

Trends and early risk factors of psychotic disorder - Northern Finland Birth Cohorts studies 1966 and 1986 (NFBC)

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BACKGROUND

Schizophrenia is a complex mental health disorder and a lifetime prevalence in Finland is about 1% with the highest prevalence in the northern region.

Although the comparison of time trends of incidence is essential for understanding the disease development and identification of risk groups, there are limited amount of studies targeting it and so far, the results of these studies are inconsistent.

Schizophrenia can be predicted by early childhood motor milestones e.g. keeping head up, grabbing at objects, sitting unsupported etc. Some of identified milestones and its risk estimates vary between studies.

This mental health disease can be seen as a continuum of symptomatology, the schizophrenia related traits, i.e. schizotypy, can be studied in general population using various scales measuring the symptoms. So far it is not explored if and how motor development milestones are associated with different schizotypal traits.

RELEVANCE OF THE PROJECT

NFBC 1966 and NFBC 1986 are unique, comparable, large general population cohorts based in the same geographical region where data have been collected prospectively since pregnancy.

In previous studies on the NFBC and psychoses these two birth cohorts were not combined and studies on time trends of the risk factors were not performed. Findings on motor development milestones are inconsistent and there is a need in meta-analytic revision of these results. In addition it is not explored if and how motor development milestones are associated with different schizotypal traits.

We hope that the findings can contribute to improvement of psychosis screening and treatment, identification of groups at risk and further development of intervention strategies.

Risk factors	Crude statistics				Adjusted odds ratio	
	OR	95% CI	R ² %	PAR%	OR	95% CI
Male gender	1.8	1.2-2.7	0.8	29	1.8	1.1-2.8
Parental psychosis*	5.9	2.3-6.6	1.5	11	4.1	2.3-7.4
Birth weight <2,500g	2.2	1.1-4.6	0.3	4	1.4	0.6-3.4
Perinatal brain damage	5.7	2.6-12.5	1.1	5	2.9	1.1-7.9
Central nervous system infection	2.9	1.1-8.0	0.3	2	3.7	1.3-10.6
Unwanted pregnancy	2.0	1.2-3.2	0.6	10	1.8	1.1-3.0
Not in normal school grade	4.4	2.7-7.1	2.4	15	4.4	2.5-7.7
Late learning to stand (12 months or later)	2.0	1.4-3.0	1.1	24	1.4	0.8-2.4
Late learning to walk (12 months or later)	1.9	1.2-3.0	0.9	33	1.3	0.7-2.3
Potty trained at the age of 1 year (no)	1.8	1.2-2.6	0.7	19	1.5	1.0-2.3
Excellent school performance (in males)	5.3	1.4-7.9	0.7	7	4.3	1.7-10.7
Social class 1 (in females)	2.4	1.0-5.8	0.1	9	4.5	1.6-13.4

Table 1. Most essential risk factors of schizophrenia in NFBC 1966 by age 34
Source: Isohanni M et al. (2006)

RESEARCH PLAN

The aims of this project are to study a) time trends of incidence and early risk factors of psychoses b) association between motor milestones and schizophrenia and related outcomes c) if and how motor milestones relate to different schizotypal traits.

These aspects of schizophrenia can be clarified by studying it on unique, high quality data and synthesize results of previous research. The data from Northern Finland Birth Cohort (NFBC) 1966 and NFBC 1986 will be used as a material. Information on motor development milestones is collected from the visits to the child health centers. Data from schizophrenia and related diagnoses are prospectively collected from various nationwide registers, whereas questionnaires with schizotypal traits were administered to the NFBC 1966 at age 31 years.

Variety of epidemiological and statistical methods will be applied to study these aspects of schizophrenia such as: longitudinal analysis (e.g. regression analysis), meta-analysis and factor analysis.

EXPECTED RESULTS

We expect that the incidence of psychosis will be higher in NFBC 1986 compared to NFBC 1966 and there will be significant changes in distribution of psychosis diagnoses in two cohorts. We also hypothesize that some of motor development milestones are associated with schizophrenia and their relation to different schizotypal scales varies.

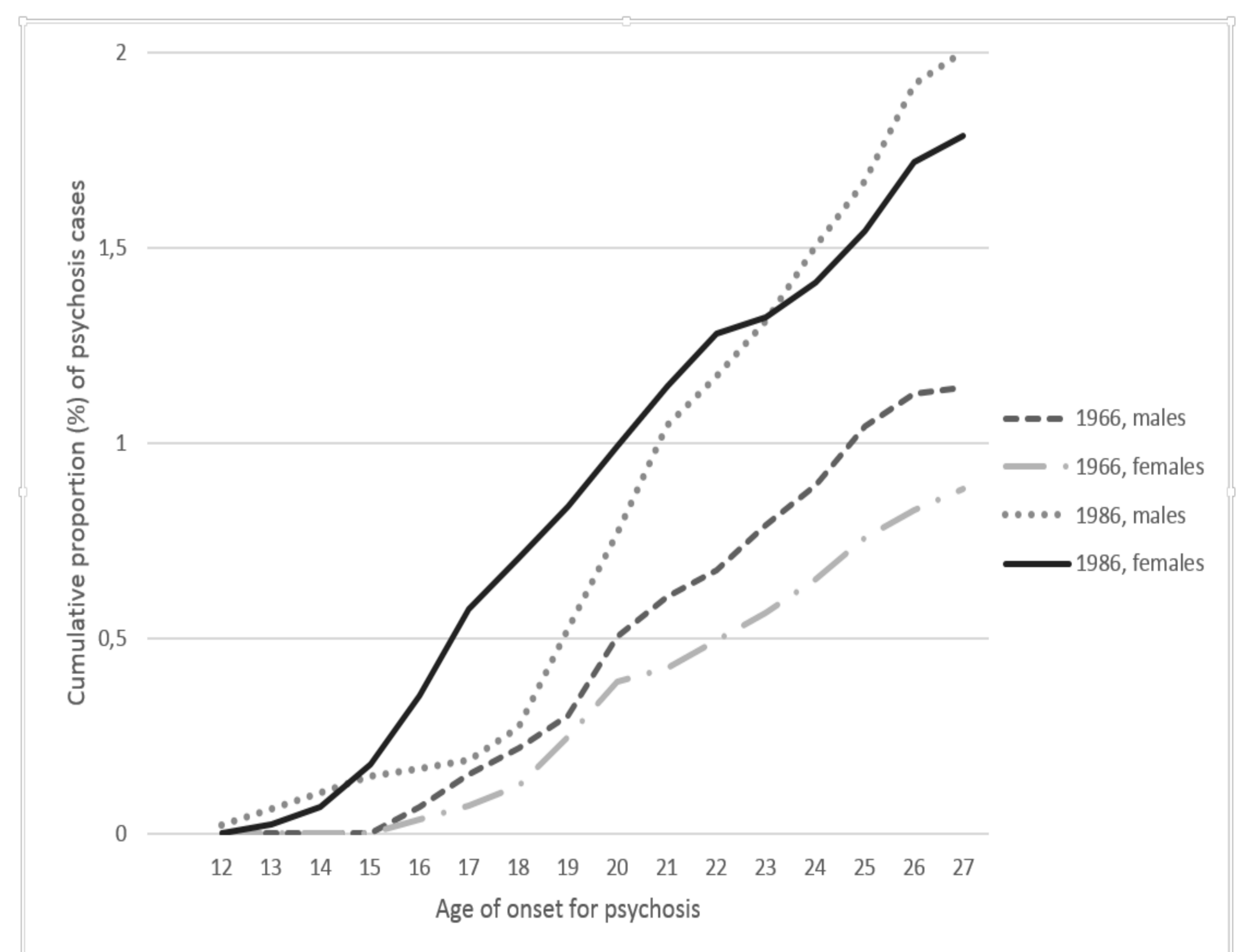


Figure 1. Cumulative incidences (%) among males and females in the NFBC 1966 and NFBC 1986

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