

A Cognitive Case Conceptualization Of Schizophrenia-Proposed Treatment Guide

This article was published in the following Scient Open Access Journal:

Abnormal Psychology and Clinical Psychiatry

Received March 15, 2021; Accepted March 20, 2021; Published March 27, 2021

Adam J. McTighe, PsyD, MBA

Mind Restoration, LLC, USA

Abstract

This paper explores the mental health topic of schizophrenia, which is considered a serious and persistent mental illness often requiring complex and comprehensive treatment. People who experience the illness can demonstrate complications and problems with everyday functioning. It is a disorder of thought that impacts how individuals perceive and interpret reality, among other core symptoms. A review of diagnostic criterion is discussed and presented. A clinical case conceptualization is presented using the cognitive model, with an emphasis on automatic thoughts and negative core beliefs. A proposed cognitive intervention strategy is outlined pertaining.

Treatment planning and goals are suggested using seven integrated action steps. Strengths and limitations along with recommendations for future research are provided.

A Cognitive Case Conceptualization of Schizophrenia with Proposed Treatment

The developmental attributions of schizophrenia such as family history, biological components, environment, substances, and other psychosocial mediating factors was examined leading to a clinical case conceptualization and proposed treatment guide. Such factors all have implicit roles in the development and maintenance of schizophrenia, which is often considered one of the most chronic and severe major mental illnesses. People who experience the illness can exhibit complications and problems with everyday functioning, notably with disordered thinking impacting how they perceive and interpret reality. Disturbances in thinking and perception often cause dependence on cognitive distortions influenced by maladaptive and or incorrect automatic thoughts, as a mitigating factor to further reinforce and propel the underlying psychotic process. Maladaptive cognitions misalign inaccurate core beliefs regarding the self, others, the world, or future, which can duly influence the functional domains of daily life. This can result in marked or even extreme impairments within personal, academic, professional, and or interpersonal relationships. In the most severe cases, individuals are not able to function independently, whereby requiring intensive and restrictive treatment or in the absence of such for one reason or another (i.e., insurance, family, finances), as can occur quite often, the Individual can end up homeless. Schizophrenia is a life-long thought disorder that, with proper intervention and treatment modalities, can be appropriately treated and maintained.

Population

Schizophrenia is a serious brain disorder that can result in distorted thinking, behavior, emotional expressive ability, perception of reality, and or ability to relate to others as indicated by the Diagnostic and Statistical Manual of mental health disorders 5th ed. (DSM-V). The factors that are suggested regarding schizophrenia development are complex; however, genetics, chemical, and brain abnormalities are often the hypothesized root of the illness, which can affect individuals of every age, race, and cultural background. Symptoms can range from social withdrawal, depersonalization, anxiety, loss of appetite, poor hygiene, delusions, auditory or visual hallucinations, or sense of being controlled from an outside source, which usually leads to paranoia (DSMV). Presentation may differ from functionality of individuals to more bizarre actions, often noted as falling under positive or negative symptomatology with age of onset being a significantly mitigating factor in terms of severity and disease course.

*Corresponding author: Adam J. McTighe, Mind Restoration, LLC, USA,
Email: adam@mindrestoration.org

Deficits in social cognition and neurocognition are believed to underlie schizophrenia symptomatology. Accurate assessment is essential in evaluating the needs and outcomes of appropriate care [12]. Treatment involves the combination of psychopharmacological and cognitive-behavioral modalities; co-occurring issues with substance abuse is also probable, usually common, often requiring a multifaceted team approach. Social-skill deficits can also be pervasive and negatively impact many key aspects of functioning. Studies have found that measures of elementary neurocognition and social cognition are related to social skills [17].

Fundamental to social-skill deficits, exist internal attributions that reinforce paranoia. It has been suggested that an exaggerated self-serving bias may underlie the formation of such [18]. Nonetheless, insight into symptoms can often be severely impaired and is negatively linked with poor treatment compliance [3].

Attempts at rehabilitation have had circumscribed effects on cognition, without concurrent improvement in brain aspects of behavior and adjustment [10], hence the need for multidisciplinary treatment.

Patient

WM is a 52-year-old African American male. He has been diagnosed with schizophrenia, since he was 18-years-old. In addition, WM has also received a dual diagnosis of alcohol dependence, a few years later after his initial schizophrenia diagnosis. His first substance use experience was estimated around the 4th grade, or age 9, which is subsequently a period where he cites being harshly criticized by his teachers, for "not being shit." His alcohol dependence has been in remission since 2008; however, the potential for relapse is always present given the propensity to use during periods of extreme stress or psychotic decompensation (likely the result of psychopharmacological noncompliance).

WM has one living younger brother, who he has not had contact with in decades; his other three siblings have all passed away. Causes of death are unknown. WM's immediate family have extensive mental health and substance abuse histories. His mother carried a dual diagnosis of schizophrenia and alcoholism; however, his father's medical history is unknown because he abandoned the family when WM was an infant.

WM dropped out of high school in the tenth grade, which is when he began engaging in nefarious activities such as drug use and illegal acts to gain monetary support, in order to survive by any means necessary. These behaviors resulted in WM being homeless for years, in addition to a lengthy legal history (petty theft). Since the age of 27, he has been on social security disability and has been living in and out of recovery houses, homeless, or been placed in intensive and restrictive treatment during periods of psychiatric decompensation due to dangerousness to self or others. He has a history of suicidal ideation and attempts. He was recently placed in an intensive Community Recovery Center (CRC) where he attended daily milieu programming to develop and learn social skills as well as coping mechanisms in order to strengthen his resilience and protective factors to abstain avoid substance relapse while remaining medication compliant. In addition to his CRC, WM is a regular patient at a local community mental health agency that provides medication, monthly

laboratory readings, and weekly outpatient therapy sessions. He requires thorough and consistent medical monitoring because of the pharmacological interventions and possibility for significant adverse side effects. WM is on a significant dose of anti-psychotic medication including direct injections of Clozaril.

WM has been gradually gaining positive awareness regarding his symptom insight and psychiatric and medical needs; however, daily tasks and routine self-care are often challenging and difficult to maintain consistently and independently. His social skill deficits continue reinforce his paranoia and mistrust of others. He is, at most times, able to go in social places when needed, such as ride the bus. This still provides barriers, however, whereby intrusive automatic thoughts about people and his safety leave him nearly paralyzed. WM's medication compliance over the recent years has allowed for him to subdue the positive symptom experiences that almost led him to suicide at age 27.

WM clearly states that auditory and visual hallucinations are present, however, medication compliance appears to be effective to help soothe and quiet the severity of each. He also recognizes the strong benefit of psychotherapy and learning that his positive symptom experiences, auditory and visual hallucinations, are things he can work to control/manage more effectively utilizing an active thought processes through awareness and reality testing. Years of living on the street and struggling to find purpose, WM has developed an impaired sense of reality and self. He now is able to acknowledge that chronic and excessive alcohol consumption were only attempts to dull and avoid facing how he experienced life and manage his complex symptomatology. WM references watching his friend die on the street, during the winter, as the turning point in his life at age 30. WM was able to successfully leave years of hardships behind when he moved into his first CRC. Twenty years later he is still living in the same type of environment, but it is with a much clearer sense of self, thanks to the consistent and nonjudgmental approach by empathic treatment providers.

Diagnosis Comorbidity and Associated Symptomatology

As with any mental health diagnosis and subsequent intervention, a comprehensive and thorough evaluation is necessary first. There are currently no medical laboratory tests (i.e., blood work) that explicity diagnose mental illness; doctors use various tests to narrow epidemiology with use of objective, subjective, clinical interview, records and collateral, and observation. If no implicit biological cause is found, referral to a psychiatrist or psychologist occurs. Both are highly trained to evaluate and diagnosis complex psychiatric, psychological, and behavioral impairments. Regarding a psychotic disorder, presenting problems can sometimes be more apparent and evident by the odd or peculiar behavior individual's exhibit, or do not (in the case of negative symptom presentation). Diagnosis is based on observation of attitudes, behavior, and interpersonal ability as well personal reports of symptom experience. In the case of WM, diagnostic evidence is clear with documentation spanning decades.

WM has had an extensive history of paranoid thought processes whereby he views everyone as a threat. He is suspicious of others and readily believes people are out to get him

or constantly after him. His suicide attempt at age 27 showcases the clear danger and warning sign often seen in psychotic disorders. Since being properly medicated after multiple attempts, overwhelming positive symptoms have been managed; however, WM still is highly irritable and easily agitated. He perceives most situations and people as assumed threats based on negative automatic thoughts. This thought process is skewed by harmful cognitive distortions and result in his predominant compensatory strategies that usually include intrusive thoughts and isolating behaviors.

Literature Review

Treatment of schizophrenia involves a combination of psychopharmacological medication and psychotherapy to reduce risk of psychotic episode and improve interpersonal relationships and disease insight [18]. However, because the cause of schizophrenia is largely unknown, treatment intervention is aimed to ease and or reduce symptom experience. Since the clinical appearance of schizophrenia can vary within a broad spectrum, intervention and treatment modality can vary as well. This variation includes implementation of basic social skills training to a need for an antipsychotic medication compliance. In some cases, electroconvulsive therapy (ECT) is utilized when other treatment has evidenced minimal effectiveness. ECT involves an electric current briefly applied on the scalp to directly stimulate the brain, inducing a controlled and localized seizure. It is typically more common among in-patient populations and can also target and alleviate severe depression and suicidality. In conjunction with medication, psychotherapy intervention has shown promise to reduce psychotic episode frequency, duration, and intensity to help maintain stabilized function.

Substance use and abuse can often makes treatment for schizophrenia less effective and more difficult [5]. Drugs like marijuana or stimulants such as amphetamines or cocaine, can make symptoms worse and heighten psychosis and paranoia. Jones and Benowitz (2002) [11] found that addiction to nicotine is the most common form of substance abuse. Individuals often become addicted to nicotine, at three times the rate of the general population (75 to 90 percent vs. 25 to 30 percent). In addition, people who abuse drugs are less likely to follow their treatment plan. Unfortunately, individuals who experience schizophrenia often do not seek treatment, or they stop treatment due to side effects of medication, or simply lack support and or resources to maintain compliance. Treatment is also more difficult when symptoms are not addressed early or accurately.

Some medications can trigger decreased immune response, reflected by a low number of white blood cells. Tardive Dyskinesia (TD) is one of the most serious side effects of antipsychotic medications used to treat schizophrenia. TD is a common side effect seen in older individuals and involves facial twitching, jerking, and twisting of the limbs or trunk of the body, or both. Another side effect, though rare, results from the use of neuroleptic (antipsychotic) drugs, which is neuroleptic malignant syndrome (NMS).

NMS involves extreme muscle rigidity, sweatiness, salivation, and fever. If suspected or observed, immediate medical intervention is necessary. Typically, however, consistent laboratory tests and imaging are conducted to ensure healthy metabolic functioning. Once a medical regime is set,

psychotherapy intervention can begin. However, difficulties exist in individual's ability to coherently define and explain personal experience, which provides further problematic areas to target automatic thoughts and correct core beliefs. A growing body of literature has shown that neurocognitive deficits in schizophrenia account for 20-60% of the variance in measures of study outcome (Green, Kern, Braff, & Mintz, 2000). Several psychometric scales exist in working to accurately measure schizophrenia features. One of the most reliable is the Beck Cognitive Insight Scale (BCIS); however, because of the unique features of schizophrenia, many of the psychometric properties of the scale remain unknown [18]. Moritz et al., (2007) [18] found that the BCIS is negatively correlated with psychopathology, such that individuals with more cognitive insight, exhibited fewer symptoms. It was also found that depression level and level of psychopathology were better predictors of clinical insight than cognitive insight [18]. Meyer and Kurtz (2000) [17] found that in addition, visual vigilance, problem-solving, and affect recognition are related to social-skills abilities. Moritz et al., (2007) [18] found that individual attribution styles affect their judgment of social situation, overall environments, and future judgments.

Kurtz et al. (2008) [15] examined 46 patients with schizophrenia. They investigated five measures of neurocognitive function, crystallized verbal ability, visual sustained vigilance, verbal learning, problem-solving, and processing speed. Two measures of symptoms existed, total positive and negative symptoms and a change of a performance based measure of everyday life skills after a year of outpatient rehabilitation. Results of a linear regression model revealed that verbal learning predicted a significant amount of the variance in change in performance-based measures of variables [15].

Kurtz et al. (2008) [15] found a major emphasis in verbal learning, for individuals being able to positively benefit from psychosocial and cognitive rehabilitation intervention strategies. Such findings indicate a strong need to psychoeducation.

A study conducted by Wataka and Revivicki (2008) examined descriptive statistics of treatment outcomes of schizophrenic patients in a cognitive therapy intervention. The Personal and Social Performance scale (PSP) developed by Morosini et al. (2000) was utilized. The scale is a clinical tool that works to assess social functioning in outpatient rehabilitation settings. The PSP scores correlated well with patient engagement (N=129) and positive treatment outcomes (Wataka & Revivicki, 2008).

Wataka and Revivicki (2008) found that socially useful activities, through personal and social relationships, were the strongest indicators, suggesting separate aspects of functioning. Internal reliability was adequate ($\alpha = 0.76$). The PSP was sensitive to differences in social functioning by clinical severity, which indicates potential to screen individuals with schizophrenia and determine levels of personal and social functioning (Wataka & Revivicki, 2008). In addition to examination of personal and social levels of function, intrinsic motivation can help determine severity of psychopathology present. Greenberber (2009) [8] used the Motivational Trait Questionnaire to examine three components of intrinsic motivation. These categories include personal mastery, competitive excellence, and motivation related to anxiety. Fluid intelligence, context processing, and working memory, as well as self-reports of mood and personal traits related to motivation was examined [8]. Sixty-six individuals with

schizophrenia and 44 healthy controls participated. As expected, among controls, self reports of intrinsic motivation were strongly related to cognitive performance. However, results do suggest that the normal relationship between self-reports of intrinsic motivation and cognitive function is disrupted in schizophrenia [8]. As a result of such cognitive deficiencies, poor quality of life exists and is prevalent in the schizophrenic population. This again calls for the need for proper psychoeducation to build and develop client's personal insight to their unique experiences in hopes to correct devastatingly intrusive automatic thought processes and adjust underlying core beliefs.

Roseman et al., (2008) [19] examined quality of life for individuals with schizophrenia, as determined by a number of factors, not limited to symptomatology. Lack of insight was proposed as one factor that may influence subject quality of life measurements or functional capacity [19]. Rosenman et al., (2008) [19] found that insight interacts with negative symptom severity to predict quality of life. Severity of symptoms and insight contribute directly to functional capacity indicating that individuals with intact insight may be better able to manage their symptoms. This finding strongly promotes the use and potential of cognitive therapy interventions to better help manage and stabilize schizophrenia.

Cognitive enhancement therapy (CET) uses a combination of medicines, computer training, and group therapy to treat schizophrenia [9]. Computer training focuses on increasing attention span and learning ability, and group exercises help to improve problem-solving skills and the ability to relate to other people. Greig et al., (2007) [9] reported that CET improves social skills and help people with schizophrenia function better with and around other people. This is a relatively new treatment method, and it is still being studied for long-term effectiveness.

PROPOSED MODEL

Format

Intervention strategies would occur in either inpatient or outpatient settings, however, because of the unique needs of the disorder. Once properly assessed, psycho education, and treatment outcomes can be established, treatment course can and should allow for individuals to reenter community living and regain semblance of their autonomy of living. This will help create, develop, and grow quality of life. The aim is to overcome symptom effects of individuals affected. Doing so will bolster self-efficacy and allow for self-maintenance, self-awareness of symptom experience, and problem-solving ability development.

Therapist

The provider must be trained in cognitive model but be able to explain that schizophrenic features experienced are results of biological and cognitive perception and that the more aware the client can be, the better outcome is associated (such that our thoughts can help control how we feel or interpret a situation).

Treatment and Intervention Plan

The goals of treatment are to eliminate and or reduce symptoms, reduce the number of relapses, and diminish the severity of the illness (Swanson et al., 2006). Relationship improvement and increased social function is also important. One

of the most studied, recognized, and efficacious psychotherapy is Cognitive Behavioral Therapy(CBT). It is specialized a type of psychotherapy that focuses on identification and management of thoughts, feelings, and behaviors.

CBT intervention modalities are most effective through structured treatment plans. These Plans incorporate the principles of CBT in measurable action steps. Each step is purposely aimed to help stabilize and manage symptomatology. Typical plans have as many as 3 to 6 unique treatment steps. The aggregate of each step forms a relevant treatment goal as identified through medical necessity. Each plan is individually designed and approved by licensed and competent clinical supervisors. Because of the potential for clinical morbidity regarding substance use, clinical assessment must ensure treatment plans are an accurate and measurable representation of clinical sequelae.

The purpose of the targeted goal is to overcome symptomatology and control positive symptom experience of WM's schizophrenia. Encompassed in this main goal are 2 sub goals. The first, the long-term goal, is aimed to utilize positive coping skills needed to effectively dismiss symptom experience and function properly. The second goal, the short-term, is focused on the most important action steps, which comprise the treatment plan.

WM has seven steps to achieve the main goal. The most important step is staying current with medical obligations such as medication compliance, but also includes weekly outpatient psychotherapy sessions. Modality of CBT psychotherapy is one to one. In addition, WM's Residential Care Center (CRC) has required group sessions, which focus on social skills, assisted daily livings (ADL's), psychoeducation. The second step in WM's treatment plan is reality testing. This step is composed of reporting any auditory or visual hallucinations. The third step is focused on identifying negative thoughts. In WM's case, 3 thoughts are targeted each session. This step is very important and serves as the foundation for fundamental change. It clearly identifies underlying negative core beliefs. WM's specific core belief stem from childhood experience and active symptom experiences. Once addressed therapy can shift to focus on them. The beliefs stem from feelings of incompetence and worthlessness. The fourth step is identifying if any needs or concerns are present. Like the previous step, 3 of each are suggested to discuss each session. The fifth step is share information about childhood. In WM's case, it helps to establish, develop, and grow therapeutic rapport and ensure the trust needed for therapeutic insight is present. The sixth step is an extension of the previous. It encourages social activation to overcome crippling paranoia. WM's goal was collectively defined as a need to "give people a chance". Either initiating or engaging social interaction achieves this, which helps to overcome perceived threats posed erroneously by others. The final, seventh step, is to identify one negative trigger in hopes to prepare for said fearful environments.

Discussion

Once the treatment plan is set and properly validated, weekly outpatient therapy sessions can monitor progress. Certain steps may require more time, but each one is equally important to achieve a stable and appropriate level of function for WM. If possible, WM can isolate core beliefs and change the

automatic thoughts that cause symptoms of paranoia. If WM can successfully identify underlying negative automatic thoughts with the supportive guide of his clinician, he can then work to adapt new schemas and modify the inaccurate core belief.

The strengths of said proposed treatment can be seen by the change in WM's overt compensatory strategies over a period of time. Before he was able to actively attune with his cognitive processes, he would compensate by avoiding social situations, drinking, and ignoring all sense of self. Once properly assessed and prescribed the appropriate psychopharmacological medication(s)— a reduction of his depression and paranoia/fear was evident [16]. WM can compensate positively through meaningful social interaction, maintain his sobriety, and utilize his abilities to positively cope with feelings of sadness and fear.

The limitations of treatment include potential for relapse, inability to maintain healthy functioning with a decline in judgement, insight, and awareness. If WM focuses on secondary or intermediate beliefs, his negative and or paranoid thought processes may not fully ameliorate and the faulty core beliefs that maintain and often-initiate psychosis episodes could return. The emphasis on the therapeutic alliance with consistent psychoeducation and support can provide the necessary framework to ensure limitations will be minimized, though this is not always probable dependent on the individual's depth of psychosis and or willingness to change through awareness. The critical role of multidisciplinary communication is an important aspect of achieving the maximized level of care in the case of WM.

Since there is not yet a scientifically agreed upon root cause of schizophrenia, future research is paramount. Such medical research is needed in better understand the epidemiological attributions, genetics, (possible) causes, and potential methods to curtail disease progression. Accordingly, additional clinical psychology research on social skill deficits and internal cognitive distortions could provide additional useful information in working to uncover the complexities subsumed in schizophrenia.

References

- American Psychiatric Association (1994). *Diagnostic and statistical manual of mental health disorders* (4th ed). Washington DC: Author.
- Barch, D., Yodkovik, N., Sypher-Locke, H., & Hanewinkel, M. Intrinsic motivation in schizophrenia: Relationships to cognitive function, depression, anxiety, and personality. *Journal of Abnormal Psychology*, 2008;117(4):776-787.
- Bayard, S., Capdevielle, D., Boulenger, J., & Raffard, S. Dissociating self-reported cognitive complaint from clinical insight in schizophrenia. *European Psychiatry*, 2009;24(4):251-258.
- Beck, J.S. (1995). *Cognitive Therapy : Basics and Beyond*. New York : Guilford Press.
- Blanchard JJ, Brown SA, Horan WP, Sherwood AR. Substance use disorders in schizophrenia: Reviews, integration and a proposed model. *Clinical Psychological Review*. 2000;20:207-234.
- Brill, N., Levine, S., Reichenberg, A., et al. Pathways to functional outcomes in schizophrenia: The role of premorbid functioning, negative symptoms and intelligence. *Schizophr Res*. 2009;110(1), 40-46.
- Favrod, J., Zimmermann, G., Raffard, S., et al. The Beck Cognitive Insight Scale in outpatients with psychotic disorders: Further evidence from a French-speaking sample. *Can J Psychiatry*. 2008;53(11):783-787.
- Greenberger, C. (2009). Internal consistency and discriminability of the Beck Cognitive Insight Scale in schizophrenic patients.
- Greig TC, Zito W, Wexler BE, et al. Improved cognitive function in schizophrenia after one year of cognitive training and vocational services. *Schizophrenia Research*. 2007;96(1-3):156-161.
- Hogarty G., Flesher S., Ulrich R., et al. Cognitive enhancement therapy for schizophrenia. Effects of a 2-year randomized trial on cognition and behavior. *Arch Gen Psychiatry*. 2004;61(9):866-876.
- Jones RT, Benowitz NL. Therapeutics for Nicotine Addiction. In Davis KL, Charney D, Coyle JT & Nemeroff C (Eds.), *Neuropsychopharmacology: The Fifth Generation of Progress* (pp1533-1544). 2002. Nashville, TN:American College of Neuropsychopharmacology.
- Kawata A., Revicki D. Psychometric properties of the Personal and Social Performance scale (PSP) among individuals with schizophrenia living in the community. *Qual Life Res*. 2008;17(10):1247-1256.
- Kumra, S., Thaden, E., DeThomas, C., et al. Correlates of substance abuse in adolescents with treatment-refractory schizophrenia and schizoaffective disorder. *Schizophrenia Res*. 2005;73(2):369-371.
- Kurtz, M., Seltzer, J., Fujimoto, M., et al. Predictors of change in life skills in schizophrenia after cognitive remediation. *Schizophrenia Res*. 2009;107(2):267-274.
- Kurtz M., Wexler B., Fujimoto M., et al. Symptoms versus neurocognition as predictors of change in life skills in schizophrenia after outpatient rehabilitation. *Schizophrenia Res*. 2008;102(1): 303-311.
- Meltzer HY, Baldessarini RJ. Reducing the risk for suicide in schizophrenia and affective disorders. *J Clin Psychiatry*. 2003;64(9):1122-112.
- Meyer, M., Kurtz, M. Elementary neurocognitive function, facial affect recognition and social-skills in schizophrenia. *Schizophrenia Res*. 2009;110(1), 173-179.
- Moritz, S., Woodward, T., Burlon, M., et al. Attributional style in schizophrenia: Evidence for a decreased sense of self-causation in currently paranoid patients. *Cognitive Therapy and Research*. 2007;31(3):371-383.
- Roseman, A., Kasckow, J., Fellows, I., et al. Insight, quality of life, and functional capacity in middle-aged and older adults with schizophrenia. *Int J Geriatr Psychiatry*. 2008;23(7):760-765.