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Dear reader,

We are so excited to share our third edition of the e-BRAIN newsletter with you! We hope to give you an update on what we've been up to, share some insightful pieces from our student, parent and teacher champions, as well as some fun facts and information about the brain! We will also be sharing data about what the average eBRAIN participant's sports activity and diet look like! As you know, the focus of e-BRAIN is mental wellbeing for everyone, so make sure you look after your physical and mental wellbeing during these times, practicing kindness to yourself and others.

Well wishes and solidarity, wherever you may be.

The e-BRAIN team

What have we been up to? Challenges and study visits!







We've been very busy since our February newsletter update!

We have met so many new participants, and old ones for their follow-up **study visits**, over the Easter holidays and June half-term and even after school during term-time!

We've also delivered both in-person and virtual **interactive workshops and presentations at our collaborating schools** about setting healthy physical and emotional boundaries, mental health awareness and managing anxiety, especially post-lockdown.





From the 1st - 31st May 2021, the team ran **75 miles** to bring people together to raise money and awareness for mental health

Mental Health Awareness week was 10th - 16th May 2021 and the theme was nature



Support us by donating! Scan this QR code

Fundraising in March: The SINaPs at Home Challenge for Youth Mental Health!

MEET THE SINAPS LAB

EXPLORING NEW HORIZONS

SSICHIATRY RESEARCH TRUE

SECTION OF IMAGING, NEUROBIOLOGY AND PSYCHOSIS LAB





The eBRAIN team is part of the wider Section of Imaging and Neurobiology of Psychosis (SINaPs) academic research team, based at the Institute of Psychiatry, Psychology and Neuroscience (IoPPN), King's College London and led by Professor Paola Dazzan.

In March 2021, our team fundraised for <u>The Psychiatry Research Trust</u>, which has been **supporting research in mental health and brain disorders since 1982**. Our goal was to burn 150,000 kilojoules as a team by doing a myriad of exercises and taking part in some fun weekly mini-challenges.

We burned 240,000kJ as a team and raised £550 for the <u>Psychiatry Research Trust!</u>

We hope our commitment to this challenge will help **raise awareness of the importance of physical activity for good mental health**, as well as mental health research.

Thank you so much for all of your support!

To see what we got up to, check out our **Youtube video** by clicking this play button!

> Find everything challengerelated on our website here

Throughout the month, we completed 30 **Zumba** classes (750 minutes in total!), 6 Boogie Bounce **trampoline** classes, tried **Pilates** for the first time and completed 8 Pilates classes, reached 1000 squat reps on **Ring Fit Adventure** (Switch), completed 300 **squats** and 1000 **Abdo blasts**, **walked/ran** more than 500km, walked (and occasionally **jogged**) around the wonderful Walthamstow Wetlands, and ran up and down the corridor a lot!

We had an absolute blast!

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Our Student Champion, Katla, reflects on her experience taking part in research

I joined **my first brain research study** whilst I was in primary school, for no reason other than that **it sounded fun.** I was in Year 3 and I thought I knew next to nothing about psychology. However, my primary school was a research school and used **metacognition strategies** to help teach us. Metacognition is thinking about how we learn, and the strategies include reflecting on our learning and working in mixed ability teams. Since this is a form of psychology, I guess that I had learnt a few things.

The study was conducted by UCL and was researching the effects of trauma on the brain development of young people. In April 2018, I was given an MRI scan and did lots of cognitive tests. These tests were screen-based games and the team monitored what parts of my brain were active at different points during the scan. I was given a disk of the brain scan, which allowed me to "browse through my brain", as one of the research team put it. I still have the disk!

At the end of my first brain study, I was very excited to receive, in addition to the disk, some compensation for my time in the project, which came as quite a surprise. I spent it by **taking my family out for pizza at age 10.** Upon the arrival of the bill, I took it and surprised my mum by paying it. I was delighted at my mum's confusion, and a little proud.

I was very happy at the prospect of doing another study, as I had enjoyed the first one so much. This second study is **the current one at King's College London, the e-BRAIN study.** This study focuses on the **brain development and mental health of young people** in London, and what in the body affects these, for example nutrition and exercise. I now had an additional motive for taking part in the study, which was that I am interested in psychology. I am studying the subject as one of my GCSE options, and was also thrilled at the prospect of having another MRI scan!

My second scan was at the end of last November, with Covid safety precautions in place. The MRI machine was just as loud as the first time. I also had to give a blood test. This was a little daunting at first but in the end, **I found it very interesting**.

Whilst writing this, I decided to revisit my brain scans, which were two and a half years apart. It was interesting to see the similarities and differences between them. **Taking part in these research projects was a new experience, and one I very much enjoyed.** It definitely sparked my interest in psychology, neuroscience and other similar subjects. Finally, being a part of these projects has helped with important research, and each piece of research could reveal something interesting about the human brain. I would encourage anyone to get involved if they have the opportunity!



Coronal (Rear) View



Sagittal (Side-On) View



Axial (Top-Down) View

An important aspect of the two studies was also that **everyone involved was** friendly, kind and enthusiastic, which was conducive to making the experience so fun and fascinating!

Which brain areas are active when we think about others' feelings?



Understanding and sharing how another person might be feeling can often be quite difficult. We can use magnetic resonance imaging to study **which brain areas are active when we think about the emotions of others.**

Neuroscientists believe that there are two networks of brain regions that are highly active when we process emotions of other people. One of them is the **empathy network** (yellow), which is involved in *sharing* others' emotions. The other one is the **mentalising network** (green), which is active when we think about and try to *understand* others' emotions.

The names and locations of the brain regions of both networks can be seen below!



Our Parent Champion, Indi, shares her eBRAIN experience and why the study is important to her



My daughter, Jess, came home from school at the beginning of the year, really excited.

"A lady came into assembly and asked us if we wanted to volunteer for a brain study and I really want to take part!"

Great, I thought, this is exactly the kind of study I would love her to be part of, so I emailed straight away.

My aunt, **Dr. Helen Neville** was a **leading neuroscientist** in the field of brain development and someone I had known very well during my childhood. We visited her lab at the **Salk Institute in San Diego** as children and then later her lab at the **University of Oregon**.

She was an inspirational woman and made a big impression on me. **Her work was cutting** edge and fascinating.

I had an MRI scan myself in her lab and **was thrilled to see an image of my own brain**; I think Jess felt the same after seeing hers. She let me hold a real human brain in my hands and explained the different parts of the brain and its functions. The word she kept coming back to was 'plasticity', which felt such an exciting and positive concept, **the brain can change depending on our experiences!**

Dr Helen Neville's work with babies' and children's brains became more interesting to me when I had my own children, and I know she would have been very proud of Jess taking part in this study. We had many interesting discussions with my aunt around the subject of babies, childcare and children's brains which informed many of my decisions about parenting.



In memory of **Dr. Helen Neville** 1946 - 2018

I was really impressed with the eBRAIN study team and hope that it has made an impression on Jess too. Young people's mental health is at the forefront of my mind, especially as we are **living through a global pandemic** that has isolated people in their own homes, often with social media being the only way to keep in touch with friends.

As parents, we are all wondering what impact this will have on our growing children, so the more research that can be done the better. I look forward to staying connected with the study over the next year and becoming a 'Parent Champion'.

This is a truly fascinating area of study and I'm sure it will benefit children and young people in the future.

The average eBRAIN participant!



Our Teacher Champion, Nicole, highlights the benefits of collaborating with eBRAIN

Students at **Harris City Academy Crystal Palace** (HCACP) have been collaborating with eBRAIN for approximately a year and a half. The eBRAIN team have fed back concerns the children reported in their assessments, which in turn meant that HCACP were able to **support these students and their families when required.**

eBRAIN have also facilitated two inset days, in which they ran a workshop on **mindfulness** and managing stress for staff. Staff found the sessions informative and enjoyable, so much so that they were asked to return to run another.

In addition to staff inset days, eBRAIN have produced **short webinars for students on managing stress, mental health and mindfulness**, which have been shared with students during assemblies.

They have been a **fantastic team to work with** and the benefits of their expertise have had a **positive impact on our students**.

Nic<mark>ole</mark> Small Academy Welfare Manager



We have seen so many of you over the past 2 years for your study visits and almost scanned 100 participants as of the first week of June 2021!

Number of eBRAIN participants scanned

Quiz about the brain!

1. Without the nervous system, you couldn't:

- a. Walk
- b. Breathe
- c. Think
- d. All of the above

2. The nervous system is made of these three parts:

- a. Brain, heart, and spinal cord
- b. Brain, spinal cord, and nerves
- c. Nerves, arteries, and veins
- d. Nerves, liver, and heart

3. Which part of the brain helps keep your balance, so you don't fall flat on your face?

- a. Cerebellum
- b. Medulla oblongata
- c. Pituitary gland
- d. Spinal cord

4. The brain creates connections, or pathways, between these microscopic cells:

- a. Blood cells
- b. Brain tissues
- c. Neurons
- d. Epithelial cells

5. Your emotions are believed to come from the:

- a. Cerebellum
- b. Medulla oblongata
- c. Heart
- d. Amygdala

6. Which part of the body is the control center for the nervous system?

- a. Spinal cord
- b. Brain
- c. Stomach
- d. Heart

Give this quiz a go and find out more about our brain and nervous system!

Find the answers on the last page of the newsletter!

How many points did you get out of 6?

Dear reader,

Thank you for reading our newsletter. We hope you enjoyed it! If you'd like to get involved with the study, find out more or have any questions, please don't hesitate to get in touch! You can find all of our contact details and social media accounts below. We look forward to hearing from you!

The e-BRAIN team

This newsletter was created by Maryam Matter with help from the eBRAIN team!



If you missed our last newsletter or would like to view any of our previous newsletters, you can find them here: https://www.ebrainstudy.com/blog

Brain Quiz Answers

1. Without the nervous system, you couldn't:

d. All of the above

2. The nervous system is made of these three parts:

b. Brain, spinal cord, and nerves

- 3. Which part of the brain helps keep your balance, so you don't fall flat on your face? a. Cerebellum
- 4. The brain creates connections, or pathways, between these microscopic cells: c. Neurons
- 5. Your emotions are believed to come from the:

d. Amygdala

6. Which part of the body is the control center for the nervous system?

b. Brain







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