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Original Research Paper

Nursing

KEYWORDS: :

Schizophrenia

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ABSTRACT

The prevalence of schizophrenia is thought to be about 1% of the population around the world; thus it is more common than diabetes, Alzheimer's disease, or sclerosis. The diagnosis of patients with schizophrenia fills up about 25% of all in patients at United States and Canada. The disorder is considered to be one of the top ten causes of long-term disability worldwide.

INTRODUCTION:

Schizophrenia, a disease of the brain, is one of the most disabling and emotionally devastating illnesses known to man. But because it has been misunderstood for so long, it has received relatively little attention and its victims have been undeservingly stigmatized. Schizophrenia is not a split personality, a rare and very different disorder. Like cancer and diabetes, schizophrenia has a biological basis; it is not caused by bad parenting or personal weakness. Schizophrenia is, in fact, a relatively common disease, with an estimated one percent to one and a half percent of the U.S. population being diagnosed with it over the course of their lives. While there is no known cure for schizophrenia, it is a very treatable disease. Most of those afflicted by schizophrenia respond to drug therapy, and many are able to lead productive and fulfilling lives.

Schizophrenia affects more than 21 million people worldwide. It is a treatable disorder. One in two people living with schizophrenia does not receive care for the condition. Care of persons with schizophrenia can be provided at community level, with active family and community involvement.

Definition:

Schizophrenia is a severe mental disorder, characterized by profound disruptions in thinking, affecting language, perception, and the sense of self. It often includes psychotic experiences, such as hearing voices or delusions. It can impair functioning through the loss of an acquired capability to earn a livelihood, or the disruption of studies. (By WHO).

Schizophrenia is a psychotic disorder (or a group of disorders) marked by severely impairedthinking, emotions, and behaviors. Schizophrenic patients are typically unable to filtersensory stimuli and may have enhanced perceptions of sounds, colors, and other featuresof their environment. Most schizophrenics, if untreated, gradually withdraw from interactionswith other people, and lose their ability to take care of personal needs and grooming. (By Medical Dictionary).

A mental disorder characterized by loss of contact with the environment, by noticeable deterioration in the level of functioning in everyday life, and by disintegration of personality expressed as disorder of feeling, thought (as in delusions), perception (as in hallucinations), and behavior—called also *dementia praecox (Medical Definition).*

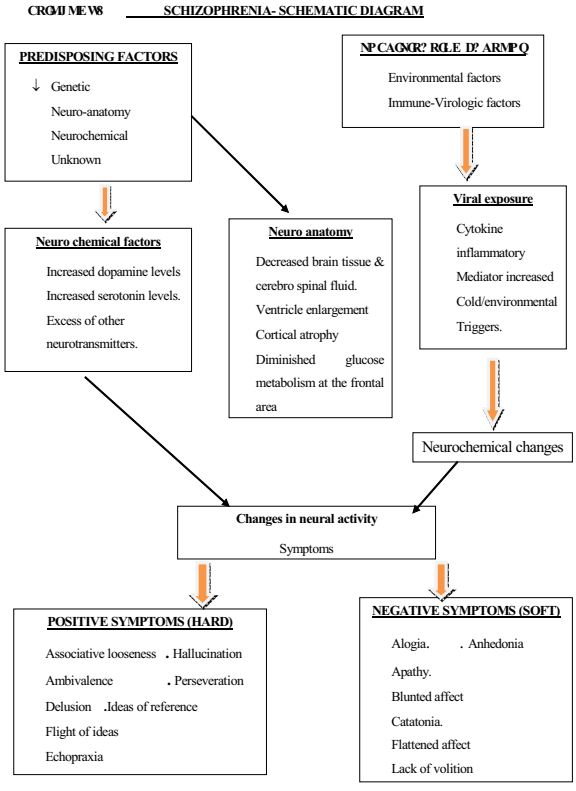
EPIDEMIOLOGY:

- Schizophrenia is diagnosed 1.4 times more frequently in males than females, and typically appears earlier in men.
- The peak ages of onset are 20–28 years for males and 26–32 years for females.
- Onset in childhood is much rarer, as is onset in middle- or old age

THE ICD-10 CLASSIFICATION:

F20 Schizophrenia
F20.0 Paranoid schizophrenia
F20.1 Hebephrenic schizophrenia
F20.2 Catatonic schizophrenia
F20.3 Undifferentiated schizophrenia
F20.4 Post-schizophrenic depression
F20.5 Residual schizophrenia
F20.6 Simple schizophrenia
F20.8 Other schizophrenia
F20.9 Schizophrenia, unspecified

A fifth character may be used to classify course:
x^0 Continuous.
x^1 Episodic with progressive deficit.
x^2 Episodic with stable deficit.
x^3 Episodic remittent.
x^4 Incomplete remission.
x^5 Complete remission.
x^8 Other.
x^9 Course uncertain, period of observation too short



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Genetic Factors-
If an individual has a family member with schizophrenia, they are more at risk for developing the disorder than an individual without a family history of the disease. Concordance rates, or the frequency of an individual developing schizophrenia if a relative suffers from it, are remarkably high. Identical twins show a 50% concordance rate; individuals with two parents with the disease show a 40% rate; fraternal twins show a 12%–15% rate; individuals with one schizophrenic parent show a 12% rate; and individuals with a schizophrenic non-twin sibling show an 8% rate of also having the disease. In contrast to this, the general population has a 1% chance of developing the disease.

Environmental Factors
While the exact environmental trigger(s) that influence the development of schizophrenia are unknown, scientists suspect that prenatal exposure to the flu or famine, obstetric complications, central-nervous-system infections in early childhood, and psychosocial stress in childhood and early adulthood may be linked to the disease.

Psychosocial environmental stressors can range from parental divorce to suffering from childhood abuse. Individuals who later develop schizophrenia may also be more socially anxious and have emotional fluctuations. It is unclear if these factors exacerbate stressors, are the result of these stressors, or stem from a third variable.

The pathenogenic theory of schizophrenia suggests that in-utero exposure to pathogens that affect the central nervous system may cause a predisposition for the development of schizophrenia.

It has been noted that people with schizophrenia often come from families with a low socioeconomic status. Some theorists suggest environmental stress associated with lower-class living may affect brain development, triggering the disease in genetically susceptible individuals. However, the correlation between socioeconomic status and schizophrenia could also be explained by the "downward drift" theory. This theory posits that because people with schizophrenia cannot hold a job or function well in society untreated, they "drift down" to a lower status.

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While much research has been done regarding whether childhood experiences play a significant role in the development of schizophrenia, not much has been determined at this time.

Neurological Factors
Research has shown that neurotransmitter activity is significantly related to schizophrenia. The study of neurotransmitters and schizophrenia is particularly important because most of the pharmaceutical treatment options for the disease involve regulating these chemicals.

The Dopamine Theory of Schizophrenia
The dopamine hypothesis of schizophrenia is a model used by scientists to explain many schizophrenic symptoms. The model claims that a high fluctuation of levels of dopamine can be responsible for schizophrenic symptoms. The simplest version of this theory suggests that schizophrenia is associated with an increase of dopamine in the central nervous system.

Additional research has identified two dopamine pathways in particular that are associated with the positive and negative symptoms of schizophrenia. The first is the *mesolimbic system,* which affects areas regulating reward pathways and emotional processes; the second is the *mesocortical system,* which affects the prefrontal cortex, areas that regulate cognitive processing, and areas involved with motor control. Excess activity in the mesolimbic pathway and lack of activity in the mesocortical pathway are thought to be responsible for positive and negative symptoms, respectively.

The dopamine hypothesis has helped progress the development of antipsychotics, which are drugs that stabilize positive symptoms by blocking dopamine receptors. The fact that these medications have been shown to treat psychosis supports the dopamine theory.

Other Neurotransmitters
Dopamine is not the only neurotransmitter associated with schizophrenia, although it can be argued that it is the most studied. Serotonin and glutamate have also been linked with schizophrenia. Increased levels of serotonin are associated with positive symptoms. Glutamate has been theorized to exacerbate hyperactivity and hypo-activity in dopamine pathways, affecting both positive and negative symptoms.

Brain Areas Associated with Schizophrenia
In addition to neurotransmitters, specific neural circuitry in various areas of the brain has been linked to schizophrenia. Dysregulation of neurotransmitters in the association cortex may explain why people with schizophrenia are not able to properly sort or filter information. The medial temporal lobe and hippocampus are associated with symptoms such as lack of focus and emotional regulation.
The thalamus can also affect symptoms in various ways: a decrease in the size of the thalamus may lead to hallucinations, and a breakdown in one of the neural pathways within the thalamus is associated with disjointed associations. Finally, the basal ganglia also affect schizophrenia. This area is involved with the integration of information from cortical areas and may also influence disjointed perceptions of environmental information.

COMMON SYMPTOMS OF SCHIZOPHRENIA:
Patients with a possible diagnosis of schizophrenia are evaluated on the basis of a set orconstellation of symptoms; there is no single symptom that is unique to schizophrenia.

In1959, the German psychiatrist Kurt Schneider proposed a list of so-called first-ranksymptoms, which he regarded as diagnostic of the disorder.

These symptoms include:
- Delusions
- Somatic
- Hallucinations
- Hearing voices commenting on the patient's behavior
- Thought insertion or thought withdrawal

Somatic hallucinations refer to sensations or perceptions concerning body organs that haveno known medical cause or reason, such as the notion that one's brain is radioactive.Thought insertion and/or withdrawal refer to delusions that an outside force (for example,the FBI, the CIA, Martians, etc.) has the power to put thoughts into one's mind or remove them.

POSITIVE SYMPTOMS
The severity of positive symptoms may depend on whether the individual is receiving treatment. Positive symptoms include the following:

Hallucinations are sensory experiences that occur in the absence of a stimulus. These can occur in any of the five senses (vision, hearing, smell, taste, or touch). "Voices" (auditory hallucinations) are the most common type of hallucination in schizophrenia. Many people

with the disorder hear voices. The voices can either be internal, seeming to come from within one's own mind, or they can be external, in which case they can seem to be as real as another person speaking. The voices may talk to the person about his or her behavior, command the person to do things, or warn the person of danger. Sometimes the voices talk to each other, and sometimes people with schizophrenia talk to the voices that they hear. People with schizophrenia may hear voices for a long time before family and friends notice the problem.

Delusions are strongly held false beliefs that are not consistent with the person's culture. Delusions persist even when there is evidence that the beliefs are not true or logical. People with schizophrenia can have delusions that seem bizarre, such as believing that neighbors can control their behavior with magnetic waves. They may also believe that people on television are directing special messages to them, or that radio stations are broadcasting their thoughts aloud to others. These are called "delusions of reference."

Sometimes they believe they are someone else, such as a famous historical figure. They may have paranoid delusions and believe that others are trying to harm them, such as by cheating, harassing, poisoning, spying on, or plotting against them or the people they care about. These beliefs are called "persecutory delusions."

Thought disorders are unusual or dysfunctional ways of thinking. One form is called "disorganized thinking." This is when a person has trouble organizing his or her thoughts or connecting them logically. He or she may talk in a garbled way that is hard to understand. This is often called "word salad." Another form is called "thought blocking." This is when a person stops speaking abruptly in the middle of a thought. When asked why he or she stopped talking, the person may say that it felt as if the thought had been taken out of his or her head. Finally, a person with a thought disorder might make up meaningless words, or "neologisms."

Movement disorders may appear as agitated body movements. A person with a movement disorder may repeat certain motions over and over. In the other extreme, a person may become catatonic. Catatonia is a state in which a person does not move and does not respond to others. Catatonia is rare today, but it was more common when treatment for schizophrenia was not available.

NEGATIVE SYMPTOMS.

- A lack of emotional response (affective flattening),
- Poverty of speech,
- Absence of volition or will. In general, The negative symptoms are more difficult for doctors to evaluate than the positive symptoms

COGNITIVE SYMPTOMS

- Poor "executive functioning" (the ability to understand information and use it to make decisions)
- Trouble focusing or paying attention
- Problems with "working memory" (the ability to use information immediately after learning it)

Poor cognition is related to worse employment and social outcomes and can be distressing to individuals with schizophrenia.

Phases of Schizophrenia

Schizophrenia usually progresses through three distinct phases:

Prodromal Phase
Occurs before hospitalization or within the year.

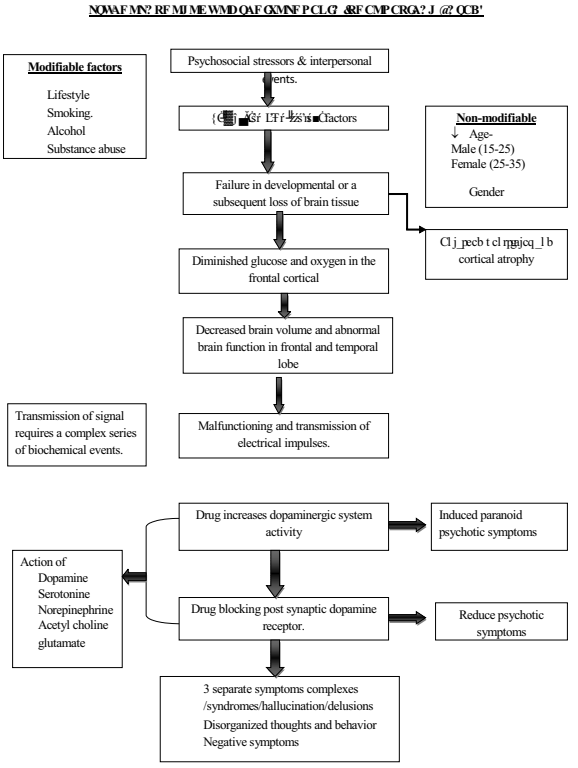
- Characterized by clear decline from his previous level of functioning.
- May withdraw from friends and families and hobbies and interests, exhibit peculiar behavior, and deterioration in work and school performance.

Active Phase

- Commonly triggered by a stressful event
- Characterized by presence of acute psychotic symptoms (e.g. hallucinations, delusions, incoherence, and catatonic behaviors).
- Prognosis worsens with each acute episode.

Residual Phase

- This is at this point in which illness pattern is established, disability level may be stabilized, and late improvements may occur.



DIAGNOSIS:

The basis for diagnosing schizophrenia is formed by **mental status examination, psychiatry history**, and **careful clinical observation**.

- **Diagnostic test results.** No definitive diagnostic tool for schizophrenia but certain tests like CT scan and MRI may be ordered to rule out disorders than can cause psychosis (e.g. vitamin deficiencies and enlarged ventricles)

- **Ventricular-brain ratio** may find elevated VBR in schizophrenic patients. **Brain scans** reveal functional cerebral asymmetries in a reverse pattern.

- **INVESTIGATIONS:**

Sr. No.	Name of Investigations	Patient's Value	Normal Value
1	History collection	Done	.....
2	Mental status examination	Done	
3	Physical examination	Done	
4	Neurological examination	Done	no any abnormality
5	Routine Blood Investigations		
	Hemoglobin	12gm	13 – 15.5gm%

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	Random blood sugar	100mg	70- 110 mg
	Total Leukocyte Count	5000/cu.mm	4000- 11000/ cu.mm
	Differentiate Leukocyte Count		
	Polymorph	58%	40-60%
	Lymphocytes	30%	17-48
	Eosinophils	01%	0-5%
	Monocytes	02%.	4- 10%

Treatment:

	According to Book	Patient picture
1	. **Antipsychotic medications** The primary form of treatment of schizophrenia is antipsychotic medication. Antipsychotic drugs help to control almost all the positive symptoms of the disorder. They have minimaleffects on disorganized behavior and negative symptoms. Between 60to70% ofschizophrenics will respond to antipsychotics. In the acute phase of the illness, patientsare usually given medications by mouth or by intramuscular injection. After the patient hasbeen stabilized, the antipsychotic drug may be given in a long-acting form called a depotdose.	Tab.chlorpromazine
2	**Dopamine receptor antagonist** The dopamine antagonists include the olderantipsychotic (also called neuroleptic) drugs, such as haloperidol (Haldol), chlorpromazine (Thorazine), and fluphenazine (Prolixin).	Tab.haloperidol
3	Serotonin dopamine antagonists. The serotonin dopamine antagonists, also calledatypical antipsychotics, are newer medications that include clozapine (Clozaril), risperidone(Risperdal), and olanzapine (Zyprexa) The SDAs have a better effect on the negative,symptoms of schizophrenia than do the ,older drugs and are less likely to produce EPS,than the older compounds. The newer drugs are significantly more expensive in the shortterm, although the SDAs may reduce long-term costs by reducing the need forhospitalization	-----
4	**Newer drugs.** Some newer antipsychotic drugs have been approved by the Food andDrug administration (FDA) in the early 2000s. These drugs are sometimes called second-generation antipsychotics or SGAs. Aripiprazole (Abilify), which is classified as a partialdopaminergic agonist, received FDA approval in August 2003.	-----
5	**Psychotherapy** Most schizophrenics can benefit from psychotherapy once their acute symptoms havebeen brought under control by antipsychotic medication. Psychoanalytic approaches arenot recommended. Behavior therapy, however, is often helpful in assisting patient's to acquire skills for daily living and social interaction. It can be combined with occupationaltherapy to prepare the patient for eventual employment.	----
6	**Family therapy** Is often recommended for the families of schizophrenic patients, to relievethe feelings of guilt that they often have as well as to help them understand the patient'sdisorder. The family's attitude and behaviors toward the patient are key factors inminimizing relapses (for example, by reducing stress in the patient's life), and familytherapy can often strengthen the family's ability to cope with the stresses caused by theschizophrenic's illness. Family therapy focused on communication skills and problem-solving strategies is particularly helpful. In addition to formal treatment, many familiesbenefit from support groups and similar mutual help organizations for relatives ofschizophrenics	----
7	**Electroconvulsive Therapy.** Rarely used but is for patients with acute schizophrenia and those who can't tolerate or don't respond to medication. It is effective in reducing depressive and catatonic symptoms of schizophrenia.	**Given**
8	**Other treatments** include compliance promotion programs, psychosocial treatment and rehabilitation, vocational counseling, supportive psychotherapy, and appropriate use of community resources.	**Given**

COMPLICATIONS:

Suicide
Any type of self-injury
Anxiety and phobias
Depression
Abuse of alcohol, drugs or prescription medications
Poverty
Homelessness
Family conflicts
Inability to work or attend school
Social isolation
Health problems, including those associated with antipsychotic medications, smoking and poor lifestyle choices
Being a victim of aggressive behavior
Aggressive behavior, although it's uncommon and typically related to lack of treatment, substance misuse or a history of violence

NURSING ASSESSMENT:

- **Recognize schizophrenia.** Note characteristic signs and symptoms of schizophrenia (e.g., speech abnormalities, thought distortions, poor social interactions).
- **Establish trust and rapport.** Don't tease or joke with patients. Expect that patient is going to put you through rigorous testing periods. Introduce yourself and explain your purpose.
- **Maximize level of functioning.** Assess patient's ability to carry out activities of daily living (ADLs).
- **Assess positive symptoms.** Assess for command hallucinations; explore answers. Assess if the client has fragmented, poorly organized, well-organized, systematized, or extensive system of beliefs that are not supported by reality. Assess for pervasive suspiciousness about everyone and their actions (e.g., vigilant, blames others for consequences of own behavior, argumentative, threatening).
- **Assess negative symptoms.** Assess for the negative symptoms of schizophrenia (as mentioned above)
- **Assess medical history.** Assess if the client is on medications, what these are, and adherence to therapy.
- **Assess support system.** Determine whether the family is well informed about the disease. Does the family understand the need for medication adherence.

NURSING MANAGEMENT

Sr. no.	Nursing diagnosis	Interventions
1	**Impaired physical mobility** related to depressive mood state and reluctance to initiate movement. **Impaired Social Interaction** related to problems in thought patterns and speech. Decreased cardiac output related to orthostatic hypotensive drug effects. **Risk for Suicide** related to impulsiveness and marked changes in behavior. Risk for injury related to hallucinations and delusions. **Risk for Imbalanced nutrition: less than body requirement** related to self-neglect and refusal for self-care. Planning and Goals	**Establish trust and rapport.** Don't touch client without telling him first what you are going to do. Use an accepting, consistent approach; short, repeated contacts are best until trust has been established. Language should be clear and unambiguous. Maintain a sense of hope for possible improvement, and convey this to the patient. **Maximize level of functioning.** Avoid promoting dependence by doing only what the patient can't do for himself. Reward positive behavior and work with him to increase his personal sense of responsibility in improving functioning. **Promote social skills.** Provide support in assisting him to learn social skills. **Ensure safety.** Maintain a safe environment with minimal stimulation. **Ensure adequate nutrition.** Monitor patient's nutritional status and if the patient thinks his food is poisoned, let him fix his own food if possible or offer him foods in closed containers that he can open. Institute suicide and/or homicide precautions as appropriate. **Keep it real.** Engage patient in reality-oriented activities that involve human contact (e.g., workshops, inpatient social skills training). Clarify private language, autistic inventions, or neologisms. **Deal with hallucinations by presenting reality.** Explore the content of hallucinations. Avoid arguing about the hallucinations. Tell them you do not see, hear, smell, or feel it but explain that you know that these hallucinations are real to him. **Promote compliance and monitor drug therapy.** Administer prescribed drugs and encourage the patient to comply. Ensure that patient is really taking the drug. Observe for manifestations that warrant hypersensitivity reactions and toxicity. **Encourage family involvement.** Involve family in patient treatment and teach members to recognize impending relapse (e.g. nervousness, insomnia, decreased ability to concentrate). Suggest ways how families can manage symptoms.

REFERENCES:

1. Kramer M et al. The ICD-9 classification of mental disorders: a review of its development and contents. Acta psychiatrica scandinavica, 1979, 59: 241-262.
2. Sartorius N. Classification: an international perspective. Psychiatric annals, 1976, 6: 22-35.
3. Jablensky A et al. Diagnosis and classification of mental disorders and alcohol- and drug-related problems: a research agenda for the 1980s. Psychological medicine, 1983, 13: 907-921.
4. Boundless. "Etiology of Schizophrenia." Boundless Psychology. Boundless, 26 May. 2016. Retrieved 05 Oct. 2016 from https://www.boundless.com/psychology/textbooks/boundless-psychology-textbook/psychological-disorders-18/schizophrenia-spectrum-and-other-psychotic-disorders-94/etiology-of-schizophrenia-359-12894/
5. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders.4th ed., revised. Washington, D.C.: American Psychiatric Association, 2000.
6. Beers, Mark H., MD, and Robert Berkow, MD., editors. "Psychiatric Emergencies." Section 15, Chapter 194 In The Merck Manual of Diagnosis and Therapy. Whitehouse Station, NJ:Merck Research Laboratories, 2004.
7. Beers, Mark H., MD, and Robert Berkow, MD., editors. "Schizophrenia and RelatedDisorders." Section 15, Chapter 193 In The Merck Manual of Diagnosis and Therapy.Whitehouse Station, NJ: Merck Research Laboratories, 2004.
8. Wilson, Billie Ann, Margaret T. Shannon, and Carolyn L. Stang. Nurse's Drug Guide 2003.Upper Saddle River, NJ: Prentice Hall, 2003.
9. Yolken, R. "Viruses and Schizophrenia: A Focus on Herpes Simplex Virus." Herpes 11,Supplement 2 (June 2004): 83A-88A.