

Research Article

Implications of Integrated Community-Oriented Approaches for Schizophrenia Treatment

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Abstract

Schizophrenia is a neurodegenerative disorder that affects approximately 1 in 300 individuals worldwide. Although its exact cause remains unclear, genetic factors have been identified as a partial contributor. Additionally, many patients with schizophrenia exhibit an imbalance between the neurotransmitter's dopamine and serotonin. The complex nature of schizophrenia raises critical questions about its causes, symptoms, and treatment options. These uncertainties are compounded by ethical concerns surrounding the capacity for decision-making and voluntary consent among patients. The principles of autonomy, beneficence, and non-maleficence are central to determining appropriate treatment strategies for individuals with schizophrenia. Electroconvulsive therapy (ECT), or "shock therapy," has been considered for patients with severe symptoms, though its potential benefits are often outweighed by risks, including significant memory loss in 40-60% of cases. Antipsychotic medications are more commonly used and can be effective, but questions arise about the ability of patients to consent to these treatments during acute episodes. This paper explores the most effective medical interventions for schizophrenia, with a focus on preserving patient autonomy, enabling informed consent, and supporting community integration.

Keywords: Schizophrenia; Drug Treatment; Neurodegenerative; Neurotransmitter Imbalance; Community-based care; Psychosocial rehabilitation

INTRODUCTION

Schizophrenia affects about 22.4 million people around the world. Although this condition isn't the most common mental disorder, approximately 50% of mental health hospital patients have a schizophrenia diagnosis [1]. The symptoms that patients with this condition characteristically experience are hallucinations, paranoia, delusions, agitation, and jumbled and/or irrelevant speech [2]. The prospective search for understanding the causes of Schizophrenia is still being investigated alongside viable treatment options that can enhance the lives of individuals with this condition. As of now, some factors that seem to impact whether a person develops Schizophrenia include genetics (its 90% heritable, with scientists identifying the C4 gene as a main contributor of the condition) [3], a stressful environment (such as exposure to stress, trauma, and poverty), and dopamine and

serotonin neurotransmitter imbalances [4]. With no current knowledge of the root cause in schizophrenia development, many treatments for the disease are experimental. Current treatments used include prescription medication that affect the neurotransmitter dopamine [5]. Approximately 10-30% of patients experience improvement after multiple trials of first-generation antipsychotics like dopamine targeting medications [2]. Mood stabilizing medications such as valproate and carbamazepine additionally improve patients' symptoms by 20-30% [6, 7]. In severe cases when medication provides little to no effect, Electroconvulsive Therapy which is also called "shock therapy" is conducted, in which 20-30% improvement however has been documented to a higher rehospitalization rate of 37.52% compared to non-ECT patients of 20.71% [8]. Although treatments can improve the quality of life for patients with schizophrenia by minimizing symptoms, the condition will continue to worsen over time due to ineffective treatment options. Even with patients receiving prescribed medications and treatments in the hospital (usually when a psychotic episode occurs), once they are moved to outpatient care, there are often psychosocial and community-based challenges.

Unfortunately, persons with Schizophrenia have experienced human rights violations within mental health institutions and their community according to the World Health Organization. Even with the best intentions in mind, mistakes have been made and efforts over the past decade have focused on improving optimal care for patients when admitted to a hospital [9]. With most funding allocation being focused on in-patient hospital care of these patients however, there are issues with providing adequate care once they are discharged. Particularly, fewer funds are dedicated to out-patient care programs. \$281.6 billion was estimated the cost of in-patient government supported care whereas \$ 20.6 billion was allocated for Assisted Outpatient Treatment (AOT) programs throughout the US in 2020 [10]. More funds dedicated to collaborative care of patients once they are discharged is an important aspect of ensuring patients will receive consistent effective treatment. Examples of outpatient care include medication management, incorporating family involvement but still allowing the patient's voice to be heard and respecting their autonomy, psychosocial rehabilitation (life skill training), supported housing, and supported employment [11]. Taking a recovery-oriented approach and a nuanced approach toward outpatient care of Schizophrenia can potentially enhance the lives of these patients by providing them with a sense of agency in their treatment options, assisting them by removing the stigma, discrimination, and social exclusion that patients may experience when not involved in a collaborative care framework [11]. The following will focus on the potential of community-based care and how this can potentially slow the progression of this condition in patients (such as through medication management), provide patients a social network they otherwise might not have (family counselling and providing assisted living care providers), and support them through fostering a higher degree of financial freedom through supportive housing and supportive employment opportunities.

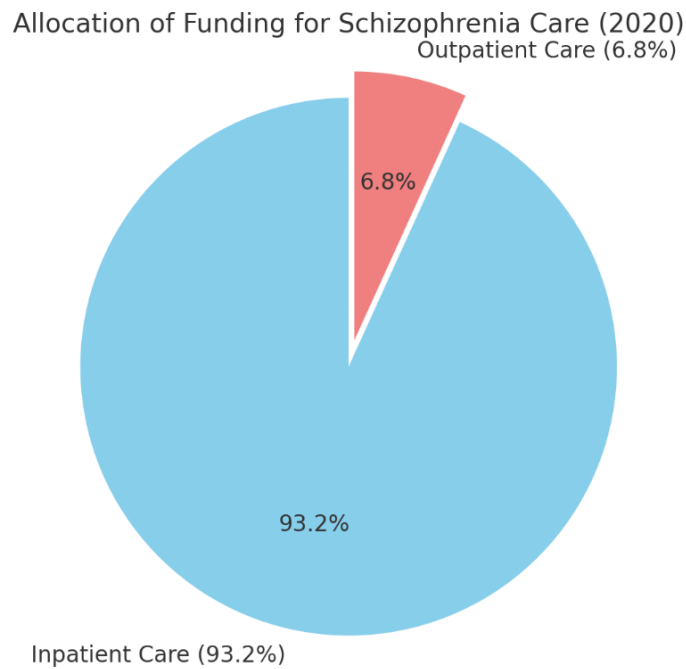


Figure 1. US government funding of in-patient vs out-patient care in 2020

METHODOLOGY

To explore the ethical considerations and implications of integrated community-oriented approaches for treating schizophrenia, a comprehensive literature review was conducted. Relevant studies were identified using academic databases, including PubMed, SCOPUS, National Library of Medicine, National Institutes of Health, and the WHO online library. Search terms included schizophrenia treatment, community-based care, psychosocial rehabilitation, and electroconvulsive therapy (ECT).

Studies were selected based on their focus on treatment modalities, including medication adherence, psychosocial interventions, and ethical considerations in treatment strategies. Inclusion criteria prioritized peer-reviewed articles, reviews, and meta-analyses published between 2006 and 2024. Studies addressing patient outcomes, ethical implications, and community care strategies were included. Exclusion criteria omitted articles focusing solely on inpatient care or unrelated mental health conditions such as depression or dementia.

Data extraction focused on identifying key themes such as medication adherence challenges, ethical dilemmas in voluntary treatment, and the integration of family and community in outpatient care. The synthesis of findings emphasizes the interplay of clinical, ethical, and psychosocial factors in optimizing schizophrenia treatment outcomes. Additionally, Table 1 depicts the summary of Schizophrenia treatment modalities regarding effectiveness and corresponding challenges.

Table 1. Summary of Schizophrenia Treatment Modalities regarding effectiveness and corresponding challenges

Treatment Modality	Description	Effectiveness	Challenges
Dopamine-Targeting Medications (e.g. First-Generation Antipsychotics)	Target Dopamine imbalances to reduce symptoms.	10-30% of patients improve after multiple trials.	Medication nonadherence due to side effects, anhedonia (50-98% of patients), and mistrust of healthcare providers.
Mood Stabilizers (e.g. Valproate, Carbamazepine)	Used for severe cases when medications are ineffective.	20-30% symptom improvement of patients	Limited evidence of efficacy in schizophrenia, potential side effects.
Electroconvulsive Therapy (ECT)	Used for severe cases when medications are ineffective.	20-30% symptom improvement but higher rehospitalization rate (37.52%) compared to non-ECT patients (20.71%)	Risk of chronic memory loss (40-60%) and ethical concerns about patient consent.
Psychoeducation	Educates patients and families on schizophrenia and treatment strategies.	Can improve medication adherence and reduce anxiety and social withdrawal.	Requires patient and family consent; stigma can hinder implementation.
Family Intervention	Incorporates family into the treatment process to support the patient and address psychosocial challenges.	Can improve treatment adherence, provide emotional support, and reduce stigma; enhances patient outcomes and trust in care.	Requires patient consent; not always embraced by families due to stigma or lack of awareness.
Cognitive Behavioral Therapy (CBT)	Helps patients manage delusions, paranoia, and negative thoughts through reality testing and coping strategies.	Reduces symptom intensity and frequency; improves depression, self-esteem, and psychological well-being.	Not widely available; insurance may not cover costs; patient acceptance can be challenging.
Psychosocial Rehabilitation	Focuses on improving social, occupational, and life skills.	Improves social support; helps patients maintain employment and autonomy. Research suggests greater than 50% improved patient quality of life.	Requires a collaborative healthcare team; however, there are limited resources and staff flexibility.

MEDICATION AS TREATMENT

A core issue facing outpatient care of Schizophrenia is the allocation of financial resources due to scarcity in limited resources and funding available [12]. Scarcity in healthcare leads to a focus on rationing and allocation of resources. When rationing is involved in healthcare for those with medical disorders, there can be ethical issues surrounding in-patient care vs out-patient care funding. This is a major ethical dilemma and analysis must be conducted to determine how the healthcare system should allocate funding. With most funding allocation being cantered on in-patient care, patients can be foreseeably in better condition until after they are discharged. However, medication regimen for those with schizophrenia can be quite complicated and once a patient is discharged, they may potentially have challenges with adhering to their medication schedule [13]. Due to the inconsistency of medication intake, readmission often occurs for schizophrenic patients; approximately 75% of schizophrenic patients become noncompliant to medication adherence within 18 months after discharge [14].

Some factors that have been identified to affect patient adherence to medication include whether or not they are self-aware of their condition, potential medication side effects that cause patient discomfort and thus resistance in medication intake, the level of communication and trust between the patient and their psychiatrist, whether or not they receive assistance in following their medication regimen within the home, and potential fear and stigma that surrounds taking antipsychotic medications. Awareness of the medical condition is one of the main proponents for patient nonadherence to their medication schedules. According to the Cleveland Clinic, approximately 50 to 98% of schizophrenic patients are afflicted by anosognosia, in which they are unable to recognize their health problems [9, 15]. Therefore, these patients are characteristically against using this medication because from their perspective, they aren't unwell. This then causes issues with the treatment of patients because without reliable medication intake, the condition will continue, impact the patient's life further, and symptoms of this condition will continue to worsen.

When it comes to patient and psychiatrist communication, whether or not the patient trusts their physician can be a highly determinable factor in the adherence of consenting to medical treatment [16]. As one of the core ethical principles of autonomy, it is expected that physicians should promote consent when treating patients. However, this can only be upheld thoroughly in an idealistic world. This is because patients who undergo psychotic episodes like those who are diagnosed with schizophrenia (which is usually caused by lack of adhering to medication schedule) are unable to give their consent to treatments in the hospital [17]. Although physicians are responding in a beneficent manner to their patient in the long term, even after a psychotic episode a patient might not realize they needed to be treated. This may lead to further damage between the physician-patient relationship, which can make the patient further resist taking their medication as they should. Additionally, for patients who are under financial burdens, they may be further frustrated by the hospital bill. If they didn't consent at the time to being treated, there might be

additional tension surrounding the hospital bill they receive as the aftermath of their hospital discharge [18]. Therefore, even if the physician is encouraging patient care collaboration, their patient might not feel that they can trust their doctor, leading to issues regarding patient medication adherence.

PSYCHOEDUCATION

Another relevant aspect is the fear and stigma patients face due to social/cultural expectations in society and negative connotations present. Patients may experience concerns within the home (such as immediate family, friends, and relatives) and outside the home and respond by socially withdrawing from their community [19]. This is often due to the stigma that can come with the condition. In the late 1990s to early 2000s, a series of research papers were published about the correlation of violence and schizophrenia diagnoses [20]. One study found that in 2006, patients with a history of violence were more likely to be diagnosed with schizophrenia than any other mental health condition [20].

Community members often make the link between the disease and violence, resulting in poor treatment of those with the diagnosis [21]. Although modern perspectives about mental health and mental health conditions are shifting, there are still negative stigmas that patients with schizophrenia encounter. For example, as a culturally diverse nation, there are families and more conservative-mindset individuals that consider mental health problems as taboo and that this subject matter should be avoided from discussion. Due to the remaining stigma of mental health, there need to be forms of out-patient care that address psychoeducation for the patient and their immediate family to ensure that family members are also educated on the importance of mental health and the nature of mental health diagnoses. Innovative methods to ease the process of support after schizophrenia diagnosis involve the patient and their loved ones being informed about standard treatment methods. Rather than these loved ones attending family therapy, it would be highly beneficial for the family psychoeducation process to occur, which involves educating them on the psychiatric condition and what the goals for treatment and rehabilitation are at [22]. This would be the most efficient approach in providing higher quality care for patients once they are discharged from the hospital. This process would help the patient feel that they are not alone and feel that they have support from their internal community that will persevere alongside them on their treatment journey. Psychoeducation, through providing information and support to patients and their families (with the patient's consent), is an innovative therapy method with an evidence-based approach that initiates collaborative care. This in turn may help patients experience lessened anxiety and concern about their health condition. Through gaining the patient's permission on which family members can be involved in the psychoeducation process, we increase patient autonomy, and at the same time benefit them, which may eventually lead to more trust the patient places on their healthcare team and faith that their medical condition won't define them.

COGNITIVE BEHAVIORAL THERAPY AS TREATMENT

As we further emphasize mental wellbeing and the improvement of psychiatric care, innovative psychosocial intervention methods have been newly developed to enhance the quality of patient care. A recent psychosocial technique that has been brought to attention is the usage of Cognitive Behavioural Therapy (CBT) to assist with treatment of schizophrenia in patients [23]. CBT is a format of talk-therapy that is used to help patients who are experiencing negative thoughts, delusions, and/or paranoia to challenge their thoughts with a professional [24]. This helps patients manage symptoms by providing a form of reality testing which helps with processing their symptoms through teaching them how to cope and decipher through their emotions. This form of treatment has not only led to a decrease in the intensity and frequency of symptoms in patients according to research, but also has helped patients establish coping skills, and has provided reality testing for patients so that they are able to better distinguish reality versus their internal experiences [25]. This treatment method not only improves symptoms for patients but also in providing positive changes such as improving depression, helping with self-esteem, and psychological wellbeing [26]. The main challenge with this treatment is persuading patients to take on this supplemental treatment regime. Patients may potentially feel overwhelmed with their current medication regimen that they might not desire to be part of CBT. As of now, because this is an innovative therapy, it is not mandatory for hospital systems to offer this therapy option, and patients who desire CBT often need to find hospitals that offer it [27]. There are currently few hospitals that make it aware to patients that CBT is an option in certain healthcare facilities, and due to the lack of knowledge and financial difficulties with attaining this therapy it can be challenging to persuade patients to partake in an extra therapy measure alongside their current treatment plans [28]. Additionally, insurance may refuse to pay for the treatment, making it challenging for patients to accept CBT therapy even if they desired to because of the lack of financial freedom. Therefore, more awareness needs to be spread on the benefits of using CBT and how it is positively impactful on patients with schizophrenia. With more awareness, there will be more healthcare facilities that offer this therapy and will make it more likely that more insurance companies in the future will help cover financial costs of CBT.

PSYCHOSOCIAL REHABILITATION AS TREATMENT

The final and most important tool to foster an optimal life for a patient diagnosed with schizophrenia is to provide help with life challenges that these patients can face. Besides coping with symptoms, patients in these situations may have difficulties in their social relationships, daily functions, and quality of life. A study in [29] found that more than half of psychiatric patients reported low quality of life (QOL), and two-thirds reported low social support. The goal of psychosocial rehabilitation is to assist patients outside of the hospital to improve their social, occupational, and life skills [30]. One of the main issues is that patients may be so affected by symptoms that they may have difficulty in keeping their occupations. Therefore, one of the aspects of rehabilitation is to provide support so

that they can maintain their employment or be able to gain assistance in attaining another job. It is important that persons with Schizophrenia are able to develop their job-related skills and continue to maintain financial independence [31]. This can help patients establish autonomy, boost their self-esteem and confidence, and help them achieve a higher quality life.

Other aspects of psychosocial rehabilitation involve patients practicing their social skills to maintain relationships and special programs that offer assistance in the home to manage their personal care and maintain routines. Through providing support to patients in aspects of their home and social life, this can prevent relapses and will promote long-term recovery for these patients. Although this is an ideal method for taking care of these patients, it requires an extensive team of psychologists, social workers, occupational therapists, vocational counsellors and more [11]. A collaborative healthcare team effort is often necessary to drastically improve the lives of patients with Schizophrenia. However, with the current healthcare team shortage, there aren't enough resources to make this happen for every patient who needs out-patient rehabilitative services [32]. Even with these challenges, there are steps being taken in the right direction. There is a new developmental program initiated by the PAN Foundation, partnering with Schizophrenia and Psychosis Action Alliance, to connect patients with innovative and essential support services [33-36]. This program involves networking services to bring patients to the right healthcare facilities that would provide outpatient services. The program will additionally provide a 12-month grant to support out-of-pocket healthcare costs for patients with Schizophrenia. Figure 2 depict the percentage treatment effectiveness rates for Schizophrenia patients across various treatment modalities

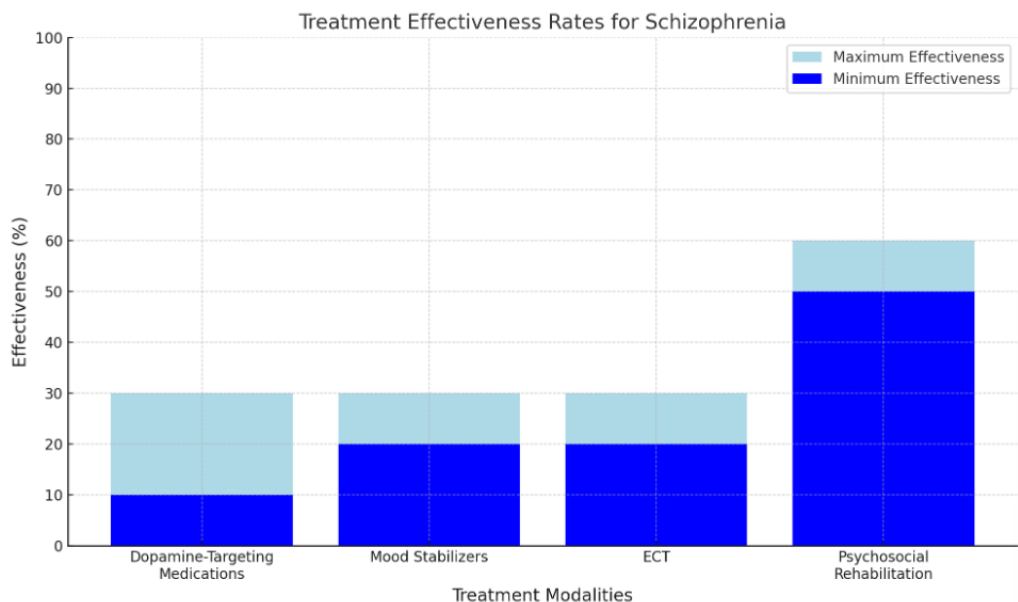


Figure 2. Percent Treatment effectiveness rates for Schizophrenia patients across various treatment modalities.

SUMMARY AND CONCLUSION

The use of psychosocial interventions such as assisted medication management, psychoeducation, family intervention, cognitive behavioural therapy, and psychosocial rehabilitation are all necessary to supplement treatment of Schizophrenia [37]. Administration of medication is not enough to preserve autonomy and benefit these patients. Approximately 30% of people diagnosed with schizophrenia don't improve under medication, and research has shown that psychosocial intervention has been proven to be more helpful, especially on patients that aren't improving under medication intake [4]. Although psychosocial interventions have been gaining traction in the medical field for fostering recovery and maintenance of symptoms in patients, there have been controversies surrounding whether other viable, but riskier options are available. For example, there has been debate of using high-dose antipsychotic medication on patients that are more difficult to treat, meaning that these patients would be prescribed medication that is well above the standard legal dose to achieve better management of symptoms [38]. High-dose antipsychotic medication treatments would potentially lead to fewer symptoms but would also lead to more severe side effects and could negatively affect the overall quality of life for patients [39]. The goal of treatments is to minimize symptoms and not to exacerbate side effects. As for now, higher dose antipsychotic medications are not recommended to be used on patients and thus psychosocial intervention is the best method forward.

The primary challenge to provide the best possible care for Schizophrenia is limited resources and funding allocation [40]. Some argue that even with sufficient funding allocation towards out-patient care and a collaborative care team, patients may perceive these programs as additional new stressors in their life and therefore some won't follow or consent to receiving out-patient care related to therapy sessions and more. Overall, methods of schizophrenia treatment will evolve over time, and with these treatments so will the movement of mental health professionals and their focus upon finding the best approach to managing symptoms and medication, providing patients the tools to establish better quality to their lives, and emphasizing the importance of collaborative care and mutual trust that must be established between the patients and their healthcare team. We owe these people optimal healthcare that will cater to their specific needs, and as of now, the best path forward is to provide psychoeducation and psychosocial assistance to personalize out-patient care options for patients with Schizophrenia.

CONFLICT OF INTERESTS

The authors should confirm that there is no conflict of interest associated with this publication.

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