

REVIEW

Psychosocial Rehabilitation Interventions in the Treatment of Schizophrenia and Bipolar Disorder

Mustafa YILDIZ 

Kocaeli University School of Medicine, Department of Psychiatry, Kocaeli, Turkey

ABSTRACT

Schizophrenia and bipolar disorder are chronic conditions with the early onset, higher relapse rate, and functional impairment that often persist despite optimum pharmacotherapy, underscoring the need for adjunctive psychosocial treatments and rehabilitation interventions. Evidence-based psychosocial treatment and rehabilitation interventions for both illnesses are adherence therapy, psychoeducation, cognitive-behavioral therapy, interpersonal and social rhythm therapy, cognitive remediation, social skills training, family education, vocational rehabilitation, case management, assertive community treatment, occupational/art therapy, and peer support. The efficacy of these interventions has been shown in

many studies. Trials generally reveal that symptom reductions, relapse preventions, reduced hospitalizations, increased social functioning, increased employment rate, and satisfactory quality of life for patients with schizophrenia and bipolar disorder are possible by using these interventions adding to optimal pharmacotherapy. This review describes the psychosocial rehabilitation interventions that have been used successfully and extensively in patients with schizophrenia and bipolar disorder.

Keywords: Schizophrenia, bipolar disorder, psychosocial treatments, rehabilitation interventions

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INTRODUCTION

Schizophrenia (Sch) and bipolar disorder (BD) are severe mental disorders that emerge at early ages through interaction of biological, genetic, and environmental factors and last lifelong with exacerbations, remissions, and relapses, causing functional impairment at varying degrees (1). Almost half of the patients with Sch and one third of those with BD experience disability markedly (2–5). Disability is the presence of functional loss to the extent to hinder the person's routine daily activities, social interactions, and work performance (6). The major cause of disability is cognitive impairment, but negative symptoms and residual depressive symptoms are also known to contribute (7–9). Prevention, early treatment, and rehabilitation are the fundamental approaches to the treatment of these illnesses that emerge at the time when the individuals are in the process of gaining their social and professional identities and prevent them from developing their skills specific to that period. Early interventions employed upon the emergence of the initial symptoms of the disease, optimal pharmacotherapies, and evidence-based psychosocial treatment approaches used for the prevention of relapses and improving quality of life and functioning has become the main elements in the treatment of these illnesses (10, 11).

Use of antipsychotics and mood-stabilizer drugs is of utmost importance for mitigating symptoms and preventing relapses, and for decreasing functional impairment (12, 13). However, pharmacotherapies alone are not sufficient; psychosocial rehabilitation interventions (PSRIs) targeting symptoms and functioning and interventions to treat comorbid medical and other mental conditions should also be included in the treatment plan (14, 15). The main goal of PSRIs added to pharmacotherapies is to increase the efficacy of the treatment by ensuring patient adherence to

medication, to prevent relapses and recurrences by improving coping skills, and in this way to reduce destructiveness of the illness, to enhance psychosocial functioning, to empower patients against stigmatization, and to increase the level of recovery by providing training to the family or caregivers (10, 16–18). However, waiting for patients to come for treatment is not the right approach at all in the treatment of these illnesses. Even when the treatment is started, patients often discontinue treatment and become ill again due to reasons such as poor insight, avolition, lack of motivation, anxiety, depression, grandiose feelings and thoughts, cognitive problems, burdens of a long-lasting treatment, stigmatization, and thoughts related to having recovered (19–21). Each illness period leads, unfortunately, to more functional impairment. In order to get the patients being in the treatment, receiving support from PSRIs, receiving skills training in needed areas, and receiving urgent interventions in cases of a crisis, comprehensive and coordinated rehabilitation services will be required (6). For all of these to happen, the patient needs to be assessed as a whole with their family and environment from the onset of the very first episode, interventions to prevent any functional loss need to be started urgently in the treatment process, and all skill-developing practices have to be performed when the disability starts to occur.

Interventions to eliminate residual symptoms and to prevent relapses should be initiated at an early stage. To this end, cognitive behavioral therapy (CBT) approaches may be utilized by the psychiatrist or a psychotherapist working in cooperation with the psychiatrist. Adherence therapy and psychoeducation where CBT techniques are also used should be provided to every patient when possible. Many patients can potentially recover and resume their functioning with optimal

pharmacotherapy combined with CBT. However, since the illness tends to relapse by its nature, psychosocial treatments, just like drug therapies, need to continue in the form of reduced-intensity maintenance sessions to meet the needs of the person in question (16, 17). When residual symptoms and exacerbations persist, skills training, family training, vocational rehabilitation works, and social supports should be added to the treatment to minimize functional losses and to improve quality of life. Presenting case management at this stage would be suitable. Although case management is recommended for patients who have not sufficient family support, it would be useful if the majority of patients are under the supervision of a case manager as families often lack knowledge about professional services. A case manager will assess the patient within the context of psychosocial rehabilitation principles and ensure the provision of services needed by them. For individuals experiencing frequent exacerbations, violent behaviors, and apparent functional losses, case management is accomplished in collaboration with an assertive community treatment (ACT) team. In such a case, the case manager acts as a member of the ACT team. Examples of psychosocial rehabilitation interventions under the coordination of a case manager were shown in Figure 1.

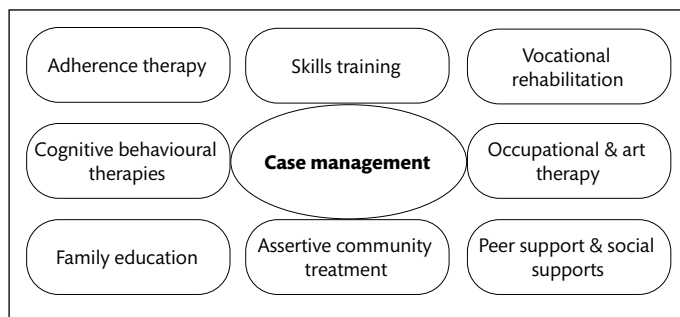


Figure 1. Psychosocial rehabilitation interventions for the patients with disability.

Optimal Pharmacotherapy

A patient whose primary problems are poor insight and/or cognitive impairment should not be expected to regularly follow their treatment regimen from the beginning. Most of the patients with Sch or BD are brought to emergency rooms or psychiatry clinics either through persuasion or coercion of their family or with the help of security forces. Nonadherence to medication, recurrence, and rehospitalizations are frequent in this patient groups (19, 22). All efforts to prevent the discontinuation of medication need to be a major component of the treatment. Above all, the most suitable medication should be used in most appropriate dose for a given patient. It should be borne in mind that there is a covert partially compliant or non-compliant group of patients who pretend to use medications but do not take effective doses (23, 24). In patients with a risk of medication non-adherence, long-acting injectable depot antipsychotics should be considered as an option (25).

Adherence Therapy

Treatment adherence means adhering to the prescribed medication therapy. Motivational interviews, psychoeducation, and cognitive behavioral approaches towards enhancing medication adherence are considered within the context of adherence therapy (AT) (26). Factors influencing treatment adherence include delusional beliefs, poor insight, depression and anxiety, cognitive impairment, lack of motivation, illness and treatment-related experiences, medication side effects, stigmatization, level of intelligence, personality characteristics, features of support sources, cultural aspects, quality of therapeutic alliance, and features of the treatment setting (27). All these areas must be considered in AT and efforts should be employed to remove obstacles to treatment adherence. Although AT is an inevitable intervention in the treatment of individuals

with a serious mental illness (SMI) such as schizophrenia, schizoaffective disorder, and bipolar disorder, it remains inadequate in preventing relapses, aggression, suicidal behavior, or rehospitalization (28). Patient-physician relationship, therapeutic alliance, and including the patient in decision-making are crucial in AT. Dealing with patients and their families in consideration of their cultural characteristics, discussing stigmatization, reviewing medication side effects in detail, adjusting medication doses and administration to be most suitable to the patient, using support sources in cases of cognitive deficits, and continuing with regular interviews may be used as interventions to help enhance medication adherence.

Psychoeducation

Psychoeducation (PE) is a training provided to the individuals with SMIs in relation to their illness, treatments, outcomes, coping skills, and rights (29, 30). Understanding the illness, developing insight, medication adherence, and regular follow-ups are emphasized in this training, and strategies are developed to recognize warning signs of a possible relapse and to prevent a new episode. A trainer knowledgeable and experienced in PE communicates information to the patient and their family in an interactive way. The training is generally provided individually or in groups to patients in their chronic phase. Books or leaflets that may be beneficial to the patients and their families may be distributed as a supplementary reference during training. Besides providing information during sessions, care should be taken to correct misinformation that the patient and their family might have. They are allowed to share their experiences in sessions. PE involves weekly sessions based on a predetermined schedule. Training provided at an early stage of the illness, in groups, and for a period of a few months has been found to be effective in preventing relapses (31, 32). Without emphasizing any specific PE model, treatment guidelines recommend the provision of accurate and up-to-date information to all patients and their families about the illness, its treatment, and outcomes as part of routine treatment (26–28, 33, 34).

Cognitive Behavioral Therapies

A cognitive behavioral approach takes the interrelatedness of thoughts, feelings, and behaviors as its basis. Emphasis is placed on the role of irrational thoughts and behaviors in the emergence and persistence of symptoms. Main goals include an understanding of the cognitive mechanisms underlying delusions and hallucinations, development of insight, improvement in reality testing, and increasing functionality. To this end, various techniques are used including reshaping patterns of distorted thinking, alternative thinking, guided discovery, and reality testing. The main goal is to help patients cope with their psychotic symptoms and related distress, eliminate symptoms such as depression and anxiety and improve functioning (10, 35, 36). CBT has been shown to increase treatment adherence, reduce relapses, improve functioning, and enhance recovery (37–39). CBT practices are recommended by treatment guidelines for patients in both the acute and chronic phases as well as those during recovering (26–28, 33, 34). There are also studies showing that CBT is beneficial for the prodromal symptoms in the early phase. It will be useful when added to the pharmacotherapy to mitigate the effect of distress and disability caused by the illness particularly in resistant Sch and in the treatment of BD. It has been found more beneficial when administered for a long period of time involving at least 16 sessions, not a short period of time. Weekly sessions may be challenging especially for patients with prominent negative symptoms. Therefore, flexibility may be required in the frequency and duration of sessions (40). Therapies based on cognitive behavioral approaches such as acceptance and commitment therapy (41), metacognitive training (42), mindfulness-based CBT (43), and dialectical behavior therapy (44) have also been found useful.

Social Skills Training

Social skills training (SST) is a series of structured skills development training designed to relieve patients' stress in social settings and to

improve their social relationships (6, 45). By developing verbal and non-verbal communication skills, it tries to help patients evaluate social clues in an appropriate manner and give reactions suitable to the occasion. Although there are skills training programs based on different approaches, SSTs generally use behavioral therapy approaches. The skill is explained and demonstrated by the trainer, the patient is encouraged to engage in role playing, positive and corrective feedbacks are provided, in vivo exercises are carried out, and homework assignments are given. These interventions involve learning by doing in an effort to increase social functioning directly. They are found beneficial especially in patients who are under the influence of negative symptoms. They include information about the illness and training for early recognition of relapses, as well. The basic SST model has been expanded into the Social and Independent Living Skills by Liberman et al. (6) to meet the various needs of patients. This version includes the following modules: 1) Medication management, 2) symptom management, 3) basic conversation skills, 4) community re-entry, 5) recreation for leisure, 6) substance abuse management, 7) workplace fundamentals, 8) friendship and intimacy, and 9) involving families in services. The program has a trainer's book for trainers, a workbook for patients, and video cassettes showing sample behaviors. From the aspect of the treatment guidelines, NICE (26) does not recommend it, but both PORT (33) and APA (28) state that SST can be used together with other PSRIs in patients with disabilities.

Cognitive Remediation Therapy

Being the major reason underlying functional impairment in the areas of independent living, social relationships, and work, cognitive impairment seems to be more apparent in Sch, but is also common in patients with BD, particularly in those with psychotic symptoms (7). Impairments in the areas of attention, working memory, speed of processing, verbal memory, visual memory, reasoning and problem-solving, abstract thinking, verbal comprehension, and social cognition are apparent in Sch (46, 47). The degree of cognitive impairment in BD patients is less compared to Sch (48, 49). A pharmacotherapy effective on cognitive impairment is not yet known (50). However, cognitive remediation/rehabilitation therapies have been developed to improve cognitive functioning. Cognitive remediation is a rehabilitation method where a series of exercises and interventions are implemented in combination to solve the problems in attention, memory, language, and executive functions (51). Cognitive remediation therapy (CRT) interventions include exercises directly targeting cognitive deficits, developing complementary strategies for cognitive deficits, and provision of environmental support to help patients perform cognitive tasks (52, 53). CRT has been shown to strengthen targeted cognitive function areas and improve overall functioning (52, 54, 55). It has been stressed that CRT practices prove to be more effective when implemented together with other PSRIs such as social skills training, vocational rehabilitation, and supported employment (52, 56, 57). Since any long-term impact of CRT on both cognitive functions and social functioning could not be demonstrated, treatment guidelines (26–28, 33, 34) do not recommend it but suggest using it for experimental purposes. Used with other PSRIs, CRT may be included in routine treatment services, but the lack of adequately trained staff in the area makes this difficult. CRT also requires precise cost/benefit analysis studies.

As a variation of CRT, functional remediation therapy teaches patients techniques to cope with their neurocognitive deficits. It can be administered individually or in a group setting. Group setting, in fact, creates an environment suitable for patients to cope with their cognitive difficulties. They are made to understand the obstacles they encounter in their daily activities due to their cognitive impairments. Psychoeducation is provided about cognitive deficits. Methods to cope with deficits in the areas of attention, memory, and executive functions are taught. The techniques used include modelling, role playing, self-instructions, verbal instructions, positive reinforcement, and metacognitive cues (58).

Interpersonal and Social Rhythm Therapy

This approach focuses on the interpersonal relationship problems experienced by patients with BD particularly in their depressive phase and the prevention of a shift to a manic state due to the impairment in their sleep/wake cycle (11). This therapy deals with interpersonal relationship problems, role conflicts, relationship needs, and loss-related problems as well as with the organization of activities that should be performed regularly in daily life such as time to go to bed and to get up, exercising, and social relations. Patients are assisted to organize their daily life after an episode and efforts are made to identify the triggers that may cause a new episode. This therapy has been shown to reduce relapses and improve functioning (59).

Family Education

The main objective of family education (FE) is to include the family members, caregivers, or concerned affiliates of the patient in the treatment and rehabilitation process in both acute and chronic periods. During this education, cognitive, behavioral, and supportive suggestions are combined with the components of the family education (60, 61). Such interventions include the provision of training to families in a way to support them in helping their patients develop coping skills, gain skills to ease their high expressive emotions, and improve their problem-solving and communication skills (62). FE has been observed to improve relationships between patients and their families, decrease patients' perception of stress, and improve patient adherence to treatment. Consequently, relapses and hospitalizations decrease, and the level of recovery increases (63). With direct or indirect influence, the burden and distress of family members diminish, and their own relationships improve. FE is recommended by treatment guidelines in both acute and chronic phases (26–28, 33, 34). The training can be administered individually or in groups and an average duration of 3–4 months or at least 6 sessions are considered adequate (64). Given the chronic and recurrent nature of these illnesses, booster sessions may be continued based on the needs of families.

Vocational Rehabilitation

Patients lose interest in their work in both acute and chronic phases, and with a disability, they become unable to perform their job. The rate of unemployment is much higher among patients with Sch and BD compared to the general population (65). The greatest problem of unemployed patients is the feeling of uselessness, low self-esteem, and stigmatization. Leading to treatment noncompliance, depression, and new episodes, these factors can affect illness progression negatively. Unemployment increases the cost of these illnesses in many direct and indirect ways. Aimed at eliminating the negative effects of unemployment, vocational rehabilitation (VR) practices are widely used across the world as an important component of rehabilitation services. The main goal in VR is to help patients get a job. VR involves various job placement programs. In a job placement with the prior training program, patients receive training in a secure or temporary workplace and prepare themselves during this period to look for a job. This is a *train-place* approach. In a supported employment program, patients, after going through a short preparation period (less than a month), are placed in a job of their preference, and are supported in their work environment. This is a *place-support* approach. Job placement was first thought could have negative effects in the patient group with a high-stress sensitivity, but studies have later shown that instead of creating a burden for patients, having a job reduced hospitalizations, increased quality of life, and decreased cost with high rates of entering and staying in a job (66–68). Supported employment is recommended by treatment guidelines (26–28, 33, 34). Every patient who is willing to work should be included in a supported employment program.

Case Management

The main goal of case management (CM) is to provide practical assistance to the patient or an individual with SMI in areas such as drug acquisition or use, financial resource acquisition, provision, or retention of suitable

sheltering environment, and when necessary, transportation to the hospital. The aim is to enable the patient to adhere to treatment and in this way to reduce the rates of hospitalization and improve social functioning (6). Instead of conventional case management interventions conducted from offices or places occupied by professionals, case management practices conducted within communities in close contact with the patient and the environment in which the patient lives and practiced as a team are found more promising (69). What is important here is to meet patients' needs as fast and effectively as possible and, in this way to prevent the destructive impacts of the illness and keep functioning at a high level. Especially patients who suffer from relapses and rehospitalizations and have little or no family support are appropriate candidates for CM. With case management, exacerbations and hospitalizations diminish and functioning improves (70). Case management can be implemented in various ways depending on the resources and health policies.

Assertive Community Treatment

Assertive community treatment (ACT) is an integrated community-based treatment method administered particularly to patients who fail to comply with treatment, have chronic symptoms, and carry a high risk of relapses and rehospitalizations. In this model, the patient is regularly monitored in their own environment (home, community, workplace), and in the event of an emergency, they are provided on-site intervention, and if necessary, are hospitalized. A team consisting of a psychiatrist, a nurse, and a social worker provide 7/24 service for a given number of patients. The case manager is also a member of this team. Patients are regularly visited at their places. Their medical and psychological treatment requirements and personal needs such as shelter and food are met, their legal rights are secured, and effort is made to place them in jobs. At times of crisis, on-site assertive treatment is implemented urgently. In selected patients, ACT has been shown to reduce symptom severity, rehospitalization, hospital stay, and homelessness and to improve quality of life in general (71-73). Treatment guidelines recommend the implementation of ACT especially for patients with treatment noncompliance and frequent hospitalizations (28, 33). However, since it always requires teamwork available, ACT is not a service that can be easily undertaken by all territories and health systems. This service can be introduced based on special arrangements made because of cost/benefit analyses.

Peer Support

Interactions in which patients with similar problems support each other emotionally and socially are considered within the framework of peer support (74). Considering the tendency of patients to be alone and away from treatment environments, it can be understood how important peer support is for them. Treatment compliance can be improved through peer learning and peer influence and patients can gain strength with peer support resulting in less stigmatization (18, 75). Peer support practices can be implemented in various ways including self-help groups where participants share their experiences, peer support services where experienced patients provide guidance to new patients, and peer mental health services where experienced patients take part in mental health services.

Hybrid Models

There are combined treatment modalities such as integrated psychological therapy combining SST and CRT (76), emotion management training in combination with integrated psychological therapy (77), illness management and recovery where PE, CBT, skills training, and peer support are practiced in combination (78), psychosocial skills training incorporating the SST, PE, and FE techniques (79), and a combination of FE and social cognition training (80). Rehabilitation centers may implement various treatment methods in a combined or consecutive way based on their resources and patients' needs.

The rate of alcohol/substance dependence comorbidity is not low in any respect in Sch and BD. Nearly one-third of these patients have an additional problem of alcohol, marijuana, cocaine, etc. dependence (81).

PSRIs to be practiced in the treatment of patients with dual diagnoses should also include dependence-related approaches. Management of such patients may include PSRIs such as PE, FE, CBT, AT, communication skills, and problem-solving skills in an integrated manner (82-84).

Occupational Therapy and Art Therapy

Occupational therapy and art therapy (OAT) consist of a series of occupational and art activities using psychotherapy techniques such as developing creative expression, increasing communication skills, gaining insight, and supporting socialization. These practices include painting, music, dancing, drama, handcrafts etc. and are implemented in groups under the leadership of persons specialized in their fields. It is a rehabilitation method that has been used in clinics for many years. Although used frequently in patients with psychotic disorders during both acute and chronic phases and found effective in reducing negative symptoms, they are not recommended by the treatment guidelines (26-28, 33, 34). The OAT activities can be costly as they require special practicing place, materials, and trained human resources. Resources for OAT need to be provided by clinics in a routine manner. It is argued that there is a need for further studies to determine what therapies in this area are effective on what symptoms or functioning areas and what their cost-beneficence would be (40).

CONCLUSION

The main goal of PSRIs is to reduce the destructive effects of the illness by improving treatment compliance, to help patients cope with the illness and treatment-related problems, to help them lead an independent life and engage in social relationships, to reduce the impact of stigmatization, and to help patients see themselves as useful and productive individuals. Possible moderators and outcomes of PSRIs are shown in Table 1. As can be seen in the table, it is not possible to attain the targeted outcomes

Table 1. Psychosocial rehabilitation interventions, potential moderators, and possible outcomes

Treatment modalities	Potential moderators	Possible outcomes
Cognitive behavioral therapies	Medication adherence Gaining insight Gaining alternative perspectives Coping skills Illness self-management	General psychopathology ↓ Distress ↓ Relapses ↓
Social skills training	Interpersonal relations Increasing self-esteem Coping skills Illness self-management Decreasing self-stigmatization	Social functioning ↑ Daily life activities ↑ Relapses ↓
Cognitive remediation therapy	Cognitive skills	Cognitive functioning ↑ Social functioning ↑
Interpersonal and social rhythm therapy	Interpersonal relations Regulation of daily routines	Relapses ↓ Social functioning ↑
Family education	Medication adherence Positive relations Crisis intervention	Relapses ↓ Family burden ↓
Vocational rehabilitation	Increasing self-esteem Feelings of usefulness Decreasing self-stigmatization	Retaining job ↑ Relapses ↓
Case management and assertive community treatment	Crisis intervention Providing services	Relapses ↓ Rehospitalizations ↓ Homelessness ↓

by using a single treatment modality. Programs organized based on needs also considering personal, familial, and cultural characteristics have a higher potential to prepare patients towards a healthier future. It should not be overlooked that the common tool of every intervention for achieving these targets is illness self-management. The main emphasis of these therapies is that these individuals should manage their own illness to be able to lead an independent and satisfactory life.

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