Schizophrenia & Other Psychotic Disorders

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Lecture Outline

• Hx of the concept of schizophrenia
• Important concepts – positive & negative sxs of schizophrenia, hallucination, delusion
• Epidemiology
• Schizophrenia – subtypes; other psychotic disorders
Lecture Outline

• Etiological theories
• Treatment
History of the concept of schizophrenia

Contributors:
- Benedict Morel (1809-1873)
- Emil Kraepelin (1856-1926)
- Eugen Bleuler (1857-1939)
- Kurt Schneider (1887-1967)
History of the concept of schizophrenia

- Benedict Morel (1809-1873) used the term 'démense précoce' to describe deteriorated patients whose illnesses had begun in adolescence.
Emil Kraepelin (1856-1926)

- Emil Kraepelin latinized Morel’s term: ‘dementia praecox’ denoted a severe chronic psychotic illness with distinct cognitive processes and early onset, leading to deterioration - different from manic-depressive disorder & from paranoia.
History of the concept of schizophrenia

- Eugen Bleuler (1857-1939) coined the term ‘schizophrenia’ to denote the schism between thought, emotion and behaviors in affected patients – a broader concept; he did not believe that a deteriorating course was necessary.
  - ‘Schizophrenic disorders’ were considered a ‘series of diseases’ due to their heterogeneity.
Eugen Bleuler (1857-1939)

Bleuler eliminated poor prognosis as criterion for schizophrenia & specified

- Primary symptoms ('core'/fundamental)
- Secondary symptoms ('accessory')
Bleuler’s primary symptoms of schizophrenia

The four ‘A’s of schizophrenia (deficits):

- Associative loosening/disturbances
- Affective blunting
- Ambivalence
- Autism
Bleuler’s secondary symptoms of schizophrenia

- Hallucinations
- Delusions
- Negativism & Stupor
Kurt Schneider on schizophrenia

- Distinguished between *first-rank* and second-rank symptoms
# Kurt Schneider on Schizophrenia

**Table 13-1: Kurt Schneider Criteria for Schizophrenia**

1. **First-rank symptoms**
   - a. Audible thoughts
   - b. Voices arguing or discussing or both
   - c. Voices commenting
   - d. Somatic passivity experiences
   - e. Thought withdrawal and other experiences of influenced thought
   - f. Thought broadcasting
   - g. Delusional perceptions
   - h. All other experiences involving volition made affects, and made impulses

2. **Second-rank symptoms**
   - a. Other disorders of perception
   - b. Sudden delusional ideas
   - c. Perplexity
   - d. Depressive and euphoric mood changes
   - e. Feelings of emotional impoverishment
   - f. “... and several others as well”
Kurt Schneider on schizophrenia

- Believed that schizophrenia could be diagnosed exclusively based on second-rank symptoms, in the absence of first-rank symptoms
Positive symptoms of schizophrenia

Florid psychosis
  – Delusions
  – Hallucinations
  – Positive formal thought disorder
  – Bizarre behavior
Delusion

- A false belief based on incorrect inference about external reality that is firmly sustained despite what almost everyone else believes and despite what constitutes evidence to the contrary.
- The belief is not accepted by other members of the person’s culture.

Examples: bizarre, d. of control, d. of reference, thought broadcasting, thought insertion, etc. – organized themes
Hallucination

• A sensory perception that seems real but occurs in the absence of external stimulation of the relevant sensory organ.

Types: Auditory (voices, sounds), gustatory (usually unpleasant taste), olfactory, visual (flashes of light, images), somatic (e.g., feeling electricity), tactile (sensation of being touched or something under the skin)
Negative symptoms of schizophrenia

Deficits, diminution or loss of functioning:

- Affective flattening (unchanging facial expression, decreased spontaneous movement, poor eye contact, etc.)
- Alogia (poverty of speech content, etc.)
- Avolition/apathy (anergia, lack of interest)
- Anhedonia-asociality (social withdrawal, lack of intimacy/closeness, poor social skill)
- Attention – poor concentration, inattentive
American bias in diagnosing schizophrenia

- In the 1970s studies were initiated to determine why national statistics showed disproportionate frequency of affective disorders in UK and of schizophrenia in the USA.

(WHO)

- Findings: the American concept of schizophrenia was broader than the UK/European concept – thus schizophrenia was overdiagnosed and overtreated in the USA.
Definitional changes of schizophrenia in the DSM

In the DSM-III-R, the definition of schizophrenia limits the diagnosis to *severe forms*, with an emphasis on Kraepelin’s notion of deterioration and on ‘positive’ symptoms (‘negative’ symptoms were ignored)
Clinical features of schizophrenia

• No clinical sign or symptom is pathognomonic (i.e., unique) for schizophrenia - can be found in other disorders

• A patient’s symptoms change over time

• We need to take into account the patient’s level of education, intellectual ability, cultural background
Diagnostic criteria for Schizophrenia

A. Characteristic sx(s) – positive & negative sx(s) (2+); only 1 if a voice keeping running commentary or 2 voices conversing – sx(s) duration of at least 1 month

B. Social/occupational dysfunction

C. Continuous signs of disturbance for 6m

D. Not due to other mental disorder, substance, medical condition, or pervasive developmental disorder
Schizophrenia subtypes

- 295.30 Paranoid Type
- 295.10 Disorganized Type
- 295.20 Catatonic Type
- 295.90 Undifferentiated Type
- 295.60 Residual Type
Schizophrenia
295.30 Paranoid Type

- Essential feature: presence of prominent delusions or auditory hallucinations with relative preservation of cognitive functioning and affect.
- Delusions are typically persecutory or grandiose, or both; other themes may occur: jealousy, religiosity, somatization.
- Individual may be predisposed to suicide or violence.
Schizophrenia
295.10 Disorganized Type

- Essential feature: disorganized speech and flat or inappropriate affect (e.g., laughter not related to the content of speech); disorganized behavior (often inability to care for self)
- Associated features: grimacing, mannerism, odd behaviors
Schizophrenia
295.20 Catatonic Type

- Essential feature: marked psychomotor disturbance that may involve motoric immobility (e.g., catalepsy – waxy flexibility, bizarre postures) or excessive motor activity – catatonic stupor or excitement, extreme negativism, mutism, peculiarities of voluntary movement
- Echolalia, echopraxia
Schizophrenia
295.90 Undifferentiated Type

- Essential feature: Criterion A of schizophrenia is met, without meeting other criteria for other types
Schizophrenia
295.60 Residual Type

- There has been at least one episode of Schizophrenia, but current clinical picture is without prominent positive psychotic symptoms, or with attenuated sx$s$ – yet there are negative symptoms
Course specifiers (only after 1 year has lapsed)

- Episodic With Interepisodic Residual Sxs
- With Prominent Negative Sxs
- Episodic With No Interepisodic Residual Sxs
- Continuous
  - With Prominent Negative Sxs
- Single Episode in Partial Remission
  - With Prominent Negative Sxs
- Single Episode in Full Remission
- Other or Unspecified Pattern
295.40 Schizophreniform Disorder

- Criteria A, D, and E of Schizophrenia are met (impairment in social or occupational functioning is not required)

- An episode lasts for:
  - at least 1m &
  - less than 6m

- Specifiers:
  - With Good Prognostic Features
  - Without Good Prognostic Features
295.70 Schizoaffective Disorder

- Disturbance in which a mood episode and the active phase of schizophrenia occur together and are preceded or followed by at least 2 weeks of delusions or hallucinations without prominent mood symptoms.
295.70 Schizoaffective Disorder

A. An uninterrupted period of illness during which there is a Major Depressive Episode, a Manic Episode, or a Mixed Episode concurrent with sx that meet Criterion A for Schizophrenia

Specify type:

- Bipolar Type
- Depressive Type
298.8 Brief Psychotic Disorder

A. Presence of one or more of the following sx$s$: delusions, hallucinations, disorganized speech, grossly disorganized or catatonic behavior

B. Duration of an episode of at least 1 day, less than 1m – with eventual full return to premorbid levels of functioning

Specify:
- With Marked Stressors
- Without Marked Stressors
- With Postpartum Onset
297.3 Shared Psychotic Disorder

297.3 Shared Psychotic Disorder (Folie á Deux)

A. A delusion develops in an individual in the context of a close relationship with another person(s) who has an already established delusion (primary or inducer); the person who develops the delusion is called secondary

B. The delusion is similar in content to that of the person who already has the established delusion
Table 14.3–6
ICD-10 Diagnostic Criteria for Induced Delusional Disorder

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<thead>
<tr>
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<th>Criteria</th>
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<tbody>
<tr>
<td>A</td>
<td>The individual(s) must develop a delusion or delusional system originally held by someone else with a disorder classified in schizophrenia, schizotypal disorder, persistent delusional disorder, or acute and transient psychotic disorders.</td>
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<tr>
<td>B</td>
<td>The people concerned must have an unusually close relationship with one another, and be relatively isolated from other people.</td>
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<tr>
<td>C</td>
<td>The individual(s) must not have held the belief in question before contact with the other person, and must not have suffered from any other disorder classified in schizophrenia, schizotypal disorder, persistent delusional disorder, or acute and transient psychotic disorders in the past.</td>
</tr>
</tbody>
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(From World Health Organization. *The ICD-10 Classification of Mental and Behavioural Disorders: Diagnostic Criteria for Research.* Copyright, World Health Organization, Geneva, 1993, with permission.)
Examples of shared delusions

1. **Bizarre d.** - a couple is working for aliens who will return one day and take them to their home planet

2. **Mood-congruent d.** - the primary is going to star in a movie and make the family millions

3. **Non-bizarre d.** - the FBI is watching the house and tapping the phones
297.1 Delusional Disorder

A. Nonbizarre delusions of at least 1m duration
B. Criterion A for Schizophrenia has never been met (tactile and olfactory hallucinations may be present if related to the delusional theme)
C. Apart from the impact of the delusion(s) or its ramifications, functioning is not markedly impaired and behavior is not obviously odd or bizarre
D. If mood episode occur, they are brief
297.1 Delusional Disorder

Specify type
(based on predominant delusional theme)

- Erotomanic Type
- Grandiose Type
- Jealous Type
- Persecutory Type
- Somatic Type
- Mixed Type
- Unspecified Type
## Delusional Disorder – Risk Factors

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<th>Table 14.3–2</th>
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<tr>
<td><strong>Risk Factors Associated with Delusional Disorder</strong></td>
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- Advanced age
- Sensory impairment or isolation
- Family history
- Social isolation
- Personality features (e.g., unusual interpersonal sensitivity)
- Recent immigration

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Types of delusions (categorized by content)

- **Bizarre delusion** = a delusion that involves a phenomenon that the person’s culture would regard as totally implausible
- **Delusional jealousy** = the delusion that one’s partner is unfaithful
- **Erotomanic delusion** = a delusion that another person, usually of higher status, is in love with the individual
Types of delusions (categorized by content)

- **Grandiose d.** = a delusion of inflated worth, power, knowledge, identity, or special relationship to a deity or famous person

- **Mood-congruent d.** = content is consistent with typical themes of a *depressed* (e.g., inadequacy, guilt, disease) or *manic* (power, special relationship with a deity, etc.) mood
Types of delusions (categorized by content)

- *Mood-incongruent d.* = content not consistent with typical themes of depressed or manic mood

- *D. of being controlled* = a delusion in which feelings, impulses, thoughts, or actions are experienced as being under the control of some external force rather than being under one’s own control
Types of delusions (categorized by content)

- **D. of reference** = a delusion whose theme is that events, objects, or other persons in one’s immediate environment have a particular and unusual significance (usually negative)

- **Persecutory d.** = a delusion in which the central theme is that one is being attacked, harassed, cheated, persecuted, or conspired against
Types of delusions (categorized by content)

- *Somatic d.* = a delusion whose main content pertains to the appearance or functioning of one’s body
- *Thought broadcasting* = the delusion that one’s thoughts are being broadcasted out loud so that they can be perceived by others
Types of delusions (categorized by content)

- *Thought insertion* = the delusion that certain of one’s thoughts are not one’s own, but rather are inserted into one’s mind
Other Psychotic Disorders

- 293.xx Psychotic Disorder Due to \( [\text{Indicate the General medical Condition...}] \)
  - .81 With Delusions
  - .82 With Hallucinations

- Substance-Induced Psychotic Disorder
- 298.9 Psychotic Disorder NOS
Etiological theories for schizophrenia

The cause of schizophrenia is not known!
Etiological theories for schizophrenia

- Biological factors
  - Genetic – twin & adoption studies
  - Neurochemical hypothesis
  - Neuropathology
- Psycho-social factors
  - Psychoanalytic/psychodynamic & learning
  - Social (industrialization, crowding) & psycho-social/family
- Stress-Diathesis
Neurochemical hypothesis

- **Dopamine hypothesis**: Schizophrenia results from too much dopaminergic activity.
  - Efficacy & potency of antipsychotics appear to be related to their ability to act as dopaminergic antagonists.
  - Drugs that increase dopaminergic activity (e.g., amphetamines) act as psychotomimetic drugs (i.e., they can produce schizophrenia-like symptoms)
Neurochemical hypothesis

- **Other neurotransmitters:**
  - **Norepinephrine:** it appears that abnormalities in the noradrenergic system predisposes to relapses
  - **GABA amino-acid:** loss of inhibitory GABA-ergic neurons in the hippocampus may lead to hyperactivity of dopaminergic and noradrenergic neurons
Neuropathology

- Major brain areas implicated in schizophrenia:
  - Limbic structures – hippocampus (disorganization of neurons)
  - Frontal lobes – poor blood flow
  - Basal ganglia (involved in the control of movement)
  - Temporal lobes – smaller
  - Thalamus & cerebellum – loss of neurons
Brain imaging

- **Computed tomography (CT)** - lateral and third ventricular enlargement (by 40%) – suggesting atrophy of brain tissue; some degree of reduction in brain and cortical volume; brain density changes (abnormalities not specific & unique to schizophrenia!!!)

- **Magnetic Resonance Imaging (MRI)** - enlarged ventricles
Brain imaging

- **Positron Emission Tomography (PET):** measures glucose utilization or cerebral blood flow - findings of *hypoactivity of the frontal lobes*
- **Functional MRI & Single photon emission tomography (SPECT):** blood flow, energy consumption, chemical activity
- **Magnetic Resonance Spectroscopy (MRS):** metabolic hypoactivity in the prefrontal cortex
Other biological hypotheses

- **Electrophysiology (EEG):** high # of patients with schizophrenia have abnormal records - *decreased alpha activity,* more than usual epileptiform activity, unusually *high sensitivity to sensory stimuli*

- **Eye movement disorder** (of smooth visual pursuit) – inability to follow a moving target in 50% to 85% of patients with schizophrenia
Other biological hypotheses

- *Psychoneuroimmunology*: immunologic abnormalities
- *Psychoneuroendocrinology*: hormonal abnormalities seem to be present and to correlate with poor prognosis
- *Genetics*: heterogeneous genetic basis
Psychoanalytic theory

- Schizophrenia results from earlier fixations in development than in neuroses.
- Freud postulated *ego defects* responsible for poor ego integration & a regressive response to overwhelming environmental stressors.
- Harry Stack Sullivan postulated *early interpersonal difficulties* related to overanxious mothering as schizophrenenogenic.
Psychodynamic theory

- *Constitutional hypersensitivity to perceptual stimuli* is a deficit (i.e., a *defective stimuli barrier*) that creates difficulty throughout development.

- Psychotic symptoms have *symbolic meaning* for the patient.
Learning theories

- Children *imitate their parents*, they learn irrational ways of thinking and acting from parents who experience pathology themselves.

- *Poor models* result in poor interpersonal relationships.
Family theorists

- *Communication deficits* such as the double-bind patterns of interaction (Gregory Bateson)

- *Schisms & skewed families*: one parent gets too close to a child of the opposite sex; child involved in the parental power struggle (Theodore Lidz)
Family theorists

- *Pseudomutual & pseudohostile families*: maintain a façade of harmony, isolation from the outside, hostility not expressed openly (Lyman Wynne)

- **Expressed emotions (EE)**: high level of expressed negative emotions (i.e., criticism, hostility, overinvolvement)
Stress-diathesis model

The model integrates biological, psychosocial and environmental factors. It postulates that a person’s vulnerability (diathesis) to develop schizophrenia may be triggered by stress and consequently the person develops the symptoms of schizophrenia. Both the diathesis and the stress can be either biological or environmental or both.

Meehl, 1962
Treatment of schizophrenia

From ancient times, treatments of schizophrenia have ranged from kindness and soothing medication, to cruelty, various restraints and death.
Treatment of schizophrenia in the 20th century - beginning

- It was widely believed that schizophrenia was incurable.
- *Freud* expressed a pessimistic view on the treatment of patients with schizophrenia
- *Jung and Adler* reported successes in treating patients with schizophrenia
Treatment of schizophrenia in the 20th century – 1930s

Interpersonal paradigm

- *Harry Stack Sullivan & Frieda Fromm-Reichman* reported successful outcome with modified versions of psychoanalytic technique – based on building a relationship with the patient – at Chestnut Lodge, Rockville, Maryland
- McLean Hospital, Belmont, Massachusetts
- Austen Riggs Center, Stockbridge, MA
Organic psychiatry developed drastic treatments with reported good outcomes

- *Insulin coma* – Manfred Sakel, 1938
- *Artificial epileptic seizures* with metrazol – Meduna, 1939
- *Electric shock treatment* (ECT) – Cerletti & Bini, 1950
- *Prefrontal lobotomy* (psychosurgery) – Antonio de Egas Monis (Nobel prize, 1949)
Treatment of schizophrenia in the 20th century – 1950s

- Two professions of psychiatry promoted two directions of treatment
  - Psychodynamic
  - Organic/biomedical – controlled studies demonstrated the effectiveness of *neuroleptic drugs* in reducing sxs in acutely ill patients & reducing relapse rates in recovered or clinically stable patients
Treatment of schizophrenia in the 20th century – ‘60s – ’70s

• Comparative treatment studies consistently found *psychopharmacotherapy to be superior to individual psychotherapy.*

• California study demonstrated that medication should be the treatment of choice for schizophrenia was the (May, 1968).

• It is now axiomatic that *schizophrenic patients must be treated with antipsychotic (neuroleptic) medication*
Treatment of schizophrenia in the 20th century – 1980s

- Psychotherapeutic interventions were viewed as irrelevant.
- The effectiveness of acute neuroleptic drug treatments was indisputable.
  - Well documented adverse side effects (estimates vary from 5% to 90%)
  - Negative symptoms were not helped by medication
Neurological side effects of neuroleptics

- Extrapyramidal (EPS) - extrapyramidal movement disorders
  - Dystonia
  - Parkinsonism
  - Akathisia - restlessness, insects crawling under the skin
  - Tardive dyskinesia (TD) = behavioral syndrome of the mouth and tongue movements
Other side effects of neuroleptics

- *Pharmacokinetic or akinetic depression* (drug-induced dysphoric affect)
- *Neuroleptic malignant syndrome* - rare, with potentially lethal complications
- *Tardive dementia* and *tardive dysmentia*
- *Tardive psychosis*
Treatment of schizophrenia in the 20\textsuperscript{th} century – 1990s

• Rising interest in the treatment of \textit{negative symptoms} of schizophrenia.
• The introduction of clozapine (\textit{Clozaril}) - an atypical antipsychotic drug with minimal neurological side effects & more effective in reducing negative symptoms
• Recognition of the \textit{role played by psychosocial factors} in the onset, course and prognosis of schizophrenia
Treatment of schizophrenia in the 20th century – 1990s

- **Hospitalization** - for stabilization/restoring functioning: medication, education about the disorder (symptoms, course), safe environment, reduced stress; practical orientation towards living following discharge

- **Behavioral therapy**: social skills training; token economy; milieu; psychoeducation; vocational rehabilitation
Treatment of schizophrenia in the 20\textsuperscript{th} century – 1990s

- \textit{Somatic treatments}: \textit{antipsychotics} (major tranquilizers) - clozapine, risperidone & dopamine receptor antagonists (serious adverse side-effects);

- \textit{Therapeutic principles}: define target sx$s$; use a previously effective drug; trial of minimum 4-6 weeks; combination of medications in tx resistant patients; maintain on lowest possible dosage (major reason for relapse is noncompliance with medication regimen)
Fountain House Mission

“Fountain House is dedicated to the recovery of men and women with mental illness by providing opportunities for our members to live, work and learn, while contributing their talents through a community of mutual support.”
Fountain House Organization

Daily operation of the clubhouse – units

• Clerical Unit
• First Floor Unit – receptionist area
• Horticulture
• Dining room
• Snack Bar
• Interpreter’s Corner – deaf & hard of hearing
Fountain House

Fountain House – the organization

http://www.fountainhouse.org

Fountain House artists

http://www.fountaingallerynyc.com/Artist.cfm
References


References