

Review: lifetime prevalence of schizophrenia and related disorders is about 5.5 per 1000, but there is significant variation between regions

Goldner E M *et al.* *Prevalence and incidence studies of schizophrenic disorders: a systematic review of the literature.* *Can J Psychiatry.* 2002 Nov;47:833–43.

QUESTION: What is the prevalence of schizophrenia and related disorders in studies published between 1980 and 2000?

Design

Systematic review with meta-analysis.

Data sources

The reviewers searched Medline, HealthSTAR, selected English language journals, and the reference lists of identified studies and review articles for papers published between 1980–2000.

Study selection

Studies containing data about the prevalence or incidence of schizophrenia and related disorders were eligible if they fulfilled the following criteria: (1) community surveys of the general population using probability sampling techniques, those that surveyed the entire population of a defined area and those that used key informant methods; (2) minimum age for participants was 18 years in prevalence studies and 15 years in incidence studies; (3) prevalence studies that covered the entire age range of the general population, or that focused only on adults (aged 18 to 65 years, for example); (4) sample size 450 or more, and (5) operationalised diagnostic criteria and case identification based on standardised instruments (ICD-9 or DSM-III or later) or clinician diagnosis.

Data extraction

The reviewers extracted data on study design, population, selection methods, case finding techniques, diagnostic criteria, prevalence, and incidence. The data were tested for heterogeneity.

Main results

The authors included 18 prevalence and 8 incidence studies. Pooled estimates were 0.34 per 100 for 1-year prevalence, 0.55 per 100 for lifetime prevalence and 11.1 per 100,000 for 1-year incidence of schizophrenia. There was significant heterogeneity, with variations between studies generally between 2 and 5-fold. For example, the pooled lifetime rate of schizophrenia in studies of Asian populations (0.25 per 100) was almost 4 times lower than in studies of non-Asian populations (0.88 per 100).

Conclusions

The authors restricted this review to studies using rigorous and relatively homogeneous methods. Despite this, there was significant heterogeneity in schizophrenia

prevalence and incidence rates. The authors suggest that there is variation in the distribution of schizophrenia around the world. Subtle methodological differences, such as discrepancies in diagnostic practices between studies, cannot be ruled out as an explanation for variations in prevalence rates.

COMMENTARY

There is growing recognition that the incidence of schizophrenic disorders varies between geographical areas. It is unlikely that this variance is due to migration. This raises important questions about both the aetiology of schizophrenia and the treatment offered.

This comprehensive review by Goldner *et al* reinforces that this variation is real, with a 2 to 5-fold variation in prevalence figures between different studies. Schelin *et al* found similar variations in Denmark, from a 26.1 per 100,000 yearly incidence in Copenhagen to an 8.6 per 100,000 incidence in rural provinces.¹ Findings in England, Sweden and the Netherlands suggest that there is an increased incidence among second generation immigrants.^{2–4}

Taken together, these findings suggest that environmental factors play a crucial role in the development of serious psychiatric disorders such as schizophrenia. The implications are (1) health planners need local data on schizophrenia rates to assist in planning and implementing effective interventions, and (2) clinicians and researchers need to continue to investigate the reasons for these variations. Future research should focus on identifying risk factors to shed light on specific aetiological factors, especially in smaller communities.

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