YOUR NEWSLETTER FROM THE TWINS EARLY DEVELOPMENT STUDY



Director of TEDS, Professor Thalia Eley, discusses the current TEDS Mental Health Study and exciting future plans



What does your research focus on and has this always been your area of interest?

I am fascinated by how people respond to the world around them, particularly stress, and how that impacts their mental wellbeing. I noticed as a teenager that my friends differed hugely in this, and I feel strongly that schools need to teach young people about coping with stress just as much as they need to teach them maths. We all need that skill!

What is the most surprising finding from your research?

I was amazed to find that not only do our genes influence how we respond to stress, but they also influence how stressful we perceive things to be. Disentangling all of this to help enable everyone to have as good mental health as possible is the core goal of my research group.

Why is mental health research important right now?

The pandemic has made it even clearer how important it is to understand the origins of mental health difficulties, who is more vulnerable, and what helps enable recovery. Our TEDS26 Mental Health Study will address important questions such as these.

As mentioned last year, we are seeking approval to link your medical records to the information you and your parents have provided over the years, to undertake further health-related research. We will be contacting all TEDS participants with further information about this exciting project.

Why do you think the medical record linkage will be useful for TEDS?

Medical record linkage allows us to collect data on everyone's experiences of healthcare and to extend our research to understanding links between different types of common health conditions as well as outcomes of treatment.

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Any final thoughts?

Thank you so much to those of you who have completed the TEDS26 Mental Health questionnaire. Your data is especially valuable if both you and your cotwin contribute (see more about this on page 3!). If you have not received the login information for this study please get in touch. Our goal is to get data from 10,000 twins, so if you haven't taken part yet, please do!

We are now on Instagram! Give us a follow @tedsproject













The Children of TEDS Twins Cottens

CoTEDS is our study for the children of TEDS Twins! We aim to understand the role that parents play during child development. Currently, we send a maximum of 3 questionnaires across 3 years of your child's life. Your child's co-parent can take part too, if applicable to your family. There are different rewards for the completion of each questionnaire, and everyone who takes part is entered into our bi-annual prize draws, with previous prizes of £100 vouchers and iPads! We are always looking for TEDS twins with children to join CoTEDS (even if they're older than 3, we have a questionnaire for you!). You can register using the details below!

What does participation in CoTEDS look like?

REGISTRATION

Register your child or pregnancy using our short enrolment form: goo.gl/Cr7Kxy or scan this QR code



Your child at AGE 1

One 20-40 minute questionnaire

Reward: CoTEDS t-shirt



Your child at AGE 2

One 30-45 minute questionnaire, plus four assessment games to be played with your child

Reward: CoTEDS art-set



Your child at AGE 3

One 30-45 minute questionnaire

Reward: CoTEDS stickers





What do we ask you about?

Child:

Health Feeding Sleep Behaviour Playing Language

Parent:

Parenting behaviours Mental health Relationships Your home life



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We now have over 1,000 children taking part in CoTEDS - THANK YOU!



NEW TO TEDS!

Genevieve =

I recently joined the TEDS team as a postdoctoral research fellow after completing my PhD in psychology at Université Laval, Canada. I am interested in understanding why some children and adolescents consistently suffer from anxiety over the years. My research investigates how genetic and environmental factors may exacerbate anxiety over time. For instance, I am particularly interested in documenting whether the genetic factors that increase risk for anxiety also increase the likelihood of being victimised by peers, which in turn may exacerbate youths' anxiety over the years. In my free time, I enjoy running to explore the streets and parks of London.

I officially joined our team as a PhD student in October 2021. I did my BSc in Psychology at Queen Mary University and, after a couple of years away from academia, completed my MSc here at King's College London. I am interested in investigating the influence of specialist genes in specific cognitive abilities. In my free time, I enjoy reading and eating good Italian food.



poth genes and the environment influence the development of mental health problems or resilience to it. I use twin as well as DNA data to address these questions. In my latest project I used the data from MZ twins and their DNA to investigate the genetic factors that are associated with greater within-twin differences for a range of mental health outcomes. I will be using TEDS data to examine questions related to the trajectory of mental health problems and how genetics and environmental factors may influence these trajectories.

I joined the TEDS team as a postdoctoral researcher in January and will be using TEDS data to investigate the associations between mental and physical health and lifestyle behaviour; and the extents to which these associations are independent of correlated genetic and environmental influences. I trained as a psychiatrist in Nigeria and did an MSc (Genes, Environment and Development) and PhD (Behavioural Genetics) at King's College, London. In my spare time, I do a bit of gardening.

A message from Professor Robert Plomin (Founder of TEDS)



PARENT D STUDY



Thousands of TEDS parents are being asked to participate in an exciting new TEDS project. The project was funded as a special grant from the Medical Research Council (MRC) because of the valuable information it will add to the TEDS study -- DNA from the parents of TEDS twins. The MRC noted 'the strategic importance of this, particularly in relation to mental health where intergenerational factors are poorly understood'.

The DNA revolution has transformed research by making it possible to assess genetic influence directly from DNA rather than indirectly by comparing MZ and DZ twins. More than 12,000 TEDS twins have contributed their DNA. Although DNA from the twins has been vital to TEDS' success, obtaining DNA from their parents will offer new ways to understand the effects of parents on children. One exciting example is that parents share 50% of their DNA with their children. With DNA from parents and their children, we can separate the DNA differences that each parent shares with their child and DNA differences that they do not share. These are called 'transmitted' and 'non-transmitted' DNA. The transmitted DNA indexes direct genetic effects from the parent to the child. What is especially interesting is that the non-transmitted DNA also has effects, a phenomenon called 'genetic nurture'. These indirect effects are genetic effects on parents that affect their children via the environment. This advance opens up new ways of understanding the interface between nature and nurture in development.

Our goal is to obtain DNA from 7,500 TEDS parents. So, if you are invited to participate, we hope you will!

Twin design

Twins allow us to study the influence of genes and environments on lots of human traits, including behaviours, learning, mental health and so much more.

Identical (MZ) twins share 100% of their genes, making them genetically identical, while non-identical (DZ) twins share on average 50%. By comparing how similar to one another MZ twins are on a certain trait (for example, height), and then by doing the same for DZ twin pairs, we can take apart the contributions of genetic and environmental factors. If MZ twins are more similar on a trait than DZ twins (for example, both being tall), this suggests that this trait is influenced by genes. However, if MZ and DZ twins are equally similar to each other on a trait, it is likely that the environment shared by both twins of the same pair (for example, the neighbourhood in which twins grow up) influences the trait more than genes. Finally, because they are genetically identical, if MZ co-twins are different from one another (for example, one is more extraverted than the other), this difference is likely to be explained by environmental factors that are not shared between both twins (for example, if both twins have different friends).

Having data from both twins in a family allows us to make these comparisons and uncover more about the relationship between nature and nurture. That is why it is particularly useful if both you and your twin take part!





EDIT Lab Blogs

Want to find out more...?

Since 2016, the Emotional **Development Intervention and** Treatment (EDIT) Lab, also directed by **Prof Thalia Eley, has released regular** blog posts in this area. The blogs are a great way to read more about topics related to TEDS research! For example, the 'Mythbusters' category aims to address some of the most common misconceptions regarding genetics and psychology with blogs discussing taking part in studies, why research is important, and how this will help future generations. However, there are plenty of other blogs covering topics ranging from parenthood to book reviews!

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DUR PICS AND STORIE



ABIGAIL AND AMY Abigail completed her first marathon this year and had her twin sister Amy and their mum cheer her on for the whole 26.2 miles. All the while wearing personalised tshirts!



JOANNA AND CHRISTINA Joanna and Christina took on the challenge this year of walking the Thames Path (all 184 miles!) in just 8 days. Together they raised over £900 for Charity Action Aid.



JOE AND SOPHIE Congratulations to TEDS twin Joe and his wife Sophie on their recent wedding!



SAMMY AND JAMES Sammy and her husband James had a double achievement this past year, getting married and welcoming their daughter!



Message from parents: **CONGRATULATIONS TO OUR TWIN DAUGHTERS** Both of them, Dr Natasha Tai Chaudhury (St John's College, Cambridge) and Dr **Nadia Tai Chaudhury** (Magdalen College, Oxford) graduated in the summer of 2020. We were so proud of them when they had graduated a few months early to start work and help during the COVID pandemic in May 2020. They are in their Foundation years working in their respective hospitals since August 2020.



SAVANNAGH AND DANIEL After some pandemic related delays, Savannagh and her husband Daniel got married in October last year!





BRANDON AND EMILY Brandon married his wife Emily in October last year!



GEORGIA'S WEDDING Another recent TEDS wedding for Georgia!



ISABEL AND JENNY Isabel had a socially distanced wedding on July 4th 2020, the first day out of lockdown. Isabel and her twin sister Jenny got creative with how to stand close for a photo!



FAYE AND ALEXANDRA Double congratulations to Faye and Alexandra on their recent graduations!





TEDS twin Katie brings science to life with beautiful illustrations. Here Katie has made an illustration inspired by connecting with her twin sister during the endless lockdowns! Check out her instagram @biologydrawn for more illustrations!

YOUR DATA FROM TEDS26



At age 21, 8% of you were vegan/vegetarian. This has gone up to 10.5% at age 26



38% of you reported having been given a mental health diagnosis



74% of you said that **loyalty to TEDS** motivated you to take part in the TEDS26 Mental Health Study



30% of you report getting at least 2 hours more sleep on non-work days