



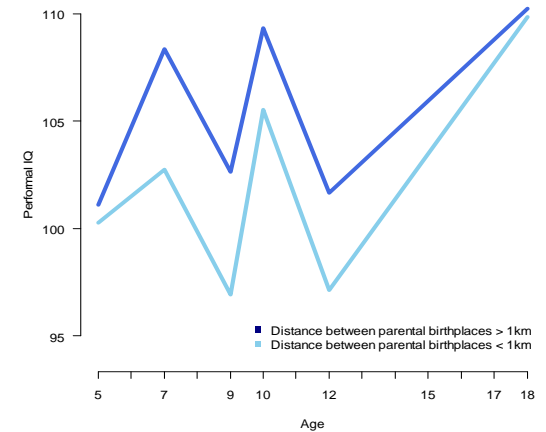
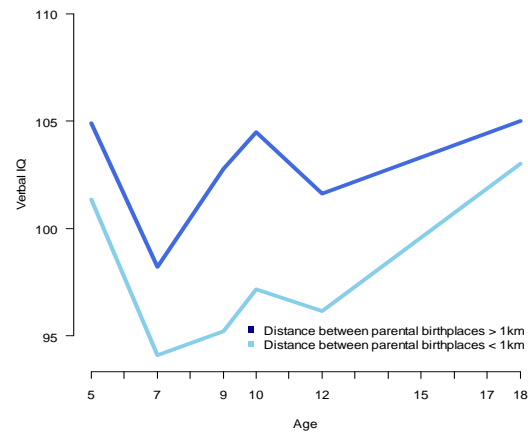
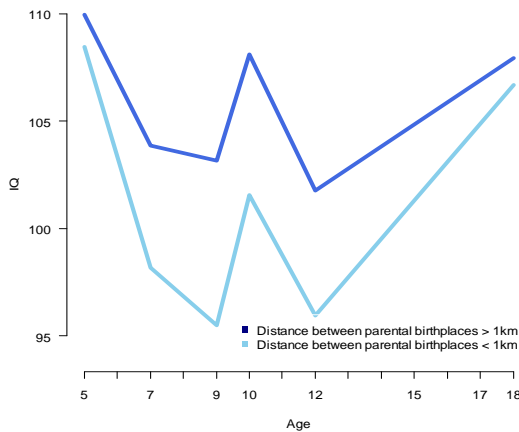
The Relationship between Proximity of Parental Birthplace and Children's IQ

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Inbreeding depression, or reduction in mean phenotypic value resulting from parental genetic relatedness, has been shown to occur for a number of traits, including intelligence. We use proximity of parental birth place as an index of probability of one's parents being genetically related, and investigate the relationship between proximity of parental birth place and IQ in children.

Measures. Longitudinal measures of cognitive abilities were taken in a sample of twins (N=1754), their siblings (N=236) and parents (N=94). Cognitive abilities were assessed using the Revised Amsterdam Children Intelligence Test (RAKIT), Wechsler Intelligence Scale for Children (WISC), Raven's Standard and Advanced Progressive Matrices (SPM, APM), and Wechsler Adult Intelligence Scale (WAIS)), at twins' ages 5, 7, 9, 10, 12, 15, 17, and 18.

Analyses. We examined the relationship between proximity of parental birthplace and full-scale (FSIQ), verbal (VIQ), and performal IQ (PIQ) in children. The analyses were performed separately at each age group while controlling for the possible effects of parental education. Given our expectation of inbreeding depression being associated with a very small distance between parental birthplaces, the distance between parental birthplaces was dichotomized with a cut-off point of 1 km.



Results. Children whose parents were born less than 1 km apart were found to have a significantly lower IQ than children with greater distance between parental birthplaces. The effect remained significant after controlling for effects of parental education, and was found to occur at all ages apart from age 5.

Conclusion. The finding of lower IQ in children whose parents are born less than 1 km apart relative to other children is consistent with the hypothesis of inbreeding depression. Future studies, measuring the association between the degree of genetic relatedness and IQ, are needed to further elucidate this relationship.