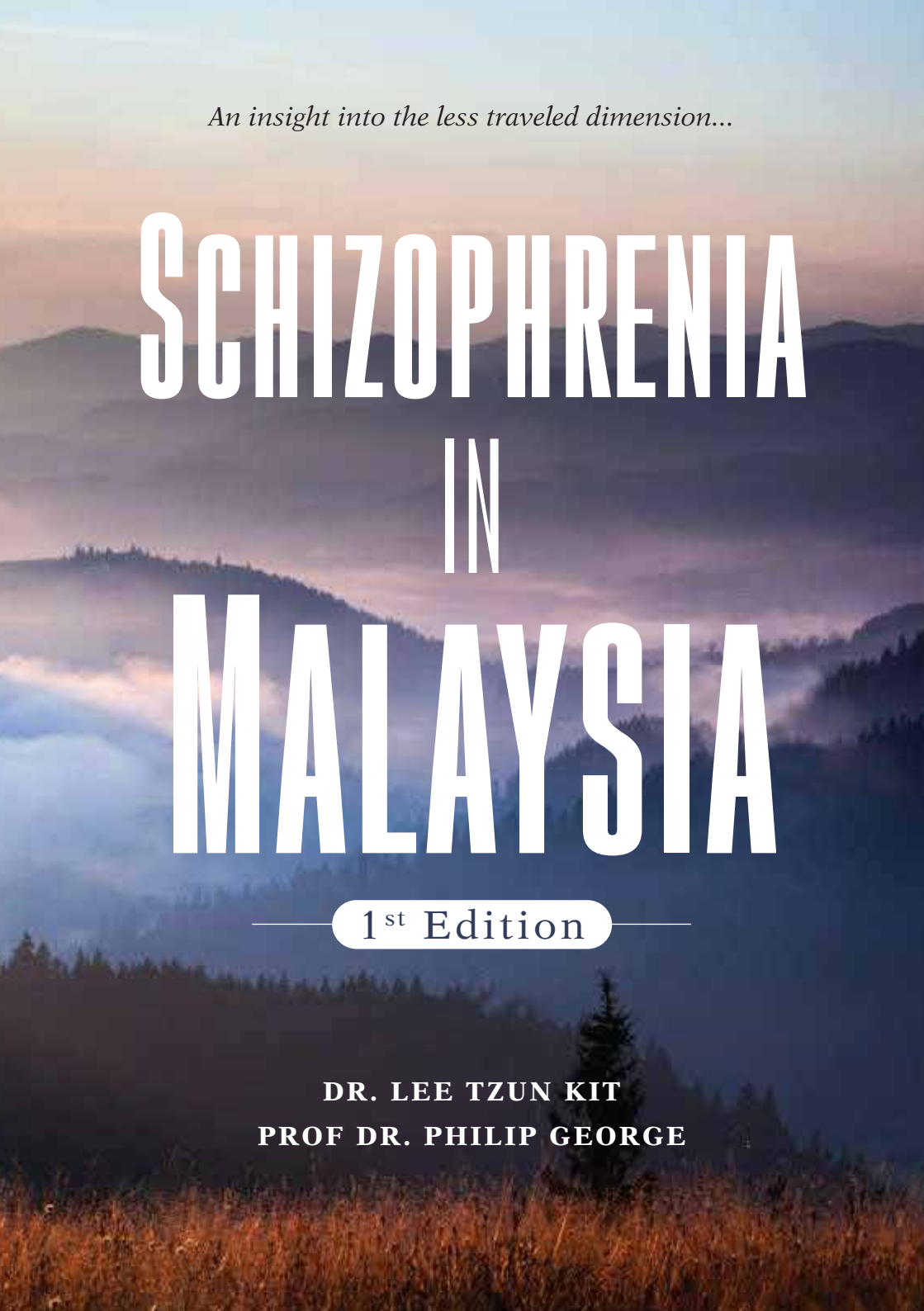

An insight into the less traveled dimension...
SCHIZOPHRENIA
IN
MALAYSIA
1st Edition
DR. LEE TZUN KIT
PROF DR. PHILIP GEORGE

This book is supported by the Malaysian Mental Health Association

The Malaysian Mental Health Association (MMHA) is a non-government organisation established to promote mental health awareness and public mental wellbeing.

Office address : TTDI Plaza, Block A, Unit 2-8. Jalan Wan Kadir 3,
Taman Tun Dr. Ismail, 60000 Kuala Lumpur, Malaysia.
Official website : http://www.mmha.org.my/
Email address : admin@mmha.org.my
Contact number : 03-27806803

Date of Publication:

Disclaimer

The content of this handbook is not intended to, and does not, amount to professional medical advice, diagnosis or treatment. Always seek advice from your physician or other qualified health provider if you have any questions regarding a psychiatric or medical condition.

ISBN:
ISBN 978-967-18129-4-5
9 789671 812945
Perpustakaan Negara Malaysia

Unless otherwise specified, all pictures use in this book are royalty free images acquired from Canva®

TABLE OF CONTENT

Forewords 1 (Prof. Dato' Dr Andrew Mohanraj) 4
Forewords 2 (Dr. Peter Norrie) 5
Preface 6
Biography of author (Dr. Lee Tzun Kit) 7
Biography of author (Prof. Dr. Philip George) 8
Acknowledgement 9
SECTION 1: Introduction 11
- What is Schizophrenia? 13
- History of Schizophrenia 14
- Statistics of Schizophrenia in Malaysia 16
- Background of Schizophrenic Patients (Based on NMHR 2003-2005) 17
- Economic Burden of Schizophrenia in Malaysia 19

SECTION 2: Clinical Aspects of Schizophrenia 21
- Causes of Schizophrenia 22
- Triggers 23
- Diagnostic criteria 24
- 5 main subtypes of Schizophrenia 31
- The Context of Religion in Schizophrenia 32
- Impact of Schizophrenia 35
  - On individual level 35
  - On family 36
- How it all started- The origin of family burden 37

SECTION 3: The Road to Recovery- Treatment of Schizophrenia 40
- Newly diagnosed Schizophrenia- The pathway towards recovery 41
- For family and friends: How do we respond to someone during a psychotic episode- The Do's and Don'ts? 45
- Comparison of different ways to communicate with schizophrenic patients 46
- Drugs (oral and injectables) 48

SECTION 4: Appendixes 53
- Hotlines 54
- Support group in Malaysia 54
- Good Sleep Hygiene 55
- Dr. Jacobson's Muscle Relaxation Technique 56

References 57

Foreword 1

I am delighted to write this foreword to yet another easy-to-understand book, which is a sequel to an earlier publication on Anxiety Disorders by the same authors. Dr Philip George, a leading figure in the field of psychiatry in Malaysia, needs no further introduction while Dr Lee Tzun Kit a young doctor demonstrates such passion and dedication to the field of mental health through his writings.

The stigma of mental illness is more pronounced than the stigma associated with physical health problems. However, schizophrenia, which is a very disabling condition, is stigmatised most within the spectrum of mental disorders. For example, a person with depression is likely to be treated more favourably and experience less stigma than a person with schizophrenia.

Therefore, there is a great need to understand this entity called Schizophrenia. The approach taken by the authors is clearly intended to enlighten health workers who might continue to entertain the outdated concept that there is no real hope for those with schizophrenia.

The book describes in simple terms complex symptomatology inherent to Schizophrenia. Primary Care doctors, in particular will find this an interesting and useful resource in their busy practice, and others with an interest in the subject will find reading this book a rewarding experience. The reader is drawn into the book by interesting case vignettes with clearly appreciable clinical features of Schizophrenia.

The relationship between religion and schizophrenia has always been fascinating because of the similarities between religious experiences and psychotic episodes. Schizophrenia in the context of religion is well explained by the authors, sitting very well with the multi ethnic and multi religious fabric of Malaysian society.

It is said that recovery in Schizophrenia carries different meanings to different people . This important feature of recovery is realistically explained in this book. Details of hotlines and support groups in Malaysia included here will prove to be particularly useful for those seeking credible support in their quest to reach out for help.

Finally, I congratulate the authors for this easy-to-read hand book which does not overwhelm the reader with complicated concepts on the subject. I am certain this book will contribute to greater public and professional understanding of Schizophrenia, leading to better quality of care.

Prof. Dato' Dr Andrew Mohanraj
President, Malaysian Mental Health Association
Board Member, World Federation of Mental Health

Foreword 2

It gives me great pleasure to support this patient and family focused handbook. In semi-retirement I have had the privilege over the last four years of being a Visiting Guest Lecturer in Psychiatry at the International Medical University's Seremban campus. I have seen firsthand the excellent teaching program in mental health led by Prof Dr Philip George and his faculty members, which also pays special attention to the students' wellbeing.

I can add to Prof Philip's biographical notes by mentioning that he was a specialist consultant in Canberra about a decade ago! His work in community mental health and addiction services is still fondly remembered there.

As a young graduate doctor, Dr Lee Tzun Kit's interest in mental health issues is to be commended. Psychiatry experience and knowledge is valuable in any medical specialty.

The handbook's authors have presented schizophrenia in an easy reading format for all readers. It is interesting to see the recent Malaysian incidence figures, which differ slightly from the standard 1% across all of the world's population. This is possibly due to cultural overlays and stigma. Also, the usual equal gender balance is not seen. It demonstrates the importance of contemporary "local" data to understand the context of schizophrenia in Malaysia at this time. I am sure academics will enjoy a debate on these interesting variations.

Understanding the presentation of the illness and its varying complex and often confounding symptoms is clearly outlined. Treatment options are well presented, emphasizing the importance of a biopsychosocial response to best manage the illness. Schizophrenia commonly disrupts two important life stages; an adolescent or young man's maturation to adult, and a young woman's ability to function as a mother. Intervention to prevent deterioration at these points is crucial.

As a clinician and researcher in my earlier career, my focus was on chronic and treatment resistant schizophrenia where sadly so often the opportunity for early treatment had passed. I was fortunate to be involved in clinical trials of many second-generation antipsychotics which now, along with enhanced long-acting injectable formulations, should be the basis of modern pharmaceutical management.

The authors encourage this emphasis on early detection and assertive medication treatment, which we more than ever now know reduces harm to the brain, and optimizes successful rehabilitation. This means that many patients can enjoy a partial if not full recovery from this illness and re-engage in many aspects of their life.

The guide to services is comprehensive and a valuable resource and I encourage you to seek help and use mental health facilities and the other supports available in your community.

Please read this handbook with the message of hope and recovery in mind. Your willingness to learn more about schizophrenia will greatly help your loved ones or patients. Whilst it still remains a challenge to understand, treat and manage, an increased knowledge across the community will also help cast away the myths and stigma of this illness.

Dr. Peter Norrie
Former Chief Psychiatrist, ACT Health
Past Adjunct Associate Professor, Australian National University, Canberra Australia

Preface

The paradigm shift in medicine is slowly moving towards patient-directed care. Medical knowledge that was once available only in textbooks has become widely available since the introduction of the internet. There are abundant websites providing unlimited amount of medical knowledge to the general public. As a result, anyone who has access to these online material can easily become well informed of his/her medical condition. Additionally, it provides people the opportunities to discuss and make informed decisions during consultations with their doctor. Notwithstanding the ease of obtaining such medical information from the web, this comes with a catch for those who rely such information as the absolute truth. Resources provided by non-official websites are usually not screened by medical personnel. Accuracy becomes a question under such circumstance. Furthermore, certain claims or information may hold true only to the group of population which the author referred to, and do not necessarily apply to all other populations. Such information based on targeted specific group of population and unverified data have often resulted in creating more confusion to information seekers especially in complicated psychiatric illness such as Schizophrenia. Hence, to help the general public alleviate and reduce this confusion over Schizophrenia due to the above reasons, we have collated and published this handbook which will provide readers with timely and accurate information about this illness in Malaysia.

Dear Readers, Schizophrenia is a mental disorder comprising of a group of symptoms. It is one many mental illnesses from the Schizophrenia Spectrum Disorders. Despite being one of the most disabling mental disorders listed by the World Health Organization, it is not discussed as frequently as other mental illnesses such as Depressive disorder and Anxiety disorders due to the complexity and extensiveness of this disease, which often leave superficial or simplified discussions unfruitful or worst, creating more confusion than ever. As a result, there is a growing stigmatization within the general population towards individuals who have Schizophrenia. Patients who are left untreated or have poorly controlled Schizophrenia may behave inappropriately in pubic, leading to them being mocked at as "crazy" or "mad" people. Unknowingly, these group of people who are being laughed at were once highly functional individuals before Schizophrenia struck.

As resources available on the internet are often laden with medical jargon resulting in dry and reading difficulties to the non-medically inclined readers, this handbook attempts to simplify and provide accurate and concise information for readers to understand Schizophrenia. This handbook contains factual experiences from real life cases which were shared by patients who achieved remission after psychiatrist treatments and is therefore suitable for the general public, patients, caregivers as well as healthcare professionals and medical students.

Our dream and hard work will be rewarded if this book enables readers to understand and reduce the relentless and debilitating social stigma towards individuals with Schizophrenia.

Dr. Lee Tzun Kit
Prof Dr. Philip George

Biography of author

DR. LEE TZUN KIT

Dr. Lee Tzun Kit graduated from the International Medical University (IMU) where he obtained his degree in Bachelor of Medicine & Bachelor of Surgery (MBBS) with distinction and earned the honour of being accepted into the dean's list. He developed a keen interest in psychiatry while providing care and online consultation to the general public during the Covid-19 pandemic. Surrounded by his friends and colleagues who are suffering from mental health issues and living in a society with relentless social stigma on mental health diseases, he has decided to embark on a journey to understand these illnesses further in order to provide holistic care to his patients.

He published a handbook on Anxiety Disorder in August 2020.

His past research includes a cross sectional study on "Complications of Diabetes Mellitus and Risk of Fall" among the general population in Seremban. The research was subsequently delivered and awarded second placing in an oral presentation which led the author to an opportunity for a poster presentation in Penang.

Presently, he works as a house officer for the Ministry of Health, Malaysia at Hospital Raja Permaisuri Bainun, Ipoh.

Biography of author

PROF. DR. PHILIP GEORGE

Professor Dr. Philip George is a Consultant Psychiatrist who has special interest in Addiction Medicine. He is presently Head of Department of Psychiatry at the International Medical University and Honorary Consultant Psychiatrist at Hospital Tuanku Jaafar located in Seremban, Negeri Sembilan. He is also a Visiting Consultant Psychiatrist at Assunta Hospital and Visiting Psychiatrist at 'The Mind Faculty', Mont Kiara in Kuala Lumpur.

He obtained his Bachelor of Medicine & Bachelor of Surgery (MBBS) in 1988 from Manipal, India and did his Masters in Psychiatry in 1996 at Universiti Kebangsaan Malaysia. He completed his Substance Abuse Subspecialty training with the University of Melbourne. He also has a Certificate of Completion in Mental Health Leadership from University of Melbourne, 2003 and a Diploma on Mood Disorders from the Lundbeck Institute, Denmark, 2010. He has more than 30 publications in journals and chapters in books. His areas of interest are: Ageing, Prevention of Substance Abuse, Managing Stress and Depression.

He is a committee member of the Addiction Medicine Association of Malaysia and Malaysian Healthy Ageing Society. He is a member of the Academy of Medicine, Malaysian Medical Association, Malaysian Psychiatric Association and Malaysian Mental Health Association. He was also part of a Disaster Medical Relief Team in Nepal post-Earthquake in August, 2015 and visiting Psychiatrist, Nauru Refugee Processing Centre from 2016 to 2019.

Acknowledgement

To Dr. Brenda Lim Thean I who had offered to review this handbook and provided her feedback.

To the Mind Matters Club of the International Medical University (IMU) who had provided us with beautiful art pieces acquired from recent art competition to be included in our handbook. Kudos to the winners.

To the general public who had taken time to provide invaluable inputs and suggestions. We have taken steps to improve the content and readability of this complicated topic highlighted in this handbook.

Courtesy of IMU Mind Matters Club

Courtesy of IMU Mind Matters Club

Section 1

Introduction

According to the Global Burden of Diseases, Injuries and Risk Factors Study 2017 (GBD 2017), there are

20 million people worldwide living with schizophrenia.

Compared to **anxiety disorders (284 million)** and major depressive disorder (MDD) (264 million), the prevalence of schizophrenia accounted only one tenth (1/10) of each of the two mental disorders in 2017.

Schizophrenia

had also been listed as top 20 most

DISABLING CONDITIONS

worldwide by the World Health Organization (WHO) in 2004.

What is Schizophrenia?

"The mind has been taken over. The mind has lost the ability to make rational decision. There's someone in there, but it is not whoever it is we formerly believed it to be."

The Collected Schizophrenia Essay - Esme Weijun Wang

The word "Schizophrenia" originated from the Greek words schizo (split) and phrene (mind). It is not the same as split personality (also known as dissociative identity disorder) or 性格分裂症 in Chinese which refers to another mental condition by which a person exhibits two or more forms of personalities.

Schizophrenia is a chronic mental condition where a person detaches from reality into a world of unknown. Schizophrenic sufferers believe in things that they encounter which some or all may seem untrue or logically impossible to normal people. They see or hear things that do not exist, a condition known as *hallucination*. Some of them even respond to an imaginary person and would appear as if they are speaking to someone invisible. As schizophrenic patients become more disconnected from the real world, their sense of judgment will veer towards becoming irrational and consequently affecting their ability to take care of themselves.

Esme Weijun Wang, the author of *"The Collected Schizophrenia Essay"* and a victim of schizoaffective disorder (a subtype of Schizophrenia) describes schizophrenic patients as dead people without being dead with progressive cessation of existence [if left untreated]. Psychoanalyst Christopher Bolla called people's experiences working with schizophrenics as "Schizophrenia presence", a term which he later defined as an eerie and uncomfortable feeling of a schizophrenic patient who has seemingly crossed from human world to the non-human environment.

History of Schizophrenia

Greek physicians

Unusual behaviours relating to this mental illness was first documented by the Greek Physicians including deterioration in cognitive function, unshakable belief about one superiority (Delusion of Grandeur) and hallucination.

Emil Kraepelin (1856-1926), German psychiatrist and founder of Modern Scientific Psychiatry

He introduced the term dementia (change in cognitive function) and precox (early onset). According to his observations, patients with dementia precox had worsening intellectual function beginning at a young age. They also suffered from hallucinations and delusions.

Eugene Bleuler (1857-1939), Swiss psychiatrist

He coined the term Schizophrenia and made changes to the original concept proposed by Dr. Emil Kraepelin. He stressed that that Schizophrenia need not have a deteriorating course synonymous to dementia.
Later, he laid out the key symptoms of Schizophrenia (or primary symptoms) which became the foundation for establisment of diagnostic criteria, also known as the 4 A's
- Affective disturbances (Mood disturbances)
- Association disturbances (Loss of meaning in spoken words)
- Autism (Problems in social interaction and communication)
- Ambivalence (Contradictory ideas about someone or something)
Dr. Emil's observation on hallucination and delusions were included and listed as secondary symptoms.

Kurt Schneider (1887-1967)

His contribution to development of diagnostic criteria for Schizophrenia was nothing short of the famous Schneider's first-rank symptoms.

Kurt Schneider's First-Rank Symptoms (1959)- Not used anymore for diagnosis

Main classification	Sub-classification	Descriptions
Delusional Perception		A person's experience on something peculiar, intense and convincing that are not shared by others. They believe in things that they see or feel despite being presented with evidences to the contrary. In Delusional Perception there is a link between a delusion and a normal perception.
Auditory hallucination (Acoustico-verbal hallucination)	Thought Echo	A person hears his/her own thoughts aloud.
	Second Person	A person hears someone talking about him/her or giving instructions to complete certain tasks. Statements spoken will involve the word "YOU". E.g. "You don't deserve to live"
	Third Person	"You should kill yourself" A person hears a group of people talking among themselves and/or giving running commentaries. Statements spoken by the group of people will involve the word "HE" or "SHE". E.g. "He is not a nice person" "Now he's going to light up the fire...and..."
Thought disturbances	Thought broadcasting	Other people know about the person's thoughts without being told the person who thinks about it.
	Thought insertion	Other people intrude their own thoughts upon the patient.
	Thought withdrawal	A person's thought has been taken out actively by other people.
Made affect and feelings		A person feels that something or someone is influencing or controlling their feeling.
Somatic passivity, delusion of influence, alien control		A person feels that something or someone is influencing or controlling their action.

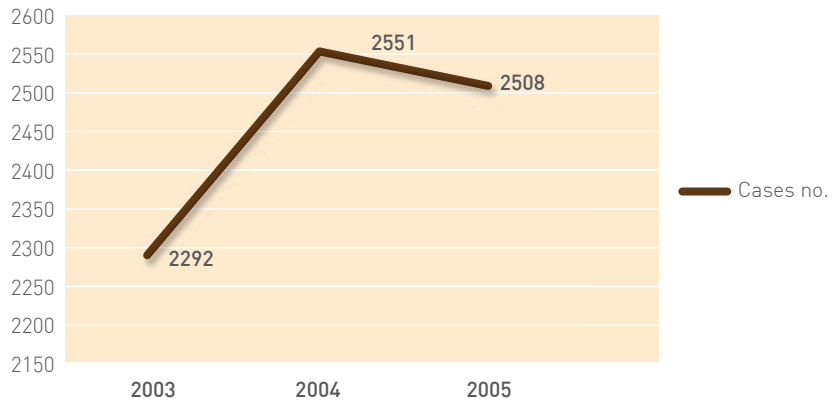
Source: https://www.researchgate.net/figure/First-Rank-Symptoms-of-Schizophrenia-Initially-Described-by-K-Schneider-1959_tbl1_11999334

Statistics of Schizophrenia in Malaysia

Reports of local cases are not widely available in Malaysia. The most recent study led by *Teoh et al* in 2013 reported an estimated 15104 patients seeking treatment for Schizophrenia in 46 general hospitals, 4 long-stay hospitals and 3 university hospitals in Malaysia cumulatively. However, data from private hospitals were not included in the research. Hence, the actual number of schizophrenic patients in Malaysia remains uncertain without an updated report from the Ministry of Health Malaysia (MOH) for the past ten years. Schizophrenia was also not reported in the past few issues of National Health Morbidity Survey (NHMS).

The Ministry of Health had been actively tracking the disease since the formation of the National Mental Health Registry (NMHR) for Schizophrenia in January 2003. Based on the "National Mental Health Registry for Schizophrenia Report 2003-2005" published in 2008, there were 7351 cases of Schizophrenia recorded by the registry. Cases were underreported as explained by the committee, probably due to delayed reporting, failure in reporting and other services reason. This shortfall was evidenced by a discrepancy in expected incidence rate which was estimated to be 100 cases per 100,000 population per year based on calculation, yet analysis showed that the number of patients included in the registry yielded a result of only 5 cases per 100,000 population per year.

Cases of Schizophrenia in Malaysia (2003-2005)



Background of Schizophrenic Patients (Based on NMHR 2003-2005)

Local data published in the "National Mental Health Registry for Schizophrenia Report 2003-2005" differs slightly from international statistics. Here, we present a few tables comparing data between global and local setting.

(A) Gender

	Global	Malaysia (Based on NMHR 2003-2005)
Gender	Similar in prevalence between genders	The number of male schizophrenic patients were 60% more than females

The reason for this disparity was probably due to males being more aggressive in nature accounting for higher admission rates in mental health facilities. Female Schizophrenic sufferers who are less aggressive were more tolerable by their families. Notwithstanding this disparity, it is generally agreeable that both genders are equally at risk of developing Schizophrenia based on worldwide statistics.

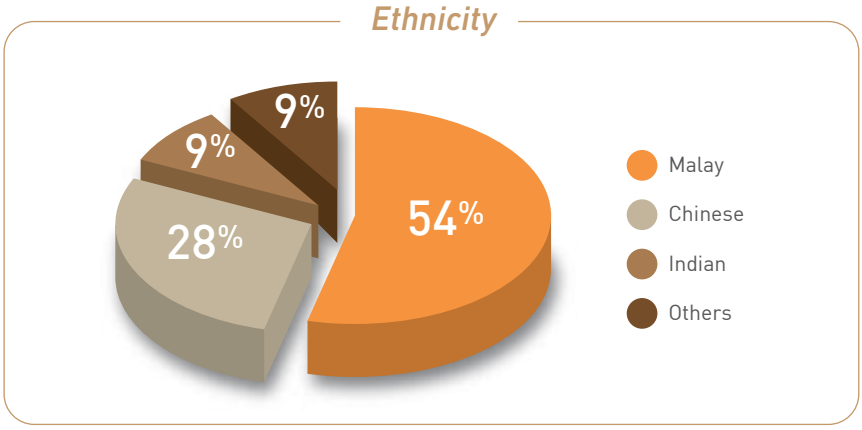
(B) Age

Schizophrenia is often considered a disease of young adults.

<table>
<tr><th></th><th colspan="2">Global</th><th colspan="2">Malaysia (Based on NMHR 2003-2005)</th></tr>
<tr><td rowspan="3">Age</td><td>Men</td><td>Women</td><td>Men</td><td>Women</td></tr>
<tr><td>Single peak at 21-25 years old</td><td>Double peak
One between 25-30 years old.
Another one after 45 years old.</td><td colspan="2">Both genders peaked at age 30 and declined rapidly.</td></tr>
<tr><td colspan="2">Onset of illness in males is typically 3-5 years earlier than in females.</td><td colspan="2">Males typically develop illness earlier than females</td></tr>
</table>

(C) Ethnicity

Patients who were diagnosed with Schizophrenia were predominantly Malays (54%), followed by Chinese (28%), Indians (9%) and others ethnicities (9%).



(D) Marital and Employment Status

Schizophrenic patients were mostly single (68.7%). Widowers, divorcees and separated individuals accounted for a smaller proportion (8.3%). The remaining 23% were married patients.

70% of registered cases were unemployed. Among those who were not unemployed, 15% of them were students.

(E) Family Status

23% of cases had family members with Schizophrenia.

(F) Substances abuse

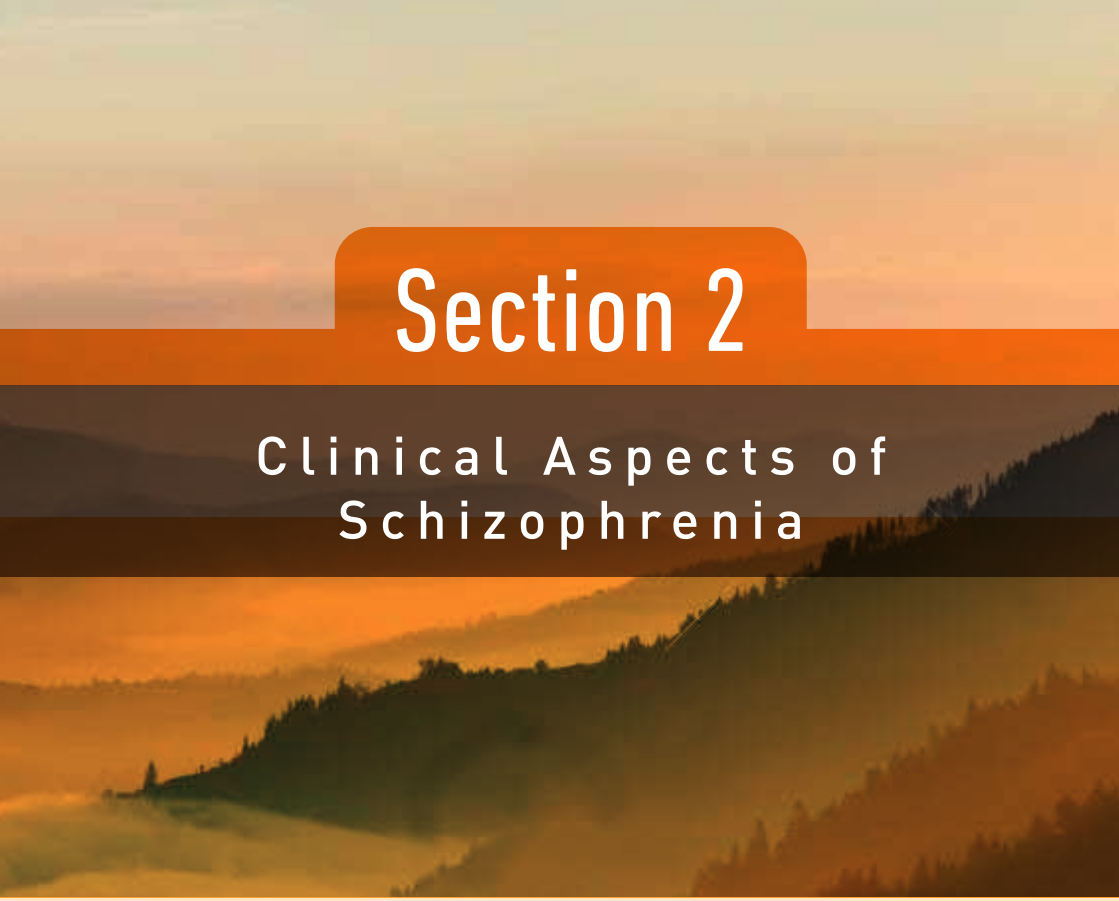
Substance or illicit drug use among schizophrenic patients are not uncommon. Alcohol, inhalant (such as industrial glue), opiate, cannabis and amphetamine type stimulants (ATS) are some examples of substances used by schizophrenic patients. Based on the NMHR, cannabis use was most common, followed by ATS.

Economic Burden of Schizophrenia in Malaysia

Treatment for Schizophrenia is extremely costly.

In 2015 alone, *Teoh et al.* reported that the total spending on treatment for approximately 15,000 schizophrenic patients in 46 general hospitals, 4 long-stay hospitals and 3 university hospitals in Malaysia cost up to 100 million US dollars (the converted local currency equivalent to MYR 430 million as of 2020), which represents about 0.04% of the national gross domestic product (GDP). This works out to an average mean cost of 6500 USD per patient in 2015 (or 27,000 MYR local currency equivalent in 2020).

While the government is struggling to fund overcrowded public hospitals, patients turning to seek treatment at private hospitals are not going to feel any respite because mental illnesses are not included in local insurance coverage schemes. The financial burdens of schizophrenic patients who seek treatment in private hospitals are thus very dependent on their own or family financial capabilities.



Section 2

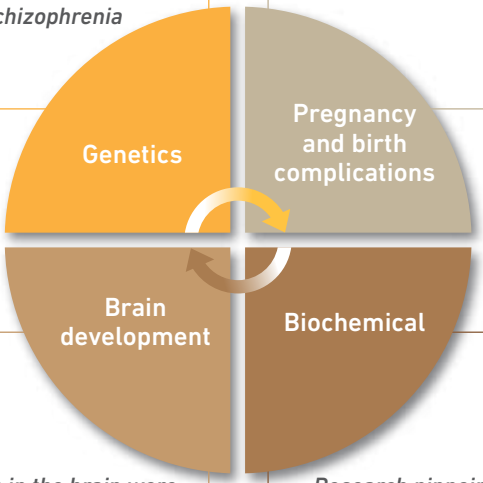
Clinical Aspects of Schizophrenia

Causes of Schizophrenia

The exact cause of Schizophrenia remains unknown. Researchers postulated four possible factors which, when combined with a trigger factor or precipitant can bring the onset of Schizophrenia.

- *23% of cases reported by the NMHR has family history of schizophrenia.*
- *Risk of developing schizophrenia seems to be higher if any of the first-degree relatives (i.e. grandparents, parents and sibilings) has schizophrenia.*
- *Yet, most people with close relative who has schizophrenia will not develop schizophrenia*

- *Low birthweight, onset of labour before 37 weeks of gestation and asphyxia (lack of oxygen during birth) are associated with schizophrenia later in life*



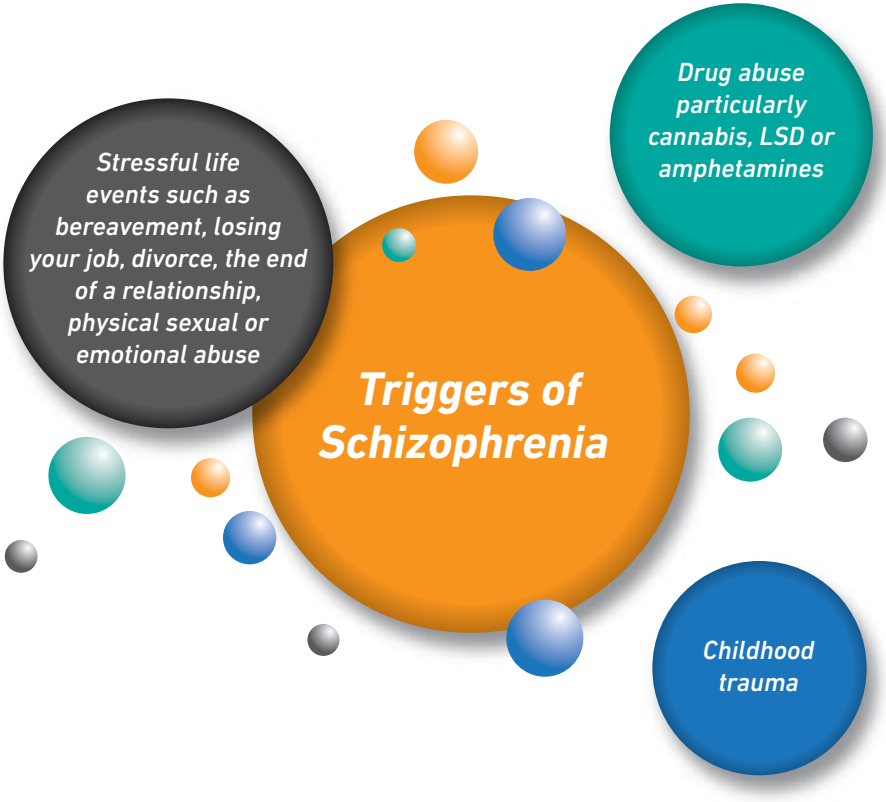
- *Structural changes in the brain were noticed by researchers in some patients with schizophrenia.*
- *Yet, not everyone with schizophrenia has these abnormal changes*

- *Research pinpointed abnormalities in two neurotransmitters or brain chemicals essential for normal function of brain cells: Dopamine and Serotonin*

Source: NHS UK, US National Institute of Mental Health (NIMH)

Triggers

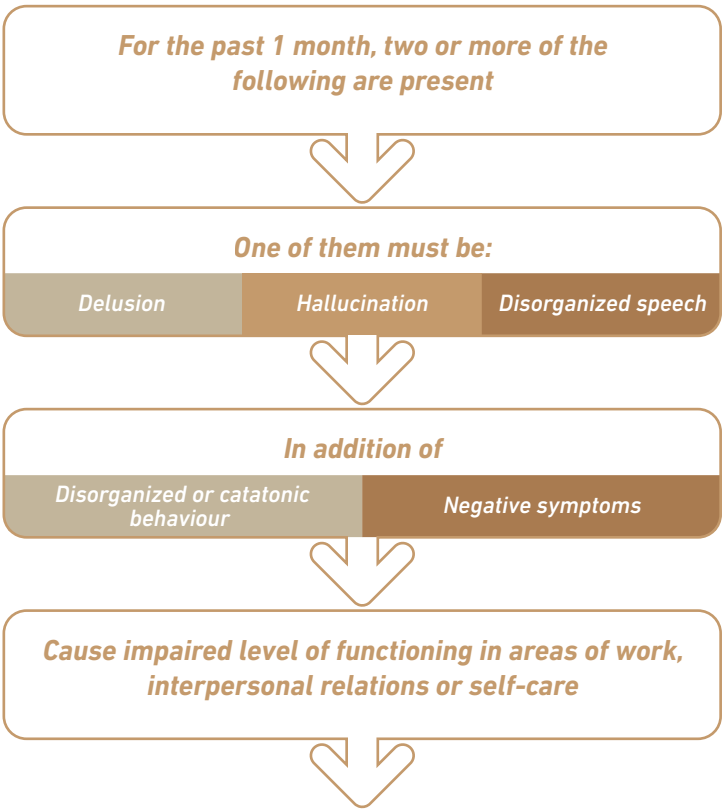
The disease may not be apparent even though a person is at risk, until it is triggered by certain stressors in life or lifestyle changes.



Diagnostic criteria

(A) DSM-5 criteria

In Malaysia, psychiatrists follow DSM -5 or ICD-10 criteria to diagnose Schizophrenia. The diagnostic criteria according to DSM-5 is depicted as follows:



**A period of at least 6 months involving milder symptoms (similar to the above) must also be present before diagnosis of Schizophrenia is made.

Definition of terms

Disorganised speech arises from abnormal thoughts. In the section below, we outlined few examples of disorganised speech which can be present in some Schizophrenic patients.

- **Neologism:** Invention and use of new words which are not accepted in current language.
- **Word salad:** The use of random words and phrases to become a sentence which does not make sense.

E.g.:

I have a ball pen eating strawberry ice cream, the soap factory caught fire and the bus needed petrol.

- **Circumstantiality:** Laborious and lengthy conversation with the use of unnecessary details, elaborations and irrelevant remarks in conversation, which often leads to delay in getting to the point or answering a question directed to them. After beating around the bush, they often come back to the main point. Such abnormal speech is thought to be caused by slow thinking. E.g.:

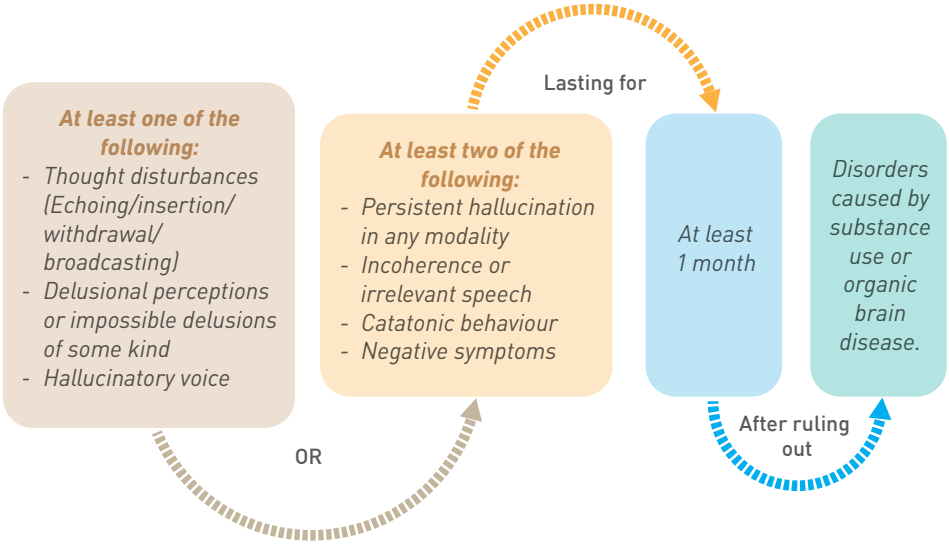
> **Doctor:** How did you come to my clinic this morning?
>
> **Patient:** I woke up at 5am this morning. I went to bed at 12am last night. because I watched a great movie which I cried so much. I brushed my teeth at 5:30am and I made myself breakfast. I had two fried eggs and a sausage. Then, I changed into my favourite green T-shirt which I purchased from one of the malls around my house. I took the bus and it was really crowded. I paid RM 3.50 for the bus fare. After three stops, I reached your clinic.

- **Tangentiality:** Similar to circumstantiality, there is lack of focus in tangential speech. These patients drift off course and start discussing about other topics. They never return to the initial topic of the conversation. E.g.:

> **Doctor:** How did you come to my clinic this morning?
>
> **Patient:** Doctor, you asked a good question! I woke up 5:30am in the morning and found the market to be crowded with people. There are plenty of cars on the road and traffic police waved at me. Thank you, doctor.

Please refer below for more explanations on delusion (p.27), hallucination (p.29), negative symptoms (p.30) and catatonic behaviours (p.32).

(B) ICD-10 criteria



Definition of terms

Thought Disturbances

- **Thought echoing:** The person hears his/her own thoughts aloud
- **Thought insertion:** The person believes that the thought that he/she has at the moment belongs to someone else and have been forcefully inserted into his/her mind.
- **Thought withdrawal:** The person believes that his/her own thoughts have been removed from the mind. This is often followed by thought block.
- **Thought broadcasting:** The person believes that others can hear what he/she is thinking.

Please refer below for more explanations on delusion (p.27), hallucination (p.29), negative symptoms (p.30) and catatonic behaviours (p.32).

Delusion

Delusion is a belief that is clearly false, yet the person is absolutely convinced that the belief is true although evidences to the contrary are presented. Such delusional beliefs are not due to an accepted norm which may be from the person's cultural or religious background or his lack of intelligence in analysis of the event.

Schizophrenic patients are not the only people at risk of developing delusions. Those with other **psychotic disorders** also often display such delusional symptoms too.

Psychotic disorders are disorders affecting a person ability to distinguish the real from the unreal, which commonly occur in certain mental illnesses such as Schizophrenia spectrum disorders (Schizophrenia is a subtype of Schizophrenia Spectrum Disorders), Mood Disorders, Delirium and Dementia. In other words, individuals who lose touch with reality are said to have **psychosis (pleural: psychoses).** Psychotic patients often develop delusions and/or hallucinations.

Psychoses can also occur in Organic Brain conditions such as Brain Tumour, Multiple Sclerosis and Stroke, in which there is an identifiable area on the brain which is not functioning well. Meanwhile, psychoses caused by mental health illness are usually not due to a structural defect on the brain.

Human immunodeficiency virus (HIV) infection affecting the brain can also lead to psychosis.

In addition, individuals who take illicit drugs and substances can also develop psychosis, called substance induced psychosis.

1. Psychosis in Mood Disorders

Individuals with a mood disorder such as bipolar mood disorder (BMD) or severe major depressive disorder (MDD) can have psychoses including delusions.

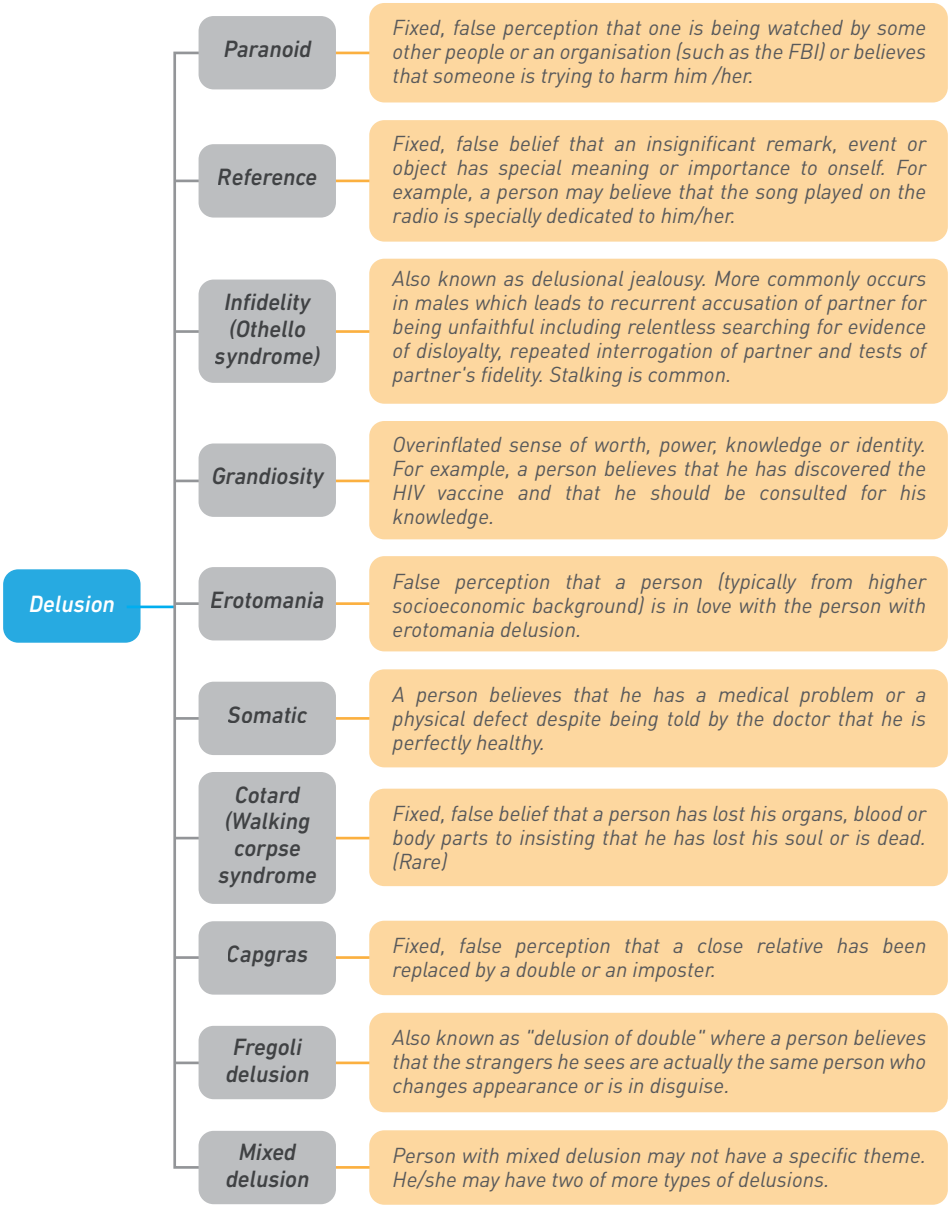
2. Psychosis in delirium and dementia

Delirium (sometimes called acute confusional state, often caused by serious infection or electrolyte imbalances) as well as dementia (due to deterioration in cognitive function, usually takes place in elderly patients) are both risk factors of psychoses.

3. Substance induced psychosis

Psychosis can also be caused by excessive alcohol intake or recreational drugs use such as methamphetamine, cannabis, ecstasy and lysergic acid diethylamide (LSD), head trauma as well as some other medical conditions.

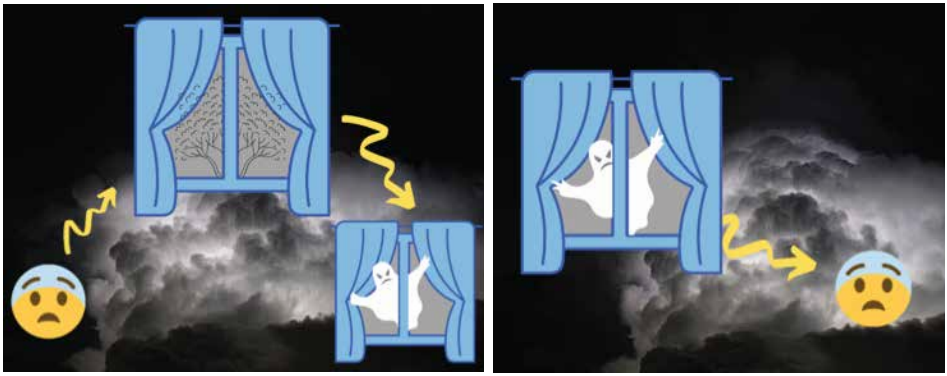
Various forms of delusion:



Footnote: Paranoid delusion is not the same as paranoid personality disorder (PPD) although both share very similar behaviours. People with PPD are distrustful and suspicious of others which often result in withdrawal and isolation of oneself from other people. The key to distinguishing PPD from paranoid Schizophrenia relies upon the presence of hallucination which is only seen in Schizophrenias.

Hallucination

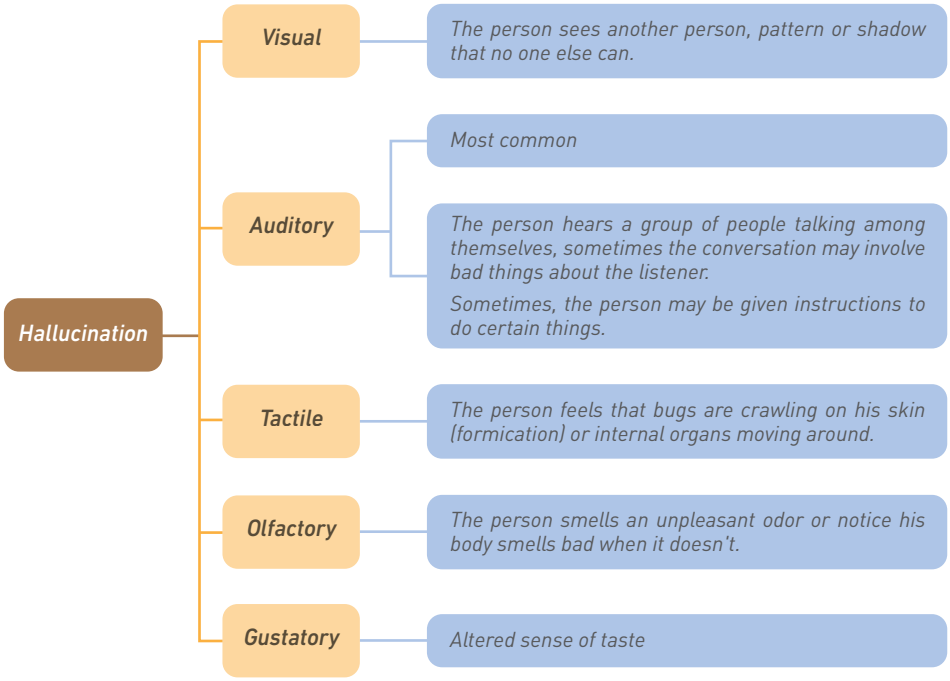
Hallucination is a condition where a person sees, hears, smells, tastes or feels things that don't **exist in the absence of an actual external stimulus.**



Left: This diagram depicts a person who misinterpreted a tree branch knocking on the window during a stormy night as a ghastly spirit standing outside the window. There is an external stimulus, in this example, a tree branch. This person is said to have an illusion.

Right: In the absence of an external stimulus, a person who hallucinates sees things that ordinary people do not. Such perceptions do not conform to social, religious and cultural norms and are seen in psychotic disorders *(refer above "delusion")*, organic brain disorders (such as Parkinson's disease) and substance use.

Common forms of hallucination:

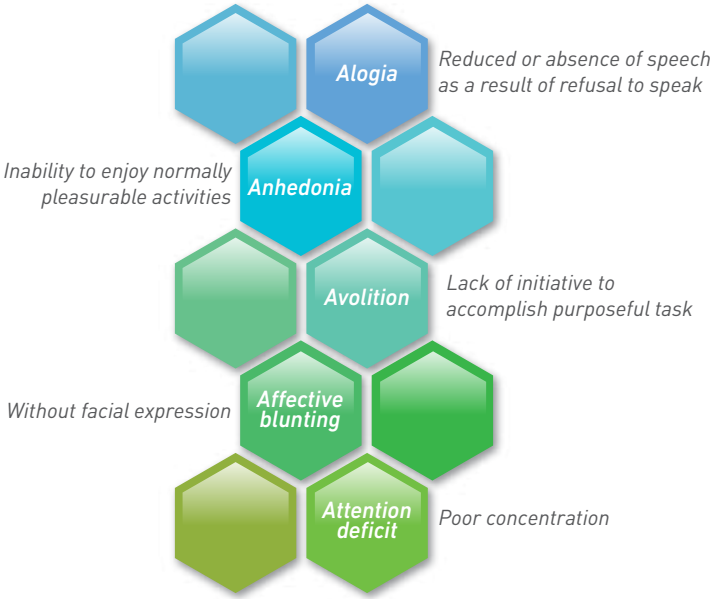


Uncommonly, Lilliputian hallucination or Alice in Wonderland syndrome is seen in alcohol-induced hallucinations. The person who is intoxicated will see things, people or animals in their miniature form, similar to the scene in Gulliver's Travels directed by Rob Letterman where Lemuel Gulliver was tied up by a group of "little people" in Bermuda Triangle.

Negative Symptoms

Years before atypical antipsychotics or second-generation antipsychotics were made available, psychiatrists classified symptoms of Schizophrenia into two distinct subsets- positive and negative symptoms.

This is because positive symptoms which encompass hallucination, delusion, disorganized speech and catatonic behaviours were manageable by antipsychotic medications (or first-generation antipsychotics introduced in the 1950s) available at that time. Negative symptoms, on the other hand, which includes avolition, alogia, anhedonia, affective flattening and attention deficit or better known as the 5A's symptoms, were resistant to treatment. This had led to researchers thinking that negative symptoms were probably due to unknown separate causes.



The 5As in a nutshell

Pharmacological treatment of Schizophrenia has expanded over the years since the introduction of clozapine (the most potent antipsychotic, also known as the "last resort" drug used in treatment-resistant-Schizophrenia) and other second-generation antipsychotics in the 1980s. Since then, co-management of positive and negative symptoms is a reality with newer medications.

5 main subtypes of Schizophrenia

After the diagnosis of Schizophrenia is made, is it classified into various themes or subtypes. Such classifications are only mentioned in the 10th revision of the International Statistical Classification of Diseases and Related Health Problems (ICD) published by the World Health Organization. The US DSM-5 do not classify Schizophrenia based on themes.

Paranoid Schizophrenia

- *Mainly positive symptoms such as auditory hallucinations (hearing voices) and paranoid delusion (sufferers believe that someone wants to harm them).*
- *Patients are typically anxious, suspicious, unusually alert or cautious, reserved and sometimes hostile and aggressive.*
- *Despite that, they can still conduct themselves appropriately in social situations.*
- *Their personalities may still be intact and they can still be somewhat functional.*

Disorganized schizophrenia *Also known as* ***Hebephrenic schizophrenia***

- *Disorganized schizophrenia is characterized by regression of higher mental function to primitive (basic), disinhibited and unorganized behaviour.*
- *Patients with disorganized schizophrenia are unable to take care of their personal hygeine as evident by an unkempt appearance.*
- *They are unable to conduct themselves appropriately in public. For example, they may burst into laugher without an apparent reason or laugh at something which is supposed to be sad.*
- *They show little or no emotions in their facial expression.*

**Disinhibited or poorly controlled behaviours are impulsive actions performed by an individual disregarding social appropriateness such as exposure of genitals or masturbating in public.*

Catatonic schizophrenia

- *Catatonic schizophrenia is characterized by disturbances in motor function and reduced mental capacity to respond to things happening around them.*
- *As such, these patients are described being in a state of stupor (state of near unconsciousness or unresponsiveness) in addition to muscle tone rigidity.*
- *They remain in one posture until someone attempts to change it. They will remain in this new position until it is being manupulated again. The term "waxy flexibility" is used by psychiatrists to explain such phenomenon.*
- *For a visual insight to a real footage of catatonia, login to* ***https://www.youtube.com/watch?v=zAEJ-Jvndms***

Residual schizophrenia

- *Residual type schizophrenia is characterized by continuous evidence of schizophrenic disturbances predominantly negative symptoms (refer page 31)*
- *They do not have the complete set of active symptoms (positive symptoms) to meet the diagnosis of other types of schizophrenia.*
- *It is also known called chronic* ***undifferentiated schizophrenia*** *based on ICD-10*

Undiffentiated schizophrenia

- *Patients who clearly have schizophrenia who cannot be easily fit into one type or another.*
- *It is also called* ***atypical schizophrenia*** *based on ICD-10*

Patient story 1: Paranoid Schizophrenia

WY is a 30-year-old married man with no children and is currently unemployed. He used to work at his father's company but found it too stressful and so he decided to stop working and started spending most of his time at home. His family members complained that he was feeling suspicious and anxious all the time. He would stay up late at night and peer out of the windows watching his neighbours as he suspected that they were going to attack or do something bad to him. He was suspicious of people with different faith and consequently developed an intense fear that these people had a motive of converting him to their religion. He was uncomfortable with meeting people other than his immediate family members including his extended family and his in-laws. He spent an extended period of time at home and had no intention to find work or socialise.

WY was diagnosed with Paranoid Schizophrenia and was started on an oral antipsychotic. He was also treated with cognitive behaviour therapy and family therapy. His wife played an important role ensuring that he did not forget his medication. Within 4 to 6 weeks, he was less suspicious and was able to interact with people more. His sleep had improved and he no longer felt anxious about his neighbour's actions. He found a job in a factory and worked 6 days a week. With his savings, he bought a PlayStation which he spent time with. His relationship with his wife improved and they are planning for a child. He is now aiming to reduce and eventually come off from his medication. His doctor gave reassurance that he may be able to do so when his condition has stabilized for a period of time.

The Context of Religion in Schizophrenia

Religious beliefs and practices may be a catalyst and a determination to a schizophrenic patient's state of delusions and hallucinations. Delusions due to religious practices may come in the form of Christians believing that they hear Jesus's voice or Taoists believing in Jitong (乩童)assuming the role of a possessed medium representing a particular Taoist God in communicating with the divine. Chinese Feng Shui maestros also believe in the ***"yin yang eye"*** in which a person has a paranormal ability to see spectres, ghosts and phantoms. Meanwhile, shamans from certain religions were able to summon and communicate with spirits. Likewise, Muslims have their fair share of beliefs in ghosts, toyol, pontianak and pochong with similar paranormal practices of exorcism.

There is a fine line between cultural beliefs practices and psychosis. While certain cultural belief practices may seem to be very similar to hallucination and delusion, psychiatrists agree that as long as these cultural beliefs are considered a part of the religion and cultural practices ***acceptable*** by the general population, they are considered normal.

Typically, psychiatric illnesses cause social and occupational dysfunction and this differentiates patients who has Schizophrenia from the general population.

Patient story 2: Suicidal risk in Schizophrenia

AP was in her late 20s when she was jilted by her boyfriend. They had known each other since childhood so it came as a big surprise when he informed her that he was marrying someone else. She had sleepless nights and was unable to work and soon started to hear voices of Satan asking her to take her life. There were also voices of angels proclaiming that God will save her and to not follow what Satan said. One day when she was overwhelmed by all the voices, she decided to slit her wrist with a penknife. Her brother then found her and brought her to the hospital. She was seen by a psychiatrist after her wrist injury was attended to by the emergency doctor and was told to have Schizophrenia. At first, she was not convinced that she had a mental illness and refused any form of treatment. Her family encouraged her to seek religious and traditional medicine treatment which seemed to help her for a short period of time. Later, the voices came back and were even more disturbing and disabling. AP decided to attempt suicide by hanging herself. She texted a farewell message to her ex-boyfriend using her phone and then proceeded to lock herself in the room to commit the act. It was lucky for AP that her ex-boyfriend contacted her family members who then broke down the door and prevented her yet again from taking her own life.

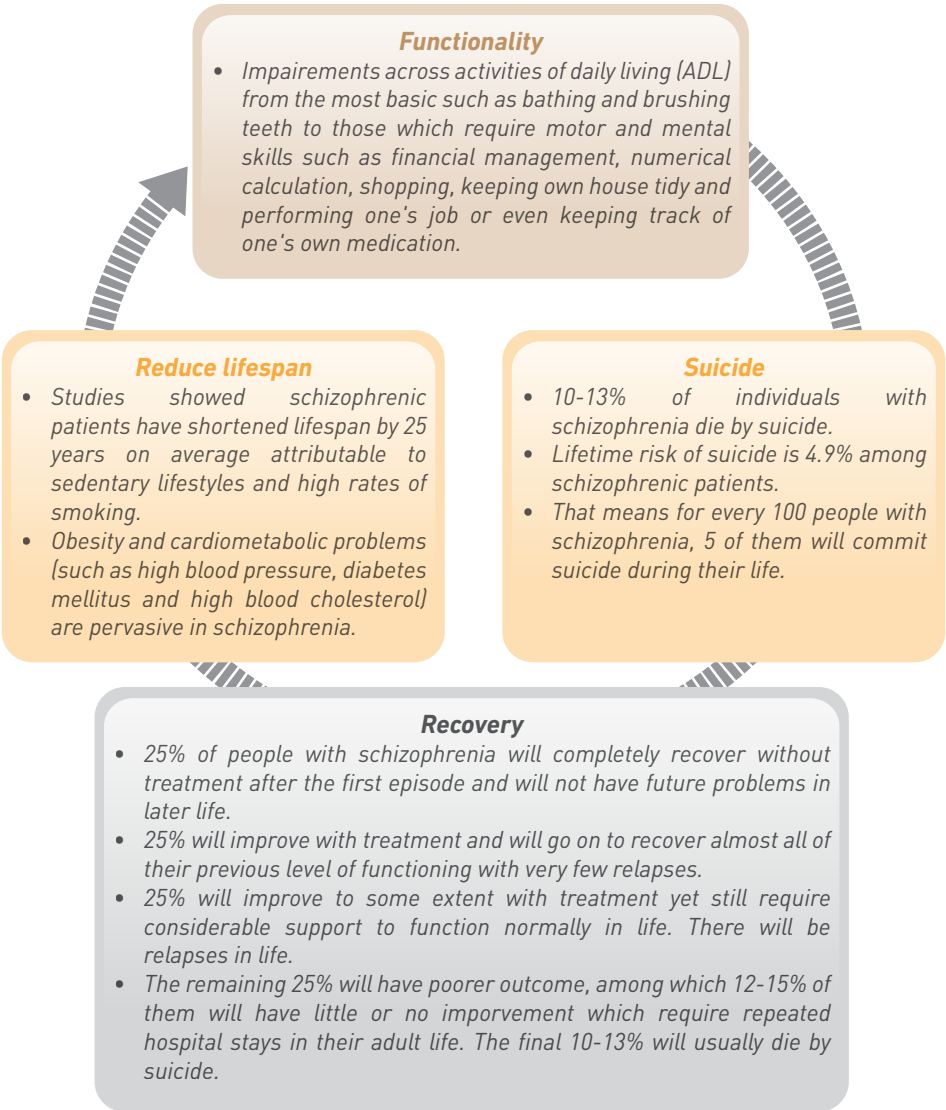
AP is now on regular oral antipsychotic treatment and is much more stable and well. She is working part-time as a clerk and spends her free time gardening, exercising, cooking and praying. She now accepts that she has a serious psychiatric illness and is willing to continue medication and follow-ups. She still hears voices but they are mainly positive voices of the angels encouraging her and are never distressing.

Footnote: If you have a suicidal ideation, please dial the numbers in the appendices to speak to one of our colleagues. We are always here to help you out!

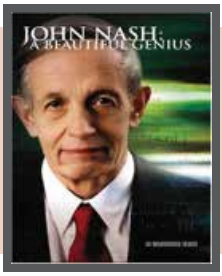
Impact of Schizophrenia

(A) On individual level

The effect of Schizophrenia varies at the individual level.



John Nash (1928-2015) was diagnosed with Schizophrenia at the age of 31 while working as a Mathematician at the Columbia University. He received treatment at several psychiatric hospitals over the course of nine years, following which, he stopped his own medication and continue to progress well along the course of his illness. He continued his studies and was awarded Nobel Memorial Prize in Economic Sciences in 1994. His story was released in a film, A Beautiful Mind, directed by Ron Howard.



(B) On Family

The Devastating Outcomes of Uncontrolled Schizophrenia on A Family- An Archive

At the age of 17, MT was diagnosed with Schizophrenia. He heard voices from God telling him that his sister, LT, had the devil in her and that God had sent him to kill her. He was subsequently hospitalized for Schizophrenia up to a year which he improved with long term medication.

After the initial hospitalization, his condition relapsed when he stopped taking his medications. He was then hospitalized in several other mental institutions, typically for few days in each hospital and ultimately ended following up at the out-patient clinic. Despite that, his condition remained poorly controlled. He continued to cause problems to his family.

As MT continued to refuse and resist medication, his deteriorating condition led to violent and eerie actions that included assault, threatening his family in ghoulish spectre or silently looming over his sister's sleeping bodies in the dead of the night only to disappear with a " crazy laugh" when they wake up startled. His worsening conditions resulted in MT being repeatedly hospitalized.

Following his arrest in December 1988, MT was released on bond provided by his mother, Melisa. Instead of heading home, Melisa detoured. When MT expressed the need to use the bathroom, she pulled her car by the roadside. As soon as MT walked away from the car, LT shot him thirteen times with a .25 calibre pistol which was purchased by Melisa few days earlier.

The next day, headlines read "Family's Final Solution Was Murder", "Family's Nightmare Ends with Slaying of Problem Child" and "Death Ends Family Nightmare".
LT was convicted of murder of her brother at the age of 32 and was sentenced to life in prison without parole.

"Judge Don Rushing told LT... the way she killed Malcolm "truly was horrible" and "as brutal and dispassionate a murder as I've had a chance to see a trial judge"

When her appeal was dismissed, she stopped her diabetic treatment and died in a South Carolina state prison in 1994.

Case quoted from: The Collected Schizophrenia Essay- Esme Weijun Wang
Legal case note available from: **https://www.leagle.com/decision/1992471308 sc1631437**

* Names and identifying details have been changed to protect the privacy of individuals.

Take home message:

- **Family support is extremely important in the management of Schizophrenia.**
- **Uncontrolled Schizophrenia can lead to family problems.**

How it all started- The origin of family burden

(A) Decentralization of mental institutions and redirecting psychiatric patients' care to the society and family members

Back in the old days, mental asylums were built to isolate psychiatric patients away from the society. According to anecdote, admission to mental asylums those days was regarded as a one-way ticket as some patients would never step foot out from the institutions to see daylight again. Patient care was mainly shouldered by doctors and nurses for as long as the patient lived.

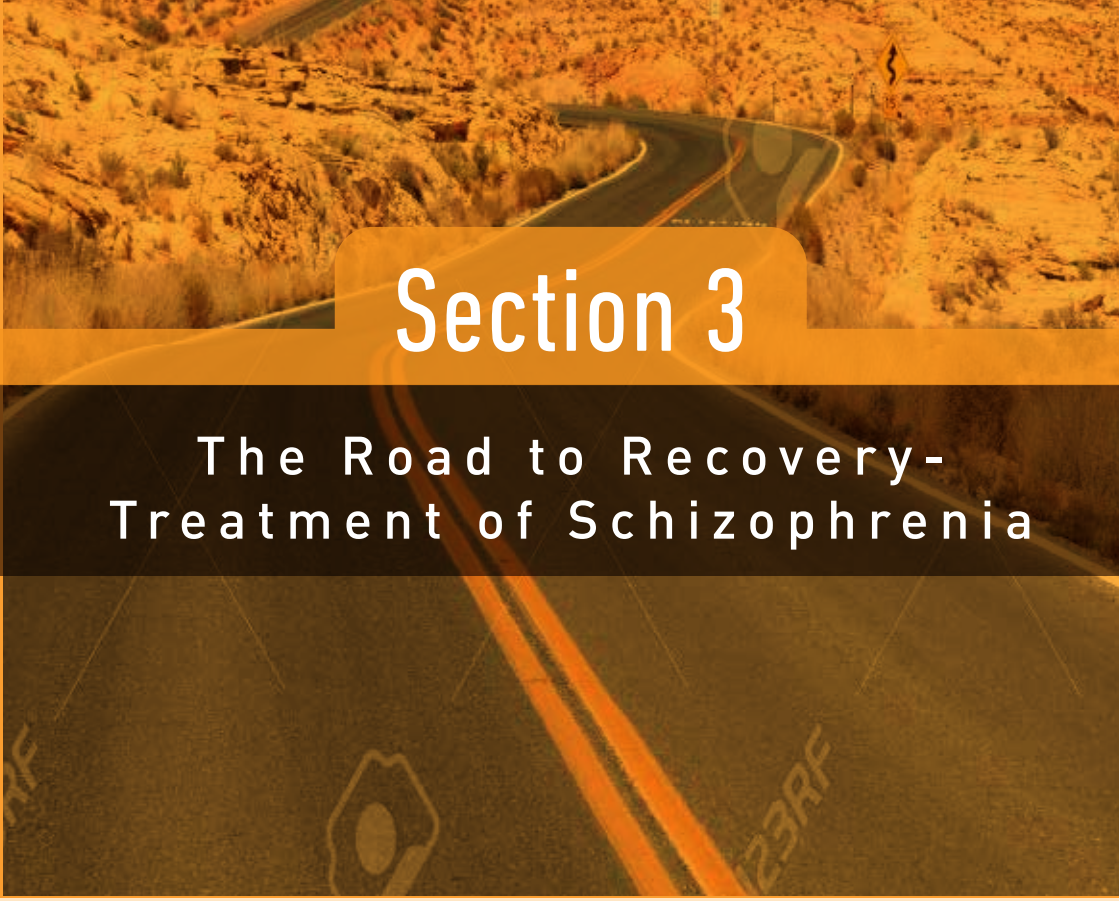
Following the famous "Water Tower" speech delivered by UK Health Minister Enoch Powell in the 1960s, the effort to close down mental asylums was initiated. Under such policy, patient care was redirected back to their family members and social support groups. It was hoped that by doing so, these psychiatric patients would be able to be reintroduced back into the society and to function on their own. Little did they know that the plan was not without flaw as the number of psychiatric patients discharged into the society had far exceeded the capacity of social support groups available at that time. Some patients did not even have family members to take care of them. Inadequate healthcare facilities and support had deliberately led to social problems. Hence, several Mental Health Acts were introduced in the UK to protect its fellow citizens, one of which was passed in 1983 allows mentally ill individuals to be detained or sanctioned by authorities ***involuntarily or without the patient's permission*** for urgent assessment by the doctor.

In Malaysia, long before the process of decentralization, Hospital Bahagia Ulu Kinta, Tanjung Rambutan, Perak (est. in 1911) was the only psychiatric facility available for the whole country. This was home to approximately 2500 long-stay psychiatric patients as of 1941. In the early 1960s, Malaysia began to make preparation for decentralization following the footsteps of other countries. Since then, referral for long-term admission was no longer acceptable and psychiatric hospitals were converted to function like other psychiatric units in general hospitals as well as a referral centre for forensic cases.

(B) Family Burden

Unlike other illnesses such as diabetes mellitus and high blood pressure, Schizophrenia affects caregivers just as much as the patient. Untreated schizophrenic patients tend to have poor insight, in which they are never convinced that they are sick. They do not take their medications or attend psychotherapy sessions as instructed by their psychiatrists. Thus, the burden of ensuring timely delivery of treatment rests upon the shoulders of the caregivers. Such burden can become so intense that the caregivers may opt for a quicker way to end their misery as discussed in the archive above.

One of many problems that caregivers face while providing care to schizophrenic patients is the ability to trust. Caregivers may have difficulty trying to determine the genuineness of certain claims from delusive or hallucinating experiences. Sometimes, certain contents of delusion or hallucination can be frightening to family members living under the same roof. Odd speeches and behaviours can also render communication ineffective and frustrating. Family members may feel embarrassed about their loved one's bizarre behaviour, thus, home visit and going to public places along with someone who has Schizophrenia are seldom usually practised.



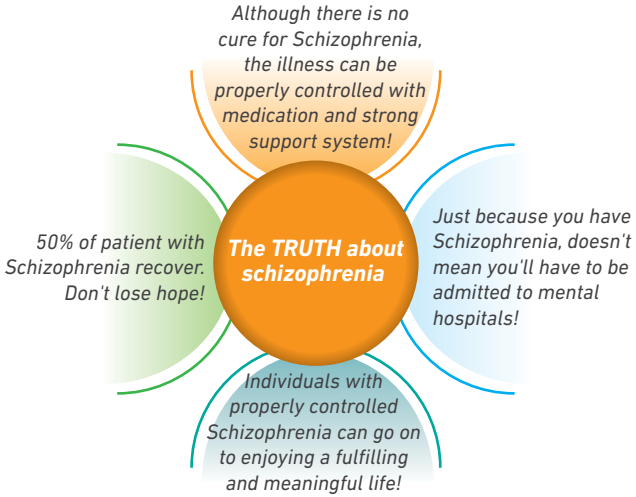
Section 3

The Road to Recovery- Treatment of Schizophrenia

Misconception about Schizophrenia

We believe that many of you who took the initiative to read this book and had come this far actually wanted to seek help either for yourself, to care for someone who suffers from Schizophrenia or just to gain an insight on Schizophrenia. In this section, we have outlined several self-help methods to help you cope better with your underlying condition. We have also included a section on how to deal with family members or friends with Schizophrenia.

It is important to first correct these misconceptions about Schizophrenia.



Newly diagnosed Schizophrenia- The pathway towards recovery

STEP 1 **Making sure you have been given the right diagnosis.** Getting the diagnosis right is extremely important as symptoms of Schizophrenia can resemble those caused by other medical conditions. It is best to leave it to a psychiatrist when it comes to dealing and managing a debilitating illness like Schizophrenia. Other mental health professionals such as Psychologists, Counsellors, Medical Social Workers and Occupational Therapists play an important role too!

STEP 2 **Accept the diagnosis.** As depressing as a diagnosis of Schizophrenia can be, resolving to taking a proactive role in treatment and self-help is crucial to your recovery. No one is at fault for your illness and you have to take responsibility to make yourself better. That means taking medication, attending to your doctor's appointment and psychotherapy sessions on time and making healthy lifestyle changes.

STEP 3 **Communicate with your doctor.** Work with your doctor on your treatment plan. Inform your doctor if you experience side effects with the medications that you are taking. Ask your doctor about additional concerns and other treatment issues.

STEP 4 **Learn to deal with positive symptoms (delusions and hallucinations) yourself.** Medication is useful only if you take an active role in managing of your symptoms. You may try out some or all of the following steps. Remember, this is just a guide, you must seek help from a clinical psychologist or psychiatrist if you need assistance.

How to deal with delusions and hallucination?

Strategies for hallucination	*Keep track of them (such as writing a diary) when they occur so that you can identify and avoid situations in which they can arise*
	Distract yourself by focusing on other activities such as reading, listening to music, exercising or cooking
	Manage your stress and anxiety (see below)
	Get a good night sleep
	Avoid alcohol and other illicit drugs
	Take your medication as instructed by your doctor. If necessary, you may visit your doctor for a review of your medication
Specific to hearing voices	*You may talk back to the voice but in appropriate environments: Challenge them and ask them to go away.*
	Avatar therapy is the latest trend in managing hallucination. *It uses computer to generate an avatar representing the negative voice so that you learn how to respond to it in real life. This therapy is believed to be more effective than supportive counselling.*
	Watch this video on Avatar therapy: ***https://www.youtube.com/watch?v=4Gmp9IILUx4***
	Acknowledge the voices but do not accept guidance from them
Strategies for delusion	*Inform your friends and family members about your problem so that they can help by providing a distracting activity or listening to your problem when delusion occurs.*
	Practice religion, meditation or other mind-body activities.
	Prayers and meditation is useful to some people when dealing with active schizophrenic symptoms.

STEP 5 **Seek support.** Remember, you do not have to go through this alone. Coping with Schizophrenia can be a lifelong process and so you'll need strong support systems to get you through along the way. Share your problems and difficulties with someone whom you trust such as your family members and friends. Misconceptions and conflicts only occur when someone doesn't truly understand the magnitude of your problem. You'll be surprised that most people will be flattered by your request for support. They will be happy to lend you an ear just when you needed it the most or direct you to more professional help. Your psychiatrist may recommend family psychoeducation, a therapy session necessary to impart knowledge of Schizophrenia among family members and caregivers in order to improve communication skills and deal with relapses and abnormal behaviour.

How to get support

STEP 6 **Managing stress and take good care of yourself.** Living with Schizophrenia can be emotionally draining. Stressful situations can easily trigger another psychotic episode. Hence, it is important to know your limits and take time to relax as needed. Mindfulness mediation, deep breathing exercises and Dr. Jacobson's muscles relaxation techniques are particularly useful in managing stress to help bring your mind and body back into a state of balance.

Schizophrenic patients can also experience long-term medical conditions such as high blood pressure and diabetes due to isolation, poor eating habits and inactivity. Stay fit by doing regular exercise when you're not experiencing psychotic symptoms. Experts recommended 30 minutes each session 5 days a week, you may do extra if you wish. Eat a healthy and balanced diet. You may refer to health books or a dietician to find out more about healthy eating.

Chain smoking, excessive alcohol intake and other illicit drug use are not uncommon among schizophrenic patients. Steer clear of these maladaptive behaviours which can contribute to additional health problems.

STEP 7 **Create a crisis plan.** If you happen to be alone during a psychotic episode, dial 999 or a hotline number and seek medical attention immediately.

For family and friends: How do we respond to someone during a psychotic episode- The Do's and Don'ts?

✔ Do:

(1) Stay calm
(2) Turn off radios, televisions and bright light if people experience voices coming from gadgets or electrical appliances
(3) Listen non-judgmentally. Give the person plenty of time and space.
(4) Speak slowly and simply. Speak in short clear sentences. You may ask simple questions about their experience
    a. Are you hearing voices other than mine?
    b. What are they telling you?
    c. What do you see/feel/taste/smell?
(5) Give reassurance by telling the person that you can see that he/she is troubled by whatever he/she is hearing or seeing.
(6) De-escalate by asking the person to listen to your voice (rather than the other voices) or looking at you (rather than whatever else they are seeing)
(7) Offer help

✗ Do not:

(1) Touch them or invade their personal space without permission. Keep a safe distance from them.
(2) Whisper or laugh
(3) Tell them that their thoughts are wrong or not real. It is important to remember that their experiences feel real to them.
(4) Pretend that you are also experiencing hallucinations
(5) Smile or shake your head when the person speaks as this may cause distress
(6) Get offended with hurtful words. The motivation for the behaviour comes from the mental illness, not from a lack of discipline.
(7) Threaten and challenge them

Things that do not help:

Constantly reminding them to take medication or attend appointments. Instead, create a mutual plan to work together.

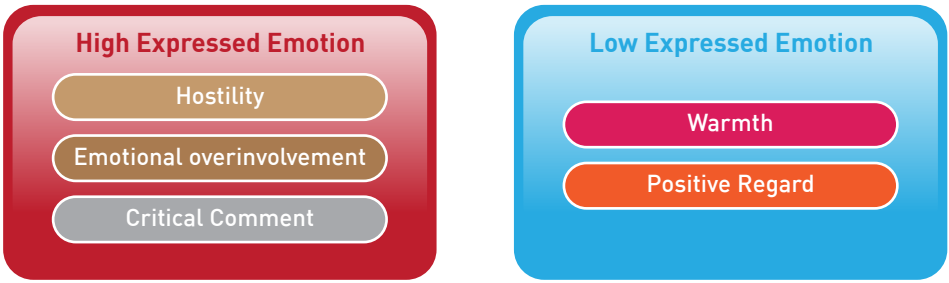
Crisis plan

Verbal de-escalation doesn't always work. If the situation becomes unsafe to you or to the surrounding people, dial 999 and seek help immediately.

Comparison of different ways to communicate with schizophrenic patients

In psychology, the caregivers' attitude towards an individual with a mental disorder is denoted as expressed emotion (EE), reflected by the choice of words and communication styles on daily interaction. Expressed emotions are divided into two groups- high EE and low EE.

Research shows that high EE tends to cause higher relapse rate among schizophrenic patients, and hence discouraged. These contrasting characteristics are summarized below.



High expressed emotions- Avoid at all cost!

Hostility

- Caregivers believe that the patient can control himself/herself and that the patient chooses not to become better without realising that some schizophrenic patients actually have poor insight and they refuse to believe that they are ill.
- The patient is often blamed and accused of being pretentious and falsely sick which causes relationship tensions and emotional problems to the parties involved.
- As a consequence of unmanageable anger, negative comments such as wishing to live away from the patient, shouting, getting angry and irritated with the patient become a part of daily communication.

Emotional overinvolvement (Overprotectiveness)

- Family believes that the patient cannot control or help him/herself, thus their help is greatly needed to take control and do things for the patient.
- Caregivers blame themselves for everything, so they initiate reparative efforts to make things better for the patient.
- Such expressed emotion discourages development of basic life skills and self-reliance. It also leads to dependence of the patient on the caregiver.

Critical comments

- A combination of both hostility and emotional overinvolvement.
- As the name suggest, caregivers engage in exchanges of critical comments with the patient.
- Tone, tempo and volume are intensified during verbal communication.
- Caregivers may openly voice out their dissatisfactory feelings about patient causing problems in their life and thus living with him/her has deliberately become a burden.
- Patients are often scolded for not following the caregivers' set-standard ways of doing things.
- Such EE can lead to physical violence and patient rejection.

Low Expressed Emotion- Better way to communicate.

Warmth

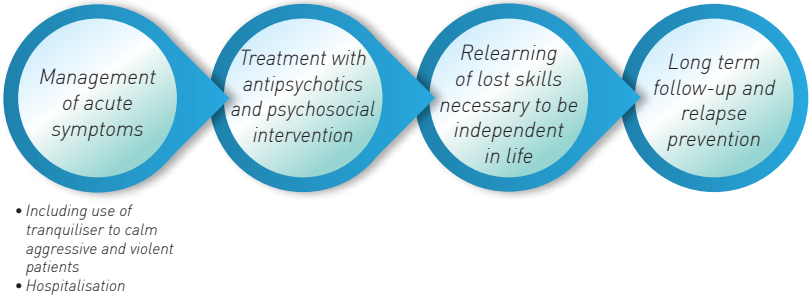
- Caregivers show kindness, concern and empathy to the patient
- Smiling is a common gesture during verbal communication.
- Caregivers think that the patient is trying to get along with everyone and it is good to have him around.

Positive Regard

- Caregivers express appreciation or support for patient's behaviour even with little effort or initiation in his day-to-day functioning.
- Verbal or non-verbal reinforcements are given by caregivers.

Drugs (oral and injectables)

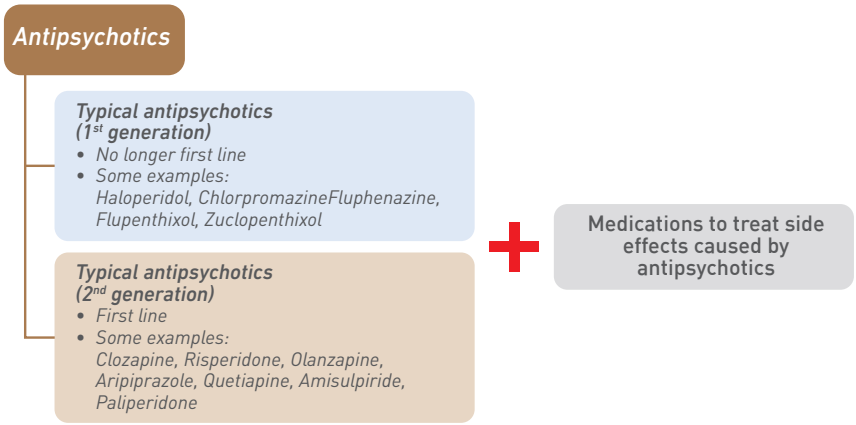
Overview of management of Schizophrenia



Psychosocial interventions refer to non-medication approaches adopted by psychiatrists and clinical psychologists to manage schizophrenic symptoms. Due to the specialities in these treatments, these approaches will be discussed separately in another edition.

Classes of oral antipsychotics

Antipsychotics are a group of medications aimed to stabilise specific neurotransmitters or brain chemicals in order for the brain to function normally.



Note: An atypical antipsychotic medication is typically started when patient is first diagnosed with Schizophrenia and the prescription is continued for a duration of **6-8 weeks** to evaluate its efficacy or effect. This is followed by the maintenance phase of treatment if the desired response to the antipsychotic prescription is achieved. Depending on the response, your psychiatrist may continue with the existing medication or switch to another drug of the same class. If adherence is an issue, the oral medication will be substituted to monthly injection.

Side effects of atypical antipsychotics

Although atypical antipsychotics is the preferred option in the treatment of Schizophrenia, this class of medication is known to have the following side effects. The side-effects do not affect everyone on this class of medications and are often self-limiting.

1. Sleep disturbances (either difficulty falling asleep or abnormally long sleeping hours)
2. Dry mouth
3. Sedation
4. Weight gain
5. Diabetes mellitus
6. High blood cholesterol
7. Sexual dysfunction (Reduce sexual urge in both sexes or inability to achieve erection in men)
8. Menstrual problems
9. Extrapyramidal symptoms (EPS)- Less common in atypical antipsychotics

For typical antipsychotics, we have decided not to discuss in this book as they are not commonly prescribed nowadays. Side effects of typical antipsychotics are typically more pronounced as compared to typical antipsychotics.

Injectable antipsychotics

If you experience or know someone who has experienced difficulty in taking the oral medication, injectable antipsychotic is an alternative treatment channel. As injectable antipsychotic medication is administered to the patient once every 2-4 weeks, the need for the patient and caregiver to be constantly reminded to take the oral medication can be avoided. This is especially helpful for those who have poor compliance to taking daily scheduled medication or has a poor insight to their illness / condition. The disadvantage however is that it can only be administered by a qualified nurse or doctor. The patients will need someone to bring them to the clinic to receive the injection.

There are several types of injectable antipsychotic medication available in the market, some of which are listed below:

	Generic Name	Brand name
Class	**Commonly used in klinik kesihatan**	
First generation antipsychotics	Fluphenazine decanoate	Modecate
	Flupenthixol decanoate	Fluanxol
	Zuclopenthixol decanoate	Clopixol
Second generation antipsychotics	Risperidone	Risperdal consta
	Paliperidone palmitate	Invega Sustenna
Class	**Newer injectable antipsychotics**	
Second generation antipsychotics	Paliperidone palmitate	Invega Trinza
	Aripiprazole monohydrate	Abilify Mantenna

Note: The effectiveness of newer injectable antipsychotics is similar to the older ones but has less side effects. Some of the newer formulation provides longer coverage and thus reduces the frequency of injections. For example, paliperidone palmitate (Invega Trinza) is only given once every 3 months, as opposed to the other older formulation which is usually given once every 2-4 weeks.

Patient story 1: Use of injectable antipsychotics in poor compliance patients

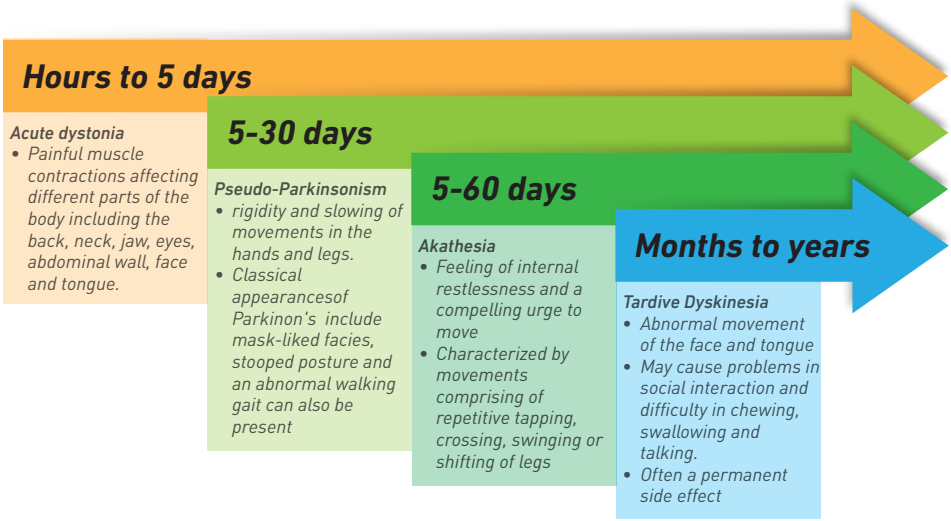
CJ, a 25-year-old single male, currently staying with his parents had consulted a psychiatrist with complaints of difficulties in falling asleep, irritability, self-isolating behaviour and poor appetite for the past 2 months. A year prior to this, he had increasing difficulties in focusing at work which resulted in him being laid off. During his free time, he used to play futsal weekly with his friends until 7 months ago when he became more homebound and preferred self- isolation over social activities. Interactions with family members and events were turned down with different excuses while he kept to himself in his own room. His mother expressed concern for him as she could hear him talking to himself and even arguing with an imaginary person from outside his room. The family brought him to see a doctor after a knife was found under his mattress. They were scared that he may harm himself or other family members. CJ took time to trust and open up to the psychiatrist. He revealed that people were mocking him and commenting on his behaviours. They were commanding and telling him that he should just end his life by stabbing himself in the stomach.

The psychiatrist diagnosed CJ with Acute Schizophrenia of hebephrenic type. He was started on atypical antipsychotic and supportive psychotherapy was initiated. His family was educated on his illness and the role they needed to play to help in his recovery. He was initially compliant to his medication schedule and follow ups but later slacked off and stopped his treatment resulting in a relapse, following which he took a large dose of his prescribed medication. After his treatment for a suspected drug overdose, CJ was referred back to the psychiatrist who reinstated his schizophrenic treatment through the long acting injectable option instead of the oral medication. Through this method, CJ would be accompanied by his family for his monthly treatments which saw him recover progressively. He is now stable and working on an online course and hopes to find work soon.

Extrapyramidal symptoms (EPS)

Extrapyramidal symptoms (EPS), also known as drug-induced movement disorders, is a spectrum of side effects triggered by antipsychotics, affecting various groups of muscles which results in significant limitations in mobility and thus impairment of daily function. These notorious adverse effects are mainly caused by typical antipsychotics (1st generation), and to a lesser degree, atypical antipsychotic (2nd generation) depending of the duration since the medication is first started.

These symptoms are manageable by other group of medication, called anti-cholinergic.



Section 4

Appendixes

Hotlines

BEFRIENDERS

- ***Hotline numbers:***
  KL: *03-7956 8145 (24 hours)*
  Ipoh: *05-547 7933 (4pm to 11pm)*
  Penang: *04-281 5161 (3pm to midnight)*
- ***E-Mail:*** *sam@befrienders.org.my*
- ***Website:*** *https://www.befrienders.org.my/*
- *Befrienders is a not-for-profit organisation providing emotional support 24 hours a day, 7 days a week, to people who are lonely, in distress, in despair, and having suicidal thoughts - without charge.*

SOLS HEALTH

- ***Contact Number:*** *6018-664-0247*
- ***E-Mail:*** *solshealth@sols247.org, navigaide@sols247.org*
- ***Website:*** *https://www.sols247.org/solshealth*
- *SOLS Health is a behavioural health centre that connects clients to accessible individual, family and community mental health and nutritional services with an emphasis on combating the stigma of mental health in Malaysia.*
- *Clients with a monthly household income below a certain threshold will qualify for subsidized rates.*

MALAYSIAN MENTAL HEALTH ASSOCIATION (MMHA)

- ***Contact Number:*** *03-2780 6803*
- ***E-Mail:*** *admin@mmha.org.my*
- ***Website:*** *https://mmha.org.my/*
- *Malaysian Mental Health Association provides support via their phone line on any mental health issues. MMHA also has qualified mental health professionals ie. clinical psychologist, and counselors providing psychological support services. Financial subsidies are readily available to ensure that necessary therapy and support is given to anyone who needs it.*

Support group in Malaysia

(1) Malaysian Mental Health Association (MMHA)

(2) Kinta Action on Mental Health Issues (KAMI)

(3) Each state family support group

Good Sleep Hygiene

Dr. Jacobson's Muscle Relaxation Technique

Dr. Jacobson's Muscle Relaxation Technique

Clench your muscles for 7-10 sec and then relax for 15-20 sec

Step 1: Hand

Clench your left hand and feel the tension. Relax and let your hand hang loosely

Repeat the same on your right hand

Step 2: Wrists

Bend your wrists backwards and then relax

Step 3: Upper arms & Shoulders

Bend your elbows towards your shoulders and tense your biceps muscles.

Then

Bring your shoulders up towards ears. Relax; Let shoulders drop down

Step 4: Forehead & Eyes

Wrinkle forehead and raise your eyebrows. Relax

Close your eyes tightly. Relax

Step 5: Neck and Jaw

Turn your head to the right side until your chin touches your shoulder. Straighten and relax. Do the same on the left side.

Then

Bend your head forward and press your chin against your chest. Straighten and relax.

Step 6: Abdomen, back and thighs

Tighten your stomach muscles. Relax.

Then

Arch backwards. Relax.

Then

Stretch one leg in front of you. Tighten your thigh muscle. Relax and then repeat on the other leg

Last but not least Step 7: Hamstrings, Calves and Feet

Push one of your heels firmly on the floor to tighten your hamstring muscles. Relax and then repeat on other heel

Then

Point your toes upwards. Relax

Then

Curl your toes downwards. Relax

That's it. Done

Source https://www.researchgate.net/figure/Dr-Jacobsons-instructions-for-progressive-muscle-relaxation-training-Muscle-group_tbl1_274656155

Free images acquired from Canva

References

Introduction

(1) Bollas C. Object Lesson. Harper's Magazine. 2015 Nov. Available from: https://harpers.org/archive/2015/11/object-lesson/

Statistics

(2) GBD 2017 Disease and Injury Incidence and Prevalence Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017 [published correction appears in Lancet. 2019 Jun 22;393(10190):e44]. Lancet. 2018;392(10159):1789-1858.

(3) The Global Burden of Disease: 2004 update. World Health Organization; 2008.

(4) Teoh SL, Chong HY, Abdul Aziz S, Chemi N, Othman AR, Md Zaki N, Vanichkulpitak P, Chaiyakunapruk N. The economic burden of Schizophrenia in Malaysia. Neuropsychiatr Dis Treat. 2017 Jul 28;13:1979-1987.

(5) National Mental Health Registry Schizophrenia Report: 2003-2005. Ministry of Health Malaysia; 2008.

(6) Management of Schizophrenia in Adults. Ministry of Health Malaysia. 2009.

(7) Beijing. Li R, Ma X, Wang G, Yang J, Wang C. Why sex differences in Schizophrenia? J Transl Neurosci (Beijing). 2016 Sep;1(1):37-42.

(8) Sadock BJ, Sadock VA, Ruiz P. Kaplan & Sadock's Concise Textbook of Clinical Psychiatry. Derived from Kaplan & Sadock's Synopsis of Psychiatry, Eleventh Edition. 4th ed. Philadelphia: Wolters Kluwer; 2017.

(9) Yao MW. Cash-strapped: Minimal benefits and insurance exclusion carves financial prison for mentally ill. MIMS Today; 2018.

Triggers

(10) Does smoking carry increase schizophrenic risk? MIMS Psychiatry. 2020 Apr 12. Available from: https://specialty.mims.com/topic/does-smoking-carry-increased-Schizophrenia-risk-

Delusion & Hallucination

(11) Badii C. Everything You Need to Know About Hallucinations. Healthline. [Update 2019 Jul 10]. Available from: https://www.healthline.com/health/hallucinations#types

(12) Kiran C, Chaudhury S. Understanding delusions. Ind Psychiatry J. 2009 Jan;18(1):3-18. doi: 10.4103/0972-6748.57851.

Subtype of Schizophrenia:

(13) Types of Schizophrenia. Mental Health UK. Available from: https://mentalhealth-uk.org/help-and-information/conditions/Schizophrenia/types-of-Schizophrenia/

Impact on individual level

(14) Pompili M, Amador XF, Girardi P, Harkavy-Friedman J, Harrow M, Kaplan K et al. Suicide risk in Schizophrenia: learning from the past to change the future. Ann Gen Psychiatry 6, 10 (2007).

(15) Strassnig M, Signorile J, Gonzalez C, Harvey PD. Physical performance and disability in Schizophrenia. Schizophr Res Cogn. 2014 Jun;1(2):112-121.

(16) Can you recover from Schizophrenia? Living with Schizophrenia. Available from: https://livingwithSchizophreniauk.org/information-sheets/can-you-recover-from-Schizophrenia/

Impact on family

Decentralization:

(17) Salleh MR. Decentralization of Psychiatric Services in Malaysia- What is the prospect? Singapore Med J. 1993; Vol 34: 139-141.

Family impact:

(18) Sherman MD. Session four- Schizophrenia and its Impact on the Family. Department of Veterans Affairs- Support and Family Education. Available from: https://www.ouhsc.edu/safeprogram/04Schizophrenia.pdf

Road to recovery- On individual level

(19) Burton N. Schizophrenia: Coping with Delusions and Hallucinations. Psychology Today. 2012 Aug 31. Available from: https://www.psychologytoday.com/us/blog/hide-and-seek/201208/Schizophrenia-coping-delusions-and-hallucinations

(20) Manalac T. AVATAR therapy more effective than supportive counselling for hallucinations. MIMS Psychiatry. 2017 Nov 30. Available from: https://specialty.mims.com/topic/avatar-therapy-more-effective-than-supportive-counselling-for- hallucinations

(21) Smith M. Robinson L, Segal J. Schizophrenia Treatment and Self-Help. HelpGuide. 2019 Nov. Available from: https://www.helpguide.org/articles/mental-disorders/Schizophrenia-treatment-and-self-help.htm

(22) Coping with psychotic experiences. Oxlead NHS. Available from:http://oxleas.nhs.uk/site-media/cms-downloads/Coping_with_psychotic_experiences.pdf

How to care for patient in psychosis

(23) Schizophrenia. Mind. 2017 Feb. Available from: https://www.mind.org.uk/information-support/types-of-mental-health-problems/Schizophrenia/for-friends-and-family/

(24) Hoebeke V. The Do's and Don't of Helping a Family Member in Psychosis. 2016 May 12. Available from: https://www.rtor.org/2016/05/12/the-dos-and-donts-of-helping-a-family-member-in-psychosis/

(25) Banerjee AG and Retamero C. Expressed emotion – a determinant of relapse in Schizophrenia: a case report and literature review. J Psychiatry Brain Funct. 2014; 1:4.

Extrapyramidal symptoms

(26) D'Souza RS, Hooten WM. Extrapyramidal Symptoms (EPS) [Updated 2020 Apr 27]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2020 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK534115/

This publication is supported by

torrent PHARMA