A Student Manual on Schizophrenia
for use in an Agency with Clients having a Dual Diagnosis

by

Carlee Stewart

A thesis submitted to the School of Community Services
in partial fulfillment of the requirements for
the degree of Bachelor of Applied Arts in Behavioural Psychology

St. Lawrence College
Kingston, Ontario
Canada

March 2014
Dedication

To my family-
Thank you for supporting me while writing this.
Abstract

The purpose of this thesis was to create a manual focused on information regarding schizophrenia. This thesis aimed at developing an educational, user friendly, informative manual based on treatments for schizophrenia. The creation of this manual came from a lacking of gathered information within the field placement agency in which the manual was designed and left for. The premise for this thesis was the creation of this manual would be used in the agency for other students. The method of this thesis included reviewing evidence-based literature followed by the construction of the manual. Succeeding this step, the manual was reviewed, and evaluated on certain aspects relating to the information included. Evaluations of the manual lead to the following conclusion: the manual was a positive step in the right direction of being educational, but not enough feedback was collected in order to support the hypothesis. Results included overall encouraging feedback, varying from positive praise relating to the clarity of the information provided, and the content of material within the manual. Very few constructive criticisms were given, the sole comment being about the finished manual product needing to be in an organized packet. Overall, pre- and post-test scores had increased for the majority of the time. The major conclusion from this study was that the hypothesis was not fully supported, although it was leading in the right direction. A further recommendation from this study includes the need for further development of testing for manuals, and their use for educational purposes. Considerably larger feedback and evaluation purposes are needed to identify what positives are associated with manuals, and what can be further improved with manuals to benefit future users.
Acknowledgments

I would like to acknowledge my thesis supervisor Lana DiFazio for her support and encouragement while developing this thesis. Thank you for your patience and dedication to me during this process. I would also like to acknowledge Gary Bernfeld for his constructive feedback as my second reader.

I would also like to extend a big thank you to all the professors who have educated me throughout my four years at St. Lawrence College. Your enthusiasm towards the Behavioural Psychology degree program is wonderful. Thank you to my placement supervisor, Amy Swayze for providing me an amazing fourth year placement and her guidance in the creation of this thesis.
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Chapter I. Introduction

The diagnosis of schizophrenia is increasing, according to recent research (Blackwell, 2013). The author articulates that this particular mental health disorder is growing in our nation and Canada is averaging high numbers of people living with schizophrenia, compared to other countries. Conclusions from these authors stated out of every 1,000 Canadians, around 3.86 people have schizophrenia.

Findings from the literature review stated behavioural treatments such as behavioural activation have been shown to benefit people with schizophrenia, by creating attainable goals and incorporating them into everyday life (Mairs, Lovell, Campbell & Keely, 2011). Aho-Mustonen et al. (2011) have also recommended psychoeducation as a potential behavioural treatment to help inform individuals diagnosed with schizophrenia about the disorder. The authors stated this could include the disorder’s symptoms, prognosis, and pharmacological information. Information from the literature review, including the treatments stated above has been included in the manual. Also contained in the manual are common pharmacological treatments, including antipsychotic medication.

The rationale for this thesis is to provide a valuable manual that the agency can use for educating future students. The results were obtained from two placement students using a questionnaire format. The constructive feedback was sought before and after reviewing the manual in order to determine whether or not it was a useful educational manual. Feedback was sought on the manual’s readability, clarity, and what was enjoyed about the manual, along with what could be done to improve the manual. Pre- and post-scores, along with qualitative responses were collected for the results section. The thesis author administered feedback questionnaires. The feedback was collected from other students within the agency.

The main chapter in this thesis following the introduction is a detailed literature review, which is focused on evidence-based studies. These studies concentrated on behavioural and pharmacological treatments. The literature review will include the general description of schizophrenia, the typical onset for the disorder, the categorized psychiatric symptoms, diagnostic criteria, behavioural treatments and pharmacological treatments. The next section, the method chapter will describe how the manual was evaluated. The results will include the outcomes from the feedback questionnaire, a description of possible improvements, and future uses of the manual. The conclusion and discussion sections will include a summary of the thesis, recommendations and limitations. References and appendices will close out the thesis. The appendices include the manual, the pre- and post-feedback questionnaires, and tables of the results.
Chapter II. Literature Review

What is Schizophrenia?
This disorder was explained as a “psychiatric disorder characterized by major disturbances in thought, emotion, and behaviour: disordered thinking in which ideas are not logically related, faulty perception and attention, flat or inappropriate affect, and bizarre disturbances in motor activity” (Davison, Blankstein, Flett, Neale 2010, p.351). These authors stated people with schizophrenia have the tendency to withdraw themselves from social situations and other people. Having schizophrenia affects occupational, personal and social aspects of an individual’s life (Rajji, Miranda & Mulsant, 2014). Additionally, it was possible for individuals with schizophrenia to remove themselves from reality in times. People diagnosed with schizophrenia had the ability to experience unusual occurrences, such as detaching themselves from their life, and leaving it for a fictional world made up of delusions and hallucinations. Kumar, Castellani, Maiti, O’Reilly & Singh (2013), schizophrenia was one of the highest rated damaging mental disorders to experience. According to Rajji et al., (2014) in Canada, around a quarter of a million individuals are affected by this disorder.

History of Schizophrenia
The first description of schizophrenia came from European psychiatrists (Davison et al., 2010). These psychiatrists, Emil Kraeplin and Eugen Bleuler created the diagnostic criteria of schizophrenia in 1898. Kraepelin first described schizophrenia in the term “dementia praecox”. He is also responsible for identifying some diagnostic criteria, which other clinicians have used past his time of exploring schizophrenia. His thoughts of dementia praecox included a loss of intellect, and early onset of the disorder. On the contrary, Bleuler contrasted the view of Kraeplin, while attempting to target the specifics of the disorder- he specified there was not an early onset, along with no cognitive deterioration. In 1908, the term “dementia praecox” was deemed inappropriate, and Bleuler proposed using the word “schizophrenia”. This word came from the Greek language with the words meaning ‘to split’ and ‘mind’.

Bleuler’s next step included exploring a common denominator of schizophrenia, due to the multitude of symptoms among the clients. The similarity that Bleuler offered was the “breaking of associate threads” (Davison et al., 2010, p.357). This concept applied to both thoughts and words. Included in this view were that if the threads were disturbed, it could account for other problems for the person was experiencing, along with being unable to keep attention, and losing a train of thought. These authors state Bleuler’s work was respected and led to an expanded hypothesis of the disorder.

Diagnostic Criteria of Schizophrenia
Presently, information pertaining to the diagnostic criteria of schizophrenia was described in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (American Psychiatric Association, 2013). This specific disorder and the criteria for diagnosis were listed under the section Schizophrenia Spectrum and Other Psychotic Disorders. At this moment, the code registered in the DSM-5 for schizophrenia was 295.90.

Currently, the standard for diagnosis of schizophrenia included changes in behaviour in several categories. The five categories included negative symptoms, grossly disorganized speech or abnormal behaviour, hallucinations, delusions and disorganized thinking (speech). These are detailed below:
**Negative Symptoms.** Negative symptoms are focused on insufficiencies in behaviours (Davison et al., 2010). Although this is not one of the defining symptoms of a psychotic disorder, it is one of the more prominent symptoms related to schizophrenia in the DSM-5 (American Psychiatric Association, 2013). A symptom included in this section is ‘diminished emotional expression’. Diminished emotional expression is described as a lack of expression and emotions from the individual. This included a decrease in emotions eye contact, facial expressions, and lack of movements from body parts that would usually accompany emotions while speaking. An example of this would have been an individual speaking about something that would typically excite the individual, but there was a lack of facial movements and expression from the individual, which lacks emphasis and emotion about what is being discussed. Another symptom in this category was avolition. This symptom could be displayed by the individual in a manner of not being motivated to engage in activities that were purposeful to them. An example from the DSM-5 was demonstrating a decreasing of interest in social and work events.

**Grossly disorganized or abnormal behaviour.** This symptom was described as a change of behaviour, which can appear in many ways. These were defined as having the potential of interrupting daily activities, and “any form of goal-directed behaviour” (DSM-5, 2013, p. 88). It was also stated individuals affected by this symptom can present in varied ways. The examples in the DSM-5 were listed as individuals becoming extremely agitated, in unexpected ways or being very childlike. Catatonia was a prominent symptom in this category. It can be displayed as being resilient when given instructions and the stoppage of spoken and physical response. The individual can appear to be engaging in motor behaviour that is excessive with no antecedent stimuli, or the polar opposite of maintaining a rigid posture for an extended period of time.

**Hallucinations.** These were described as a unique experience an individual may experience. Hallucinations were stated to be an involuntary experience and “must occur in the context of a clear sensorium” (DSM-5, 2013, p.87). Hallucinations are “vivid and clear, with the full force and impact of normal perceptions” (DSM-5, 2013, p.87). Examples described of hallucinations included individuals enduring auditory hallucinations (Davison et al., 2010). These authors included experiences such as hearing voices commenting on everyday behaviours, individuals hearing their thoughts spoken in a different voice, or voices arguing inside their head.

**Delusions.** Delusions are able to appear to as stable beliefs held by the individuals. They were described as “fixed beliefs that are not amendable to change in light of conflicting evidence” (DSM-5, 2013, p.87). Delusions had the ability to occur within a multitude of themes. Themes of delusions could be an individual having the idea they had special powers, believing they will be hurt by a particular organization or believing their internal organs are malfunctioning. Examples of delusions included thinking someone is controlling them, or their behaviours, others could hear what the individual was thinking, or the individuals thoughts were being taken from them (Davison et al., 2010).

**Disorganized thinking (speech).** According to the DSM-5, this symptom was typically displayed through the change in the individual’s speech pattern. One of the symptoms is described as “incoherence”. Incoherence was explained as incredibly muddled speech, to the point of being incomprehensible to the listener. Another symptom included in this section was switching from topic to topic while speaking, changing the typical speech pattern of an individual. Lastly, the final listed symptom was presented as the individual being asked a question, and responding with an inappropriate or unrelated answer to the question that was asked. This symptom was known as tangentiality.
Timelines for diagnosis varied for schizophrenia spectrum and other psychotic disorders. Timelines for schizophrenia diagnosis are as follows. Prior to diagnosis, it was important that the symptoms the individual had experienced are not caused by the use of medications, another illness or the use of any substances. Firstly, at least two of the symptoms above must have been present for at least one month or longer. One of the symptoms must have been hallucinations, delusions or disorganized speech. If the symptoms had not lasted one month due to the beginnings of treatment, a physician will have needed to decide if the symptoms would have persisted to the one-month period.

Signs of decreased self-care, lessened relationships, and occupational difficulties were noted for decreasing past the regular level for the individual. These changes and disturbances to the individual must have lasted for a period of at least six months. Included in the six months was a month of symptom from the listed five described above. The period of a month of those particular symptoms may have been shortened if treatment had already begun.

Lastly, individuals who had a childhood onset communication disorder or autism spectrum disorder must have met the needed one-month of the listed symptoms, and hallucinations or delusions were present for a month, or less if treated with success.

Onset of Schizophrenia

Typical onset of this particular mental health disorder does not occur in childhood, although possible (Davison et al., 2010). It is also specified by these authors it is more characteristic for schizophrenia to become established in the later stages of adolescence, or within the early years of adulthood. As recorded in the DSM-5 (2013), although there is a variance among different populations, 0.3% to 0.7% is the overall lifetime prevalence of schizophrenia. Between sexes, equal amounts of cases are reported. Females are typically associated with more mood symptoms; meanwhile males typically have longer lasting symptoms.

Phases of schizophrenia. The primary phase of schizophrenia was premorbid according to Lee, McGlashan & Woods (2005). These authors stated this first stage was defined as “the individual’s vulnerability to schizophrenia” (p. 195). This phase relates to the developmental period of an individual. Particularly with schizophrenia, this focused on trauma during birth, a interruption in mother to child bonding or an unusual communication patterns within the family. The prodromal secondary phase of schizophrenia was defined by Lee et al., (2005) as “a change from the premorbid functioning and extends up to the time of the onset of frank psychotic symptoms” (p. 195). Key factors during this stage included a change in psychosocial functioning in a substantial manner. Other changes included changes in mood and anxiety levels, becoming socially withdrawn, sleep issues and increases in irritability. The last stage, the psychotic phase, may be triggered by a stressful life events, or environments, including an emotionally charged event in an individuals life. This phase includes an acute segment. An acute phase included the individual experiencing hallucinations and delusions. Additionally included in this final phase were an early and late recovery phases. The early recovery phase occurred the first 6 months after the individual began receiving treatment. Meanwhile, the late recovery phase included the succeeding 6 to 18 months period following the early recovery phase. These authors stated that following the onset of a first episode of psychosis, the period of treatment and recovery, including the concurrent 5 years after the onset as the ‘critical period’. Follow up studies done of the critical period have demonstrated that up to 80% of individuals have deteriorated during this time period.
As seen above, schizophrenia can be characterized by a multitude of behaviours. This leads individuals to appear with a variety of symptoms while in the periods of active schizophrenia.

**Biological significance.** Kumar, Castellani, Maiti, O’Reilly & Singh (2013), stated that there is not significant biological indication to predict the onset of this disorder. However, they specified indications within family mental health history could be an indication of the disorder. These authors conveyed that the genetic research associated with schizophrenia, although driven by the accessibility of new technology, still had very poor outcomes. They stated that the level of research around this topic had an unsatisfactory outcome, although there were areas of genetics in which need to be researched at a more intense level. Morstensen et al., stated that the absolute best indicator for schizophrenia was the family history (as cited in Kumar et al., 2013, p. 335). Perala et al., stated that children who had a biological parent with the diagnosis of schizophrenia had a 10% higher chance of receiving a diagnosis themselves, as compared to the 1% chance of the rest of the population with a parent identified with the disorder (as cited in Kumar et al., 2013, p.335).

**Chemicals Related to Schizophrenia.** Medication therapy related to schizophrenia included using medications that suppressed dopamine activity in the brain, due to the excessive amounts of the chemical, or the oversensitivity towards dopamine (Davison et al., 2010). Di Forti, Lappin & Murray stated that an abundance of dopamine in the brain could lead to psychotic symptoms (as cited in Sinacola & Peters-Strickland, 2012).

**Medications in Treating Schizophrenia**

Pharmacological treatments for schizophrenia were divided into two categories of psychotic medications according the National Institute of Mental Health (2009).

**Medication Categories.** The first category of antipsychotics was typical antipsychotics. These included medications such as chlorpromazine (Thorazine), fluphenazine (Prolixin), haloperidol (Haldol), and perphenazine (Trilafon). These medications were used for the added behavioural and psychotic symptoms such as hallucinations, disorganized speech and delusions, but typically did not work well with negative symptoms (Davison et al., 2010). The second category was atypical antipsychotics, which included risperidone (Risperdal), quetiapine (Seroquel), apriprazole (Abilify), and paliperidone (Invega). Wirsching stated Risperdal, in particular, was found to have fewer side effects while still reducing symptoms (as cited in Davison et al., 2010, p. 379).

**Side Effects.** Side effects from these medications included a racing heartbeat, potential skin rash, sun sensitivity, fatigued, and impaired vision as stated by the National Institute of Mental Health (2009). Other side effects included weight gain, and metabolism changes. It was important that clients were monitored when they were taking these medications. Tardive dyskinesia was a side effect that can occur after a long period of antipsychotic use. Involuntary muscle movements have primarily demonstrated the condition. Tardive dyskinesia had the ability to stop after the medication was discontinued, but in some cases, it may never be cured.

**Increasing Medication Adherence.** According to Lee, Kane, Sereika, Cho & Jolley (2010), medication adherence was defined as “the extent to which patients follow the instructions regarding dosage and frequency” (p. 418). Canas et al. (2013), stated that poor medication adherence in people with schizophrenia could lead to a greater probability of hospitalization, increased chance of relapse, and poor outcomes over a long period of time. Lee et al., (2010)
stated that most of the young adults diagnosed with schizophrenia within their study reflected themselves as being compliant to their prescribed medication during a self-report measure. After the individuals were training on tracking their medication compliance, the numbers of those thinking they were being compliant decreased. The conclusions of this study were as follows. Overall, the individuals had an average daily medication compliance of 55.92%, lower than the primary estimate. The authors stated that while conducting this study, a majority of the patients overestimated the amount of times they believed they had properly complied with their medication instructions. Recognizing that people with schizophrenia have a harder time with medication compliance was a first step recommended by the authors when starting pharmacological treatment (Canas et al. (2013)). Other strategies these authors offered included having the medication prescriber and the client agree on a medication regime that would have worked well for both parties. Next, a non-judgmental environment was recommended to be present in order to properly create a working therapeutic alliance, which included the use of open questions and a trusting environment. A third strategy included creating an individualized plan for each client. The way the medication was taken needed to be discussed between all parties. Also included should be the caregiver’s support in the medication plan. It was essential to have them included because it has been shown that positive between all parties could lead to fewer hospitalizations and decreased relapse symptoms. The next strategy included reviewing how effective the treatment would be and incorporating other psychological and behavioural interventions to optimize treatment for the client with schizophrenia. Lastly, continuity of care was essential for the client to continue being successful; for example open communication between physicians, family members, and community care. All community partners needed exceptional communication between all parties to ensure the best care plan can be created for client.

As seen above, many medication options are available in order to provide relief and control of people who are diagnosed with schizophrenia. The encouraging side of medication according to the literature review included support in decreasing the psychotic symptoms. On the unfortunate side of pharmacological treatment was cost, time taken by individuals to attempt different medications, and considering what works for each individual person. There is also the possibility of encountering side effects. It is stated particular side effects may not phase out after discontinuing certain medications, and the individual may have to live with for the rest of their life. The medication literature review focusing on information Canas et al., (2013) also identified multiple strategies that have aided individuals with schizophrenia which have helped them become more compliant with medication. Many of these strategies are able to be used without difficulty, and are simple to implement between client, family members, mental health workers, health care providers and attending physicians.

**Behaviour Therapies**

After medication therapy was explored, individuals may seek out or be referred to behaviourally-based treatments for schizophrenia. This treatment focused on changing unwanted behaviours individuals may be experiencing, and putting action based plans into place which can be used to cope with the disorder.
Behavioural Activation.

**Purpose of treatment.** Behavioural activation was utilized to increase motivation and daily activities. Behavioural activation was described by Wright, Basco and Thase (2006), as a “simple procedure that engages the patient in a process of change and stimulates a sense of positive movement and hope” (p.124). These authors also described the process as a therapist helping the client choose at least one or more activities that are possible in making a difference in how the client feels, creating a plan to carry out the chosen activities. Behavioural activation was described as a simple, organizational task that can aid in battling the negative symptoms of schizophrenia. This technique used simple procedures in which the client can add in reinforcing activities in order to create pleasure within their day.

**Use with negative symptoms.** When negative symptoms of schizophrenia were present in clients, behavioural activation can be used to motivate clients to do more meaningful activities during the day, as stated by Mairs, et al. (2011). These authors stated when addressing negative symptoms, using small steps can begin the process. Therapists begin behavioural activation by identifying activities that are completed daily by the client. Examples of these activities could be going for a walk, meeting friends or performing personal hygiene practices. The second step of utilizing behaviour activation included dividing the activities by the amount of reinforcement that is given when the client completes them. This reinforcement rating system could range from very reinforcing to little reinforcement provided. Next, goals were created using the listed daily activities the client had mentioned in the previous step. These measurable, realistic goals were incorporated into the client’s schedule after being discussed between the therapist and client during therapy sessions. It was important in behavioural activation for the goals to be reevaluated. The importance of this step was to monitor the client’s progress around the goals set. Goals set may have needed to be altered due to the course of treatment, or the client’s progress of achieving the goals.

Cognitive Behaviour Therapy

**Purpose of treatment.** Cognitive behaviour therapy (CBT) was described as having two defining factors. The first factor was described as “our cognitions have a controlling influence on our emotions and behaviour (p.1) and “how we act or behave can strongly affect our thought patterns and emotions” (p.1) (Wright et al., 2006). Aaron Beck was the first person to cultivate methods and theories regarding cognitive behavioural therapy interventions, reported by Beck himself (as cited by Wright et al., 2006).

**Treatment construct.** Cognitive behavioural therapy interventions were described to have the ability to reduce cognitive distresses that are sustained by certain thoughts (Hofmann, Asnaani, Vonk, Sawyer & Fang, 2012). Kingdon and Turkington (2006), described this therapeutic intervention as examining the association between thoughts, feelings, and behaviours. Examining the relationships between these three areas, can lead to recognizing the antecedents for these thoughts. The overall goal in CBT was to reduce the frequency and severity of these negative cognitions. The relationships of these thoughts, feelings and actions are examined in therapy. Clients and therapists typically spend between 12 to 20 sessions using CBT, depending on the need of the client. Before starting therapy, it was extremely important for a therapeutic relationship to be established between the client and therapist. This would allow for the client to feel comfortable to share their story.

Sessions have typically begun with the client describing their thoughts while their therapist used active listening techniques (Kingdon & Turkington, 2006). Materials shared in the
sessions included written and visual materials and rating scales. Coping strategies are also discussed, along with the clients overall view of the situation at hand.

Kingdon & Turkington (2006) described CBT as the therapist organizing and guiding clients through certain situations that have produced negative or unwanted thoughts using a three-part ABC model. This model can be described as having three columns which analyze the relationship between the thoughts, the beliefs which occur because of this thoughts, and the consequences of these behaviours. Collaboratively, the therapist and client should

**Column A.** This primary column can be described as what happened before he thought occurred, also known as the antecedent to the thought. The therapist should prompt the client to think about what prompted the difficult thought.

**Column B.** This secondary column is where the client should write down their beliefs. This belief should be the one related to the difficult thought as described in the first column. The belief in this column are assessed by the therapist then discussed between the client and the therapist.

**Column C.** The last column focused on the consequences related to the difficult thought and the related belief from the first two columns. The effects from the consequences are discussed between therapist and client.

From this model, the therapist had the ability to guide the client through the relationship between the difficult thoughts they could be having, what beliefs are associated with this thought and what consequences could come from continuing this thinking pattern. The intended use of this ABC model is to examine the relationship between the three columns and work towards changing and eliminating difficult thoughts and beliefs, and changing the negative consequences that can come from them.

**Rational-emotive cognitive model.** A subset of cognitive behaviour therapy is rational-emotive cognitive model as stated by Quintin, Belanger and Lamontage (2012). This model differs from CBT in the way of focusing upon illogical and irrational thoughts, which in turn were causing emotional distress (Richards & Thyer, 2004). According to these authors, the rational-emotive focused upon the identification of the irrational beliefs, collaboratively challenging them, with the intent of replacing them with beliefs focused upon rational beliefs. It can be used for dealing with delusions, which can be a principal part of schizophrenia (Quintin, Belanger and Lamontage, 2012). This model again used a three-part ABC chart. This cognitive model used the belief that delusions have a trigger, or activating event. This cognitive model uses the belief that these activating events, followed by the delusions, leads to certain consequences. The three-part chart is very similar to the one used in cognitive behavioural therapy. The difference with this chart is that the primary column is used again for an activating event, the secondary column for examining delusional disturbances and beliefs. The final column again discusses consequences related with delusions. Wiersma et al., stated this model has lead to increased self-esteem and overall functioning, with decreases in depression and anxiety (as cited in Quintin, Belanger and Lamontage, 2012, p. 115).

**Hallucinations and delusions.** Sivec & Montesano (2013) state when treating delusions, it may be difficult to identify the motivating operations of the delusions. They suggest that it is important to move deeper into the beliefs, as the most important part of the belief may not always be very obvious. Delusional thinking has many layers, and is typically maintained by many reinforcers. It is important to explore the layers that may motivate the external behaviour. Hallucinations can be dealt with in two different ways (Sivec & Montesano, 2013). The first strategy includes testing reality experiences between client and therapist. Secondly, coping
strategies that are currently being used are identified and tested for effectiveness, along with introducing new ones to the client. These authors state it is beneficial to investigate a multitude of coping strategies to utilize when experiencing auditory hallucinations.

The multi-part model used in cognitive-behaviour therapy was utilized particularly due to the ease with which it assists clients to make connections between the columns. It was deemed helpful when used as a visual aid when jotting down thoughts, beliefs and consequences. It has shown many benefits and is one of the more popular choices for behaviour-based treatments.

**Social Skills Training**

Social skills training focused on making individuals with schizophrenia more independent, according to Kopelowicz, Liberman & Zarate (2006). These authors stated that using behavioural techniques could allow individuals to learn to manage their disorder along with developing skills for independent living.

**Focuses of social skills training.** Kopelowicz et al., (2006) stated that social skills’ training was described as being focused on using appropriate social behaviours, which will generalize over many situations and environments. These behaviours include learning to make effective decisions, stress management, bettering conversation skills, and learning to express emotions in an appropriate manner. Other important focuses include learning to manage their disorder. Overall, social skills training prepares individuals to learn socially appropriate ways of expressing themselves, and giving them skills to live successfully with their diagnosis. Liberman (2007) stated that certain social modules included in social skills training are as follows. Primarily, learning to perceive social cues were focused on. Particularly, leaving to receive and process these cues was focused on. This included learning to respond in a socially appropriate manner, either in a verbal or non-verbal mode. Secondly, goals were created collaboratively between therapist and client focused upon identifying situations where communication would be needed. This included deciding the type of communication that would be used, when the communication would be occurring, the importance of the situation and who the person on the other communicating end would be. These collaborative incremental goals concentrated upon matching long-term values in the individual’s life.

**Learning social skills.** According to Kopelowicz et al., (2006) the process of learning social skills can be an individually based, or in a group setting. Typical sessions included being led by 1 to 2 therapists with 4 to 12 individuals included. These meetings were stated to meet between 1 and 5 times a week, lasting between 45 to 90 minutes. As stated by these authors, patients who had previously completed this type of behavioural intervention had the ability to join these sessions as a training aide, helping others in session with their knowledge of applying social skills training to everyday situations. Socials skills reported being learned through many different behavioural mediums (Liberman, 2007). First described was modeling. The therapist used this in order to demonstrate appropriate behaviour in different situations. This allowed the individual to obtain skills through seeing positive modeling. These skills were described as being identified and adapted through seeing these behaviours being performed by another person. Roleplaying was included in the learning mediums. This included practicing appropriate real life scenarios. These role-plays can be used in individual or group format. Frequently practicing of these newly acquired skills was recommended. The frequent practicing of these skills should continue on until the level of appropriateness had reached social norms, and is able to be
implemented in everyday life situations. Additionally, relevant homework was described as being assigned between sessions.

**Psychoeducation**
Psychoeducation was described as a popular method for introducing people to their diagnosis (Wright et al., 2006). These authors stated that psychoeducation was used for educating individuals, family members, and other important parties about significant information related to schizophrenia.

**Uses of psychoeducation.** Aho-Mustonen et al. (2011) utilized psychoeducation to teach long-term offenders who were diagnosed with schizophrenia about their diagnosis and the details of the mental illness. The offenders covered many topics throughout the psychoeducational sessions. The sessions included learning about what schizophrenia is, the diagnosis criteria, what course the illness can take, symptoms, relapse signs, how stress influences the disorder, the effects of medications when used to treat schizophrenia, and psychosocial treatment options. The study found that patients receiving this approach had an improved quality of life, self-esteem and understanding the consequences of their illness.

Rummel-Kluge, Kluge and Kissling (2013) examined the use of psychoeducation over a period of five years in psychiatric hospitals in Europe. These authors found that psychoeducation was a regularly used treatment by the responders of the surveys. The use of psychoeducation was one of the most commonly dependable strategies for treating schizophrenia and its use had increased within the five years that were examined in the study.

Psychoeducation was designated as an advantageous treatment option. It provided educational information to individuals and family members. It allows individuals with schizophrenia to become empowered and be educated. After receiving psychoeducation, individuals should become aware of the course of their illness may take, and what can be done to prevent symptoms from occurring. An array of information was covered, leaving the individual feeling invested in their diagnosis, and allowing them to be as involved as possible while creating a prospective recovery treatment plan.

Although all of the above treatments have been used to treat schizophrenia, many of them vary in the way they do so. Behavioural activation, although used for negative symptoms of the disorder, has the potential of not working for the individual if their negative symptoms are at the very severe end of the spectrum. If the client completely lacks of motivation, they are unwilling to attempt the suggested activities at that point in time. Behavioural activation should be utilized with individuals experiencing negative experiences, and who are feeling lowered motivation to do activities in which they may have previously enjoyed.

As cognitive behavioural therapy focuses on challenging thoughts and beliefs, it has evidence based behind it for changing the way individuals interpret thoughts, and teach them to reexamine their associated behaviours and consequences. Although this treatment is evidence-based, if the client does not believe the efficacy of treatment, and CBT does not help them right away, the individual may not think CBT will help them. Also, if the individuals are in an active symptom period, trying to use CBT-based activities may not even be an option. These are valid obstacles to the impact of CBT, though, as reviewed above, it has been shown to have positive effects with individuals diagnosed with schizophrenia.
Lastly, psychoeducation was termed as a unique form of treating schizophrenia due to the fact it was not described as being a method to change behaviour; it is exclusively based on educating people on their disorder. This approach was effective in informing not only the diagnosed individuals, but also their family and friends. Being informed can lead the individual, their caregivers and family to feeling more informed. An unconstructive side to this treatment could be the lack of motivation to attend the informative meetings, or not believing the information provided. The individual may also not be convinced that they match the description of what is needed to be diagnosed with schizophrenia. Although all of the above treatments vary, they all attend to different aspects of schizophrenia.

Manuals in Treatment

Research of manuals. Najavits, Weiss, Shaw et al. (2000) researched how useful and effective manuals have been when used by practicing therapists. Thee categories included in the surveys were overall reactions to manuals, what an immaculate manual would entail and the evaluating therapists background. The overall results showed the therapists found manuals to be a very positive tool to have as a guide. Most frequently, these authors reported using manuals to refer back to information previously read. They also specified to discussing the information with other coworkers. It was also reported manuals were used to satisfy the need to learn new information, improve their current work, and a useful way to learn a new treatment. When the cognitive-behavioural therapists were asked about an ideal manual, the three highest-rated items on the scale were a description of individual procedures, solutions to possible problems, and rationale for treatment approaches using theories. The three least important pieces of information for a manual to have were listed as videotapes that demonstrated the procedures and techniques in the manual, a quiz at the end which would test the readers knowledge, and lastly, quizzes to test the clients amount of knowledge in regards to the material presented to them.

Conclusions from this study are as follows. These authors concluded that manuals have an overall positive role when being used by practicing therapists. These authors stated manuals were used as a resource when learning about different treatment options. Manuals were used on multiple occasions as reported by the therapists in the study, and were rated as highly beneficial to these working therapists.

Manuals were reflected as being found helpful and beneficial when after being rated highly by practicing therapists (Najavits et al., 2000). As the agency needed a centralized package of information, a manual was chosen due to its positive nature to be left for future placement students.

Summary

Within this literature review, many sources of information have been evaluated in order to piece together the needed criteria to recognize and diagnose schizophrenia. The DSM-5 has outlines a collaborative, detailed list of potential signs related to recognizing schizophrenia, and making it possible to diagnose this disorder. Multiple behavioural treatments, differentiating from educationally-based, to focusing on changing thoughts, and including positive behaviours in everyday life, have been discussed above. Pharmacological options were discussed as being able to treat symptoms of schizophrenia, but not without cautionary side effects. Although these medication-based treatments differ, trusted professionals are able to provide best practices to clients who may be stressed when dealing with difficult psychiatric symptoms. As shown above,
an assortment of choices are available to clients and families dealing with schizophrenia. Moreover, as reviewed above, manuals were evaluated as being useful, and a continuously used resource from practicing therapists. Overall, manuals were rated beneficial to the users.
Chapter III: Method

The agency in which the thesis manual was designed for is an in-patient unit treating people aged 18 to 64 years of age identified with a dual diagnosis. A dual diagnosis is described as an individual being diagnosed with developmental disability and concurrent mental health disorder or behaviour disorder. The clients within this agency had received psychological, behavioural and medical treatments while being an inpatient on this unit. The goal of this program was to conduct a short evaluation, then create a personalized recovery plan to transition these individual’s back into the community.

Participants
The manual has been prepared for future placement students. The placement students who use this manual in the future should be coming from a mental health, behavioural, or developmental college or undergraduate university educational background. This manual was designed to introduce and educate placement student with regard to one of the more prevalent mental health disorders within the dual diagnosis of the agency. Participants would benefit from reading the manual within the first week of placement in the agency.

Facilitators
Facilitators are not needed to implement this manual. One of their roles would be to provide the future students with the manual, if they felt that the placement student would benefit from using it. The other role would include answering any questions the reader may have after reading the manual. The manual should be kept in a safe and designated area to keep the manual in a usable and clean condition.

Design
The manual was designed to provide an overview of information related to schizophrenia, which is one of the more prevalent mental disorders within the agency. It was divided into four sections, to increase user practicality, and ease to find information. It would be best for others to read the manual in a quiet area, in order to be able to focus on it. When being used in the future, the facilitator or another staff member should answer all questions regarding information within the manual. There were not extra materials provided with the manual by the author. The user, depending on their knowledge level, may explore extra reading or materials in the case of wanting to expand their knowledge more, or find more information on a particular section. The use of the manual may be individualized so that future students only read some chapters, instead of the entirety of its information, depending upon their current level of knowledge of schizophrenia. The author created the manual on a 14-week field placement in the agency in which this manual was left.

Procedure
The manual (Appendix A) was divided into four parts. The first part of the manual focuses on preliminary information regarding schizophrenia. The information described what schizophrenia is, its prevalence, and its typical onset. The second part is the diagnostic criteria and symptoms of schizophrenia. The diagnostic criteria are from the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders. This section discussed the time periods needed to diagnose schizophrenia, the symptoms of schizophrenia, and their description. The third section,
behavioural treatments, explains their procedures and how they can be used for people diagnosed with schizophrenia. The last part of the manual covers pharmacological treatments. This part includes the more common typical and atypical antipsychotics to treat schizophrenia, along with their side effects, and what symptoms they treat. This section also included guidelines on how to increasing medication adherence in clients, and the key role of family members, community workers and physicians.

Confidentiality and Informed Consent

There was no need to collect informed consent or a confidentiality agreement when using the enclosed manual. This manual was designed for the dual diagnosis unit in which it was created. It should not be used in the future in another setting without permission from the author. This was due to the fact the manual was going to be used solely within the dual diagnosis unit, under the management of the supervisor the thesis author had within the agency.

Evaluation

Two placement students from a different program while on their 15-week placement in the same agency evaluated the manual using evaluation sheets created by the author. The first evaluator was 21 years of age, and the second was 36 years of age. Both were female. They were both completing their two-year diploma in Developmental Service Worker. They were both completing a 15-week field placement within the agency at the time they evaluated the manual. The evaluation sheets are included in Appendix B. The questions included in the evaluation were rated on a 5-point Likert scale. There were spaces included on the evaluation form leaving room for the evaluators to leave written responses. A pre-score of the evaluators’ knowledge regarding schizophrenia was recorded based on their recollection along with a post-score after reading the manual. Questions evaluating the manual included rating the clarity of information provided, understandability, what was learned the most overall from the manual, the presentation of information, and the diagnostic criteria. Their were also pre- and post-questions focusing on the behavioural and pharmacological treatments. Certain written questions focused on what was liked about the manual and what could be improved. These results are displayed in Appendix C. Overall all pre-scores reflected retrospective data, while post-scores were based on their current knowledge and opinions.
Chapter IV: Results

The purpose of using the questionnaire to evaluate the manual was to rate its educational value, clarity and usefulness. The hypothesis of this thesis was that the manual, when evaluated, had a quantity of valuable information for individuals who may not have much previous knowledge of many aspects of schizophrenia. The questionnaires used to evaluate the manual included pre- and post- questions that examined the knowledge of the evaluator. It used a Likert scale of 0 to 5 for quantitative results, as well as spaces for participants to fill in their own answers for the qualitative questions. No statistical tests were used to interpret these descriptive results.

Primarily, multiple questions on the feedback questionnaire asked for the participant’s knowledge of certain items before and after reading the manual. These pre- and post-scores are included below.

Overall Knowledge.

In the overall knowledge section, participant one scored a pre-score of 3.0. The post score of from this participant was a 4.0. There was an overall improvement of 1.0. Participant two had a pre-score of 2.0, followed by a post-score of 5.0. There was an overall difference of 3.0. The difference of these scores for participant one and two suggests an increase of understanding in overall knowledge of schizophrenia.

Behaviour Treatments.

In the behaviour treatments section, participant one had a pre-score of 4.0, and a post-score of 5.0 after reading the manual. There was an overall difference of 1.0 from pre-score to post-score. Participant two had a pre-score of 1.0, with a post-score of 5.0. There was an overall increase from the pre-scores to the post-score of 4.0.

Pharmacological Treatments.

In the pharmacological treatments section, participant’s one pre-score was 4.0, with the post score being 4.0. There was not an increase of scores, which suggests no change in the knowledge of this section. Participant two’s pre-score for this section was a 2.0, with a post-score of 5.0. The increase of 3.0 suggested an increase of knowledge in this section.

The evaluation of the mean scores of the overall knowledge, behavioural treatments and pharmacological treatments sections suggested the following. Two out of the three sections had potentially meaningful change. Two of the three section averages scored an average score of 2.0 or higher. This means 66.67% of the average scores, had a change that suggests improvement of the scores from pre- to post-manual knowledge.

Participant one’s scores increased in two of the three potential areas, leading to a score of 66.67%. This shows a small change in knowledge from pre- to post-knowledge in these sections. Participant two’s knowledge increased in three of the possible three areas, leading to a score of 100%. This suggests a higher increase of knowledge when compared to participant one.
Table 1. Pre- and post-scores of overall knowledge, behaviour and pharmacological treatments of Participants One and Two

<table>
<thead>
<tr>
<th>Manual Area</th>
<th>Pre-Score</th>
<th>Post-score</th>
<th>Difference</th>
<th>Mean Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participant One</td>
<td>3.0</td>
<td>4.0</td>
<td>+1.0</td>
<td>+2.0</td>
</tr>
<tr>
<td>Participant Two</td>
<td>2.0</td>
<td>5.0</td>
<td>+3.0</td>
<td></td>
</tr>
<tr>
<td>Behaviour Treatments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participant One</td>
<td>4.0</td>
<td>5.0</td>
<td>+1.0</td>
<td>+2.5</td>
</tr>
<tr>
<td>Participant Two</td>
<td>1.0</td>
<td>5.0</td>
<td>+4.0</td>
<td></td>
</tr>
<tr>
<td>Pharmacological Treatments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participant One</td>
<td>4.0</td>
<td>4.0</td>
<td>0.0</td>
<td>+1.5</td>
</tr>
<tr>
<td>Participant Two</td>
<td>2.0</td>
<td>5.0</td>
<td>+3.0</td>
<td></td>
</tr>
</tbody>
</table>

After reading the manual, ratings were given on multiple other sections related to the usability of the manual. The ranges of these scores were between 4.0 and 5.0 on all sections answered. Within the section of presentation, educational value, and understandability, both participants post-scores were a 5.0, the highest scores available. The totaled post-scores of participant one equaled to be 31 out of a possible 35. This lead to a percentage of 88.57% out of a possible 100%, which leads to a suggested possible significant score regarding the overall quality of information of these sections. Participant two had a total post-score of 35 out of a possible 35. This led to a percentage of 100% in the overall sections. This suggests a high quality of information within the manual.

Table 2. Pre- and post-scores of participant one and two on overall manual areas

<table>
<thead>
<tr>
<th>Manual Area</th>
<th>Participant One</th>
<th>Participant Two</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-score</td>
<td>Post-score</td>
</tr>
<tr>
<td>Presentation</td>
<td>-----</td>
<td>5.0</td>
</tr>
<tr>
<td>Educational Value</td>
<td>-----</td>
<td>5.0</td>
</tr>
<tr>
<td>Clarity</td>
<td>-----</td>
<td>4.0</td>
</tr>
<tr>
<td>Understandability</td>
<td>-----</td>
<td>5.0</td>
</tr>
<tr>
<td>General Life Areas</td>
<td>-----</td>
<td>4.0</td>
</tr>
<tr>
<td>Diagnostic Criteria</td>
<td>-----</td>
<td>4.0</td>
</tr>
<tr>
<td>Symptoms</td>
<td>-----</td>
<td>4.0</td>
</tr>
</tbody>
</table>
Chapter V: Discussion

Thesis Summary
As a first step, these results have revealed positive feedback in relation to the manual. Although optimistic, these results are not enough to support the hypothesis manual being a reliable educational piece of material. These results conclude the scores given converted in the direction of being clear and the content being valuable to individuals using the manual. Overall, all of the responses given increased, except for one, showed an increase of knowledge over the topics discussed, including overall general knowledge of schizophrenia. The results from these questionnaires provide preliminary support for the educational valuables of the manual of this agency, which was the intended purpose of this manual.

The focus of this thesis was to create a user-friendly manual to present a multitude of information about schizophrenia. The purpose of the manual was to be educational piece of material for placement students with the agency who are from multiple disciplines. Given the various disciplines, not all placement students have the same knowledge of schizophrenia. After analyzing the data collected from the feedback questionnaires, the results have shown although hopeful, the hypothesis is not fully supported. The results, while positive, were not enough to completely fulfill the hypothesis. The outcomes from the questionnaire had an array of positive comments about the manual, including the manner in which it was written. Other positive comments included the assortment of information provided and the informative nature of such material. Constructive feedback from the questionnaires suggested organizing the manual within a folder or binder. The constructive criticism was taken into consideration and the appropriate changes were made.

Conclusions from this thesis are as follows. Manuals were identified as a positive learning practice after examining the results. This manual, in particular was identified to have clearly explained examples of behavioural and pharmacological treatments. Clear and relevant information in regards to signs, diagnostic criteria and symptoms in an individual were also identified as positive characteristics.

Results in the Context of the Current Literature
Similarities between the literature reviewed and the thesis completed are as follows. This manual was designed following a review of the literature, on topics that were relevant to the topic of treating schizophrenia and its symptoms. The included treatments in this manual are evidence-based and have empirical literature to back up the treatments. Particular to this thesis is the literature focusing on the relevance and usefulness of manuals. Najavits, Weiss, Shaw et al. (2000) stated that manuals were found as a helpful learning guide by practicing therapists. This literature was found helpful when designing the schizophrenia manual. Although this thesis did not meet the anticipated hypothesis, there was hopeful progression towards creating a useful manual.

Strengths
One strength of this thesis is the overall utility of the manual. Comments from the feedback questionnaire ensued that this manual was a strong source of information. There were generally positive comments received regarding the overall usefulness of the manual. It received high marks for clarity, available information, and the description and explanations of treatments, behavioural and pharmacological for schizophrenia. Another strength was the variety of
information provided in the manual. The information ranged from symptoms, diagnostic criteria, evidence based behavioural treatments, pharmacological options and the associated information with the medication.

**Limitations**

A limitation to this thesis includes the limit of the results section. Due to the small sample size of individuals filling out questionnaires, one is restricted from making the assumptions that the data collected fits the hypothesis. The results from the questionnaires give a positive first step to completing the hypothesis, but much more data would need to be collected and reviewed. Moreover, the ‘pre-test’ scores are retrospective and rely on the participants’ recall, which is subject to bias and is of questionable validity. Another limitation to this thesis was the use of self-report measures in the evaluation section. The users may have used a response set, in which they continuously give themselves the same score on many different questions. The author did not use reverse scoring on the evaluation scores to prevent this from occurring. The evaluators may have also felt the need to given socially desirable answers while completing the evaluation, leading to unreliable scores.

**Challenges**

Challenges included attempting to explore the amount of information in which present in relation to schizophrenia and schizophrenia related disorders. Finding and sorting through evidence-based studies and theories were a challenge. Other challenges included the creation of the manual, and what information was the most relevant to becoming an educational manual. It was also challenging to work in a tight time constraint to create the manual.

Issues within this thesis include designing an informative manual, but in the information is displayed in a manner in which individuals who may have very little knowledge about schizophrenia are able to utilize the information. It was difficult to produce a manual that had easy readability to different populations of users.

**Multilevel Challenges**

**Client.** Although no clients participated in this thesis, this manual can impact them if those placement students become well informed about schizophrenia. An example of this may be the students’ development of a more complete understanding about how challenging people with schizophrenia find simple activities of daily living.

**Program.** The program in which this manual was created for has a unique population. The population of clients in this unit included clients who were diagnosed with a mental health and/or behaviour disorder, plus a concurrent developmental disability. Within such a fluid environment, the manual could help partially prepare students, participating in the treatment of the clients in this program. It is suggested that the facilitator, as to help the program continue to run well promptly answers the questions by the users of this manual.

**Societal.** Mental health is beginning to become a more popular topic of discussion on a societal level. This has led to an increase of needed accessible information in relation to mental health information, resources available to individuals with a disorder, including their friends and family members. This manual, while not available to broader public, is a ‘step in the right direction’ of having useful and reliable information available to those who wish to learn about schizophrenia.

**Further Recommendations**
It is recommended that further research of the usefulness of this and other educational manuals needs to be explored with a much larger sample size that was possible in the present thesis. It would be beneficial to test the way in which information is offered. Varying the way information is presented would communicate more about what is beneficial in the learning process when using manuals. If different methods of presentations were provided, and evaluated, this would link what is beneficial for learning, and what falls short. Due to the probability of the number of cases of schizophrenia within mental health agencies and psychiatric hospitals, these areas would be more advantageous to test manuals. In summary, more testing is needed to evaluate these and other manuals, and their usefulness in facilitating treatment implementation as well as the orientation of staff and students.

**Contribution to Behavioural Psychology**

This thesis contributes to the Behavioural Psychology field because of the creation of an educational manual. Education and being informed are a large part of the psychology field. If manual and educational information were not available, the learning of psychology, behaviourism, and treatment options available would be difficult. The creation of this manual while not meeting the hypothesis criteria identified by the thesis author, this manual was a beginning step to identifying beneficial learning options, to learn about particular mental health disorders. This thesis also focused on mental health, one of the largest populations targeted in behavioural psychology.
References


Norman, R., Malla, A., & McLean, T. (2002). Stress management programme may reduce hospital admissions among people with schizophrenia. *Evidence-Based Mental Health, 6*(52), 52. doi: 10.1136/ebmh.6.2.52


Introduction

This manual was designed to give an overview of general information related to schizophrenia. Included inside this manual is the diagnostic criterion from the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders. Also included are the most common choices and evidence-based behavioural treatments to use with people diagnosed with schizophrenia. Additionally, pharmacological treatments are explored that appear to have the most effect when treating symptoms of schizophrenia.

This manual is not to be used to diagnose any mental disorders; it is for educational purposes only. Diagnosis needs to be completed by a medical professional.

This manual was designed in part to fulfill the criteria of completing a thesis for a Bachelor of Applied Arts in Behavioural Psychology. It is not to be used for anything outside an educational manual. It is not to be reproduced without the author’s permission. Permission can be granted by contacting the author at carleestewart@live.com.
Part I. What is Schizophrenia?

Schizophrenia is a neurological, mental disorder that affects numerous aspects of an individual’s living and affects the performance of daily activities. This includes changes in emotions, behaviours and thoughts while this disorder is in its active phase.

This disorder affects around 1% of the worldwide population. Conclusions from a study done in 2013 stated out of every 1,000 Canadians, around 3.86 people have schizophrenia.

The commencement of this disorder typically begins between the ages of 16 to 30 years old. Onset of this disorder, before the age of 18, is known as early onset schizophrenia.

Biologically, this disorder has no single genetic marker. One of the more telling factors of the onset of schizophrenia is having a close family member having the disorder. Offspring of parents with a schizophrenic disorder have a much higher chance of developing schizophrenia.

Information on this page is from Lee & Schepp (2009), Davison et al. (2010), Blackwell (2013)
The phases of schizophrenia are as follows. The first phase of schizophrenia is the premorbid phase. This first stage is described as being the developmental period of an individual where they can become more vulnerable to schizophrenia. Some events, in which this phase focuses upon include:

• birth trauma
• lack of communication patterns in the family
• interruption of bonding time between mother and child

The second phase: prodromal, is described as a change in functioning from the first phase until the onset of psychotic symptoms. Changes described include:

• being withdrawn from social situations
• sleep patterns shifting
• changed levels of mood and anxiety

Lastly, the psychotic phase is described as being triggered by a stressful or emotionally charged event or hectic environment. In this phase individuals are said to experience:

• hallucinations
• delusions

Information from this page is from Lee, McGlashan & Woods (2005)
This phase also includes early and late recovery phases. An early recovery phase is the first six months after an individual has starting receiving treatment. The last recovery phase spans from the 6 month point to 18 months after following the early recovery phase. Following the onset of a first episode psychosis, treatment and recovery time, including the 5 years post onset is known as the critical period. During the critical period, studies have shown up to 80% of individuals have experienced decreased functioning during this period.

Schizophrenia has the ability to change the overall functioning of an individual’s life, from social performance to lacking personal hygiene. Other life aspects affected includes reduced economic capabilities, cognitive functioning, behavioural problems and independent living issues.

This disorder has many ways of presenting psychiatrically and physically. Bizarre thoughts, beliefs, and psychosis can interrupt daily living, which affects everyday functioning. Physical changes, changed hygiene practices, facial features and body positions have to the ability to affect the individual in a serious manner, with all the other indications above.

Information on this page is from Lee et al., (2005), Lee & Schepp (2009)
Within this manual, schizophrenia is explained in a detailed manner. Treatments, medications and other critical information are also expanded upon.
History of Schizophrenia

The first description of schizophrenia came from European psychiatrists. Specifically, Emil Kraepelin and Eugen Bleuler helped first define criteria associated with schizophrenia. In 1908, Bleuler introduced the term ‘schizophrenia’. It comes from the Greek words mind ‘split’ and ‘mind’.

Eugen Bleuler’s next step including exploring a common denominator of schizophrenia, due to the multitude of symptoms among the clients. The similarity that he offered was the ‘breaking of associate threads”, which applied to both thoughts and words. He also specified people with this diagnosis had a lack of an early onset, and no cognitive deterioration, which Emil Kraepelin was focused upon. In more recent research, Bleuler’s work has been noted as being respected and leading to helping create an expanded hypothesis of the disorder.

Information on this page is from Davison et al., (2013)
Part II. How is Schizophrenia Diagnosed?

When a person is presenting with issues related to schizophrenia, and a diagnosis is still questionable, medical professionals are able to utilize the diagnostic criteria of this mental health disorder in a book called the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*. Currently, the fifth edition of this book is available. A complete description of schizophrenia, along with many other mental health disorders is presented within the literature.

As this manual is focused on schizophrenia, the diagnostic criteria will be presented in order for better understanding of this mental health disorder. It is important to know that schizophrenia includes a variety of different signs and symptoms. There is not one single defining factor in relation to diagnosis.
How is Schizophrenia Diagnosed?

The symptoms listed below must be persistent for a period of one month, or would have persisted for that long, if treatment had not been started. If the symptoms below persist for a period of time other than the one-month needed for diagnosis, they are known as residual symptoms.

The five categories below are listed in the DSM-5 in which the symptoms of schizophrenia predominantly present as:

- Delusions
- Disorganized Speech
- Negative Symptoms
- Hallucinations
- Grossly Disorganized or Abnormal Motor Behaviours

Information on this page is from the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (2013)
Delusions

Delusions are labeled as a key feature of schizophrenia. Delusions are described as having a belief, or multiple beliefs. These beliefs are fixed, and if accurate evidence is presented to the individual concerning the unrealistic features of their belief, the individual’s idea can be very difficult to change. Delusions usually revolve around a theme, such as religion, and can be described as being ‘over the top’ in comparison to a realistic persons ideas.

The six categories of delusions referenced in the DSM-5 are:

- Referential
- Grandiose
- Nihilistic
- Erotomanic
- Persecutory
- Somatic

Information on this page is from the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (2013)
**Referential Delusions:** Focused upon gestures and cues from another person, or people. The individual believes that certain gestures and cues are being directed straight at them.

Example: The individual believes their neighbor is watching at them, after they observe their neighbor looking out of their window in their general direction.

**Grandiose Delusions:** The individuals believe they have become rich (ex. thinking they have inherited a large monetary fortune). They also may believe that they are famous, as well thinking they have some sort of an extra power.

Example: An individual believes a family member has left them a million dollars, they are a celebrity or they have X-ray vision powers.

**Nihilistic Delusions:** A belief revolved around thinking a major catastrophe is going to happen.

Example: The individual may believe the world is going to end on a certain date, or an earthquake is going to occur.

Information on this page is from the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (2013).
**Erotomanic Delusions:** The delusional individual believes another person is in love with them. This occurs even though there is no evidence that the other person is in love with them.

Example: An individual believes their coworker is in love with them.

**Persecutory Delusions:** Believing a particular group, or organization is targeting or is going to target the delusional individual.

Example: An individual may believe the local police forces are targeting them.

**Somatic Delusions:** Fixed beliefs in which revolve around personal health issues.

Example: An individual may believe their internal organs are not working properly.

The diagnostic criteria associated with delusions are stated as difficulties in at least one, or more of the listed categories for a period of six months.

Information on this page is from the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (2013).
Disorganized Speech

Symptoms of disorganized speech can be displayed in many different ways from a person experiencing them. Disorganized speech has many different forms when the symptom is presented. During a residual period of the disorder, disorganized speech may present at a less severe level. Problems in diagnosing this symptom include language barriers from physicians or the client.

Categories present in disorganized speech include:

- loose associations
- incoherence
- tangentiality.

**Loose Associations:** The act of a consistent change of themes while engaged in conversations. The individual may switch topics very frequently while experiencing loose associations.

Example: While talking to an individual, a conversation is very hard or impossible to carry on due to the constant switching of topics. Varying themes may also make conversation difficult to follow or continue.
**Incoherence:** The extreme disorganization of spoken words. This symptom can be so severe that the words spoken by the individual are delivered at an unrecognizable degree. This symptom has been nicknamed ‘word salad’.

Example: An individual talking, but is saying a multitude of jumbled words that have no connection to each other.

**Tangentiality:** When asked a question, the individual experiencing tangentiality will respond with an answer that is not related to the asked question.

Example: Asking a client about how their day is going, and the person experiencing this symptom replying about something completely non-related to how they would describe their day.

The diagnostic criteria for disorganized speech are stated as needing to be severe enough to worsen effective communication at a significant level.
Negative Symptoms

Negative symptoms of schizophrenia are one of the most significant parts of recognizing the disorder. Negative symptoms can appear in other psychiatric disorders, but are of the most prominence in schizophrenia. Within the DSM-5, primary and secondary symptoms are listed.

Primary negative symptoms include:

- **Avolition**
- **Lessened emotional expression**

**Avolition**: A decrease of motivation in relation to self-initiated activities. These activities may include occupation and social activities. A lessened interest in activities the client found purposeful before the onset of these symptoms may occur. Part of avolition can include the individual sitting for long periods of time.
**Lessened Emotional Expression:** A decrease in expressions, which show on the individuals face. The normal facial expressions that accompany speech are decreased. This includes a lack of eye contact, reduced emotion in the face. Another descriptor of lessened emotional expression includes a change of rhythm in speech. Secondary to facial and linguistic changes, a change in body movements that would typically accompany speech is decreased. Changes include the lack of movement in the face, head, and hand, which are typically emphasized while speaking.

Secondary negative symptoms include:

- **Alogia**
- **Anhedonia**
- **Asociality**

**Alogia:** A decrease in speech output. This would present as the client speaking at a level that is less than what is typically presented by them.

Information on this page is from the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (2013).
**Anhedonia:** A reduction in the ability to experience pleasure from preferred activities. The client may also have reduced pleasure while positive stimuli is present. This symptom also may present as the individual being unable to recall the amount of pleasure they experienced, when they had been engaged in a previously completed activity.

**Asociality:** The lack of desire to participate in social activities. When this symptom is present, the individual may show a lack of interest in regards to joining in social activities. This symptom may be associated to the lack of social activities available to the individual.

As specified above, negative symptoms are a substantial clue while diagnosing schizophrenia.
Hallucinations

Hallucinations are involuntary visual or auditory experiences that occur without outside stimuli. They appear to the individual experiencing them as clear and intense. They may appear to the person experiencing them as a normal occurrence.

In people experiencing schizophrenic symptoms, auditory hallucinations are the most likely to occur. Auditory hallucinations are common in people with disorders such as schizophrenia and other schizophrenic disorders. Hallucinations of this manner are commonly experienced as voices, different from the experiencing person’s own thoughts. The voices may appear as being familiar or unfamiliar to the person experiencing them. Hallucinations that occur when an individual are falling asleep, or waking up, are considered a normal experience.

In relation to diagnostic criteria, hallucinations must occur when the individual is in a clear sensory state.

Information on this page is from the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (2013).
Grossly Disorganized or Abnormal Motor Behaviour

As many of the other symptoms of schizophrenia, grossly disorganized or abnormal motor behaviour is able to present in a variety of ways. This symptom can present from being extremely agitated, which can very unpredictable, to be extremely silly, presenting in a childlike state.

Other than ranging from one extreme to another, this symptom has the ability to present in the form of changing behaviours that relate to achieving goals. These symptoms may present as challenges in daily activities.
One of the primary symptoms in this category includes catatonia.

**Catatonia:** A decrease in reactivity to the individual’s environment. It also has a variety of symptoms. On the high range of catatonia, individuals may have excessive motor behaviours, which are purposeless, and have no obvious cause. These behaviours are known as catatonic excitement.

On the low side of catatonia, individuals may not respond verbally to stimuli, along with a lack of motor reactions. Individuals may display negativism, which is described as being resilient to given instructions. Mutism from the individuals also can occur.

Physical symptoms of catatonia may present as changes in the individual’s posture, unusual speech abnormalities, and particular facial expressions. An individual’s posture has the ability to become very rigid, bizarre or inappropriate. Changes in speech include echoing of words, or the lack of speech, as mentioned above. Facial expressions are described as repeating certain looks such as grimacing and staring.

As noted in the DSM-5, catatonia has the tendency of being associated with schizophrenia, but does appear in other psychiatric disorders. Catatonia may also appear in certain medical disorders.

Information on this page is from the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (2013).
Other Important Diagnostic Criteria Information

It is important to note the levels of functioning in an individual must be decreased in comparison to the baseline level the individual had prior the onset of the disorder. This is a large part of helping in the diagnostic process of schizophrenia.

Assessing symptoms related to mania, depression and certain cognitions could be very important in helping with the diagnostic criteria.

The use of alcohol and drugs, medical ailments or illegal substances, need to explored to ensure they are not the cause of the symptoms the individual is experiencing.

Information on this page is from the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (2013).
Other psychiatric disorders need to be ruled out before diagnosing schizophrenia. Typical disorders, which may need to be ruled out before diagnosing schizophrenia, include bipolar disorder with psychotic features, depression with psychotic features, or schizoaffective disorder.
Part III. Behavioural Treatments of Schizophrenia

Behavioural treatments focus on changing behaviours displayed by an individual. These can focus on cognitions, what behaviours occur from the belief, and the consequences involved. Other treatments in this section include learning about the specific disorder, and making themselves as educated as possible. Listed below are many of the most common, and trusted treatments for treating the behavioural aspects of schizophrenia.
Cognitive Behavioural Therapy

Cognitive behavioural therapy (CBT) is one of the most popular and well-known methods for treating symptoms of many mental illnesses. It is based on two rationales.

1. Thoughts have the ability to effect emotions and lead to behaviours.
2. The way, in which we behave is able to effect thought patterns and has the ability to effect our emotions.

Cognitive behavioural therapy is focused on certain thoughts, and works to change those thoughts, so the distress associated with them are changed, and lead to different consequences. This method concentrates on the relationships between antecedents, thoughts, and consequences.

Utilizing CBT with clients can be paired with a visual aspect. It is a chart with three columns to visually analyze and connect the antecedents (column A), to the belief (column B), and see the consequences and results in the last part (column C). This is known as the ABC model.

Information on this page is from Wright, Basco & Thase (2006)
Using CBT with clients can be done in multiple steps.

**Active Listening:** CBT sessions begin with the therapist using engaged and active listening while the client describes the thoughts they are currently experiencing.

**ABC Model:** Therapist introduces ABC model to client. It is explained as a model that examines relationships between thoughts, beliefs and the consequences.

**Column A:** The antecedent of the thought. What had occurred before the negative thought, according to the client. It is important for the client to be able to describe what happened in their own terms, in order for them to feel in control of changing their beliefs.

**Column B:** The belief associated with the antecedent from the first column. The therapist first assesses the belief. This is followed by a discussion of the beliefs between therapist and client.

Information on this page is from Wright, Basco, & Thase (2006), Hofmann, Asnaani, Vonk, Sawyer & Fang, (2012), Kingdon & Turkington, (2006)
**Column C:** The consequences from the beliefs. There is a summary of what happened to the client after they experienced the belief. Also examined is how the belief affected the outcome the client experienced. Client and therapist discuss the relationships and connections between the three columns.

This model can be used in sessions, along with the client doing it themselves outside of sessions, and reviewing it with the therapist during their next meeting time. This model is also available to examine delusions. It used the same ABC model, and is known as the Rational-Emotive Cognitive Model. The columns are used to divide what happened before the delusional thought occurred, what the delusions thought is, and the consequences of such thought. Again, like the model shown above, connections and relationships are discussed between the three columns.

This model has shown decreases in anxiety and depression, but has increased overall functioning, and boosted self-esteem.

Information on this page is from Wright, Basc, & Thase (2006), Hofmann, Asnaani, Vonk, Sawyer & Fang, (2012), Kingdon & Turkington, (2006), Quintin, Belanger & Lamontagne (2012)
Social Skills Training

Social skills’ training is another popular, evidence-based option available for people with schizophrenia to improve functioning in everyday life. Social skills training is described as a behavioural technique focused on learning activities in which promote healthy living and daily skills. This training is focused on overcoming negative symptoms and cognitive deficiencies. Training can occur in groups, with families or individually.

Social skills training uses behavioural based techniques to teach the individuals appropriate behaviours. Reinforcement schedules, errorless learning, and contingent reinforcement are used to teach the client their new skills. Other behavioural techniques include cueing, observational learning, prompting, and modeling appropriate skills and behaviours. These skills are focused on being able to be generalized over many environments and situations. When social skills training are paired with schizophrenia, it is best to approach the learning of the skills with an overlearning assertiveness, and repeat the practice over and over. It is important to break down the steps into numerous, small ones, in order to be successful.

Information on this page is from Kopelowicz, Liberman & Zarate, (2006)
Positive reinforcement is extremely important. Acceptable responses and behaviours are to be met with a lot of positive reinforcement to continue to be successful in the training.

Topics covered in social skills training include:

**Social awareness**
- Ex. being able to read facial expressions of others

**Appropriate social behaviour that fits into social norms**
- Ex. Speaking appropriately to a police officer

**Skills to expression emotions**
- Ex. Learn to express in a positive manner

**Handling social information**
- Ex. Interpretation of the significance of expressions

**Effective verbal or nonverbal skills**
- Ex. Being able to communicate effectively

**Instrumental role skills**
- Ex. renting a room,
- Buying food
- Occupational skills

**Interactional skills**
- Ex. Initiating, continuing and ending conversation

Information on this page is from Kopelowicz, Liberman & Zarate, (2006)
Social Skills Training

Evidence states strengthening social skills of people with schizophrenia can help them develop abilities to curb negative reactions to stressful situations, and social situations.

These skills will also give more self-confidence when dealing with worrying situations. These skills have been linked to higher self-reported self-confidence and life satisfaction. They have also aided in medication compliance, and healthy advancement towards recovering.

Information on this page is from Kopelowicz, Liberman & Zarate, (2006)
Stress Management

Stress has been shown to effect individuals diagnosed with schizophrenia. It has been shown that natural physical stress reactions connect with symptom severity displayed within people with schizophrenia. Other studies have shown that some individuals with schizophrenia are more responsive to stress than others when dealing with stressors.

Specifically, a study focused on stress management, showed positive results after a group stress management-learning group, which lasted 12 weeks.

Topics covered in this group included:

- Muscle relaxation
- Increasing physical endurance to stress
- Cognitive skills
- Behavioural skills

Results showed participating members had fewer hospitalizations, over the group in the study who did not receive stress management training.

Results were collected during a one-year follow up. Authors from this study recommend individuals with schizophrenia should get training in various coping skills to reduce schizophrenic symptoms.

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Other topics in which can be covered in stress management groups includes the following:

- Education relating to schizophrenia
- Problem-solving skills
- Social skills teaching

Family support can be of the upmost importance during the time of learning to live with schizophrenia, but as the person works on balancing medications, life stressors and symptom management. In an article focusing on parents being informed about their children with schizophrenia, it is recommended for parents and families to get the effected person help as soon as possible. Community mental health teams, intervention teams and psychiatrists are available to help families and individuals. Hospitalization admissions for a phase of time may aid in stabilizing the individual.
**Behavioural Activation**

Behavioural activation is an evidence-based technique, which focuses on adding meaningful events into an individual’s day. It can be used with negative symptoms of schizophrenia, in order to increase the amount of activities that are being accomplished on a daily basis.

Behavioural activation is typically used in counseling sessions. A therapeutic relationship should be developed before attempting to introduce certain behavioural techniques. Therapists should introduce this technique after a few sessions.

**Small steps:** Therapists should begin with small steps when working with the clients.

**List usual activities:** Therapists encourage clients to list the daily activities they engage in at that current time. These activities can range in dimension. Examples of the activities could be having a shower, going for a walk, reading the newspaper, going grocery shopping, visiting with friends and family, and going to the gym.

The clients should list as much as possible, allowing for a variety of activities to add into the behavioural activation schedule.

Information on this page is from Wright, Basco & Thase (2006), Mairs, Lovell, Campbell & Keeley (2001)
**New activities:** Therapist and client brainstorm new activities, in which could be added to the weekly schedule. The new activities could be something the client enjoyed doing before, but has stopped due to negative symptoms, or a new activity the client is able to successfully complete.

**Reinforcement:** Therapists ask the client to divide the activities from the previous step. The activities should be divided from very reinforcing to least reinforcing.

**Pleasurable:** Collaboratively, the therapist and the client list the activities from most to least pleasurable.

**Add activities:** Together, the client and therapist will decide what activities can be added into a weekly schedule for the client to follow. An example of the weekly schedule template is on the following page.

**Goals:** Create achievable goals in relation to the new and old activities from the steps above. The goals need to be achievable, realistic and attainable.

Information on this page is from Wright, Basco & Thase (2006), Mairs, Lovell, Campbell & Keeley (2001)
The goals need to be reviewed, and changed as needed with therapist to ensure success. Goals will need to be adjusted to meet the client’s needs and ensure they are successful while using behavioural activation.

This technique has helped individuals increase motivation, be encouraging in planning new daily activities, as well as encourage feelings of hope and positive movement.

Included on the next page is a blank example of a weekly behavioural activation schedule. It is broken down into daily sections ranging from Monday to Sunday, with the hours of 7 am to midnight included. From this example, it is easy to visualize the therapist and client working collaboratively together to fill out the schedule with activities the client is currently engaged in.

Information on this page is from Wright, Basco & Thase (2006), Mairs, Lovell, Campbell & Keeley (2001)
## Behavioural Activation Schedule

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Psychoeducation

Psychoeducation is a behavioural technique in which is focusing primarily individuals with a certain diagnosis, family members and other important individuals learning important information. Psychoeducation is described as educating individuals about their diagnosis, and critical related information. It is used commonly, and is one of the most applicable treatment options for treating mental illnesses. Psychoeducation typically is conducted in-group sessions. This allows the participants to share thoughts and feelings and may include homework that is to be completed in between sessions. This treatment option aims at empowering individuals and using hope-promoting approaches.

Topics that are typically discussed include, but are not limited to include:

**Orientation to the group**
- What is expected from the group
- What is expected of the participating individuals

**The Disorder**
- What is schizophrenia?
- What it feels like to have schizophrenia from the individuals viewpoint
- What schizophrenia appears like to family, friends, workers

Information on this page is from Aho-Mustonen et al. (2011)
The Diagnosis of Schizophrenia
• How is schizophrenia diagnosed?
• Who can diagnose schizophrenia?
• What is the diagnostic criterion?

Signs and Symptoms of Schizophrenia
• What are the signs on schizophrenia?
• What are the symptoms of schizophrenia?

What course can the disorder take?
• What can happen to individuals diagnosed with schizophrenia?
• Prevention of relapses

Stress and Schizophrenia
• The relationship stress has with schizophrenia

Medication Information
• How to take medication
• What does the medication treat?
• Side effects discussed
• Medication questions discussed and answered

Treatments for Schizophrenia
• What other treatment options are available
• What do treatments help with?
• How will different treatments help?

Information on this page is from Aho-Mustonen et al. (2011)
Other topics can be discussed at the individual and group needs during the sessions.

This treatment option has shown improvements in the categories of increasing knowledge in relations to individual’s diagnosis, along with increasing self-esteem and improved quality of life.

Information on this page is from Aho-Mustonen et al. (2011)
Part IV. Pharmacological Treatments

A large part of treating schizophrenia is utilizing medications prescribed by medical professionals. Authors have found that people diagnosed with schizophrenia have a much more difficult time following a medication routine. When clients are being passive about the medication they are using, their chances of relapse are greater, increasing their chance of being admitted to a hospital. Many steps have to be taken when deciding what pharmacological treatment would be best for the individual who will be taking them.

Listed on the next few pages are the most common antipsychotics used to treat schizophrenia. Listed with those are the side effects, what age groups the drug is designed for, and what symptoms they are made to target. As included are tips for increasing fidelity with medications.

Information on this page is from Canas et. al., (2013)
Antipsychotic Medications

Listed below are the most common antipsychotics used to treat the symptoms of schizophrenia. The first category of medication is atypical antipsychotics.

Atypical Antipsychotics

risperidone (Risperdal)

- Able to use in adolescents between the ages of 13-17 for the treatment of schizophrenia
- Able to in adults for the treatment of schizophrenia

Symptoms treated:

- Short team manic episodes

Common side effects:

- Increased chance of death in the elderly with dementia-related psychosis
- Elevated blood sugars in patients with diabetes
- Feeling the need to pace
- Sexual dysfunction

Information on this page is from Patient Information Sheet Risperidone (generic) (2012)
Drug interactions:

- Tegretol clears risperidone quicker from the bottom
- Prozac slows risperidone when leaving the body
- Paxil slows risperidone when leaving the body
quetiapine (Seroquel)

Symptoms treated:

- Hearing voices
- Seeing and sensing objects that are not realistic
- Over suspiciousness
- Delusions

Common side effects:

- Increased suicidal thoughts
- Increased chances of stroke
- Low blood pressure
- Trouble swallowing
- Dizziness
- Fainting
- Impaired thinking and judgment
- Impaired motor skills

Drug Interactions:

- Seroquel levels may be effected from Dilantin, Tagamet and Ativan
apriprazole (Abilify)

- Able to use in adolescents between the ages of 13-17 for the treatment of schizophrenia
- Able to in adults for the treatment of schizophrenia
- Not approved for use in elderly people with dementia

Symptoms treated:

- Sensing and seeing objects that are not realistic
- Suspicious feelings
- Hearing voices

Side Effects:

- Increased chance of stiffening muscles
- Tardive dyskinesia
- High blood sugar
- Sleeping issues

Information on this page is from Patient Information Sheet apriprazole (2011)
paliperidone (Invega)

• Able to use with adolescents between the ages of 12-17
• Able to use with adults

Symptoms treated:

• General schizophrenia symptoms

Common side effects:

• Hyperprolactinemia in females: Missing menstruation, leaking breast milk
• Hyperprolactinemia in males: Sexual dysfunction, breast development
• Low white blood cell count
• Lightheadedness

Used with permission from Microsoft.

Information on this page is from Your Medication Information paliperidone (2012)
clozapine (Clozaril)

Symptoms treated:

- Suicidal behaviour
- Treatment-resistant psychosis for chronic-risk individuals

Common side effects:

- Seizures (with higher medication dosages)
- Inflammation of the heart muscles
- Strokes
- Dizziness
- Dry mouth
- Fever
- Sedation
- Sweating
- Agranulocytosis: Blood cell blood disorder, where the white blood cells decrease, potentially leading to being unable to fight infections

Blood tests are needed to keep track of white blood cell counts

Weekly for the first six months, then biweekly for the rest of the time the individual is on the medication

Information on this page is from Sinacola & Peters-Strickland (2012), Your Medication Information: Clozapine (generic) Clozaril (Brand) (2012)

The second category of medication is typical antipsychotics.
Typical Antipsychotics

chlorpromazine (Thorazine)

Symptoms treated:

- Psychotic disorders
- Manic episodes
- Behavioural problems in children

Common side effects:

- Drowsiness
- Catatonic states
- Hyperglycemia
- Dry mouth
- Nasal congestion
- Appetite changes

- Should not be used with individuals who use large amounts of alcohol and drugs

Information is on this page is from Brown University Chlorpromazine (generic), Thorazine (brand). (2002)

haloperidol (Haldol)
Symptoms treated:
  • Psychotic disorders
  • Tourette’s syndrome

Common side effects:
  • Rigidness
  • Slowed movements
  • Mild sedation
  • Body temperature changes

Drug Interactions:
  • Lithium: leads to increased chance of dehydration
  • Tegretol: decreased blood levels
  • Alcohol and drugs to be used cautiously when using this medication

Information on this page is from Haloperidol (generic) Haldol (Brand) (2004)
Although these medications help reduce the symptoms of schizophrenia, many problems may arise when taking these medications. Some of the most common side effects of these medications include:

- Skin rash
- Sun sensitivity
- Impaired vision
- Quickened heart beat
- Feeling lethargic
- Metabolic changes
- Weight gain

Also described in many of the antipsychotic medication sections under side effects is neuroleptic malignant syndrome (NMS). It is described as having a high fever, sweating, changed blood pressure, irregular or quickened heartbeat, stiffened muscles, and the feeling of confusion. NMS has the ability to affect the individual’s kidneys. This side effect is listed as a medical emergency, and help is to be contacted right away.

One of the most serious and potentially lasting side effects of antipsychotic medications includes tardive dyskinesia (TD). Tardive dyskinesia is described as involuntary muscle movements throughout the body, after a long period of medication use. Even if the medication is discontinued, this side effect may not.

Information on this page is from Sinacola & Peters-Strickland (2012), Your Medication Information: Clozapine (generic) Clozaril (Brand). (2012)
It is very important to note the side effects listed in this manual is not a complete list of side effects of all the medications listed. The side effects listed in this manual are some of the most noticeable, but more information about side effects should be researched through reliable medication information sources.
Tips for Increasing Medication Adherence

These following tips have been recognized in helping individuals, family members, community partners and other help increase medication compliance.

Recognize individuals with schizophrenia may have poor medication compliance.

- Extremely important for prescriber and client to work as team when choosing medication
- Choose medication routine that will satisfy both parties
- Prescriber needs to monitor client while on medication, and make changes if needed
- Lack of adherence is not always intentional, the individual may not possess the skills to comply to medication, or be able to take their medication
- Clients may endure a lack of motivation, disagree with the treatment option, or have a lack of insight of how the medication has the potential to help

Information on this page is from Canas et. al., (2013)
Create a non-judgmental environment.

- Prescriber should present as non-judgmental to client
- Environment should feel safe, confidential, and trusting
- Prescriber and client should create a therapeutic alliance, this is listed as a very important step by the authors
- Use of open questions between parties, aids in communication
- Positive relationships between parties have been shown to help in the recovery process of the client

Use Individualized Planning

- Medications should be chosen in regards to individual’s personal needs (ex. injections for clients who will not use oral medications)
- Collaboratively choose medication
- Clarify side effects, address concerns
- Allow individuals to make informed decisions

Information on this page is from Canas et. al., (2013)
**Involve Other Parties**

- Involve caregiver, family members, friends in psychoeducation and care plans
- Other parties can help to offer insight in medication compliance of the individual
- Benefits from involving other parties: positive attitudes toward treatment, increased support, intervening when needed, support with symptoms
- Involving other parties has shown to reduce relapse rates, and improving medication adherence

**Make Care Effective**

- Ensure treatment is as effective as possible to benefit the client
- Prescriber can recommend community treatments (ex. CBT therapy)

Information on this page is from Canas et. al., (2013)
Ensure Care Is Continued

• Create a care plan

• Use the supports within the environment

• An essential step for recovering individuals

• Research has shown continuing care reduces hospitalizations and mental health agency services

Information on this page is from Canas et. al., (2013)
References


Norman, R., Malla, A., & McLean, T. (2002). Stress management programme may reduce hospital admissions among people with schizophrenia. *Evid Based Mental Health, 6*(52), 52. doi: 10.1136/ebmh.6.2.52


Appendix B: Manual Evaluation and Feedback Form

Please use this sheet to evaluate the manual.

1. On a scale of 0 (not very knowledgeable) to 5 (extremely knowledgeable), how much information did you comprehend about schizophrenia before reading the provided manual?

   0   1   2   3   4   5

2. On a scale of 0 (not very knowledgeable) to 5 (extremely knowledgeable), how much information do you feel you now comprehend about schizophrenia after reading the manual?

   0   1   2   3   4   5

3. In relation to the above two questions, what did you feel like you learned the most from this manual overall? Please provide an answer below.

4. How would you rate the presentation of the information in this manual? (0 being not pleasing to the eye, 5 being extremely pleasing to the eye)

   0   1   2   3   4   5

5. On a scale from 0 (not very educational) to 5 (very educational), how would you rate the educational value of the entirety of information provided in this manual?

   0   1   2   3   4   5

6. On a scale from 0 (not very clear) to 5 (extremely clear), how clearly presented was the entirety of information?

   0   1   2   3   4   5

7. On a scale from 0 (not understandable) to 5 (very understandable), was easily understood was the entirety of information provided in the manual?

   0   1   2   3   4   5

8. Did the introduction section give a clear understanding of the general life areas schizophrenia effects? (0 being not clear at all, 5 being extremely clear)

   0   1   2   3   4   5
9. Was the diagnostic criterion of schizophrenia explained in a clear manner? (0 being not clear, 5 being extremely clear)

   0  1  2  3  4  5

10. Where the symptoms of schizophrenia clearly explained in the manual? (0 being not clear, 5 being extremely clear)

   0  1  2  3  4  5

11. How knowledgeable were you were in behavioural treatments of schizophrenia prior to reading the manual? (0 being not very knowledgeable, 5 being extremely knowledgeable)

   0  1  2  3  4  5

12. After reading the manual, do you feel as thought you have a more widespread knowledge of behavioural treatments used for people with schizophrenia? (0 being not very knowledgeable, 5 being extremely knowledgeable)

   0  1  2  3  4  5

13. In the behavioural treatments section, were the different treatments explained in a clear manner? (0 being not clear at all, 5 being extremely clear)

   0  1  2  3  4  5

14. How knowledgeable were you in regards to pharmacological treatments for people diagnosed with schizophrenia prior to reading this manual? (0 being not familiar at all, 5 being extremely familiar)

   0  1  2  3  4  5

15. After reading the manual, how would you rate your knowledge in regards to preferred pharmacological treatments for people with schizophrenia? (0 being not very knowledgeable, 5 being extremely knowledgeable)

   0  1  2  3  4  5

16. In the pharmacological section, were the different pharmacological options explained in a clear manner? (0 being not clear at all, 5 being extremely clear)

   0  1  2  3  4  5
17. What did you like about the manual? Please be detailed.

18. What did you not like about this manual? Please be detailed.

19. What could be changed in the manual to make it more user friendly?

20. Please leave other detailed comments and concerns below.

Thank you for participating honestly in this evaluation.
### Appendix C: Raw Data from Participant One and Two

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<tr>
<th>Manual Area</th>
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<th>Post-score</th>
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