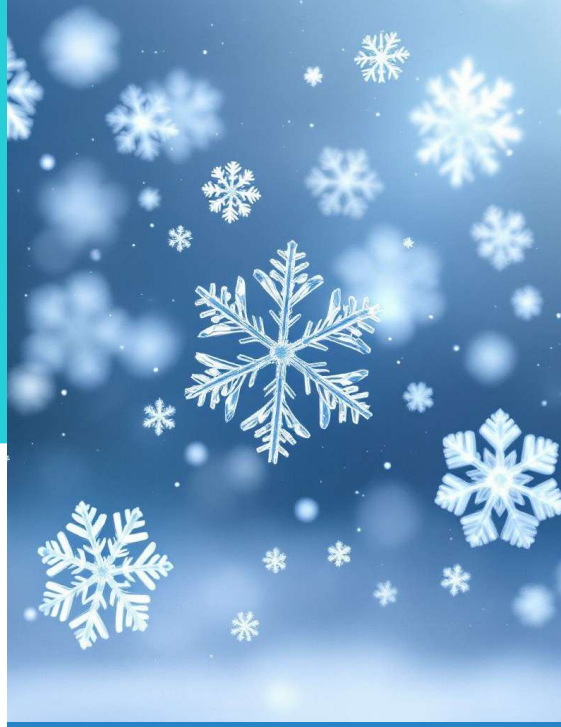
Theirworld

Edinburgh Birth Cohort

Winter 2025



NEWSLETTER

Welcome,

to the latest edition of our newsletter. Winter is certainly upon us and we have fun ideas to help you make the most of what the season has to offer! Look out for the free Sprogmanay party at the National Museum which makes a welcome return on New Year's Day.

In staff news, we're delighted to welcome new Research Assistant Jessica Dolan and also to welcome back Selina Abel who joins us in a post-doctoral post.

Looking ahead, 2026 will mark 10 years since the first babies were recruited to TEBC. Lots more babies and follow up visits have happened since then with what are now, fantastic junior scientists! We are delighted to introduce a Certificate of Recognition to be awarded to all TEBC junior scientists for their outstanding contributions to science and TEBC.

We are asking you to get in touch with us if your contact details have changed since we last saw you. We're also looking for feedback on the study visits and would love to hear what you think!

Research findings this time are from a paper led by Dr Katie McKinnon, published in November. The research looked at how preterm birth and socioeconomic status (a person's social standing) relate to brain development in newborn babies around their due date and at 5 years.

As always, a huge thank you to everyone who takes part in TEBC and shares their time with us, it's much appreciated.

Warm wishes, the TEBC Team.

Staff News

We are delighted to welcome **Jessica Dolan** who joins us as Research Assistant to support the 5 year and 7 year visits. We also wish a warm, welcome return to **Selina Abel**. Many of you will have met Selina when she was a student with us. There's more about Jessica and Selina on page 3.

We said goodbye to **Melissa Thye** who leaves to take up another brain imaging post at the University. We wish Melissa every success in her new post!

Winter – make, eat and visit!

Finger painting, festive pizza and Sprogmanay returns to the National Museum for 2026.
Details on page 6.

News

10 Years of TEBC. Recognising Outstanding Contributions

In 2026 it will be 10 years since the first babies were recruited to TEBC. Wow, a lot has changed since then and babies are now junior scientists! However, what has remained constant throughout is the dedication of the families who take part. Junior scientists have told us that they are proud to be part of the study and we are incredibly proud of them, too.

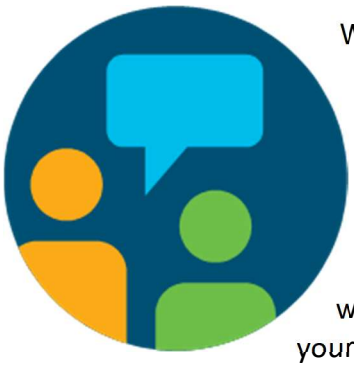
To mark this milestone, we are delighted to introduce a Certificate of Recognition, to be awarded to all TEBC junior scientists for their outstanding contributions to science and TEBC. We'll start sending these out soon with their birthday card.

5 & 7 Year Visits: Updating Your Contact Details

We are excited to be seeing so many junior scientists back at 5 and 7 years! To organise a visit, we normally get in touch by email and phone around the time they turn 5 or 7. If your email or phone number have changed since we last saw you, please do get in touch so that we can make sure our records are up to date. You can send us a message on 07584 642277 or email TEBC@ed.ac.uk

Let Us Know What You Think!

We really enjoy welcoming you and your junior scientist to the study visits. Parents on the study advisory group have told us that it would help to prepare for a visit if they could hear from other families what it's like.



Working with parents, we are now putting together a small booklet that highlights the experiences of families who are taking part, and we would love to include your voice.

If your junior scientist and/or you would like to share any thoughts about your visits, such as favourite activities, memorable moments, or how your child found the games or the brain scan, we would be delighted to hear from you.

You can share your feedback by scanning the QR code. If you would like to add anything more, you are always welcome to contact us at TEBC@ed.ac.uk or 07584 642277.

All feedback in the booklet will be anonymised (for example, any names removed) so that it won't be possible to identify you or your child.

Welcome Jessica

Hi, I'm Jessica! I recently joined the TEBC team in autumn this year. I have a background in psychology, specifically developmental psychology.

I'm really excited to understand how children learn and develop as they grow older, and I'm looking forward to exploring this more through the work we do at TEBC.

I grew up in Edinburgh and have also lived in Germany and The Netherlands. In my spare time, I enjoy going on beach walks and experimenting with new recipes at home.

I look forward to meeting many of you at the 5- and 7-year TEBC visits!

Welcome back Selina

We also wish a warm, welcome return to Selina Abel. Many of you will have met Selina before when she was a student.

Selina completed her PhD and re-joins the team as a post-doctoral researcher, focusing on the 5 year visits. She is looking forward to seeing you if you're due to come back for a 5-year visit!

Photo: Selina attending her graduation ceremony at the University of Edinburgh.

Research Findings

Preterm birth, socioeconomic status and brain development across childhood

Background Information

Preterm birth, being born before your due date, can be associated with changes to brain development and challenges during childhood and beyond, such as cerebral palsy (movement problems), learning difficulties, vision or hearing problems, and mental health problems.

Socioeconomic status (SES) refers to an individual's social standing, which is affected by their access to financial, educational, social, and health resources. In babies, SES may be measured at three levels:

1. Neighbourhood deprivation - how deprived or rich a neighbourhood is. In Scotland, this is captured using the Scottish Index of Multiple Deprivation (SIMD): a postcode-based score that includes neighbourhood-level information about income, employment, health, education, housing, crime, and access to services.

2. Family SES - parental education level and occupation.

3. Subjective SES - a measure of how someone perceives their social standing and quality of life.

Lower, compared to higher, SES is associated with differences in child brain structure and an increased chance of developing learning difficulties and mental health problems.

We previously studied how preterm birth and a family's socioeconomic status relates to brain structures in the neonatal period, around their due date, and found that they both had effects. White matter is the parts of the brain connecting different brain regions, and we already know it is important for outcomes in babies born preterm. We now wanted to look at how preterm birth and a family's socioeconomic status related to development of the white matter of the brain across childhood, in the neonatal period and at five years of age.

Research Questions

We looked at how preterm birth and low socioeconomic status relate to white matter in the brain in newborn babies around their due date and at five years. We also looked at whether this relationship is different depending on what we used to describe socioeconomic status.

Findings

In the neonatal period among preterm babies, those who were born closer to term (i.e. with higher gestational age) had more "mature" white matter. Similarly, children whose mothers had higher education also showed more mature white matter. In contrast, the neighbourhood-level measure did not show a strong association at this age.

At five years old for preterm-born children, the story changes slightly. The link between how early they were born and their white matter structure depended more on neighbourhood-level deprivation (rather than maternal education).

In other words, both preterm birth and socioeconomic environment matter — but their relative importance changes over time.

Conclusions

Brain development is shaped by more than just biology and medical factors. When babies are born early, they are biologically more vulnerable — but their postnatal environment, including socioeconomic conditions, also plays a role. The influence of social conditions changes over time. Right after birth, family-level factors (like maternal education) seem more important; by early childhood, broader neighbourhood-level factors become more relevant.

We don't yet know how preterm birth and poverty affect brain structure. However, supporting families and reducing poverty, or the effects of poverty, could improve preterm brain development. Our results suggest we might need to adapt what interventions we give as children grow, supporting families in early life, and focusing on the wider neighbourhood as they grow up.

Scan the QR code to access the full text paper by Katie McKinnon and co-authors.

We have published over 50 research papers using data from the study cohort. Summaries of all our published research findings are available on our study website. Use the QR code to find more on the website.

Winter – make, eat and visit!

This simple winter tree finger painting activity is great for kids of all ages. Use a cotton bud to add a finishing touch of snowflakes!

Christmas tree pizza tart

Bring festive fun to dinnertime with this tree-shaped pizza made with shop-bought pastry. Choose your own toppings!

Sprogmanay returns for 2026! Celebrate the start of the New Year in party style with an afternoon of free family fun with live music and performances. Need a break from dancing? You can also explore the galleries packed with inspiring objects and stories.

Also check out their 'What's On' section for other family events including:
Relaxed Morning for those who would appreciate a calmer visit.
Sensory Sunday an exciting, hands-on sensory play session for children with additional needs.
Drawn Together at the Museum between Christmas and New Year for some mindful sketching around the museum.
Find Out Fridays, drop-in Friday fun for families of all ages during term time.

Contact Details

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https://www.ed.ac.uk/centre-reproductive-health/tebc