

NEWS

Community Newsletter: Powering neuroimaging studies, neurodiversity and Nigerian autism screening

BY SPECTRUM

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In honor of **#BrainAwarenessWeek**, we'll kick off this edition of the Community Newsletter with some tweets about what scientists still need in order to reliably link behavior with brain structure or function.

Specifically, **Scott Marek**, psychiatry instructor at Washington University in St. Louis, Missouri, **tweeted a thread** about his new analysis in *Nature* — a “dream come true”— that shows that certain types of neuroimaging studies lack statistical power. *Spectrum* **covered the paper** on Wednesday.

A dream come true, now out **@Nature** w **@tervoclemmensb** <https://t.co/uZdmFGPWW3>

I started this project before knowing my wife and kid.

Science can be a slog, this one was worth it.

Pointing towards an exciting future for brain-behavior research.

A????????? pic.twitter.com/4hV71kGawx

— Scott Marek (@smarek0502) **March 16, 2022**

Within the thread, Marek quotes the paper, writing that “there is **no one-size-fits-all** for

neuroimaging studies.”

“There is no one-size-fits-all for neuroimaging studies; minimum sample size requirements depend on the study aims. Many neuroimaging-only studies are typically adequately powered at small sample sizes.” (see paper).

— Scott Marek (@smarek0502) **March 16, 2022**

“Go big or stay home!” tweeted **Kevin Mitchell**, associate professor of developmental neurobiology and genetics at Trinity College Dublin in Ireland, **in summary**.

Go big or stay home! Small neuroimaging association studies just generate noise.
<https://t.co/dTwmKCmmkK> pic.twitter.com/2HI1gdIbMY

— Kevin Mitchell (@WiringTheBrain) **March 16, 2022**

But Mitchell was careful to emphasize in response to **Timothy Verstynen**, associate professor of psychology at Carnegie Mellon University in Pittsburgh, Pennsylvania, that “many fMRI study designs are **not subject to this sample size issue**.”

The findings are not a setback for neuroimaging but rather a “breakthrough,” the study’s co-senior investigator **Nico Dosenbach**, associate professor of neurology at Washington University in St. Louis, told *Spectrum*. “Recognizing why something isn’t working is always a critical step for making it work.”

Andrew Whitehouse, professor of autism research at the Telethon Kids Institute in Perth, Australia, **hailed the vision** behind another new paper this week that presents “an early, supportive and neurodiversity-affirming pathway for autistic children.”

A great paper that leans heavily on clinical trial evidence to propose an early, supportive and neurodiversity-affirming pathway for autistic children, commencing pre-diagnostically. A terrific vision. ?????

An integrated early care pathway for autism <https://t.co/hfKIsDUKUH>

— Andrew Whitehouse (@AJOWhitehouse) **March 16, 2022**

The approach is a “**nice integration** of developmental models, trial evidence, carer support, neurodiversity and global perspectives,” tweeted **Tony Charman**, chair of clinical child psychology at King’s College London in the United Kingdom.

Agree - Nice integration of developmental models, trial evidence, carer support, neurodiversity and global perspectives; food for thought for all and (respectful) discussion...???? **#autism** Jonathan Green (NoT) **@LeadbitterKathy @LancetChildAdol**
<https://t.co/RuHdCvIY0t>

— Tony Charman (@TonyASDorAFC) **March 17, 2022**

And it offers “an **important path to the future**,” tweeted **Helen Tager-Flusberg**, professor of anatomy, neurobiology and psychology at Boston University in Massachusetts.

An important path to the future... <https://t.co/DA9vhSZxUk>

— Helen Tager-Flusberg (@HelenTager) **March 16, 2022**

And **Rosa Hoekstra**, reader in global perspectives on neurodevelopmental disorders at King’s College London, congratulated **Muideen Bakare**, psychiatrist at the Federal Neuropsychiatric Hospital in Enugu State, Nigeria, and **Andy Shih**, senior vice president of public health and inclusion at Autism Speaks, on their **work on the Nigerian Autism Screening Questionnaire**, published in *Autism* this month. She notes in a response that the tool is available for all who are interested in the supplementary materials.

Congratulations **@MuideenBakare @ASAndyShih** and colleagues on this **#Africa** led

effort developing and validating the Nigerian **#Autism** Screening Questionnaire!
<https://t.co/AjU4jU2R11>

— Dr Rosa Hoekstra (@rosa_hoekstra) **March 9, 2022**

That's it for this week's Community Newsletter! If you have any suggestions for interesting social posts you saw in the autism research sphere, feel free to send an email to news@spectrumnews.org.

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