

Children born with a cleft lip unlikely to be genetically inclined to do poorly at school

May 6 2020

New research has found that children born with a cleft lip, either with or without a cleft palate, are not likely to be genetically predisposed to do less well at school than their peers. The study by the Cleft Collective research team at the University of Bristol is published today [6 May] in the *International Journal of Epidemiology*.

Worldwide, around one in every 700 babies is born with a cleft lip, which is a gap in the upper lip. Some previous studies have shown that children born with a cleft lip or a [cleft palate](#) (a gap in the roof of the mouth) do less well in school, even if they don't have any other conditions or known [genetic syndromes](#).

It has been suggested that these observed differences could be due to a [genetic predisposition](#) to lower intelligence caused by undiagnosed differences in brain structure or function. The new study by the Cleft Collective team indicates that this is unlikely to be the case for children born with a cleft lip.

The team compared information about the genetics of cleft lip to information about the genetics of [educational attainment](#) and intelligence using an approach pioneered at Bristol known as Mendelian randomization and another genetic approach known as 'linkage disequilibrium score regression'. They found very little evidence to suggest that the genetic influences on cleft lip are related to low educational attainment or intelligence.

The findings could have an important impact on family counselling and coping strategies, and on how the public perceives people born with a cleft lip.

Dr. Gemma Sharp, Senior Lecturer in Molecular Epidemiology in the MRC Integrative Epidemiology Unit and senior author of the study, said: "Our study has highlighted the need for further research into possible explanations as to why these children tend to do less well at school. For example, the differences in educational attainment might be explained by factors related to having a cleft lip (with or without a cleft palate), such as social stigmatization and impaired speech and [language development](#), or by confounding factors such as family socioeconomic position.

"A better understanding of these factors could help to develop ways to support schools and families to improve educational attainment in children born with a [cleft lip](#)."

Christina Dardani, Ph.D. student at the Centre of Academic Mental Health and the first author of the study, added: "Our findings could have a positive impact on how people perceive children born with a [cleft lip](#). When they are born, they are just as likely as anyone else to do well at school. The fact that some studies have found they do less well really highlights the need to provide the right environment and educational opportunities to help these children reach their full potential."

The researchers hope to conduct further research in this area using data from the Cleft Collective Cohort Studies as the [children](#) in that study reach school age.

Provided by University of Bristol

Citation: Children born with a cleft lip unlikely to be genetically inclined to do poorly at school (2020, May 6) retrieved 17 April 2024 from <https://medicalxpress.com/news/2020-05-children-born-cleft-lip-genetically.html>

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