

# TEDS

SPRING 2013

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THE NEWSLETTER FROM TEDS [TWINS EARLY DEVELOPMENT STUDY]

## From the Director



AS THE FOUNDER AND DIRECTOR OF TEDS, I am very grateful to you and your family for your contribution since TEDS began more than 18 years ago. Your help has made TEDS one of the most important twin projects in the world and the only major twin study of development in the UK. I can assure you that all the information you have provided over the years has been used down to the last drop, with more than 300 papers in scientific journals. As one indication of how important these scientific discoveries have been, these 300+ TEDS papers have been cited in publications by other scientists more than 6,000 times! In case you would like to see these papers, most of them are available on our website.

Development does not end at 18. Indeed, much less is known about development in early adulthood than any other developmental age, including old age. That is why I am keen for you to continue to be involved in TEDS even after you leave home. After your

18th birthday, we would like to contact you directly to invite you to participate in new TEDS projects, although we will continue to contact you via your parents until we are able to contact you directly. We are asking everyone for their GCSE and A-level results because these are a very important part of TEDS. However, rather than inviting everyone to participate in all projects, in the future we will only invite you to participate in a few of the projects so that we do not wear out



Kelly & Shelly Rajput collect their A level results in 2012

our welcome with you. If you are invited, we hope you will enjoy three projects coming up soon – musical ability, face recognition, and social networking (see 'Twitter' below).

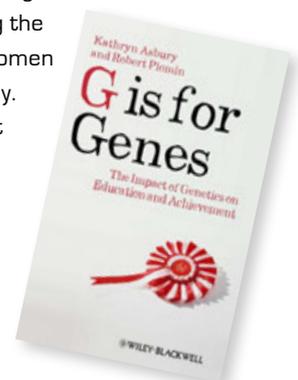
I hope you will continue to be involved in TEDS for many years to come. Thank you again for your help.

We will again be contacting those of you who are taking exams this summer for your results. We wish you the best of luck with your studies! ●

## G is for Genes

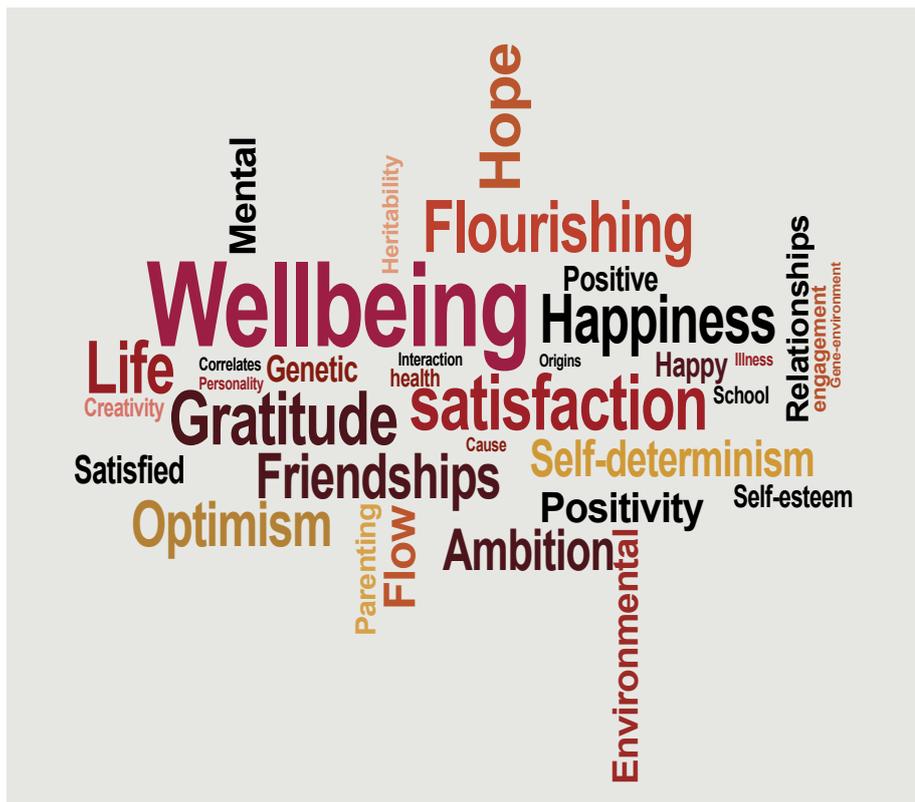
THIS SUMMER WILL SEE the publication of *G is for Genes*, a book about genetics and education that Dr Kathryn Asbury and Professor Robert Plomin have been working on for the last few years. *G is for Genes* describes what genetic research – especially the research carried out in TEDS – has discovered about how children and young people learn and about the strongest influences on their abilities and achievements. Kathryn and Robert use this evidence to suggest ways in which education can be enhanced and schools made more constructive, supportive and enjoyable for every pupil.

We owe an enormous debt of gratitude to TEDS families because without you and your great generosity in responding to our questionnaires and activities this book would not have been written. We hope that, if you are tempted to read it, *G is for Genes* will make sense of some of the questions we have asked you since the twins were toddlers through to them becoming the young men and women that they are today. We hope too, that it will show you how your efforts continue to make important contributions to both science and society ●



# TEDS - making a difference!

## Looking on the bright side



MOST OF THE RESEARCH in psychology over the past 50 years has focused on human problems and disorders. Researchers have made considerable progress in developing treatments for psychological disorders and in understanding why problems occur across development. However, although most of us are mentally healthy most of the time, far less attention has been given to understanding the nature of human flourishing and what makes life worth living. That is why a new area has developed in Psychology, called Positive Psychology, to understand more about positive wellbeing. In TEDS, Dr Claire Haworth is leading research into understanding how diverse measures of wellbeing relate to one another.

Our research in wellbeing is attracting considerable interest because, with your help, we can provide information about what being mentally healthy really means, how a positive outlook can be beneficial to your work and your physical health, and whether we can increase wellbeing by completing simple weekly activities.

Wellbeing is more than happiness. We're showing that other positive outcomes like how satisfied you are with your life, whether you find meaning and purpose in your daily activities and whether you have positive relationships are also important for staying mentally healthy ●

## Gene hunting with your DNA

WE HAVE MENTIONED IN previous newsletters how the DNA you provided is being used to help identify the specific genes involved in development. We know that your genes contribute a lot to many aspects of development because of the 'twin method' which compares identical and non-identical twins, as shown in hundreds of TEDS publications. A completely new use of DNA involves estimating overall genetic influence for unrelated people – not comparing twins. In a series of papers, we have shown that this new method using DNA alone with just one member of each twin pair strongly supports the findings from the twin method. In addition, the comparison between the results for the



new DNA method and the twin method provides important clues about where we can find more of the genes that affect development ●

# TEDS - making a difference!

## TEDS Family Study: an update



ADOLESCENCE IS A TIME of great change. While relationships with friends become increasingly important, relationships within the family remain important too. Other developments in how young people behave and feel, learn and play also occur at this time. The TEDS Family Study was all about studying these changes in adolescence, to help us understand how relationships, behaviours and emotions develop and what part genes and environments play in this.



Ultimately, we hope what we learn will help us to better support young people and their families in the future.

The TEDS family study is now completed, and we wanted to say a huge THANK YOU to the TEDS families who so generously gave their time and participated in this study. It was a real

pleasure to meet all the young people and their families and to learn about how young people perceive their relationships with their parents and with each other. We saw 551 families over 2 years and are now busy analysing the findings.

It is early days, but one very important finding has emerged already: we found that genes play an important role in influencing how teenagers think and feel about their family relationships, more so



it seems than young children. We think this reflects the fact that teenagers' personalities play an increasing role in how they think and feel, and also in how others respond to them. We also found large differences in how teenagers in the same family see their relationships with their parents and these differences could not be explained by their genes. What leads to these differences is something we really want to understand more about, and we hope the information the TEDS families gave us will help us solve that important puzzle. We will keep you posted!

We are very grateful to all of you for taking the time to participate in our research. Pictured are some of the TEDS members who have been lucky in our prize draws. It could be you next time! ●

## TEDS joins Twitter!



WE ARE EXCITED TO announce the Twins Early Development Study's first foray into the world of social media. 2013 has seen the launch of TEDS' very own Twitter account. We will keep you updated on recent findings, publications, where TEDS has been featured in the press and all other goings on here at TEDS towers. Follow us by searching @TedsProject to find out more.

We are also in the process of launching a new study, investigating how we use social media. If you are interested in taking part we are looking for more participants and would love to have you on board. All it involves is us following you on Twitter; if you are happy for us to do this then please send us your @username to our email on [teds-project@kcl.ac.uk](mailto:teds-project@kcl.ac.uk). Alternatively, send us a tweet with your full name saying you'd like to take part and we'll find you that way! ●

# TEDS - making a difference!

## Drawing a person at age 4

WHEN TWINS IN TEDS were four years old, you helped us with a fun assignment. We asked parents to have their children draw



a picture of a child in our questionnaire booklet. We ended up with over 14,000 drawings by 4-year olds of the human figure. As far as we know this is the largest collection in the world. And it is the only large sample from twins – which makes it hugely interesting.

It might sound far-fetched, but our recent analyses show that those drawings show some continuity with the way people think a decade later. We are submitting a journal article that describes our findings. One curious feature of children's drawings is the 'tadpole' stage where their drawings have no arms and legs. Around age four, most children draw legs and arms that come right out of the head. Yet, if you ask a child to point to their stomach, they do so correctly.

We expected that because young twins often play together the drawing scores of fraternal twins would be just as alike as those of identical twins. We thought that two children drawing together would pick up each other's style – or that parental would influence show up strongly. But the identical twins' drawing scores were more alike than fraternal twins' and we found that the genetic influence on the drawing scores was as strong as on overall cognitive abilities ●

## Meet the participant

DC: I JOINED the study when we were born, I'm now 16; I'm an identical twin. I could have opted out but you get some

rewards and the vouchers can be useful! Sometimes the questions are interesting; they make you think about things you might not have thought about before. People will often identify us as 'the twins', which can be a little annoying, but it's not usually close friends, just people you meet every so often, so it's not much of a problem. We've always been quite close, we share most things. Because we have a small house we still share a room, which can be quite nice, although it's problematic sometimes. As we've gotten older we've started to do more things separately. All of my friends overlap with my brother's, but he has some unique friends too. Neither of us has ever felt the need to be different from each other intentionally; we're content enough with our own individuality that we don't mind how similar we may seem to others. I'm more sciencey; my brother is doing maths and humanities - he wants to read English at university but we are currently thinking of applying to different places. It would be new and quite nice to be somewhere different. I wouldn't have to keep tidying up! It would be great to keep going into a 'children of twins' study ●



## Interview with Andrew McMillan

EVER WONDERED WHAT HAPPENS to the information you send us? For more than a decade Andy has worked with TEDS to manage the information you send us.

AM: I started off as a science teacher, for around ten years, then I got into IT with a job at Hammersmith Hospital in their Information Department. I wanted something a bit higher level and came across TEDS. I had been used to working with very large quantities of data in the hospital. When I came here to TEDS it was very much up to me to innovate. Only TEDS administrators have access to the families and their contacts, but all that information is stripped out. The individuals who are in the dataset are not identifiable in any way, as we take out dates of birth and names, and that process is part of my job. When

we contact each family we use a unique identifier, it is confidential so we encrypt it through a mathematical process. The data are stored on servers, which live at the Institute of Psychiatry on secure premises, and very few people have physical access to them. However if there was a fire in the server room we would still have copies, all studies at the Institute of Psychiatry have backup arrangements.

I had the idea of a networked set of files that would be a data dictionary. The first generation took me about a year to create. The volume of data is huge, and a lot of the work is to do with detail. If you cut corners, something could go under the radar and things could go wrong, so every little bit has to be checked and double-checked. One of the qualities needed for a data manager is a slightly obsessive attention to detail! I enjoy my work but I try not to think about it in the evening. I run a lot, listen to music, read and spend a lot of time with my daughter – a normal family life ●

