

## ASSOCIATION BETWEEN DURATION OF UNTREATED PSYCHOSIS AND PROGRESSION OF BRAIN VOLUME CHANGE IN SCHIZOPHRENIA - THE NORTHERN FINLAND 1966 BIRTH COHORT

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**Introduction:** Long duration of untreated psychosis (DUP) has been associated to brain morphological changes in schizophrenia in cross-sectional analyses. It is unclear DUP relates to brain volume change over time.

**Aims:** Our aim was to analyze the association between length of DUP and total brain volume change in schizophrenia in a general population based sample.

**Methods:** All members of the Northern Finland 1966 Birth Cohort (NFBC1966) known to have had psychotic illness were invited for a field study at the age 34-years (in average 10 year after onset of psychosis) and follow-up nine years later at the age 43-years. DUP was assessed from medical records. The total brain volume scan interval change and the DUP information were available for 32 subjects with DSM-III-R schizophrenia. We analysed the correlation between length of DUP and the mean annual whole brain reduction, adjusted for age of illness onset and sex.

**Results:** The mean annual whole brain volume reduction was 0.66%. The reduction was 0.76% among those with shortest DUP, 0.58% among those with median DUP, and 0.63% among those with longest DUP. There was no statistically significant correlation between DUP and annual brain volume change when adjusted for onset age and/or sex.

**Conclusions:** We did not find an association between long DUP and brain volume decrease in schizophrenia in 9 years follow-up. Although long DUP has been associated with differences in brain volume in cross-sectional analyses, the significance of DUP on brain morphology in long term is unclear.