First-contact incidence of schizophrenia in Surinam

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Summary We tested the hypothesis that the increased incidence of schizophrenia among Surinamese immigrants to the Netherlands could be explained by a similarly high incidence in Surinam. We conducted a 1-year first-contact incidence study in Surinam and compared the findings with data from a similar study conducted in The Netherlands using the same inclusion criteria and instruments. The risk of developing a schizophrenic disorder was 2.4 times higher (95% CI 1.3–4.2) in Surinamese immigrants than in residents of Surinam. The increased risk is probably due to environmental factors in The Netherlands.

Declarations of interest None.

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There is no satisfactory explanation for the increased incidence of schizophrenia among several immigrant groups to Europe (e.g. Cantor-Graae et al., 2003). Migration from the previous Dutch colony Surinam to The Netherlands is of particular research interest, because it was large-scale and relatively unselective. We therefore conducted a first-contact incidence study in Surinam to test the hypothesis that the increased incidence of schizophrenia among Surinamese immigrants could be explained by a similarly high incidence in Surinam. We used data from a study in The Netherlands, in which exactly the same inclusion criteria and instruments had been applied (Selten et al., 2001).

METHOD

Incidence study in Surinam

Surinam gained independence in 1975 and during the period 1973–1990 more than a third of its population migrated to The Netherlands. Its current population is about 481 000; the capital, Paramaribo, has 244 000 inhabitants. Most people speak Dutch. The population consists of African Surinamese (41%), East Indians (37%), Javanese (15%) and others (7%). All people have access to mental health care, provided by Psychiatric Centre Surinam. In two remote districts care is provided by physicians of the Medical Mission.

For the study sample we tried to recruit everyone aged 15–54 years making their first-ever physician contact for a (suspected) psychotic disorder during the period 1 February 2002 to 1 February 2003. General practitioners and physicians in remote districts were asked by letter to refer all eligible patients, and at intervals were reminded of the study by telephone. The six psychiatrists in Surinam were visited personally. One author (C.Z.), of Dutch–Surinamese origin, made weekly checks in Psychiatric Centre Surinam to find out if any patient with a first psychotic episode had been seen at the outpatient department or admitted to the ward. She screened the medical files for information and interviewed all patients using the Dutch translation of the Comprehensive Assessment of Symptoms and History (Andreasen et al., 1992). No patient refused to be interviewed. C.Z. also interviewed at least one key informant about each patient, using the Instrument for the Retrospective Assessment of Symptoms and History (Hafner et al., 1992). Occasionally, an interpreter was used. A urine drug screen was performed in 78% of the sample. Three psychiatrists, one from Surinam (R.D.) and two from the Netherlands (J.P.S. and P.N.v.H.), discussed with C.Z. the patient’s history and arrived at a consensus DSM–IV diagnosis (American Psychiatric Association, 1994).

Incidence study in The Netherlands

For comparison we used data from a study conducted in The Hague between 1 April 1997 and 1 April 1999 (Selten et al., 2001). This study found that the risk of a DSM–IV schizophrenic disorder (schizophrenia, schizophreniform or schizoaffective disorder) for Surinamese of the first generation was 3.2 times higher (95% CI 1.8–5.7) than that for Dutch natives and that the risk for members of the second generation was 5.5 times higher (95% CI 2.5–11.9).

Statistical analysis

To avoid underestimation of the rapidly growing population, we used as denominator the April–June 2003 census data. A post-enumeration survey showed that the census’s underestimation was maximally 2.6%. In August 2003 a fire destroyed the Bureau for Statistics and some results were lost. Consequently, the Bureau’s figures for that year’s population (241 837 males, 239 292 females) were not subdivided by age. However, it was possible to estimate figures for 5-year age groups using the Bureau’s estimations for 2000. Standardised first-contact rates for schizophrenic disorders were derived by direct standardisation for age and gender to the world standard population in 1990 (United Nations, 1991). To compare the risk for Surinamese immigrants to The Netherlands with that for residents of Surinam, relative risks adjusted for 5-year age group and gender were calculated by Poisson regression analysis.

RESULTS

In Surinam, 64 people made a first contact for a psychotic disorder (Table 1). The median interval between psychosis onset and first contact was 8 weeks (interquartile range 3–76 weeks). Residents of Paramaribo (about half of the population) were overrepresented in the sample of patients: 47 patients (73% of the sample) lived in this city, and the remaining patients lived in smaller towns and villages (n=11) or in the country’s interior (n=6). Thirty-eight patients had been to an alternative healer before they contacted a physician.

The crude first-contact rate for schizophrenic disorders (DSM–IV code 295.x) was 1.68 per 10 000 (95% CI 1.23–2.25). The standardised rate for schizophrenic disorders was 1.77 per 10 000 (95% CI 1.53–2.03). The risk of a first contact for a schizophrenic disorder for Surinamese first-generation residents of The Hague was 2.4 times higher than for those residents in Surinam: age- and gender-adjusted relative risk (RR) 2.4, 95% CI 1.3–4.2. The risk for
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