family of a patient with schizophrenia. Therefore, crisis intervention is another component of family therapies. Although different theoretical models have similar effectiveness, it has been stated that psychoanalytically oriented applications may yield negative results [150].

Family care programs provide positive gains for both the family and the patient by enabling families to solve their problems more effectively, increase their self-confidence, be more understanding toward patients, reduce feelings of strain and anger, and increase their ability to cope with stress [151]. In family support programs, the main topics are providing information about mental illnesses, social support, medications, and other treatment methods, improving problem-solving and communication skills with the patient, and sharing experiences and difficulties [152].

The primary purposes of psychoeducation for families are to provide information about the disorder and treatment, to regulate family communication, to help with coping methods, to increase problem-solving skills, to reduce stress caused by family conflicts, and to increase the social support of family members [146]. Family therapies help patients' relatives better understand the effects of the disease on functionality and recognize exacerbated psychotic symptoms [153]. The vulnerability-stress model, which emphasizes the biological nature of the disease, can be explained to patients' relatives to reduce stigmatization [154]. Certain areas, such as plans, job expectations, medication compliance, marriage, and pregnancy, may also need to be included in family therapies. Family therapies are essential in reducing the family's anger and guilt, recognizing and solving problems that may arise in advance, setting reasonable expectations for the patient, and setting limits where necessary [147]. Expressed emotion, which is defined by a high level of criticism and excessive emotional reactivity and is highly associated with exacerbation of psychotic symptoms, should also be studied in family therapies [155]. Studies have found expressed emotion to be associated with cognitive impairment and disease severity. Patients may also behave negatively in response to expressed emotion [146]. Families being overly protective and interventionist or sacrificing themselves and being overly selfless are dysfunctional coping attitudes [156]. For this reason, patients' relatives should be encouraged to engage in activities outside the home as it provides freedom. This improves the patients' relatives' quality of life [148]. Efforts should be made to correct the misinformation and prejudices of patients' relatives about schizophrenia and treatments because this attitude can negatively affect patients and disrupt medication compliance [157].

Family therapies are important because they benefit patients' families and indirectly contribute to patients' recovery. In a meta-analysis examining interventions given to families, it was reported that family therapies reduced hospitalizations and increased medication compliance [158]. Family therapies reduce the exacerbation of the disease, the burden on the family, emotional expression, and treatment costs. It also increases the patients' compliance with treatment and psychosocial

functionality [148, 156]. A study found that family therapies lasting 6–9 months reduced relapse rates, increased patient compliance with treatment, and reduced symptom severity [159]. It has also been reported that family interventions increase families' ability to cope with the disease process and have positive effects on protecting their mental well-being [150]. It has been determined that family therapies carried out in group practice give similar results, effectively increase the functionality of patients and their relatives, and reduce relapses [160]. A study conducted with first-episode psychosis patients reported that family therapies reduced relapse rates, hospitalization duration, and psychotic symptom severity and increased functionality for up to 24 months [153].

As a result, family interventions contribute to the cooperation between patients, their families, and healthcare professionals and help to achieve desired results, such as preventing relapses [161]. Schizophrenia treatment guidelines also recommend family interventions at all stages of the disease, as they reduce hospitalizations and symptom severity [71]. It is beneficial to start family psychoeducation from the early stages of schizophrenia, and family therapies are also strongly recommended for first-episode psychoses [162]. All treatment guidelines agree that family interventions reduce relapse, hospitalization rates, and the burden experienced by families [162].

4.7 Psychosocial skill treatment

Social functionality plays an essential role in meeting the needs of individuals. For this reason, developing social skills and abilities is very important for quality of life. Social competence is the ability to communicate in social areas such as work, school, home, entertainment, shopping, treatment, and social and legal services [163]. Social skill is the ability of people to exhibit appropriate behavior in social environments and to successfully apply their social competencies in real life [164]. Social skills include various performances such as verbal and non-verbal communication, accurate social perception, making decisions or responses in accordance with social situations and rules, speaking skills, skills that can enable the management of disease, and expressing emotions such as empathy and compassion [165].

Social competencies and skills are incredibly restricted in patients with schizophrenia. They often struggle to develop social relationships, meet social needs, or fulfill other social roles [166]. In addition, frequent and long-term hospitalizations may keep the person away from their social environment, causing the loss of already learned social skills and the inability to learn new social skills [164]. Schizophrenia itself can cause negative attitudes in the social environment and economic difficulties, causing patients to withdraw from society and lose/fail to learn social skills [167]. Patients with schizophrenia may need to receive training on this subject due to the difficulties they experience in terms of social skills [165].

PSST is a complementary intervention developed to eliminate the social skill deficiencies experienced by patients in their daily lives [86]. PSST has a significant position in increasing the social functionality of patients [168]. Skills are initiated and developed through learning. For this reason, behavioral techniques (e.g., social learning and negative reinforcers) are primarily used in PSST. Patients can improve social skills through behavioral learning, and as a result, they can reach the capacity to live independently [28, 165].

In PSST, first of all, the obstacles in the patients' lives are discussed with the patients, and the current problem areas are identified in cooperation. A target is then determined regarding these problem areas. In order to reach the main goal,

short-term and intermediate goals are determined from simple to complex. During this process, the therapist also explains to the patients in an educational framework which communication skills must be learned, with whom, where, and when to use them. Role-playing and rehearsing allow patients to develop the communication skills necessary for the target situation. Positive and constructive feedback is given to the patient regarding the behavior exhibited in role-playing and rehearsal. Patients also learn indirectly from their therapist through social modeling and observation. The most crucial factor is reinforcing the learned behaviors and skills by repeating them frequently, especially in real life. Therefore, behavioral experiments are integral to PSST [164, 165]. Other frequently used behavioral methods include shaping behavior, coaching, using reinforcers, relearning, self-direction, generalization, and self-monitoring [164].

Liberman et al. [28] created a structured PSST model (UCLA social and independent skill modules) by strengthening PSST with psychoeducation and problem-solving skills. This program includes medication management, symptom management, basic conversation skills, community re-entry, recreation for leisure, substance abuse management, workplace fundamental skills, friendship and intimacy, and involving families in service modules. This program, which is a modular training, can increase social functionality and decrease symptoms, exacerbations, and relapses. In order to maintain this positive effect, it is recommended that the program last at least 1 year and be continued with support meetings [169].

Cognitive-behavioral-oriented PSST is an 18-week group intervention consisting of three modules. These modules consist of cognitive skills, social skills, and problem-solving skills. These interventions have been found effective in normalizing attenuated psychotic symptoms and eliminating stigma, and are also suitable for individuals in clinical high-risk states for psychosis [170]. Cognitive-behavioral-oriented PSST has also increased functionality, reduced negative and positive symptoms, and improved social competence [171].

Studies have reported that psychotic symptoms and relapse rates are lower, and communication skills and quality of life are better in schizophrenia patients who have received PSST than in schizophrenia patients who have not received PSST [164]. PSST has also been found to have beneficial effects in helping patients stay at work longer and reducing substance abuse [172]. It is superior to standard treatment for positive and negative symptoms [173].

PSST complements other treatment methods and is one of the interventions that must be included in treatment [165]. Adding PSST to treatment programs makes it easier for patients to cope with the disease, reduces relapse rates, and increases social functionality, level of insight, quality of life, and treatment compliance [174]. When patients learn to cope with stressful life events or daily challenges, thanks to their social skills, they become more competent in solving these problems [165].

4.8 Community-based mental health services

CBMHS are evidence-based and recovery-oriented practices that aim to improve the mental health of a community, are accessible and acceptable, take into account patients' goals and strengths, and help provide a wide range of support, services, and resources. CBMHS are a psychosocial approach targeting the community. Within CBMHS, patients are considered systemically and evaluated within their socioeconomic context. The principle of protecting patients individually and socially is at the forefront. Services are publicly available to everyone. CBMHS are carried out

by a team. The services provided are long-term and lifelong. CBMHS also consider the social costs of disorders [175].

This type of rehabilitation focuses on accessibility of services, cultural factors, and community involvement. Particularly in areas with inadequate service access, strategies such as CBMHS play an intermediary role in helping patients meet their needs [176]. CBMHS have the functions of helping patients assert their rights, helping them recover, encouraging their participation in society, improving the mental health of the family and the entire community, reducing stigma and discrimination, increasing awareness of mental health in society, and facilitating access to medical, psychological, social and economic services. The main aim is to empower people with severe mental disorders by integrating them into society [177].

A large number and variety of CBMHS have been created in many countries so far [178]. As mental health services began to be provided on a community-based, a significant portion of patients began to be treated in the community, and the rate of receiving inpatient treatment decreased significantly [179]. CBMHS have great importance and impact, especially in low- and middle-income countries with relatively inadequate health services. Studies support the feasibility and effectiveness of CBMHS in low- and middle-income countries and recommend providing these services [180].

CBMHS are critical for preventing hospitalization. Patients who benefit from CBMHS have lower hospitalization rates and durations than when they do not receive this service [181]. CBMHS make it easier for patients to access the resources they need. Patients can thus have easier access to areas such as health, education, financial aid, and social support [182]. A study reported that CBMHS contributed to increased functionality, insight level, and treatment compliance and reduced caregiver burden and symptoms of schizophrenia [183].

The existence of some such health provider centers to serve patients whose symptoms are not severe enough to require hospitalization is an essential benefit of the community-based mental health field. However, this can create relative complexity within the healthcare system, and it may be difficult for patients with schizophrenia who have a severe mental disorder to access CBMHS. Conditions such as lack of insight, impaired cognitive abilities, and symptoms related to schizophrenia can significantly reduce patients' ability to benefit from these services. Therefore, it is necessary to be aware of these factors and find solutions to these problems while providing CBMHS [178].

4.9 Occupational rehabilitation

Occupational rehabilitation consists of vocational and artistic activities with goals such as improving creativity, expression and communication skills, socialization, and increasing insight [184].

Vocational rehabilitation is a psychosocial intervention applied to patients who desire to learn and work, focusing on vocational training and reinforcing the skills required for a profession [27]. There is a severe impairment in social and occupational functioning in schizophrenia. Vocational rehabilitation is an important area to focus on to compensate for impaired functionality. Vocational rehabilitation includes providing employment support and necessary theoretical and practical vocational training. The aim is to increase the occupational functionality of patients, which is a step toward functional recovery and, thus, enables them to integrate into society more easily [185].

It may be critical for people with schizophrenia to continue their work or be employed after being discharged from the hospital for their return to society. However, since schizophrenia, which is a chronic disease, may have features such as the presence of residual symptoms, decreased work performance, and deterioration in cognitive and social functions, employment opportunities of patients may decrease [27]. People with schizophrenia face serious problems finding employment, even if they have only been hospitalized once [186]. However, it is known that schizophrenia patients can continue their working lives for a long time after adequate support and treatment are provided [187].

Occupational rehabilitation aims to increase patients' independence in daily life by improving social skills [188]. Working in fulfilling occupations contributes to social inclusion and improves functioning and self-esteem [189]. Some studies have reported that vocational rehabilitation reduces patients' symptoms and increases their cognitive functions and quality of life [190]. In another study on vocational rehabilitation, it was stated that in addition to increasing the social functionality of schizophrenia patients, the hospitalization duration of the patients was shortened, and the risk of hospitalization was reduced [191].

Art therapies can be applied to patients whose negative symptoms are dominant and whose verbal communication is difficult [71]. Art therapies are carried out under the leadership of experts in fields such as painting, music, dance, drama, and handicrafts. It can be applied in groups. Art therapies allow patients to express themselves indirectly and strengthen the patient-therapist relationship. These treatments developed toward the end of the twentieth century and have been used for many years [184].

In a 10-week randomized controlled study in which art therapies were applied to patients with schizophrenia, it was found that art therapy positively changed the patients' self-esteem compared to standard treatment [192]. It has also been reported that art group therapy increases social functioning in patients [193] and significantly reduces negative symptoms statistically compared to standard treatment approaches [194]. The use of art for therapeutic purposes has essential functions in terms of self-understanding of individuals with disorders such as schizophrenia, where verbal communication is limited and negative symptoms are present [195].

4.10 Case management

Patients often need people to help them make the most of the community-based and psychosocial services available, guide them, and coordinate services. The provision of these services is called case management, and the mental health specialist who performs case management is called a case manager. Case management is an approach that aims to monitor patients' adaptation to society, prevent rehospitalization, facilitate access to services, and ultimately improve patients' quality of life [196]. Case management aims to coordinate the care of individuals with severe mental disorders in the community and to increase the accessibility and efficiency of continuous care [197]. In addition, patients are assisted in obtaining and using medications, obtaining financial resources, and providing appropriate accommodation and transportation to the hospital. The main aim is to increase the patients' adaptation to treatment and society, reduce hospitalizations, and increase social functionality [28].

Many different case management models have emerged from the past to the present. Classical case management includes determining needs, planning treatment, providing connections, monitoring, evaluation, and advocacy. The first case

management model developed is the broker service model. In this model, the main task of the case manager is to provide the services that patients need and to ensure coordination between various services. In this way, finding early solutions to many patients' problems is possible. However, in this model, the case manager is not a clinician [198].

In clinical case management, the case manager also assumes the clinician's role. The case manager has duties such as evaluation, planning, connection with resources, expanding social networks, coordination between services, crisis intervention, and providing psychoeducation, psychosocial, and pharmacological treatment. They provide a wide range of services, including assistance with housing, government aid, and transportation [199].

Assertive community treatment has been developed to meet the needs of individuals with more severe illnesses who experience frequent exacerbations, violent behavior, and severe decline in functionality [184]. In this model, services are carried out by a team including a psychiatrist, a nurse, and at least two case managers. It is aimed to reduce the number of patients per staff and to provide services in society and the natural environment of patients. The workload is shared by a team rather than by individual. Thus, direct service can be provided 24 hours a day [200]. This model's primary purpose is to meet patients' needs urgently and prevent the devastating effects of the disease. Patients who experience frequent relapses, recurrent hospitalizations, and weak family support are especially suitable individuals for assertive community treatment [184].

Intensive case management, unlike other case management models, aims to provide quality health care in a short time. Treatment services such as emergency home visits are also provided. Its mission is to facilitate community services and assist patients with daily living skills [201]. It has been shown to have benefits in terms of functionality, patient retention in treatment, employment utilization, housing, and shorter hospitalization durations compared to the standard approach [202].

In the strength model, the focus is more on patients' strengths and positive aspects. In this model, the relationship between the case manager and the patient is fundamental and indispensable. While performing the intervention, patients' wishes are considered. The model proposes the treatment of patients in the community and argues that, in principle, individuals with severe mental disorders can also learn, grow, and change [203].

The rehabilitation model also prioritizes individual desires and goals. In addition to individual goals, the social contribution of patients is also aimed in this model [204].

Evaluation, planning, patient-centeredness, bonding, and monitoring are standard functions in case management models [205]. Studies have shown that case management improves patients' functionality and increases their quality of life [206]. It has also been effective in improving negative symptoms [197].

In patients where residual symptoms and exacerbations persist, case management is an appropriate approach in addition to other psychosocial interventions. The case manager's importance is increasing, especially considering the need for more knowledge about services from patients and their families. At this point, the case manager will evaluate the patients psychosocially and help provide the necessary services [184]. It is recommended that case management be implemented as a psychosocial intervention method due to its positive effects on clinical recovery, good social functioning, and reduced hospitalization rates [207].

4.11 Social supports

Social supports are generally defined as having a reliable environment to meet emotional, instrumental, educational, material, and psychosocial needs [208]. Integration of schizophrenia patients into society is one of the most critical goals in schizophrenia treatment. In order to ensure the integration of these individuals into society, they must first be supported in areas such as health, education, employment, social security, and social assistance. This can be achieved by states granting certain rights to these patients and increasing the awareness of patients and their relatives about these rights [209].

There is a strong relationship between schizophrenia and poverty. Lack of social support and caregiving burden can be considered among the reasons for this relationship [210]. Since schizophrenia causes severe loss of functionality and productivity, it can indirectly lead to the impoverishment of individuals and their families [211]. Stigmatization associated with schizophrenia may affect patients and their families' ability to develop productive social networks and benefit from social supports [212]. People with schizophrenia often require the care of a family member, which can lead to a loss of productivity and, therefore, income for another family member [213]. In addition, the treatment costs of schizophrenia, which is a chronic disease, can pose a severe economic burden [214].

The housing problem continues to be a negative situation for schizophrenia. Having a home-like living space is one of the foundations of recovery. Because not being able to live in an adequate home also prevents the development of social relationships with healing properties. As a result of providing adequate and appropriate housing, patients are more likely to feel like they belong to society and integrate into it. This contributes to the development of social relations. In this way, schizophrenia patients can achieve a better quality of life and, indirectly, a life with fewer symptoms. Therefore, mental health professionals and policymakers should not ignore this issue [215].

Education, a social right, is critical for patients to be employed and productive in the future. In this way, it contributes to the integration of patients with society. Particularly patients who cannot adequately benefit from vocational training have difficulties in employment and cannot have a regular income. For this reason, it is essential to support schizophrenia patients for education and provide them with convenience in this process [209].

One of the things that should be done is to provide opportunities for patients with good functionality to work in a suitable job and to provide financial support to patients whose functionality has not improved and who cannot work. Schizophrenia patients with low functionality and reduced social networks may need social support in areas such as social security, social aid, and health. Encouraging non-governmental organizations can be effective in seeking and demanding rights [209].

Social support has a significant impact on the adaptation of individuals with mental disorders to society, reducing their psychiatric symptoms and reducing the number of hospitalizations [216]. It has a protective effect on schizophrenia and is a necessity in clinical and functional recovery [217]. Additionally, emotional social support also reduces relapse rates. It is, therefore, necessary to encourage the provision of better social support [218].

Although various social supports exist in various countries, patients' and their relatives' awareness of social supports is generally low. As a result, patients cannot

fully benefit from their social rights. Therefore, there is a need for more services for patients with schizophrenia and to increase their awareness of these supports [209].

Definite policies should be developed to reduce poverty in order to support recovery in schizophrenia patients, increase social supports, and reduce the family care burden [210]. In this process, disciplines such as health professionals, social workers, economics, politics, and law should play an active role. Only in this way can social integration of schizophrenia patients be achieved [209]. For example, in Turkey, in order to work as a public employee, patients with schizophrenia have the right to take a different exam than healthy people. This exam, designed for individuals with schizophrenia and similar disorders, makes it easier for the patients to be assigned to a job. In this way, patients gain financial and social opportunities, become functional, and are exposed to less stigma. As a result, the adaptation of patients with schizophrenia to society increases.

4.12 Motivational interviewing in schizophrenia patients with substance use disorder

Motivational interviewing is a guiding counseling style that aims to achieve behavioral change and helps recognize and resolve ambivalent feelings and thoughts on a particular subject. If change is aimed at motivational interviewing, a partnership is established between the interviewer and the patient. In order to achieve behavioral change, it is necessary to activate individuals' reasons. Additionally, accepting patients' autonomy and acting compassionately are other elements of motivational interviewing. Motivational interviewing involves asking open-ended questions, confirmation, information exchange, reflection, and summarization [219]. Motivational interviewing aims to resolve ambivalence by raising awareness of the conflict between one's goals and current situation [220].

Today, motivational interviewing is mainly used to address problematic behavior patterns, especially to help change substance use behavior [221]. Motivational interviewing is particularly effective in preventing alcohol-related problems [222]. In a study conducted with individuals with comorbid schizophrenia and alcohol use disorder, it was found that patients were able to stay away from alcohol for more extended periods, and their drinking days decreased thanks to motivational interviewing [223].

In a study conducted with patients with comorbid schizophrenia and substance use disorder, it was reported that when motivational interviewing was used together with other psychosocial interventions, the number of days patients abstained from alcohol and substances increased, and a decrease in positive symptoms and exacerbations was achieved over 12 months [224]. In other studies, it has been found that in patients in whom psychosocial interventions such as motivational interviewing, crisis management, social skills training, and psychoeducation were used in combination, substance use decreased, urine substance tests were largely negative, and their compliance with treatment and quality of life increased compared to patients in whom these interventions were not used [225–227]. In a recent review and meta-analysis, the effectiveness of motivational interviewing in individuals with comorbid psychosis and substance use disorder was found to be moderate [228].

It is essential to be more directive and repetitive and use concrete language in motivational interviews with schizophrenia patients, as cognitive impairment accompanies them. It may be necessary to keep session times shorter so patients can tolerate them and to keep the treatment period longer to establish skills [229].

5. Use of psychosocial interventions in combination with other treatments

Considering the effectiveness of psychosocial interventions, the ideal way to treat schizophrenia seems to be the integration of pharmacotherapy and psychosocial interventions [7]. Medication alone has limited effect when not supported by psychosocial interventions [10]. It is known that when psychosocial interventions are used together with other treatments, the rate of discontinuation or change of treatment decreases, relapses decrease, and the level of insight, quality of life, and social functionality increase [230]. For example, it has been found that the majority of schizophrenia patients who receive traditional antipsychotic drug treatment together with psychosocial treatment, such as social skill training, meet the remission criteria, and their symptomatic and functional improvements are more significant than those who receive antipsychotic treatment alone [18]. With combined treatment, the rate of patients participating in employment and receiving education increases. Therefore, it is critical to integrate psychosocial interventions with other interventions in the early stage of schizophrenia [230].

Combining pharmacological and psychosocial interventions has some advantages. Patients receiving psychosocial intervention may require lower doses of antipsychotic medication. Patients who receive appropriate medication may comply better with psychosocial interventions than those who are not compliant with medication. Combining treatments may each enhance the effect of the other, and the positive effects may be more significant than expected. Each treatment can help patients maintain and restore their biopsychosocial integrity by providing improvements in both common and specific areas [231].

Combined treatment is promising for recovery in schizophrenia, and it is emphasized that the most appropriate method in the treatment of schizophrenia is the integration of pharmacological treatment with psychosocial interventions [7].

6. Conclusion

Considering the problem areas experienced by patients, the treatment of schizophrenia should be addressed in a biopsychosocial context. Studies show that the psychosocial approach has positive results in patients with schizophrenia accompanied by severe disability. There is ample evidence that psychosocial interventions are highly effective in integrating patients into society and improving their functionality and quality of life. Therefore, it is crucial to continue psychosocial interventions together with pharmacotherapy. Using different psychosocial interventions together may provide more excellent benefits. Since schizophrenia is a multidimensional mental disorder, detailed evaluation of these dimensions in patients and intervention with psychosocial methods in areas that are deemed deficient are very important for the quality of life and functionality of patients.

We frequently see the benefits of psychosocial interventions in our clinical practice. For example, we started to follow up with a 19-year-old female patient who started experiencing symptoms of delusions and hallucinations at the age of 17 after a one-year prodromal period and was diagnosed with schizophrenia, in a community-based mental health center. Previously, her delusions and hallucinations had been treated with olanzapine and amisulpride. However, her symptoms of social isolation,

alogia, and decreased self-care had not responded to medication and continued. She participated in an art therapy program focused on music, dance, and theater at the community-based mental health center. After that, she improved her communication skills and started talking more spontaneously, and her self-care increased. Her statement was as follows: "I don't recognize myself, but it turns out I have great talents within me." This case once again shows the effect of psychosocial interventions on symptoms of schizophrenia and their potency-inducing properties.

Recovery in schizophrenia is a process. Considering that recovery is related to how well the patient can perform psychosocial functions and social reintegration, the importance of psychosocial interventions increases. Even if full recovery cannot be achieved, various psychosocial interventions should be applied to minimize functional losses. Schizophrenia treatment guidelines also recommend psychosocial interventions at all stages of treatment.

Author details

Ulaş Korkmaz[1] and Cicek Hocaoglu[2*]

1 Department of Psychiatry, Giresun Training and Research Hospital, Giresun, Turkey

2 Department of Psychiatry, Recep Tayyip Erdoğan University, Rize, Turkey

*Address all correspondence to: cicekh@gmail.com

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References

[1] Frith CD. The Cognitive Neuropsychology of Schizophrenia. Classic ed. London: Psychology Press; 2015

[2] Liberman RP, Kopelowicz A, Smith TE. Psychiatric rehabilitation. In: Sadock BJ, Sadock WA, editors. Comprehensive Textbook of Psychiatry. 7th ed. Philadelphia: Williams and Wilkins; 2000. pp. 3218-3245

[3] Penn DL, Mueser KT, Tarrier N, Gloege A, Cather C, Serrano D, et al. Supportive therapy for schizophrenia: Possible mechanisms and implications for adjunctive psychosocial treatments. Schizophrenia Bulletin. 2004;**30**(1): 101-112. DOI: 10.1093/oxfordjournals.schbul.a007055

[4] Silva JACE. World aspects of psychiatry. In: Sadock BJ, Sadock WA, editors. Comprehensive Textbook of Psychiatry. 7th ed. Philadelphia: Williams and Wilkins; 2000. pp. 3333-3342

[5] Bustillo JR, Lauriello J, Horan WP, Keith SJ. The psychosocial treatment of schizophrenia: An update. American Journal of Psychiatry. 2001;**158**(2):163-175. DOI: 10.1176/appi.ajp.158.2.163

[6] Tauber R, Wallace CJ, Lecomte T. Enlisting indigenous community supporters in skills training programs for persons with severe mental illness. Psychiatric Services. 2000;**51**(11):1428-1432. DOI: 10.1176/appi.ps.51.11.1428

[7] Schooler NR. Relapse prevention and recovery in the treatment of schizophrenia. Journal of Clinical Psychiatry. 2006;**67**:19

[8] Kraepelin E. Dementia Praecox and Paraphrenia. Robert E. New York: Krieger Publishing Co. Inc; 1919

[9] Taylor M, Jauhar S. Are we getting any better at staying better? The long view on relapse and recovery in first episode nonaffective psychosis and schizophrenia. Therapeutic Advances in Psychopharmacology. 2019;**9**:2045125319870033. DOI: 10.1177/2045125319870033

[10] Andreasen NC, Carpenter WT Jr, Kane JM, Lasser RA, Marder SR, Weinberger DR. Remission in schizophrenia: Proposed criteria and rationale for consensus. American Journal of Psychiatry. 2005;**162**(3):441-449. DOI: 10.1176/appi.ajp.162.3.441

[11] Juckel G, Morosini PL. The new approach: Psychosocial functioning as a necessary outcome criterion for therapeutic success in schizophrenia. Current Opinion in Psychiatry. 2008;**21**(6):630-639. DOI: 10.1097/YCO.0b013e328314e144

[12] Ahmed AO, Marino BA, Rosenthal E, Buckner A, Hunter KM, Mabe PA, et al. Recovery in schizophrenia: What consumers know and do not know. Psychiatric Clinics. 2016;**39**(2):313-330. DOI: 10.1016/j.psc.2016.01.009

[13] Harvey PD, Bellack AS. Toward a terminology for functional recovery in schizophrenia: Is functional remission a viable concept? Schizophrenia Bulletin. 2009;**35**(2):300-306. DOI: 10.1093/schbul/sbn171

[14] Liberman RP, Kopelowicz A. Recovery from schizophrenia: A concept in search of research. Psychiatric Services. 2005;**56**(6):735-742. DOI: 10.1176/appi.ps.56.6.735

[15] Emsley R, Chiliza B, Asmal L, Lehloenya K. The concepts of remission

and recovery in schizophrenia. Current Opinion in Psychiatry. 2011;**24**(2):114-121. DOI: 10.1097/YCO.0b013e3283436ea3

[16] Vita A, Barlati S. Recovery from schizophrenia: Is it possible? Current Opinion in Psychiatry. 2018;**31**(3):246-255. DOI: 10.1097/YCO.0000000000000407

[17] Hopper K. Recovery from Schizophrenia: An International Perspective. New York: Oxford University Press (OUP); 2007

[18] Valencia M, Fresan A, Juárez F, Escamilla R, Saracco R. The beneficial effects of combining pharmacological and psychosocial treatment on remission and functional outcome in outpatients with schizophrenia. Journal of Psychiatric Research. 2013;**47**(12):1886-1892. DOI: 10.1016/j.jpsychires.2013.09.006

[19] Kucharska-Pietura K, Mortimer A. Can antipsychotics improve social cognition in patients with schizophrenia? CNS Drugs. 2013;**27**(5):335-343. DOI: 10.1007/s40263-013-0047-0

[20] Schneider-Thoma J, Siafis S, Tardy M, Komossa K, Heres S, Kissling W, et al. Maintenance treatment with antipsychotic drugs for schizophrenia. Cochrane Database of Systematic Reviews. 2020;**48**:738-740. DOI: 10.1002/14651858.CD008016.pub3

[21] Organization WH. CBR: A Strategy for Rehabilitation, Equalization of Opportunities, Poverty Reduction and Social Inclusion of People with Disabilities: Joint Position Paper. Geneva: Organization WH; 2005

[22] Çetinyalçın İ, Oğuz H. Fiziksel tıp ve rehabilitasyonun anlamı, amacı, dünü, bugünü, yarını. Tıbbi Rehabilitasyon. İstanbul: Nobel Tıp Kitabevleri Ltd. Şti; 1995

[23] Liberman RP, McCann MJ, Wallace CJ. Generalization of behaviour therapy with psychotics. The British Journal of Psychiatry. 1976;**129**(5):490-496. DOI: 10.1192/bjp.129.5.490

[24] Kopelowicz A, Liberman RP, Zarate R. Psychosocial treatments for schizophrenia. A Guide to Treatments that Work. 1998;**2**:201-228

[25] Lehman AF. Improving treatment for persons with schizophrenia. Psychiatric Quarterly. 1999;**70**:259-272. DOI: 10.1023/A:1022082031007

[26] Lee D-E, Choi Y-S. The history and achievement of psychosocial treatment for patients with schizophrenia. Journal of Korean Neuropsychiatric Association. 2009;**48**:411-422

[27] Sun X, Yue S, Duan M, Yao D, Luo C. Psychosocial intervention for schizophrenia. Brain-Apparatus Communication: A Journal of Bacomics. 2023;**2**(1):2178266. DOI: 10.1080/27706710.2023.2178266

[28] Liberman RP. Yeti yitiminden iyileşmeye: Psikiyatrik iyileştirim el kitabı. Yıldız M, çev ed Ankara: Türkiye Sosyal Psikiyatri Derneği. 2011:278-310

[29] Gunatilake S, Ananth J, Parameswaran S, Brown S, Silva W. Rehabilitation of schizophrenic patients. Current Pharmaceutical Design. 2004;**10**(18):2277-2288. DOI: 10.2174/1381612043384141

[30] Svensson B, Hansson L. Relationships among patient and therapist ratings of therapeutic alliance and patient assessments of therapeutic process: A study of cognitive therapy with long-term mentally ill

patients. The Journal of Nervous and Mental Disease. 1999;**187**(9):579-585. DOI: 10.1097/00005053-199909000-00008

[31] Pinto RZ, Ferreira ML, Oliveira VC, Franco MR, Adams R, Maher CG, et al. Patient-centred communication is associated with positive therapeutic alliance: A systematic review. Journal of Physiotherapy. 2012;**58**(2):77-87. DOI: 10.1016/S1836-9553(12)70087-5

[32] Bordin ES. The generalizability of the psychoanalytic concept of the working alliance. Psychotherapy: Theory, Research & Practice. 1979;**16**(3):252. DOI: 10.1037/h0085885

[33] Horvath A, Bedi R. The Alliance, [w:] Psychotherapy Relationships That Work: Therapist Contributions and Responsiveness to Patients, (red.) Norcross JC. Oxford University Press, New York; 2002

[34] Organization WH. Stronger Collaboration, Better Health: Global Action Plan for Healthy Lives and Well-Being for All: Strengthening Collaboration among Multilateral Organizations to Accelerate Country Progress on the Health-Related Sustainable Development Goals. Geneva: Organization WH; 2019

[35] Chang JG, Roh D, Kim C-H. Association between therapeutic alliance and adherence in outpatient schizophrenia patients. Clinical Psychopharmacology and Neuroscience. 2019;**17**(2):273. DOI: 10.9758/cpn.2019.17.2.273

[36] Hsieh WL, Yeh ST, Liu WI, Li IH, Lee SK, Chien WT. Improving medication adherence in community-dwelling patients with schizophrenia through therapeutic alliance and medication attitude: A serial multiple mediation model. Patient Preference and Adherence. 2022;**16**:1017-1026. DOI: 10.2147/PPA.S351848

[37] Bourke E, Barker C, Fornells-Ambrojo M. Systematic review and meta-analysis of therapeutic alliance, engagement, and outcome in psychological therapies for psychosis. Psychology and Psychotherapy: Theory, Research and Practice. 2021;**94**(3):822-853. DOI: 10.1111/papt.12330

[38] Leucht S, Tardy M, Komossa K, Heres S, Kissling W, Salanti G, et al. Antipsychotic drugs versus placebo for relapse prevention in schizophrenia: A systematic review and meta-analysis. The Lancet. 2012;**379**(9831):2063-2071. DOI: 10.1016/S0140-6736(12)60239-6

[39] Ayuso-Gutiérrez JL, del Rio Vega JM. Factors influencing relapse in the long-term course of schizophrenia. Schizophrenia Research. 1997;**28**(2-3):199-206. DOI: 10.1016/S0920-9964(97)00131-X

[40] Gray R, Leese M, Bindman J, Becker T, Burti L, David A, et al. Adherence therapy for people with schizophrenia: European multicentre randomised controlled trial. The British Journal of Psychiatry. 2006;**189**(6):508-514. DOI: 10.1192/bjp.bp.105.019489

[41] Sacchetti E, Vita A, Siracusano A, Fleischhacker W. Adherence to Antipsychotics in Schizophrenia. Milano: Springer; 2014

[42] Byerly M, Fisher R, Whatley K, Holland R, Varghese F, Carmody T, et al. A comparison of electronic monitoring vs. clinician rating of antipsychotic adherence in outpatients with schizophrenia. Psychiatry Research. 2005;**133**(2-3):129-133. DOI: 10.1016/j.psychres.2004.11.002

[43] Lacro JP, Dunn LB, Dolder CR, Jeste DV. Prevalence of and risk factors for medication nonadherence in patients with schizophrenia: A comprehensive review of recent literature. The Journal of Clinical Psychiatry. 2002;**63**(10):15489. DOI: 10.4088/jcp.v63n1007

[44] Perkins DO, Gu H, Weiden PJ, McEvoy JP, Hamer RM, Lieberman JA. Predictors of treatment discontinuation and medication nonadherence in patients recovering from a first episode of schizophrenia, schizophreniform disorder, or schizoaffective disorder: A randomized, double-blind, flexible-dose, multicenter study. Journal of Clinical Psychiatry. 2008;**69**(1):106. DOI: 10.4088/jcp.v69n0114

[45] Lochmann van Bennekom MW, Gijsman HJ, Zitman FG. Antipsychotic polypharmacy in psychotic disorders: A critical review of neurobiology, efficacy, tolerability and cost effectiveness. Journal of Psychopharmacology. 2013;**27**(4):327-336. DOI: 10.1177/0269881113477709

[46] Thrush CR, Han X, Pyne JM, Thapa P, Sullivan G. A pilot study of barriers to medication adherence in schizophrenia. The Journal of Clinical Psychiatry. 2004;**65**:211-216. DOI: 10.4088/jcp.v65n0211

[47] Glick ID, Stekoll AH, Hays S. The role of the family and improvement in treatment maintenance, adherence, and outcome for schizophrenia. Journal of Clinical Psychopharmacology. 2011;**31**(1):82-85. DOI: 10.1097/JCP.0b013e31820597fa

[48] Cesur E, Fıstıkçı N, Dönmezler FG, Saatçioğlu İÖ. A clinical case of treatment-resistant schizophrenia: 60 hospitalizations and 342 ECT sessions in 36 years; lack of social support or undertreatment? Psychiatry and Clinical Psychopharmacology. 2015;**24**:S181. DOI: 10.5455/NYS.20150316014347

[49] Zygmunt A, Olfson M, Boyer CA, Mechanic D. Interventions to improve medication adherence in schizophrenia. American Journal of Psychiatry. 2002;**159**(10):1653-1664. DOI: 10.1176/appi.ajp.159.10.1653

[50] Kishimoto T, Agarwal V, Kishi T, Leucht S, Kane JM, Correll CU. Relapse prevention in schizophrenia: A systematic review and meta-analysis of second-generation antipsychotics versus first-generation antipsychotics. Molecular Psychiatry. 2013;**18**(1):53-66. DOI: 10.1038/mp.2011.143

[51] Karow A, Czekalla J, Dittmann RW, Schacht A, Wagner T, Lambert M, et al. Association of subjective well-being, symptoms, and side effects with compliance after 12 months of treatment in schizophrenia. Journal of Clinical Psychiatry. 2007;**68**(1):75-80. DOI: 10.4088/jcp.v68n0110

[52] Bäuml J, Pitschel-Walz G, Volz A, Lüscher S, Rentrop M, Kissling W, et al. Psychoeducation improves compliance and outcome in schizophrenia without an increase of adverse side effects: A 7-year follow-up of the Munich PIP-study. Schizophrenia Bulletin. 2016;**42**(Suppl. 1):S62-S70. DOI: 10.1093/schbul/sbw008

[53] Farooq S, Nazar Z, Irfan M, Akhter J, Gul E, Irfan U, et al. Schizophrenia medication adherence in a resource-poor setting: Randomised controlled trial of supervised treatment in out-patients for schizophrenia (STOPS). The British Journal of Psychiatry. 2011;**199**(6):467-472. DOI: 10.1192/bjp.bp.110.085340

[54] Emmerson LC, Granholm E, Link PC, McQuaid JR, Jeste DV. Insight and treatment outcome with

cognitive-behavioral social skills training for older people with schizophrenia. Journal of Rehabilitation Research and Development. 2009;**46**(8):1053-1058. DOI: 10.1682/JRRD.2009.04.0042

[55] Ertem MY, Duman ZÇ. The effect of motivational interviews on treatment adherence and insight levels of patients with schizophrenia: A randomized controlled study. Perspectives in Psychiatric Care. 2019;**55**(1):75-86. DOI: 10.1111/ppc.12301

[56] Schulz M, Gray R, Spiekermann A, Abderhalden C, Behrens J, Driessen M. Adherence therapy following an acute episode of schizophrenia: A multi-centre randomised controlled trial. Schizophrenia Research. 2013;**146**(1-3):59-63. DOI: 10.1016/j.schres.2013.01.028

[57] Montes JM, Medina E, Gomez-Beneyto M, Maurino J. A short message service (SMS)-based strategy for enhancing adherence to antipsychotic medication in schizophrenia. Psychiatry Research. 2012;**200**(2-3):89-95. DOI: 10.1016/j.psychres.2012.07.034

[58] Popp B-S, Manea MM, Moraru MO. Treatment adherence and social functioning in patients diagnosed with schizophrenia and treated with antipsychotic depot medication. Clujul Medical. 2014;**87**(2):109. DOI: 10.15386/cjmed-292

[59] Weiss KA, Smith TE, Hull JW, Piper AC, Huppert JD. Predictors of risk of nonadherence in outpatients with schizophrenia and other psychotic disorders. Schizophrenia Bulletin. 2002;**28**(2):341-349. DOI: 10.1093/oxfordjournals.schbul.a006943

[60] Xia J, Merinder LB, Belgamwar MR. Psychoeducation for schizophrenia. Cochrane Database of Systematic Reviews. 2011;**6**:CD002831. DOI: 10.1002/14651858.CD002831.pub2

[61] Pekkala E, Merinder L. Psychoeducation for schizophrenia. Cochrane Database of Systematic Reviews. 2002;**2**(2):CD002831. DOI: 10.1002/14651858.cd002831

[62] Pharoah F, Mari JJ, Rathbone J, Wong W. Family intervention for schizophrenia. Cochrane Database of Systematic Reviews. 2010;**12**:CD000088. DOI: 10.1002/14651858.CD000088.pub3

[63] Sarkhel S, Singh O, Arora M. Clinical practice guidelines for psychoeducation in psychiatric disorders general principles of psychoeducation. Indian Journal of Psychiatry. 2020;**62**(Suppl. 2): S319. DOI: 10.4103/psychiatry.IndianJPsychiatry_780_19

[64] Rummel-Kluge C, Kissling W. Psychoeducation for patients with schizophrenia and their families. Expert Review of Neurotherapeutics. 2008;**8**(7):1067-1077. DOI: 10.1586/14737175.8.7.1067

[65] Sibitz I, Amering M, Gössler R, Unger A, Katschnig H. Patients' perspectives on what works in psychoeducational groups for schizophrenia: A qualitative study. Social Psychiatry and Psychiatric Epidemiology. 2007;**42**:909-915. DOI: 10.1007/s00127-007-0245-5

[66] Wood L, Byrne R, Varese F, Morrison AP. Psychosocial interventions for internalised stigma in people with a schizophrenia-spectrum diagnosis: A systematic narrative synthesis and meta-analysis. Schizophrenia Research. 2016;**176**(2-3):291-303. DOI: 10.1016/j.schres.2016.05.001

[67] Tessier A, Roger K, Gregoire A, Desnavailles P, Misdrahi D. Family

psychoeducation to improve outcome in caregivers and patients with schizophrenia: A randomized clinical trial. Frontiers in Psychiatry. 2023;**14**:1171661. DOI: 10.3389/fpsyt.2023.1171661

[68] Alizioti A, Lyrakos G. Measuring the effectiveness of psychoeducation on adherence, depression, anxiety and stress among patients with diagnosis of schizophrenia. A control trial. Current Psychology. 2021;**40**(8):3639-3650. DOI: 10.1007/s12144-019-00255-4

[69] Colton C, Manderscheid R. Congruencies in increased mortality rates, years of potential life lost, and causes of death among public mental health clients in eight states. Preventing Chronic Disease. 2006;**3**(2):1-14

[70] Bäuml J, Froböse T, Kraemer S, Rentrop M, Pitschel-Walz G. Psychoeducation: A basic psychotherapeutic intervention for patients with schizophrenia and their families. Schizophrenia Bulletin. 2006;**32**(Suppl. 1):S1-S9. DOI: 10.1093/schbul/sbl017

[71] NICE. Psychosis and Schizophrenia in Adults: Prevention and Management. London: National Institute of Health and Social Care Excellence; 2014

[72] Whitehead L. Supportive therapy for schizophrenia. Issues in Mental Health Nursing. 2016;**37**(12):973-974. DOI: 10.1080/01612840.2016.1249699

[73] Winston A, Schaefer A. Supportive psychotherapy. In: Tasman A, Riba MB, Alarcón RD, Alfonso CA, Kanba S, Ndetei DM, et al., editors. Tasman's Psychiatry. Cham: Springer International Publishing; 2020. pp. 1-27

[74] Randolph ET. Social networks and schizophrenia. In: Handbook of Social Functioning in Schizophrenia. Boston: Allyn & Bacon; 1998. pp. 238-246

[75] Harder S, Koester A, Valbak K, Rosenbaum B. Five-year follow-up of supportive psychodynamic psychotherapy in first-episode psychosis: Long-term outcome in social functioning. Psychiatry: Interpersonal and Biological Processes. 2014;**77**(2):155-168. DOI: 10.1521/psyc.2014.77.2.155

[76] Schaub A, Mueser KT, von Werder T, Engel R, Möller H-J, Falkai P. A randomized controlled trial of group coping-oriented therapy vs supportive therapy in schizophrenia: Results of a 2-year follow-up. Schizophrenia Bulletin. 2016;**42**(Suppl. 1):S71-S80. DOI: 10.1093/schbul/sbw032

[77] Tarrier N, Kinney C, McCarthy E, Humphreys L, Wittkowski A, Morris J. Two–year follow–up of cognitive–behavioral therapy and supportive counseling in the treatment of persistent symptoms in chronic schizophrenia. Journal of Consulting and Clinical Psychology. 2000;**68**(5):917. DOI: 10.1037/0022-006X.68.5.917

[78] Penn DL, Meyer PS, Evans E, Wirth RJ, Cai K, Burchinal M. A randomized controlled trial of group cognitive-behavioral therapy vs. enhanced supportive therapy for auditory hallucinations. Schizophrenia Research. 2009;**109**(1-3):52-59. DOI: 10.1016/j.schres.2008.12.009

[79] Hurford IM, Kalkstein S, Hurford MO. Cognitive rehabilitation in schizophrenia: Strategies to improve cognition. Psychiatric Times. 2011;**28**(3):43

[80] Green MF, Kern RS, Braff DL, Mintz J. Neurocognitive deficits and functional outcome in schizophrenia: Are we measuring the "right stuff"?

Schizophrenia Bulletin. 2000;**26**(1):119-136. DOI: 10.1093/oxfordjournals.schbul.a033430

[81] Perlick DA, Rosenheck RA, Kaczynski R, Bingham S, Collins J. Association of symptomatology and cognitive deficits to functional capacity in schizophrenia. Schizophrenia Research. 2008;**99**(1-3):192-199. DOI: 10.1016/j.schres.2007.08.009

[82] Keefe RS, Bilder RM, Davis SM, Harvey PD, Palmer BW, Gold JM, et al. Neurocognitive effects of antipsychotic medications in patients with chronic schizophrenia in the CATIE trial. Archives of General Psychiatry. 2007;**64**(6):633-647. DOI: 10.1001/archpsyc.64.6.633

[83] McGurk SR, Twamley EW, Sitzer DI, McHugo GJ, Mueser KT. A meta-analysis of cognitive remediation in schizophrenia. American Journal of Psychiatry. 2007;**164**(12):1791-1802. DOI: 10.1176/appi.ajp.2007.07060906

[84] Medalia A, Opler LA, Opler MG. Integrating psychopharmacology and cognitive remediation to treat cognitive dysfunction in the psychotic disorders. CNS Spectrums. 2013;**19**:106-124

[85] Bowie CR, Bell MD, Fiszdon JM, Johannesen JK, Lindenmayer J-P, McGurk SR, et al. Cognitive remediation for schizophrenia: An expert working group white paper on core techniques. Schizophrenia Research. 2020;**215**:49-53. DOI: 10.1016/j.schres.2019.10.047

[86] Kern RS, Glynn SM, Horan WP, Marder SR. Psychosocial treatments to promote functional recovery in schizophrenia. Schizophrenia Bulletin. 2009;**35**(2):347-361. DOI: 10.1093/schbul/sbn177

[87] Twamley EW, Jeste DV, Bellack AS. A review of cognitive training in schizophrenia. Schizophrenia Bulletin. 2003;**29**(2):359-382. DOI: 10.1093/oxfordjournals.schbul.a007011

[88] Wykes T, Van der Gaag M. Is it time to develop a new cognitive therapy for psychosis—Cognitive remediation therapy (CRT)? Clinical Psychology Review. 2001;**21**(8):1227-1256. DOI: 10.1016/S0272-7358(01)00104-0

[89] Green MF. New possibilities in cognition enhancement for schizophrenia. American Psychiatric Association. 2009;**166**:749-752

[90] Tomás P, Fuentes I, Roder V, Ruiz JC. Cognitive rehabilitation programs in schizophrenia: Current status and perspectives. International Journal of Psychology and Psychological Therapy. 2010;**10**(2):191-204

[91] Bryce SD, Rossell SL, Lee SJ, Lawrence RJ, Tan EJ, Carruthers SP, et al. Neurocognitive and self-efficacy benefits of cognitive remediation in schizophrenia: A randomized controlled trial–corrigendum. Journal of the International Neuropsychological Society. 2019;**25**(6):659-660. DOI: 10.1017/S1355617717001369

[92] Lejeune JA, Northrop A, Kurtz MM. A meta-analysis of cognitive remediation for schizophrenia: Efficacy and the role of participant and treatment factors. Schizophrenia Bulletin. 2021;**47**(4):997-1006. DOI: 10.1093/schbul/sbab022

[93] Wykes T, Reeder C. Cognitive Remediation Therapy for Schizophrenia: Theory and Practice. London: Routledge; 2006

[94] Medalia A, Saperstein AM. Does cognitive remediation for schizophrenia improve functional outcomes? Current Opinion in Psychiatry.

2013;**26**(2):151-157. DOI: 10.1097/YCO.0b013e32835dcbd4

[95] Velligan DI, Diamond PM, Mintz J, Maples N, Li X, Zeber J, et al. The use of individually tailored environmental supports to improve medication adherence and outcomes in schizophrenia. Schizophrenia Bulletin. 2008;**34**(3):483-493. DOI: 10.1093/schbul/sbm111

[96] Kaneko Y, Keshavan M. Cognitive remediation in schizophrenia. Clinical Psychopharmacology and Neuroscience. 2012;**10**(3):125. DOI: 10.9758/cpn.2012.10.3.125

[97] Wykes T, Reeder C, Corner J, Williams C, Everitt B. The effects of neurocognitive remediation on executive processing in patients with schizophrenia. Schizophrenia Bulletin. 1999;**25**(2):291-307. DOI: 10.1093/oxfordjournals.schbul.a033379

[98] Vita A, Barlati S, Ceraso A, Nibbio G, Ariu C, Deste G, et al. Effectiveness, core elements, and moderators of response of cognitive remediation for schizophrenia: A systematic review and meta-analysis of randomized clinical trials. JAMA Psychiatry. 2021;**78**(8):848-858. DOI: 10.1001/jamapsychiatry.2021.0620

[99] Fitapelli B, Lindenmayer J-P. Advances in cognitive remediation training in schizophrenia: A review. Brain Sciences. 2022;**12**(2):129. DOI: 10.3390/brainsci12020129

[100] Wykes T, Reeder C, Landau S, Everitt B, Knapp M, Patel A, et al. Cognitive remediation therapy in schizophrenia: Randomised controlled trial. The British Journal of Psychiatry. 2007;**190**(5):421-427. DOI: 10.1192/bjp.bp.106.026575

[101] Martini F, Spangaro M, Bechi M, Agostoni G, Buonocore M, Sapienza J, et al. Improving outcome of treatment-resistant schizophrenia: Effects of cognitive remediation therapy. European Archives of Psychiatry and Clinical Neuroscience. 2023:1-9. [Advance Online Publication]. DOI: 10.1007/s00406-023-01731-6

[102] Buonocore M, Spangaro M, Bechi M, Trezzani S, Terragni R, Martini F, et al. Cognitive remediation in schizophrenia: What happens after 10 years? Schizophrenia Research: Cognition. 2022;**29**:100251. DOI: 10.1016/j.scog.2022.100251

[103] Vita A, Barlati S, Ceraso A, Deste G, Nibbio G, Wykes T. Acceptability of cognitive remediation for schizophrenia: A systematic review and meta-analysis of randomized controlled trials. Psychological Medicine. 2022;**53**:1-11. DOI: 10.1017/S0033291722000319

[104] Beck A, Rector N, Stolar N, Grant P. Schizophrenia: Cognitive theory, research and therapy. Psychiatric Rehabilitation Journal. 2009;**32**:327-328. DOI: 10.1037/h0094638

[105] Beck AT. Beyond Belief: A Theory of Modes, Personality, and Psychopathology. New York: The Guilford Press; 1996

[106] Moritz S, Klein JP, Lysaker PH, Mehl S. Metacognitive and cognitive-behavioral interventions for psychosis: New developments. Dialogues in Clinical Neuroscience. 2019;**21**(3):309-317. DOI: 10.31887/DCNS.2019.21.3/smoritz

[107] Škodlar B, Henriksen M, Sass L, Nelson B, Parnas J. Cognitive-behavioral therapy for schizophrenia: A critical evaluation of its theoretical framework from a clinical-phenomenological perspective. Psychopathology. 2013;**46**(4):249-265. DOI: 10.1159/000342536

[108] Turkington D, Kingdon D, Weiden PJ. Cognitive behavior therapy for schizophrenia. American Journal of Psychiatry. 2006;**163**(3):365-373. DOI: 10.1176/appi.ajp.163.3.365

[109] Sarin F, Wallin L, Widerlöv B. Cognitive behavior therapy for schizophrenia: A meta-analytical review of randomized controlled trials. Nordic Journal of Psychiatry. 2011;**65**(3):162-174. DOI: 10.3109/08039488.2011.577188

[110] Sensky T, Turkington D, Kingdon D, Scott JL, Scott J, Siddle R, et al. A randomized controlled trial of cognitive-behavioral therapy for persistent symptoms in schizophrenia resistant to medication. Archives of General Psychiatry. 2000;**57**(2):165-172. DOI: 10.1001/archpsyc.57.2.165

[111] Huhn M, Tardy M, Spineli LM, Kissling W, Foerstl H, Pitschel-Walz G, et al. Efficacy of pharmacotherapy and psychotherapy for adult psychiatric disorders: A systematic overview of meta-analyses. JAMA Psychiatry. 2014;**71**(6):706-715. DOI: 10.1001/jamapsychiatry.2014.112

[112] Rector NA, Seeman MV, Segal ZV. Cognitive therapy for schizophrenia: A preliminary randomized controlled trial. Schizophrenia Research. 2003;**63**(1-2):1-11. DOI: 10.1016/S0920-9964(02)00308-0

[113] Garety PA, Fowler DG, Freeman D, Bebbington P, Dunn G, Kuipers E. Cognitive-behavioural therapy and family intervention for relapse prevention and symptom reduction in psychosis: Randomised controlled trial. The British Journal of Psychiatry. 2008;**192**(6):412-423. DOI: 10.1192/bjp.bp.107.043570

[114] Startup M, Jackson M, Bendix S. North Wales randomized controlled trial of cognitive behaviour therapy for acute schizophrenia spectrum disorders: Outcomes at 6 and 12 months. Psychological Medicine. 2004;**34**(3):413-422. DOI: 10.1017/S0033291703001211

[115] Turkington D, Kingdon D, Turner T. Effectiveness of a brief cognitive–behavioural therapy intervention in the treatment of schizophrenia. The British Journal of Psychiatry. 2002;**180**(6):523-527. DOI: 10.1192/bjp.180.6.523

[116] Bighelli I, Wallis S, Reitmeir C, Schwermann F, Salahuddin NH, Leucht S. Effects of psychological treatments on functioning in people with schizophrenia: A systematic review and meta-analysis of randomized controlled trials. European Archives of Psychiatry and Clinical Neuroscience. 2023;**273**(4):779-810. DOI: 10.1007/s00406-022-01526-1

[117] Jauhar S, McKenna P, Radua J, Fung E, Salvador R, Laws K. Cognitive–behavioural therapy for the symptoms of schizophrenia: Systematic review and meta-analysis with examination of potential bias. The British Journal of Psychiatry. 2014;**204**(1):20-29. DOI: 10.1192/bjp.bp.112.116285

[118] Van der Gaag M, Valmaggia LR, Smit F. The effects of individually tailored formulation-based cognitive behavioural therapy in auditory hallucinations and delusions: A meta-analysis. Schizophrenia Research. 2014;**156**(1):30-37. DOI: 10.1016/j.schres.2014.03.016

[119] Sitko K, Bewick BM, Owens D, Masterson C. Meta-analysis and meta-regression of cognitive behavioral therapy for psychosis (CBTp) across time: The effectiveness of CBTp has improved for delusions. Schizophrenia Bulletin Open. 2020;**1**(1):sgaa023. DOI: 10.1093/schizbullopen/sgaa023

[120] Pozza A, Dèttore D. Modular cognitive-behavioral therapy for affective symptoms in young individuals at ultra-high risk of first episode of psychosis: Randomized controlled trial. Journal of Clinical Psychology. 2020;**76**(3):392-405. DOI: 10.1002/jclp.22901

[121] Zheng Y, Xu T, Zhu Y, Li C, Wang J, Livingstone S, et al. Cognitive behavioral therapy for prodromal stage of psychosis—Outcomes for transition, functioning, distress, and quality of life: A systematic review and meta-analysis. Schizophrenia Bulletin. 2022;**48**(1):8-19. DOI: 10.1093/schbul/sbab044

[122] National Collaborating Centre for Mental Health (UK). Schizophrenia: core interventions in the treatment and management of schizophrenia in primary and secondary care (update) [Internet]. Leicester, UK: British Psychological Society; 2009

[123] Malhotra A, Baker J. Group Therapy. Treasure Island (FL): StatPearls Publishing; 2019

[124] Barlow SH, Burlingame GM, Fuhriman A. Therapeutic applications of groups: From Pratt's" thought control classes" to modern group psychotherapy. Group Dynamics: Theory, Research, and Practice. 2000;**4**(1):115. DOI: 10.1037/1089-2699.4.1.115

[125] Gabrovšek VP. Inpatient group therapy of patients with schizophrenia. Psychiatria Danubina. 2009;**21**(1):67-72

[126] Kanas N. Group therapy for patients with chronic psychotic disorders. International Journal of Group Psychotherapy. 1999;**49**(3):413-416. DOI: 10.1080/00207284.1999.11732619

[127] Opalić P. Theme-orientated group psychotherapy of psychotics. Group Analysis. 1988;**21**(4):289-297. DOI: 10.1177/0533316488214002

[128] O'Brien CP. Group therapy for schizophrenia: A practical approach. Schizophrenia Bulletin. 1975;**1**(13):119. DOI: 10.1093/schbul/1.13.119

[129] McLeod T, Morris M, Birchwood M, Dovey A. Cognitive behavioural therapy group work with voice hearers. Part 1. British Journal of Nursing. 2007;**16**(4):248-252. DOI: 10.12968/bjon.2007.16.4.22995

[130] Elis O, Caponigro JM, Kring AM. Psychosocial treatments for negative symptoms in schizophrenia: Current practices and future directions. Clinical Psychology Review. 2013;**33**(8):914-928. DOI: 10.1016/j.cpr.2013.07.001

[131] Payn SB. Reaching chronic schizophrenic patients with group pharmacotherapy. International Journal of Group Psychotherapy. 1974;**24**(1):25. DOI: 10.1080/00207284.1974.11492266

[132] Sigman M, Hassan S. Benefits of long-term group therapy to individuals suffering schizophrenia: A prospective 7-year study. Bulletin of the Menninger Clinic. 2006;**70**(4):273-282. DOI: 10.1521/bumc.2006.70.4.273

[133] Kingsep P, Nathan P, Castle D. Cognitive behavioural group treatment for social anxiety in schizophrenia. Schizophrenia Research. 2003;**63**(1-2):121-129. DOI: 10.1016/S0920-9964(02)00376-6

[134] García-Cabeza I, González de Chávez M. Therapeutic factors and insight in group therapy for outpatients diagnosed with schizophrenia. Psychosis. 2009;**1**(2):134-144. DOI: 10.1080/17522430902770058

[135] Chien WT. Effectiveness of psychoeducation and mutual support group program for family caregivers of Chinese people with schizophrenia.

The Open Nursing Journal. 2008;**2**:28. DOI: 10.2174/1874434600802010028

[136] Pickett-Schenk SA, Lippincott RC, Bennett C, Steigman PJ. Improving knowledge about mental illness through family-led education: The journey of hope. Psychiatric Services. 2008;**59**(1): 49-56. DOI: 10.1176/ps.2008.59.1.49

[137] Addington J, McCleery A, Addington D. Three-year outcome of family work in an early psychosis program. Schizophrenia Research. 2005;**79**(1):107-116. DOI: 10.1016/j.schres.2005.03.019

[138] Fellowship W. Families as Partners in Care: A Document Developed to Launch a Strategy for the Implementation of Programs of Family Education, Training, and Support. Toronto: World Schizophrenia Fellowship; 1998

[139] Soygür H, Çelikel B, Aydemir Ç, Bozkurt S. Hasta yakınları ile gerçekleştirilen psikodrama yönelimli destekleyici-eğitici grup psikoterapisinin kronik şizofreni gidişi üzerinde etkisi. Düşünen Adam. 1998;**11**(4):5-11

[140] Winefield HR, Harvey EJ. Needs of family caregivers in chronic schizophrenia. Schizophrenia Bulletin. 1994;**20**(3):557-566. DOI: 10.1093/schbul/20.3.557

[141] Lowyck B, De Hert M, Peeters E, Wampers M, Gilis P, Peuskens J. A study of the family burden of 150 family members of schizophrenic patients. European Psychiatry. 2004;**19**(7):395-401. DOI: 10.1016/j.eurpsy.2004.04.006

[142] Gülseren L, Çam B, Karakoç B, Yiğit T, Danacı A, Çubukçuoğlu Z, et al. Şizofrenide ailenin yükünü etkileyen etmenler. Türk Psikiyatri Dergisi. 2010;**21**:203-212

[143] Willick MS. Schizophrenia: A Parent's Perspective: Mourning Without End. Washington DC: American Psychiatric Association; 1994

[144] Li J, Lambert CE, Lambert VA. Predictors of family caregivers' burden and quality of life when providing care for a family member with schizophrenia in the People's Republic of China. Nursing & Health Sciences. 2007;**9**(3):192-198. DOI: 10.1111/j.1442-2018.2007.00327.x

[145] Wyman K, Clarke S, McKenzie P, Gilbert M. The impact of participation in a support group for carers of a person with schizophrenia: A qualitative study. International Journal of Psychosocial Rehabilitation. 2007;**12**(2):97

[146] McFarlane WR. Family interventions for schizophrenia and the psychoses: A review. Family Process. 2016;**55**(3):460-482. DOI: 10.1111/famp.12235

[147] Varghese M, Kirpekar V, Loganathan S. Family interventions: Basic principles and techniques. Indian Journal of Psychiatry. 2020;**62**(Suppl. 2):S192. DOI: 10.4103/psychiatry.IndianJPsychiatry_770_19

[148] Caqueo-Urízar A, Rus-Calafell M, Urzúa A, Escudero J, Gutiérrez-Maldonado J. The role of family therapy in the management of schizophrenia: Challenges and solutions. Neuropsychiatric Disease and Treatment. 2015;**11**:145-151. DOI: 10.2147/NDT.S51331

[149] Bloch S, Hafner J, Harari E, Szmukler GI, Brodaty H, Kissane D. The Family in Clinical Psychiatry. London: Oxford University Press; 1994

[150] Glynn SM, Cohen AN, Dixon LB, Niv N. The potential impact of

the recovery movement on family interventions for schizophrenia: Opportunities and obstacles. Schizophrenia Bulletin. 2006;**32**(3):451-463. DOI: 10.1093/schbul/sbj066

[151] Lucksted A, Stewart B, Forbes CB. Benefits and changes for family to family graduates. American Journal of Community Psychology. 2008;**42**:154-166. DOI: 10.1007/s10464-008-9195-7

[152] Dixon L, Stewart B, Burland J, Delahanty J, Lucksted A, Hoffman M. Pilot study of the effectiveness of the family-to-family education program. Psychiatric Services. 2001;**52**(7):965-967. DOI: 10.1176/appi.ps.52.7.965

[153] Camacho-Gomez M, Castellvi P. Effectiveness of family intervention for preventing relapse in first-episode psychosis until 24 months of follow-up: A systematic review with meta-analysis of randomized controlled trials. Schizophrenia Bulletin. 2020;**46**(1): 98-109. DOI: 10.1093/schbul/sbz038

[154] Nuechterlein KH, Dawson ME. A heuristic vulnerability/stress model of schizophrenic episodes. Schizophrenia Bulletin. 1984;**10**(2):300. DOI: 10.1093/schbul/10.2.300

[155] Brown GW, Birley JL, Wing JK. Influence of family life on the course of schizophrenic disorders: A replication. The British Journal of Psychiatry. 1972;**121**(562):241-258. DOI: 10.1192/bjp.121.3.241

[156] Barrowclough C, Tarrier N. Families of Schizophrenic Patients: Cognitive Behavioural Intervention. Cheltenham: Nelson Thornes; 1997

[157] Grover S, Chakrabarti S, Sharma A, Tyagi S. Attitudes toward psychotropic medications among patients with chronic psychiatric disorders and their family caregivers. Journal of Neurosciences in Rural Practice. 2014;**5**(4):374-383. DOI: 10.4103/0976-3147.139989

[158] Pilling S, Bebbington P, Kuipers E, Garety P, Geddes J, Orbach G, et al. Psychological treatments in schizophrenia: I. Meta-analysis of family intervention and cognitive behaviour therapy. Psychological Medicine. 2002;**32**(5):763-782. DOI: 10.1017/S0033291702005895

[159] Dixon L, Adams C, Lucksted A. Update on family psychoeducation for schizophrenia. Schizophrenia Bulletin. 2000;**26**(1):5-20. DOI: 10.1093/oxfordjournals.schbul.a033446

[160] Chien WT, Chan SW. The effectiveness of mutual support group intervention for Chinese families of people with schizophrenia: A randomised controlled trial with 24-month follow-up. International Journal of Nursing Studies. 2013;**50**(10):1326-1340. DOI: 10.1016/j.ijnurstu.2013.01.004

[161] Gutiérrez-Maldonado J, Caqueo-Urízar A. Effectiveness of a psycho-educational intervention for reducing burden in Latin American families of patients with schizophrenia. Quality of Life Research. 2007;**16**:739-747. DOI: 10.1007/s11136-007-9173-9

[162] Ventriglio A, Ricci F, Magnifico G, Chumakov E, Torales J, Watson C, et al. Psychosocial interventions in schizophrenia: Focus on guidelines. International Journal of Social Psychiatry. 2020;**66**(8):735-747. DOI: 10.1177/0020764020934827

[163] Knapczyk D, Rodes P. Teaching Social Competence. Champaign. Ill: Research Press; 2001

[164] Bellack AS, Mueser KT, Gingerich S, Agresta J. Social Skills Training for

Schizophrenia: A Step-by-Step Guide. London: Guilford Publications; 2013

[165] Kopelowicz A, Liberman RP, Zarate R. Recent advances in social skills training for schizophrenia. Schizophrenia Bulletin. 2006;**32**(Suppl. 1):S12-S23

[166] Milev P, Ho B-C, Arndt S, Andreasen NC. Predictive values of neurocognition and negative symptoms on functional outcome in schizophrenia: A longitudinal first-episode study with 7-year follow-up. American Journal of Psychiatry. 2005;**162**(3):495-506. DOI: 10.1176/appi.ajp.162.3.495

[167] Mueser KT, Glynn SM, SR MG. Social and Vocational Impairments. Washington DC: American Psychiatric Publishing, Inc.; 2006

[168] Shean GD. Evidence-based psychosocial practices and recovery from schizophrenia. Psychiatry: Interpersonal and Biological Processes. 2009;**72**(4):307-320. DOI: 10.1521/psyc.2009.72.4.307

[169] Marder SR, Wirshing WC, Mintz J, McKenzie J, Johnston K, Eckman TA, et al. Two-year outcome of social skills training and group psychotherapy for outpatients with schizophrenia. The American Journal of Psychiatry. 1996;**153**(12):1585-1592. DOI: 10.1176/ajp.153.12.1585

[170] Granholm EL, McQuaid JR, Holden JL. Cognitive-Behavioral Social Skills Training for Schizophrenia: A Practical Treatment Guide. New York: Guilford Publications; 2016

[171] Granholm E, Holden J, Link PC, McQuaid JR. Randomized clinical trial of cognitive behavioral social skills training for schizophrenia: Improvement in functioning and experiential negative symptoms. Journal of Consulting and Clinical Psychology. 2014;**82**(6):1173. DOI: 10.1037/a0037098

[172] Liberman RP. Dissemination and adoption of social skills training: Social validation of an evidence-based treatment for the mentally disabled. Journal of Mental Health. 2007;**16**(5):595-623. DOI: 10.1080/09638230701494902

[173] Turner DT, McGlanaghy E, Cuijpers P, Van Der Gaag M, Karyotaki E, MacBeth A. A meta-analysis of social skills training and related interventions for psychosis. Schizophrenia Bulletin. 2018;**44**(3):475-491. DOI: 10.1093/schbul/sbx146

[174] Roder V, Brenner H, Müller D, Lächler M, Zorn P, Reisch T, et al. Development of specific social skills training programmes for schizophrenia patients: Results of a multicentre study. Acta Psychiatrica Scandinavica. 2002;**105**(5):363-371. DOI: 10.1034/j.1600-0447.2002.1o214.x

[175] Cancro R. The underutilization of psychiatric rehabilitation. World Psychiatry. 2006;**5**(3):159

[176] Chatterjee S, Patel V, Chatterjee A, Weiss HA. Evaluation of a community-based rehabilitation model for chronic schizophrenia in rural India. The British Journal of Psychiatry. 2003;**182**(1):57-62. DOI: 10.1192/bjp.182.1.57

[177] Khasnabis C, Motsch KH, Achu K, Al Jubah K, Brodtkorb S, Chervin P, et al. Community-Based Rehabilitation: CBR Guidelines. Geneva: WHO; 2010

[178] Mechanic D. Strategies for integrating public mental health services. Psychiatric Services. 1991;**42**(8):797-801. DOI: 10.1176/ps.42.8.797

[179] Bauer M, Kunze H, Von Cranach M, Fritze J, Becker T. Psychiatric reform in Germany. Acta Psychiatrica Scandinavica. 2001;**104**:27-34. DOI: 10.1034/j.1600-0447.2001.1040s2027.x

[180] Asher L, Patel V, De Silva MJ. Community-based psychosocial interventions for people with schizophrenia in low and middle-income countries: Systematic review and meta-analysis. BMC Psychiatry. 2017;**17**(1):1-15. DOI: 10.1186/s12888-017-1516-7

[181] Krieger I, Bitan DT, Sharon-Garty R, Baloush-Kleinman V, Zamir L. The effect of community-based mental health rehabilitation services for schizophrenia: A retrospective cohort study. Psychiatric Quarterly. 2020;**91**:1453-1463. DOI: 10.1007/s11126-020-09772-z

[182] WHO. Community Based Rehabilitation: CBR Guidelines. Geneva: World Health Organization; 2010

[183] Özdemir İ, Şafak Y, Örsel S, Karaoğlan Kahiloğulları A, Karadağ H. Bir toplum ruh sağlığı merkezinde şizofreni hastalarına uygulanan ruhsal-toplumsal uyumlandırma etkinliğinin araştırılması: Kontrollü çalışma. Anatolian Journal of Psychiatry/Anadolu Psikiyatri Dergisi. 2017;**18**(5):419-427. DOI: 10.5455/apd.254450

[184] Yildiz M. Psychosocial rehabilitation interventions in the treatment of schizophrenia and bipolar disorder. Archives of Neuropsychiatry. 2021;**58**(Suppl. 1):S77. DOI: 10.29399/npa.27430

[185] Lysaker P, Bell M. Work rehabilitation and improvements in insight in schizophrenia. The Journal of Nervous and Mental Disease. 1995;**183**(2):103-106. DOI: 10.1097/00005053-199502000-00007

[186] Davidson M, Kapara O, Goldberg S, Yoffe R, Noy S, Weiser M. A nation-wide study on the percentage of schizophrenia and bipolar disorder patients who earn minimum wage or above. Schizophrenia Bulletin. 2016;**42**(2):443-447. DOI: 10.1093/schbul/sbv023

[187] Gjerdalen OS, Lystad JU, Bull H, Ringen PA, Røssberg JI, Martinsen EW, et al. Vocational rehabilitation augmented with cognitive behavioral therapy or cognitive remediation for individuals with schizophrenia: A 5-year follow-up study. Nordic Journal of Psychiatry. 2023;**77**(1):23-30. DOI: 10.1080/08039488.2022.2042598

[188] Gibson RW, D'Amico M, Jaffe L, Arbesman M. Occupational therapy interventions for recovery in the areas of community integration and normative life roles for adults with serious mental illness: A systematic review. The American Journal of Occupational Therapy. 2011;**65**(3):247-256. DOI: 10.5014/ajot.2011.001297

[189] Wilcock AA. Occupational Science: Bridging Occupation and Health. Los Angeles, CA: SAGE Publications Sage CA; 2005

[190] Bio DS, Gattaz WF. Vocational rehabilitation improves cognition and negative symptoms in schizophrenia. Schizophrenia Research. 2011;**126**(1-3):265-269. DOI: 10.1016/j.schres.2010.08.003

[191] Oka M, Otsuka K, Yokoyama N, Mintz J, Hoshino K, Niwa S-I, et al. An evaluation of a hybrid occupational therapy and supported employment program in Japan for persons with schizophrenia. The American Journal of Occupational Therapy. 2004;**58**(4):466-475. DOI: 10.5014/ajot.58.4.466

[192] Green BL, Wehling C, Taisky GJ. Group art therapy as an adjunct to treatment for chronic outpatients. Psychiatric Services. 1987;**38**(9):988-991. DOI: 10.1176/ps.38.9.988

[193] Meng P, Zheng R. Group intervention for schizophrenia inpatient with art as medium. Acta Psychologica Sinica. 2005;**37**(3):403

[194] Richardson P, Jones K, Evans C, Stevens P, Rowe A. Exploratory RCT of art therapy as an adjunctive treatment in schizophrenia. Journal of Mental Health. 2007;**16**(4):483-491. DOI: 10.1080/09638230701483111

[195] Crawford MJ, Patterson S. Arts therapies for people with schizophrenia: An emerging evidence base. BMJ Mental Health. 2007;**10**(3):69-70. DOI: 10.1136/ebmh.10.3.69

[196] Guarino K. Step-by Step: A Comprehensive Approach to Case Management. Canada: Homeless Hub; 2011

[197] Cheng J, Liu H, Geng T, Wang Y, Yu L, Li J, et al. The effect of case management for schizophrenia clients in China. Journal of Behavioral and Brain Science. 2020;**10**(8):297. DOI: 10.4236/jbbs.2020.108019

[198] Holloway F, Carson J. Review article case management: An update. International Journal of Social Psychiatry. 2001;**47**(3):21-31. DOI: 10.1177/002076400104700303

[199] Kanter J. Clinical case management: Definition, principles, components. Psychiatric Services. 1989;**40**(4):361-368. DOI: 10.1176/ps.40.4.361

[200] Stein LI, Test MA. Alternative to mental hospital treatment: I. Conceptual model, treatment program, and clinical evaluation. Archives of General Psychiatry. 1980;**37**(4):392-397. DOI: 10.1001/archpsyc.1980.01780170034003

[201] Surles RC, Blanch AK, Shern DL, Donahue SA. Case management as a strategy for systems change. Health Affairs. 1992;**11**(1):151-163. DOI: 10.1377/hlthaff.11.1.151

[202] Dieterich M, Irving CB, Bergman H, Khokhar MA, Park B, Marshall M. Intensive case management for severe mental illness. Cochrane Database of Systematic Reviews. 2017;**1**:CD007906. DOI: 10.1002/14651858.CD007906.pub3

[203] Rapp CA. Theory, Principles, and Methods of the Strengths Model of Case Management. Gordon: Harwood Academic Publishers; 1993

[204] Anthony W, Forbess R, Cohen M. Rehabilitation-oriented case management. In: Case Management for Mentally Ill Patients: Theory and Practice. Gordon: Academic Publishers; 1993. pp. 99-118

[205] Chamberlain R, Rapp CA. A decade of case management: A methodological review of outcome research. Community Mental Health Journal. 1991;**27**:171-188. DOI: 10.1007/BF00752419

[206] Gorey KM, Leslie DR, Morris T, Carruthers WV, John L, Chacko J. Effectiveness of case management with severely and persistently mentally ill people. Community Mental Health Journal. 1998;**34**:241-250. DOI: 10.1023/A:1018761623212

[207] Incedere A, Yildiz M. Case management for individuals with severe mental illness: Outcomes of a 24-month practice. Turkish Journal of Psychiatry. 2019;**30**(4):245-252. DOI: 10.5080/u23532

[208] Stansfeld SA, Fuhrer R, Shipley M. Types of social support as predictors of psychiatric morbidity in a cohort of British civil servants (Whitehall II study). Psychological Medicine. 1998;**28**(4):881-892. DOI: 10.1017/S0033291798006746

[209] Aslantürk H. Community integration and social rights in mental health area. Turkish Journal of Family Medicine and Primary Care. 2016;**10**(4):259-270. DOI: 10.21763/tjfmpc.271333

[210] Yu Y-H, Peng M-M, Bai X, Luo W, Yang X, Li J, et al. Schizophrenia, social support, caregiving burden and household poverty in rural China. Social Psychiatry and Psychiatric Epidemiology. 2020;**55**:1571-1580. DOI: 10.1007/s00127-020-01864-2

[211] Lim K-L, Jacobs P, Ohinmaa A, Schopflocher D, Dewa CS. A new population-based measure of the economic burden of mental illness in Canada. Chronic Diseases in Canada. 2008;**28**(3):92-98. DOI: 10.24095/hpcdp.28.3.02

[212] Zhang T-M, Wong IY-L, Yu Y-H, Ni S-G, He X-S, Bacon-Shone J, et al. An integrative model of internalized stigma and recovery-related outcomes among people diagnosed with schizophrenia in rural China. Social Psychiatry and Psychiatric Epidemiology. 2019;**54**:911-918. DOI: 10.1007/s00127-018-1646-3

[213] Metts R, editor. Disability and development. In: Background Paper Prepared for the Disability and Development Research Agenda Meeting. Washington DC: World Bank Headquarters; 2004

[214] Hailemichael Y, Hailemariam D, Tirfessa K, Docrat S, Alem A, Medhin G, et al. Catastrophic out-of-pocket payments for households of people with severe mental disorder: A comparative study in rural Ethiopia. International Journal of Mental Health Systems. 2019;**13**(1):1-13. DOI: 10.1186/s13033-019-0294-7

[215] Browne G, Courtney M. Schizophrenia housing and supportive relationships. International Journal of Mental Health Nursing. 2007;**16**(2):73-80. DOI: 10.1111/j.1447-0349.2006.00447.x

[216] Huang CY, Sousa VD, Tsai CC, Hwang MY. Social support and adaptation of Taiwanese adults with mental illness. Journal of Clinical Nursing. 2008;**17**(13):1795-1802. DOI: 10.1111/j.1365-2702.2008.02310.x

[217] Vázquez Morejón AJ, León Rubio JM, Vázquez-Morejón R. Social support and clinical and functional outcome in people with schizophrenia. International Journal of Social Psychiatry. 2018;**64**(5):488-496. DOI: 10.1177/0020764018778868

[218] Samuel T, Nigussie K, Mirkena Y, Azale T. Relationship between social support and schizophrenia relapse among patients with schizophrenia on follow-up at Amanuel Mental Specialized Hospital, Addis Ababa, Ethiopia: A case-control study. Frontiers in Psychiatry. 2022;**13**:980614. DOI: 10.3389/fpsyt.2022.980614

[219] Vasilaki EI, Hosier SG, Cox WM. The efficacy of motivational interviewing as a brief intervention for excessive drinking: A meta-analytic review. Alcohol and Alcoholism. 2006;**41**(3):328-335. DOI: 10.1093/alcalc/agl016

[220] Arbuckle MR, Foster FP, Talley RM, Covell NH, Essock SM. Applying motivational interviewing strategies

to enhance organizational readiness and facilitate implementation efforts. Quality Management in Healthcare. 2020;**29**(1):1-6. DOI: 10.1097/QMH.0000000000000234

[221] Smedslund G, Berg RC, Hammerstrøm KT, Steiro A, Leiknes KA, Dahl HM, et al. Motivational interviewing for substance abuse. Campbell Systematic Reviews. 2011;**7**(1):1-126. DOI: 10.4073/csr.2011.6

[222] Kohler S, Hofmann A. Can motivational interviewing in emergency care reduce alcohol consumption in young people? A systematic review and meta-analysis. Alcohol and Alcoholism. 2015;**50**(2):107-117. DOI: 10.1093/alcalc/agu098

[223] Graeber DA, Moyers TB, Griffith G, Guajardo E, Tonigan S. A pilot study comparing motivational interviewing and an educational intervention in patients with schizophrenia and alcohol use disorders. Community Mental Health Journal. 2003;**39**:189-202. DOI: 10.1023/A:1023371705506

[224] Barrowclough C, Haddock G, Tarrier N, Lewis SW, Moring J, O'Brien R, et al. Randomized controlled trial of motivational interviewing, cognitive behavior therapy, and family intervention for patients with comorbid schizophrenia and substance use disorders. American Journal of Psychiatry. 2001;**158**(10):1706-1713. DOI: 10.1176/appi.ajp.158.10.1706

[225] Bellack AS, Bennett ME, Gearon JS, Brown CH, Yang Y. A randomized clinical trial of a new behavioral treatment for drug abuse in people with severe and persistent mental illness. Archives of General Psychiatry. 2006;**63**(4):426-432. DOI: 10.1001/archpsyc.63.4.426

[226] Gouzoulis-Mayfrank E, König S, Koebke S, Schnell T, Schmitz-Buhl M, Daumann J. Trans-sector integrated treatment in psychosis and addiction: A randomized controlled study of a motivational, cognitive behavioral therapy program under standard hospital treatment conditions. Deutsches Ärzteblatt International. 2015;**112**(41):683. DOI: 10.3238/arztebl.2015.0683

[227] Barrowclough C, Marshall M, Gregg L, Fitzsimmons M, Tomenson B, Warburton J, et al. A phase-specific psychological therapy for people with problematic cannabis use following a first episode of psychosis: A randomized controlled trial. Psychological Medicine. 2014;**44**(13):2749-2761. DOI: 10.1017/S0033291714000208

[228] Wang W, Chau AKC, Kong P, Sun X, So SH-W. Efficacy of motivational interviewing in treating co-occurring psychosis and substance use disorder: A systematic review and meta-analysis. The Journal of Clinical Psychiatry. 2021;**83**(1):38865. DOI: 10.4088/jcp.21r13916

[229] Ziedonis DM, Stern R. Dual Recovery Therapy for Schizophrenia and Substance Abuse. Thorofare, NJ: SLACK Incorporated; 2001. pp. 255-264

[230] Guo X, Zhai J, Liu Z, Fang M, Wang B, Wang C, et al. Effect of antipsychotic medication alone vs combined with psychosocial intervention on outcomes of early-stage schizophrenia: A randomized, 1-year study. Archives of General Psychiatry. 2010;**67**(9):895-904. DOI: 10.1001/archgenpsychiatry.2010.105

[231] Falloon I, Liberman R. Behavioral family interventions in the management of chronic schizophrenia. Family Therapy in Schizophrenia. London: Guildford Press; 1983