

S2. Interaction between biological and social factors in psychiatry

PERINATAL TRAUMA AND ITS CORRELATES IN MONOZYGOTIC TWINS DISCORDANT FOR SCHIZOPHRENIA

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To investigate the potential contribution of obstetric complications (OCs) to the development of schizophrenia, OC histories were studied through detailed parental reports for 23 monozygotic twins (MZ) pairs discordant for schizophrenia, 10 MZ twin pairs concordant for schizophrenia and 10 normal control MZ twin pairs. OC history was further studied in relation to minor congenital malformations ("minor physical anomalies", MPAs) developing early in gestation and also in relation to degree of neurological abnormality, as independently assessed in adulthood. Twin pairs with schizophrenia, and especially discordant pairs, had significantly increased rates of OCs especially during labour/delivery. Somatic complications during pregnancy were significantly related to the development of MPAs in the total sample and in discordant twin pairs particularly. Degree of adult neurological impairment in well discordant MZ twins was significantly positively related to history of both neonatal and total OCs, with a similar but nonsignificant trend among ill twins. Family history of psychosis, history of substance abuse and history of postnatal cerebral trauma bore no systematic relationship to neurological impairment in ill or well co-twins. Early somatic trauma appear to be related to the later development of schizophrenia and leave lasting traces in morphological and neurofunctional characteristics of schizophrenics and their genetically identical healthy co-twins.

OBSTETRIC COMPLICATIONS AND THEIR RELATIONSHIP TO LATER SCHIZOPHRENIA AND BIPOLAR AFFECTIVE DISORDER

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Although genetic factors are known to play a role in the aetiology of schizophrenia the relative contribution of environmental factors remains controversial. Among such factors obstetric complications (OC's) have attracted considerable attention.

From the Dublin Psychiatric Case Register, we obtained the maternity hospital records of 810 patients with a diagnosis of schizophrenia or bipolar affective disorder. Each patient's birth was matched with a control for age, sex, socioeconomic group, maternal age and parity. Birth records were blindly evaluated using recognised scales for the assessment of OC's. Data relating to the frequency and severity of OC's will be presented.

VULNERABILITY TO SCHIZOPHRENIA: RESEARCH IMPLICATION

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Vulnerability to schizophrenia is conceptualised here as a deficient attunement between an individual and his world ("enactive approach"). This approach attempts to integrate elements of phenomenological-hermeneutic epistemology, classical empiricism, and more recent non-objectivistic epistemologies. The concept of attunement is elaborated, and its research implications illustrated through a discussion of several empirical and theoretical domains. 1) The inconsistency and lack of stability of empirical results of the research in schizophrenia. 2) Review of the available data on premorbid and prodromal behavioural features in schizophrenia. 3) Pragmatic and theoretical failure of classical cognitive paradigms. 4) Insights from infant development studies, pointing to an intertwining of motor-perceptual and cognitive abilities. 5) Linguistic approach pointing to the fact that the use of metaphor, as a basic communicative vehicle, is originally anchored in the bodily involvement in the world. 6) Current views of the ontogenesis of the Central Nervous System with a special reference to "neural darwinism" and neural network models. 7) Brief review of gene-environment interactions in the pathogenesis of schizophrenia.

BIOLOGICAL AND SOCIAL PREDICTORS OF OUTCOME IN PSYCHOSIS

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A series of 166 psychotic patients was extensively investigated and followed up for 4 years. Among schizophrenic patients, males had an earlier onset of psychosis than females but this difference disappeared when patients who had suffered obstetric complications were removed. Ventricular volume did not differ among female schizophrenics with and without a family history but non-familial male schizophrenics had greater ventricular volume than familial cases; this was not explained by obstetric complications.

Male and, to a lesser extent, Afro-Caribbean patients had a poor outcome while patients who had suffered adverse life events had a good outcome. Early insidious onset, low IQ, and childhood problems were bad prognostic indicators as was increased Sylvian fissure and third ventricular volume.

CORRELATES OF THE EXTREMES OF OUTCOME IN SCHIZOPHRENIA

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94% of a sample of 532 schizophrenic patients discharged over a 10 year period were traced after 3-13 years. Considerable heterogeneity of outcome was observed. Most but not all patients continued to show psychotic symptoms. High scores on negative symptoms were associated with poor function in most areas but this was not true of positive symptoms. Cognitive decline was present in marked degree in 36 cases, absent in 66 cases and of intermediate degree in the remainder. The historical correlates of this suggest that it is associated with earlier evidence of poor and perhaps declining ability. 49 individuals scored zero on both negative and positive symptoms at follow-up. Biographical details of these individuals will be presented in order to cast light on the determinants of this favourable outcome.