

Correlation Between Pregnancy and Childbirth Complications and the Mental Health of the Children Born

A. Madhu¹, A. Deegan², D. Cawthorpe¹

¹Cumming School of Medicine, University of Calgary, Calgary, Canada ; ²Community Services, Child & Adolescent Addiction & Mental Health, Calgary, Canada

OBJECTIVE:

Complications of birth and pregnancy are more than twice as likely among children and adolescents with mental disorder. Using an informatics approach, this study examines the type of mental disorder associated with complications of birth and pregnancy in the local pediatric population (Calgary Research Ethics Board ID: 21695).

METHODS:

A data set containing physician visit for approximately 240,000 unique individuals from 1994-2009 was employed. Additionally, a systematic literature review and meta-analysis of pediatric mental disorder associated with complications of birth and pregnancy (as a major class of ICD) was undertaken in order to provide an interpretational context.

RESULTS:

Results from the systematic literature review show that mothers who experience gestational infection, disease or drug exposure had a 3.7-fold increased risk of giving birth to children with mental disorders. Perinatal risk factors and obstetric complications were observed to cause a 1.5-fold increased risk. Emotional violence during pregnancy was seen to correlate with premature birth (an obstetric complication) which belongs to the previous category. Forrest plot also revealed that gestational diabetes and influenza were the leading causes of increasing this risk. In the local pediatric population, the prevalence of offspring born with mental disorders whose mothers experienced pregnancy/childbirth complications increased from 18 individuals/1000 to 28 individuals/1000.

CONCLUSION:

On average, maternal pregnancy/childbirth complications lead to a 2-fold increased risk of offspring being born with mental disorders. In the local population, the prevalence of mental disorders consequent to pregnancy and childbirth complications has increased by a factor of 1.4 during the 1994-2009 period.