The Epidemiology and Global Burden of Schizophrenia

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Schizophrenia is a psychiatric syndrome characterized by delusions, disorganized speech, hallucinations, and impaired executive functioning. Affecting approximately 1% of the global population, the disorder ranks among the top 10 causes of global disability. The degree to which schizophrenia disrupts an individual's ability to function in their daily life varies substantially, with some able to function at a high level while others are severely disabled.[1] Overall, within the United States, the average potential life lost for individuals with the condition is 28.5 years.[2]

Findings from research indicate that schizophrenic psychosis manifests most commonly during the second and third decades of life during late adolescence and early adulthood.[3] That said, schizophrenia debuts not with psychosis, but rather with marked declines in social and cognitive functioning.[4] In an analysis of data from the Israeli draft board and National Psychiatric Hospitalization Case Registry, researchers noted that adults who later developed schizophrenia recorded deficits on intellectual measures collected during draft assessments administered at ages 16 and 17.[5] These findings corroborate those collected in a previous study conducted 2 decades ago. Investigators tracking twins noticed that the one in the pair who went on to develop schizophrenia showed poorer school performance for nearly a decade before the onset of psychosis.[6]

Over the last few decades, accumulating evidence has shown that the distribution and disease course of schizophrenia differ substantially between the sexes. Compared with women, men tend to have an earlier age at onset, worse premorbid functioning, more severe negative symptoms, and an elevated frequency of alcohol and substance abuse.[7] Additionally, men tend to display a blunted affect and exhibit more marked effects from social withdrawal. Differences in cognitive impairment remain comparatively less well characterized, although some evidence suggests that male schizophrenia patients have greater memory deficits than their female counterparts. Performance in language, visuospatial, and attention domains, in contrast, appears roughly identical.[8]

Although schizophrenia has an estimated heritability of 79%, several environmental factors are highly suspected to contribute to disorder development.[9] Obstetric complications resulting in fetal hypoxia and maternal bacterial infections during pregnancy are associated with schizophrenia, with the most severe psychiatric effects resulting from multisystemic infections.[10] Researchers estimate that infection with *Toxoplasmosis gondii* alone elevates the risk for schizophrenia by 80% and bipolar disorder by between 25% and 50%.[11] Data collected from separate investigations additionally implicate season of birth in schizophrenia development; the incidence of the disorder is highest among individuals born during winter and spring months.[12] Seasonal variation in viral exposure, such as influenza, may account for this trend, along with changes in sunlight exposure, nutrition, and temperature.[10]

In addition to these factors, migrant status and urbanicity appear to elevate the odds of developing schizophrenia. Across studies, scientists have observed an increased risk of psychotic disorders such as schizophrenia in individuals who relocate and become minorities in their new communities.[13] Notably, because this correlation is intact among second-generation migrants, researchers believe that the cause of disorder development is not necessarily from the stress of relocation itself but instead from social isolation, discrimination, and socioeconomic stressors.[14] Findings from a meta-analysis of observational studies support the idea that there is an increased risk of schizophrenia for people living in urban areas compared with more rural locales.[15] Already, a majority of the world population lives in a city (56%), and demographers believe that 7 in 10 will reside in densely populated urban centers by 2050.[16] Concurrently, the number of migrants worldwide will very likely continue to grow. Since 1960, the number of people living outside their country of origin has nearly quadrupled, and the number of refugees experiencing displacement from climate change associated natural disasters could grow to 1 billion over the next 3 decades.[17]

The largest burden from schizophrenia is among patients aged between 25 and 54 years, which broadly corresponds to the most productive years in most individuals' lives.[3] The indirect costs associated with lost productivity, coupled with those linked to medical care, cost the United States approximately $281.6 billion in 2020 alone. For each person diagnosed with schizophrenia at age 25, the total lifetime cost to the economy is approximately $3.8 million or $92,000 per year.[18]

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Caregiver Perspective

"My son is 21 and has been living with this horrible disease since he was 18. We have had 4 hospitalizations, each over a month in duration. We seem to be in a rut right now. He is non-med-compliant, refuses to go to treatment . . . before his hospitalization, he was drinking heavily."[19]

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