Background
Paediatric traumatic brain injury (TBI) is a world-wide impactful problem. Sequela following TBI varies and may not show itself before the child is facing higher academic demands. Minimal and mild TBI can, as well as moderate and severe TBI, be followed by cognitive and behavioural impairment. This nationwide register-based cohort study aimed to estimate long-term educational consequences following TBI during childhood.

Materials and methods
All living-born children in Denmark (1977-2000) were included at time of birth and followed through the Danish National Health Registers and the Danish Educational Registers until death, emigration, age 19/25 years, or end of follow-up (Dec 2019). Children without TBI were used as controls. There were no exclusion criteria. School performance was estimated by a primary outcome defined as 1) completion of primary education or completion of primary education and lower secondary education, and 2) grade point average (GPA) achieved the final year of primary/lower secondary education, and a secondary outcome defined as 3) starting and completing youth education or higher educational level.

Results
Of 1,527,513 children, 88,015 suffered from a TBI before the age of 15 years (30,609 minimal, 46,379 mild, 6,983 moderate, and 4,044 severe). 1) Children with TBI (all severity levels) were 4% less likely to complete primary/lower secondary education compared to other children (95% CI 3% to 5%). The likelihood of completing school was reduced with increasing number of TBIs and severity level. 2) Children with TBI (all severity levels) also achieved a lower GPA than other children, and a higher percentage of children with TBI had a GPA below that of the entire cohort. GPA decreased with increasing number of TBIs, severity level, and older age at time of trauma. 3) Last, children with TBI (all severity levels) were 4% less likely to begin as well as complete youth education or higher educational level than other children (95% CI 3% to 5% and 95% CI 3% to 5%, respectively). Interaction analyses showed that neurological and psychiatric co-morbidities in either children or parents, and parental educational status did not markedly affect size of outcome.

Conclusion
TBI during childhood was found to have a detrimental impact on school performance, and this impact seemed to increase by number of TBIs and TBI severity. The findings highlight the importance of educational support in children who suffers a TBI, regardless of severity level.