Schizophrenia

Definition

Schizophrenia is a mental disorder characterized by disruptions in thought processes, perceptions, emotional responsiveness, and social interactions. Although the course of schizophrenia varies among individuals, schizophrenia is typically persistent and can be both severe and disabling.

Symptoms of schizophrenia include psychotic symptoms such as hallucinations, delusions, and thought disorder (unusual ways of thinking), as well as reduced expression of emotions, reduced motivation to accomplish goals, difficulty in social relationships, motor impairment, and cognitive impairment. Although symptoms typically start in late adolescence or early adulthood, schizophrenia is often viewed from a developmental perspective. Cognitive impairment and unusual behaviors sometimes appear in childhood, and persistent presence of multiple symptoms represent a later stage of the disorder. This pattern may reflect disruptions in brain development as well as environmental factors such as prenatal or early life stress. This perspective fuels the hope that early interventions will improve the course of schizophrenia which is often severely disabling when left untreated.

Additional information can be found on the NIMH Health Topics page on Schizophrenia.

Age-Of-Onset for Schizophrenia

Schizophrenia is typically diagnosed in the late teens years to early thirties, and tends to emerge earlier in males (late adolescence – early twenties) than females (early twenties – early thirties).[1,2] More subtle changes in cognition and social relationships may precede the actual diagnosis, often by years.

Prevalence of Schizophrenia

Precise prevalence estimates of schizophrenia are difficult to obtain due to clinical and methodological factors such as the complexity of schizophrenia diagnosis, its overlap with other disorders, and varying methods for determining diagnoses. Given these complexities, schizophrenia and other psychotic disorders are often combined in prevalence estimation studies. A summary of currently available data is presented here.

- Across studies that use household-based survey samples, clinical diagnostic interviews, and medical records, estimates of the prevalence of schizophrenia and related psychotic disorders in the U.S. range between 0.25% and 0.64%.[3,4,5]
- Estimates of the international prevalence of schizophrenia among non-institutionalized persons is 0.33% to 0.75%.[6,7]

Burden of Schizophrenia

Despite its relatively low prevalence, schizophrenia is associated with significant health, social, and economic concerns.

- Schizophrenia is one of the top 15 leading causes of disability worldwide.[8]
- Individuals with schizophrenia have an increased risk of premature mortality (death at a younger age than the general population).[9,10,11,12]
    - The estimated average potential life lost for individuals with schizophrenia in the U.S. is 28.5 years.[10]

- Co-occurring medical conditions, such as heart disease, liver disease, and diabetes, contribute to the higher premature mortality rate among individuals with schizophrenia.[10] Possible reasons for this excess early mortality are increased rates of these medical conditions and under-detection and under-treatment of them.[13]
- An estimated 4.9% of people with schizophrenia die by suicide, a rate that is far greater than the general population, with the highest risk in the early stages of illness.[9]

- Approximately half of individuals with schizophrenia have co-occurring mental and/or behavioral health disorders.[14]
- Financial costs associated with schizophrenia are disproportionately high relative to other chronic mental and physical health conditions, reflecting both "direct" costs of health care as well as "indirect" costs of lost productivity, criminal justice involvement, social service needs, and other factors beyond health care.[5]

Data Sources

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14. Tsai J, Rosenheck RA. Psychiatric comorbidity among adults with schizophrenia: a latent class analysis. *Psychiatry Res.* 2013 Nov 30;210(1):16-20. PMID: 23726869

Statistical Methods and Measurement Caveats

The prevalence rate of schizophrenia and related psychotic disorders is difficult to estimate using typical household survey methods alone. Accurate assessment of schizophrenia is best achieved using clinicians trained in the diagnosis of mental illnesses. The U.S. prevalence studies cited here were selected based on their use of U.S. population samples and use of methods that involved clinical diagnosis, either via clinical reappraisal (validation) studies or clinical record studies.[3,4,5]

Individuals with schizophrenia and other psychotic disorders may be under-counted in prevalence estimation studies. These individuals may be under-represented in household surveys because they may reside in prisons, other institutions, or may lack a permanent address. Similarly, some people with schizophrenia and other psychotic disorders may not be fully reflected in medical records data because they may not have a documented diagnosis, and/or may receive little or no health care

Information on statistical methods and measurement caveats can be found in the papers cited on this page and listed in the reference section. Below we provide additional background information for large datasets used in two studies cited on this page.[3,5]

National Comorbidity Survey Replication (NCS-R)

- The NCS-R is a nationally representative, face-to-face, household survey conducted between February 2001 and April 2003 with a response rate of 70.9%. DSM-IV mental disorders were assessed using a modified version of the fully structured World Health Organization Composite International Diagnostic Interview (WMH-CIDI), a fully structured lay-administered diagnostic interview that generates both International Classification of Diseases, 10th Revision, and DSM-IV diagnoses. The DSM-IV criteria were used here. Participants for the main interview totaled 9,282 English-speaking, non-institutionalized, civilian respondents. Non-affective psychosis was assessed in a subsample of 2,322 respondents.[3] The Sheehan Disability Scales (SDS) assessed disability in work role performance, household maintenance, social life, and intimate relationships on 0-10 scales. The NCS-R was led by Harvard University.

- Survey non-response: In 2001-2002, non-response was 29.1% of primary respondents and 19.6% of secondary respondents. Reasons for non-response to interviewing include: refusal to participate (7.3% of primary, 6.3% of secondary); respondent was reluctant – too busy but did not refuse (17.7% of primary, 11.6% of secondary); circumstantial, such as intellectual developmental disability or overseas work assignment (2.0% of primary, 1.7% of secondary); and, household units that were never contacted (2.0%).

- For more information, see PMID: 15297905.

Medical Expenditure Panel Survey (MEPS)

- The MEPS collect data from community-dwelling people in the U.S. It does not include patients living in group homes, supported living arrangements, prisons, and institutions. In addition, homeless people and undocumented immigrants are excluded. These groups may have a higher prevalence of schizophrenia. MEPS survey responses were obtained from a single respondent for all the members of the family, therefore some recall bias may be associated with the responses.
- Patients for the schizophrenia study were selected based on ICD-9 codes only. Due to the stigma associated with the condition, physicians are known to give patients an interim non-schizophrenia diagnosis when uncertain about schizophrenia until it can be confirmed. To capture patients who may be given an interim non-schizophrenia diagnosis, researchers used the ICD-9 code for non-organic psychoses in addition to that for schizophrenic disorder in their study.[5] MEPS collects information about conditions through patient interviews and some miscoding may occur as the household participants describe their conditions during the interviews and the coders record the ICD-9 codes for the diagnosis.
- For more information, see doi/10.1111/jphs.12027/epdf and the MEPS Survey Background Page.

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