

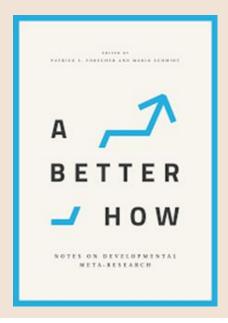
# Advancing Open and Big-team Reproducible Science through Increased Representation (ABRIR): Barriers for researchers in the majority world and paths forward

Brendan Ch'ng, Nadia Corral-Frias, Sandesh Dakal, Nikita Ghodke, Alma Jeftic, Aleksandra Lazić, & Kwizera Rulinda

October 8th 2024 2024 Big Team Science Conference



## Motivation



Our standards for excellence in research must not only prioritize methodological rigor but also embrace inclusivity and diversity, ensuring that psychological science serves and reflects the entire global community.

Enhancing inclusivity is not only a matter of equity but also a strategic imperative. Knowledge may be derived from LMIC that can be generalized to High Income Countries (HICs).

 There is moral imperative to research psychological phenomena that disproportionately affect Low and Middle Income Countries (LMICs) (Adetula et al., 2022).

## Motivation

## Redesign open science for Asia, Africa and Latin America

Sandersan Onie

Researchers in many countries need custom-built systems to do robust and transparent science.

ast year, my colleagues and lorganized a webinar on open science, with a focus on Indonesia. One participating university experienced blackouts owing to a faulty electricity grid. At another, a generator exploded. At a third, political riots had damaged buildings.

Perhaps most people reading this article would find such constraints intolerable, but the reactions were inspiring. People regrouped and found ways to attend the webinar, or to access it later. We advertised through Twitter and by word-of-mouth and expected only a few attendees - but more than 1,000 academics. government workers, students and journalists participated. The message was loud and clear: Indonesia wants to produce good research.

Research is relatively new in many countries in Asia, Africa and Latin America. Across these regions, young scientists are working to build practices for open science from the ground up. The aim is that scientific communities will incorporate these principles as they grow. But these communities' needs differ from those that are part of mature research systems. So, rather than shifting and shaping established systems, scientists are endeavouring to design new ones.

Researchers in these regions face many challenges: lack of funding, inadequate access to literature and poor infrastructure. They are disadvantaged by government policies that increase apparent productivity at the expense of quality. The development of robust, open research in Indonesia and beyond could have global benefits. By my estimation, more than 80% of the world's population live in areas where research is developing, suggesting



- Our long-term mission is to identify challenges uniquely faced by researchers from LMIC and devising best practices that can be shared within the academic community.
- We are invested in capacity building relevant for each of our regions in local languages.
- We hope to build a collaborative network of psychological science researchers from LMICs to explore and answer questions of deep relevance to each of our regions.



## ABRIR HUB EVENTS IN 6 LOCATIONS



## Introducing our Panelist



Nadia Corral-Frías, PhD (Mexico)



Alma Jeftić, PhD (Bosnia + Denmark + Japan)



Aleksandra Lazic (Serbia)



Rulinda Kwizera (Rwanda)



Nikita Ghodke (India)



Brendan Ch'ng, PhD (Malaysia)



Sandesh Dhakal, PhD (Nepal)



ABRIR

## Bosnia-Serbia Hub Event, June 2024

A 2-hour hackathon organized/led by:

Aleksandra Lazić & Alma Jeftić

in collaboration with

<u>Open Science Community Serbia</u> &

<u>LIRA Lab</u> (Faculty of Philosophy,

University of Belgrade)

#### Who were the participants?

Among the 37 people who registered for the event...

- 30 came from Serbia, 7 from Bosnia & Herzegovina
- 17 worked/studied in psychology (around half of which were ECRs), 4 in humanities, 4 were librarians, and the rest came from other fields







RADNI SASTANAK | HAKATON

#### Otvorena nauka i Kolaborativna istraživanja

Perspektiva Srbije i BiH

17. jun 2024.

11.00-13.00 (CET) | onlajn

Interesuje vas otvorena i kolaborativna nauka? Želite da ona bude raširenija i dostupnija, ali i ravnopravnija prema istraživačima iz regiona?

Pripremite svoja pitanja i ideje i pridružite nam se na onlajn sastanku!

Da li ste baš Vi pozvani? Dobrodošli su istraživači/ce, studenti/ce, bibliotekari/ke... svih nivoa predznanja. Samo imajte u vidu da će fokus biti na regionu (posebno BiH i Srbiji) i društvenim naukama (posebno psiholoziii).

Zašto da učestvujete? Doprinećete osmišljavanju preporuka za unaprjeđenje nauke. Podijelićete svoja iskustva i resurse. Umrežićete se sa kolegama koji žele da sprovode velike projekte.

#### Još informacija?

Alma Jeftić alje@hum.ku.dk Aleksandra Lazić aleksandra.lazic@f.bg.ac.rs

Registrujte se ovde!

t.ly/JpOAm

Ovaj događaj ponosno podržavaju:







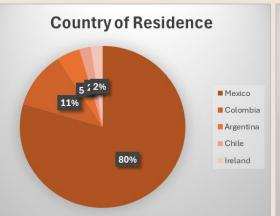
This work has been possible thanks to the support provided by The Open Research Funders Group through the Seed Award Program.

### Latin America Hub Event, June 2024

A 2-hour hackathon organized/led by: Nadia Corral-Frias, Karla Garduño (Universidad de Sonora) **Debora DiBurin** (Universidad de Buenos Aires)



#### Who were the participants?





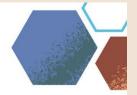












### ¿Te interesa la ciencia abierta y colaborativa? ¿Quieres mejorar el acceso a la ciencia abierta y colaborativa?

Reunión LATAM



#### 05 de Junio

9:00 hrs Sonora 10:00 hrs CDMX

11:00 hrs Colombia

12:00 hrs Chile

13:00 hrs Argentina









## Malaysia Hub Event, August 2024



A 2-hour hackathon organized/led by: **Brendan Ch'ng** 

in collaboration with the Malaysia

Educational Psychology Society (MEPS)

#### Who were the participants?

Among the 27 people who registered for the event...

 17 students, 5 lecturers, 2 educational psychologists, and the remaining were a research assistant, a head librarian, and a caseworker.

#### **ABRIR X MEPS WORKSHOP ON**

## OPEN SCIENCE AND BIG-TEAM SCIENCE

15 AUGUST 2024 2-4 PM (GMT +8) ONLINE







**ORGANISED BY:** 





SUPPORTED BY:



This event was made possible with the backing from The Open Research Funders
Group via the Seed Award Program.

## India Hub Event, August 2024

A 2 hour hackathon organized/led by: **Nikita Ghodke** 



In collaboration with Project
USPAS x #dev-ersity in
academia

#### Who were the participants?

There were a total of 34 participants, among which 22 were students, 9 were research staff, and 3 were psychologists interested in research that registered for the event all from different range of ages, gender and hailed from different cities within India. Overall, all were very new to the concept of OS and BTS and were keen on understanding more on it and how to be involved.

#### **ONLINE HACKATHON SESSION**

### OPEN SCIENCE AND BIG TEAM SCIENCE: A REGIONAL PERSPECTIVE

September 9th, 2024 6:30 PM- 8:00 PM (IST)

Are you interested in open science and want to participate in big team science?

Join us for a hackathon focused on advancing open science and big team science in India. This session will focus on discussing the challenges and opportunities for open science in the region.





#### What to expect from the session?

We will aim to develop innovative solutions to promote open science practices and ways for the community to involve in big team science projects.

#### Who can participate in the hackathon?

This is open to all researchers, students, and librarians from across the region.

Register Now: Click on the link or scan QR code



#### Organised by:











Supported by:

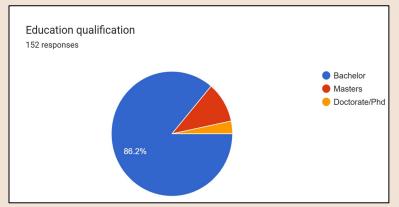
### Plans Africa Hub, October 2024



A hackathon organized/led by: Adetula Adeyemi and Kwizera Rulinda

**In collaboration with** Lifeline Organization Rwanda

#### Who were your participants?





### Plans for Nepal Hub, October 2024

It will be hackathon organized/led by: Sandesh Dhakal

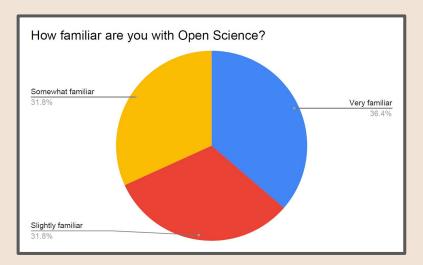


Coming Soon!

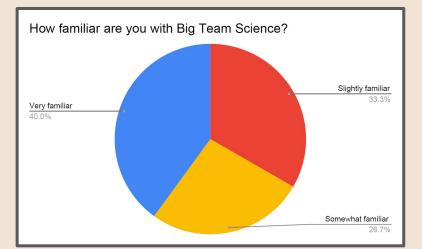
In your event, how much did the attendees know about Open Science

Bosnia-Serbia
Hub Event

and BTS?



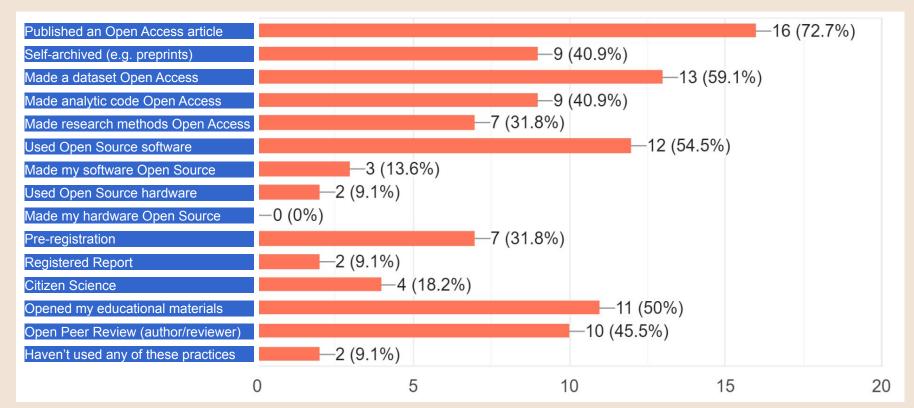
N = 22



N = 15

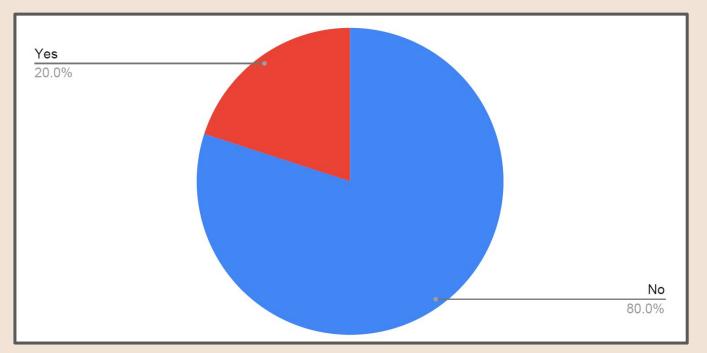
### What Open Science Practices have you engaged in?

#### Bosnia-Serbia Hub Event



## Have you ever been the lead or a part of a team leading/initiating a Big Team Science project?

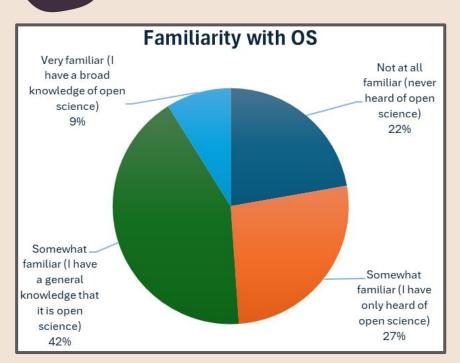
Bosnia-Serbia Hub Event

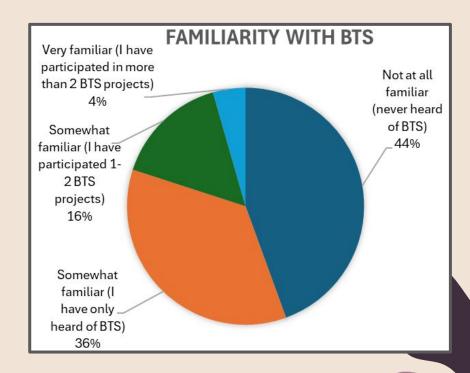




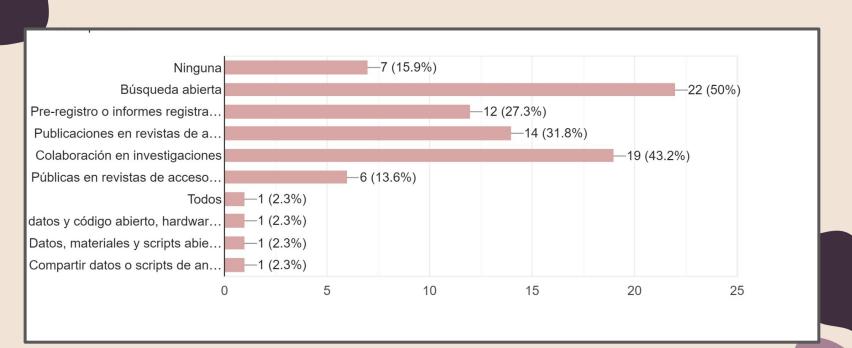
## In your event, how much did the attendees know about Open Science and BTS?

LATAM Hub Event





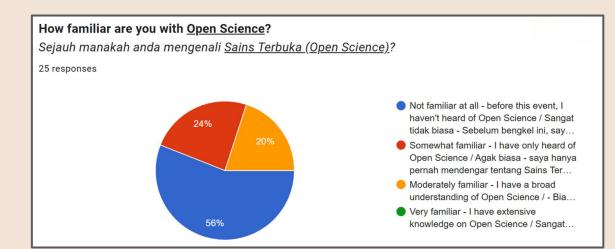
## What Open Science Practices have you engaged in? LATAM Hub Event

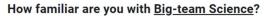




In your event, how much did the attendees know about Open Science and BTS?

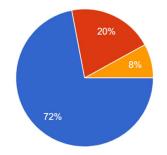
Malaysia Hub Event





Sejauh manakah anda mengenali <u>penyelidikan kolaboratif (Big-team Science)</u>?

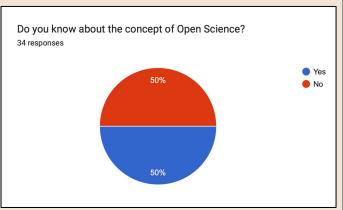
25 responses

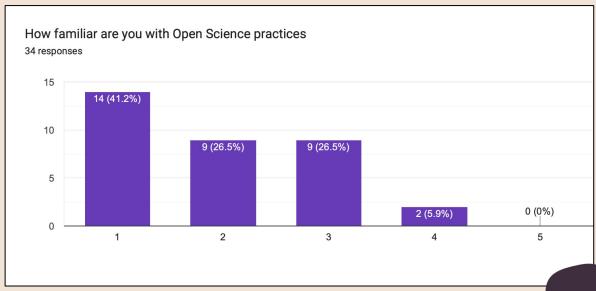


- Not familiar at all before this event, I haven't heard of collaborative research / Sangat tidak biasa - sebelum acara ini...
- Somewhat familiar I have only heard of collaborative research / Agak biasa saya hanya pernah mendengar tentan...
- Moderately familiar I have experience with 1-2 collaborative projects / Biasa...
- Very familiar I have experience with 3 or more collaborative projects / Sanga...

## In your event, how much did the attendants know about Open Science and BTS?

India Hub Event

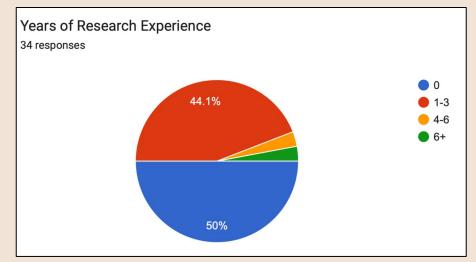


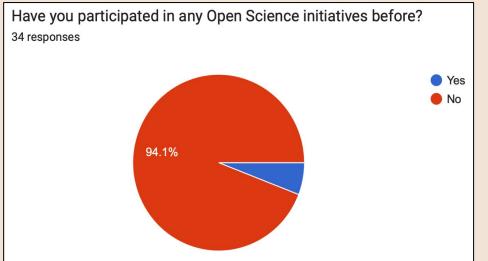


Familiarity on OS Practices on a scale of 1-5 (1 - they knew nothing about it and 5 - they knew something or enough on it)

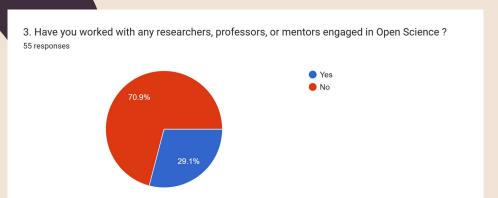
In your event, how much did the attendees know about Open Science and BTS?

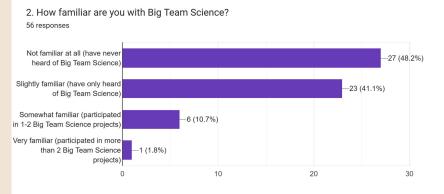
India Hub Event

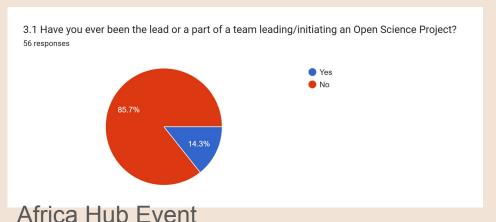


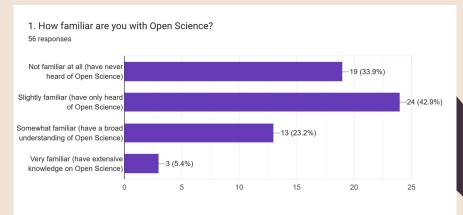


## In your event, how much did the attendees know about Open Science and BTS?











What do you think are the biggest barriers for Open Science and BTS in your region?

Bosnia-Serbia
Hub Event

## What is the <u>main reason</u> preventing you or your collaborators from engaging more in Open Science?

(22.7%)
(18.2%)
(13.6%)
(9.1%)
(4.5%)
(4.5%)
(0%)

## What is the <u>main reason</u> preventing you or your collaborators from engaging more in Big Team Science?

Confusing onboarding procedures Lack of academic reward Lack of skills/knowledge (training) Lack of time Lack of interest in region specific issues Lack of interest in samples from our countr	5 (33.3%) 2 (13.3%) 2 (13.3%) 2 (13.3%) 2 (13.3%) ries 1 (6.7%)
·	,
Translation/adaptation burden	1 (6.7%)
Lack of money	0 (0%)

## What do you think are the biggest barriers for Open Science and BTS in your region? LATAM HUD EVENT

#### **Both**

Language Barriers

Confusing on-boarding

Lack of financial support

Lack of trust of institutions

"No hay contactos o guías para iniciar"

"Las barreras lingüísticas"

"FALTA CONFIANZA EN LAS ESTRUCTURAS"

#### OS

Lack of access to resources

Cultural and language hegemony

"Hegemonía del inglés falta de acceso a recursos en espanol y publicaciones en espanol"

"Acceso a recursos tecnológicos, financieros, de formación"

#### **BTS**

Lack on interest of regional problems

Lack of academic reward

**Cultural Adaptation of instruments** 

**Ethics Approval** 

"Las prioridades a resolver de latinoamérica comparado con Estados Unidos y Europa no son compatibles o pueden llegar a no ser relevantes para su nivel de publicación"

"El hecho de que la participación en estos trabajos no es reconocido por las instituciones que nos evalúan (cantidad de autores, lugar del autor, crédito por la participación)."

What do you think are the biggest borriers for Open Science and BTS in your region?

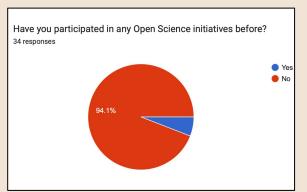
Malaysian perspective

What possible challenges/concerns might you have about engaging in Open Science practices or joining a Big-team Science group?

- Resources of recruiting local participants
- Concerns about being credited for my work
- Challenges in term of time constraints since I'm already working full time
- Recruiting participants
- The lack of experience and how I might fare with my team due to the lack of knowledge I have in this field
- I believe an issue that may arise for me is that I am not fully qualified in conducting reviews and data analysis. Being an undergraduate, I have relatively limited knowledge on data analysis.
- I am still learning about open science, and so I am not sure if I am doing it correctly.
- Disappointing my team members for not performing up to their expectations (because I had a different expectation?)
- My lack of experience
- It might be time consuming and requires a lot of commitments, as working on a research project is not an easy task.
- First of all, of course my lack of resources and experiences in the whole process itself, though perhaps that would be another reason for me to perform well. Other than that, it might be the strain of mobility for me.
- Not easy to apply and get research grants
- Must we be attached to a certain organisation to contribute?
- There is more workload for the lecturer, as we all have our work commitments and
  often face large class sizes. Introducing the BTS concept to the students is fine, but
  guiding and showing them step by step is really time-consuming, especially since it is
  not included in the teaching syllabus.

## What do you think are the biggest barriers for Open Science and BTS in your region?

India Hub Event



Major Barriers:

- a) Lack of familiarity on OS and BTS and no direction on resources available
- b) Interest in involvement but no mentors guidance many participants shared only heard of it but not knowing anything about.
- c) No exposure and stigma on OS (many mentors do not encourage it)

"The academic curriculum lacks to teach such concepts as research as a subject is not taught well or the atleast the traditional material does not include concepts of OS and BTS"



## What do you think are the biggest barriers for Open Science and BTS in your region?

India Hub Event

What do you hope to gain from participating in this hackatho	What do you	hope to gai	n from partici	pating in this	hackathon?
--	-------------	-------------	----------------	----------------	------------

34 responses

What do you hope to gain from participating in this hackathon?

34 responses

Im open to learning more about this framework and how I can utilise this

Introduction to Open Science, it's practices, and ways to get opportunities to work in the field.

I hope to learn about Open science and how it would help me in my research journey

More insights regarding Open Science and its interactions with Behavioral and Social Sciences.

To gain more insights about different aspects of research and resources available for conducting effective research in India.

Exposure and better understanding of the field

To know more about and if it is relevant for my future reasearch

To know more about open science initiatives and eventually become a part of their organising committees to further increase accessibility

I'm hoping to understand more about open science and contribute to meaningful psychological research.

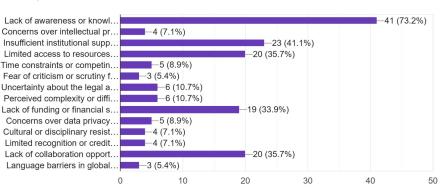


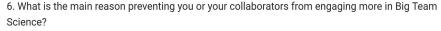
## What do you think are the biggest barriers for Open Science and BTS in your region?

Africa Hub Event

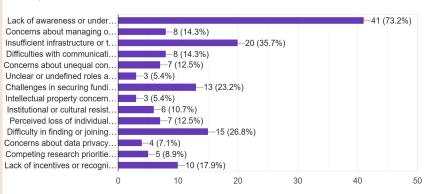
5. What is the main reason preventing you or your collaborators from engaging more in Open Science?

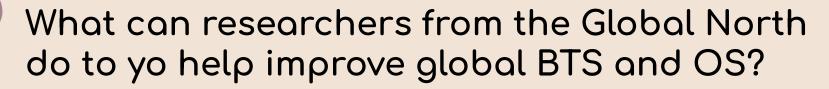
56 responses



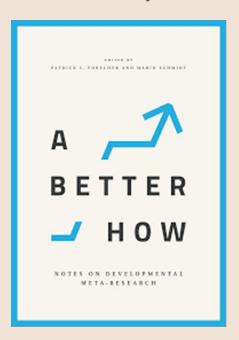


56 responses





- More leadership roles are needed
  - Better ways to recruit leadership from Global South



### Bridging the majority and minority worlds: liminal researchers as catalysts for inclusive open and big-team science

Alma Jeftic (University of Copenhagen & International Christian University, Tokyo), Marc Yancy Lucas (Universidad de Sonora, Hermosillo), Nadia Corral-Frías (Universidad de Sonora, Hermosillo) and Flavio Azevedo (University of Utrecht)

In the contemporary landscape of psychological sciences, the imperative to foster inclusive, socially just, and globally collaborative research endeavors has never been more pressing. Despite the potential for diversity and equity, systemic barriers and biases persist in open and big-team science projects, often relegating researchers from low- and middle-income countries (LMIC) to peripheral roles within international collaborations. This situation underscores a critical issue within psychological sciences: the inadequate representation of diverse participants and researchers. Such a shortfall not only exacerbates the replication crisis but also suggests that the crisis extends beyond mere methodological rigor. It points to a deeper systemic problem rooted in the insufficient diversity and inclusivity of research practices and theoretical perspectives. This multidimensional challenge highlights the necessity for an approach to scientific inquiry that integrates a broader range of cultural and experiential backgrounds into the fabric of psychological research. This paper proposes a path forward, stressing the critical role of *liminal scientists* who can bridge the gaps between the Global North and South, as well as between diverse academic structures.



## What can researchers from the Global North do to yo help improve global BTS and OS?

Encourage and support BTS from Global South researchers

#### BTS led by Serbian scientists



As part of the Reason4Health project, we are conducting a cross cultural study on questionable health practices

#### **BTS led by Chilean scientists**



#### SergioB 04:59

Hi all! A couple of co-authors and I are starting a big team project and would like to invite you all to participate!

See here small site for the whole project

(https://sbarbosadelatorre.wixsite.com/2d3dpersonperception) and an expression of interest quatrics

(https://psicologiauniandes.qualtrics.com/jfe/form/SV\_0Bw8L6sMURX0 yEu?Q\_CHL=qr).

We will be submitting a phase 1 registered report soon at which point I will be sharing the draft manuscript but for now we'd be happy to start building a collaboration network.

## What can researchers from the Global North do to yo help improve global BTS and OS?

- Stop helicopter science and dangerous stereotypes
- Be open to feedback
  - Reduce defensive responses
- More funding opportunities for Global South researchers (in the Global South)
- Cite, follow, and support researchers from the Global South

### What can researchers from the Global North do to help improve global BTS and OS?

#### Malaysian perspective

- More awareness
- More training & guidance/mentorship
- More transparency in the workflow process

#### What can BTS groups do to increase your participation?

E.g.:

- ★ What can your colleagues (or potential) from high-income countries (HIC) do to improve your experience in BTS and open science?
- ★ What do you need so that you can be more active in BTS groups?
- ★ What would you need so that you can feel comfortable to take a leadership role in a BTS group?
- ★ Do you feel that it is "impossible" for you to join any BTS groups? If you perceive any barriers to joining BTS groups, please elaborate on these obstacles.
- Include us in leadership roles as well
- Transparent workflow
- Have more opportunities to do this and increase awareness in these fields
- More awareness regarding BTS, as it's not well known here
- Should collaborate with universities only then more students get to learn about this.
   Or collaborate with student organization. Can start small I think. Can do it within our own Southeast Asian region first? But maybe first have to gather young researchers who just graduated. Drop me an email from time to time? To stay up-to-date
- I believe that consistent updates for opportunities may encourage me to be more active in BTS and open science
- Team members or someone specific willing to explain or check on our work and progress from time to time to make sure we're on the right track
- Increase visibility and advocacy in the public, not just among researchers, by organizing more advocacy programs such as workshops and seminars.
- I am not sure how to participate or search for such collaborating opportunities. Most
  of the time, it is "by chance" that I've encountered the advert for it. Sometimes it's
  word of mouth. I hope there is some sort of database where I can refer and see
  which one I can join.

More collaborations

https://www.metadocencia.org/authors/abrir/





More learning materials

@PsychRStats







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#### **SPEAKER**

#### Dr. Erin Buchanan

Professor of Cognitive Analytics at Harrisburg University, Pennsylvania <a href="https://x.com/aggieerin">https://x.com/aggieerin</a>

Join our FREE workshop on Multilevel Models using R! Dive into advanced statistical techniques designed to handle data with nested structures.

This hands-on session will cover:

- · The theory behind multilevel models
- Practical applications
- Step-by-step guidance on implementing them in R.

Ideal for researchers, data analysts, and statisticians looking to enhance their analytical skills.

By the end of the workshop, you'll be equipped with the knowledge and tools to confidently apply multilevel models to your own data.

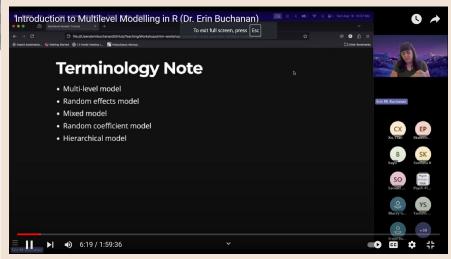
(7:30 PM IST/ 10:00 AM EDT)

DATE: 18 August 2024 TIME: 2:00 PM UTC

VENUE: ONLINE

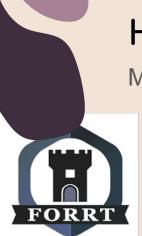
IT'S FREE!

https://www.youtube.com/watch?v=hQmYzCYuD1k



Translated written materials forthcoming





More materials in our native languages

### Translations of Open Science Educational Materials https://forrt.org/lesson-plans/

#### LESSON PLAN TEMPLATE:

This is a template for a lesson plan structure, so we can start turning our curated resources in the Table of activities into full lesson plans with learning outcomes. Please either create copies of this template and upload to our OSF project page or create your own lesson plan and paste it in the landing page. There san example here

Name of the class: A brief introduction to Open Scien	ce
Suitable context: (e.g., entry- level/ undergraduate/postgraduate	Undergraduate psychology students     Entry-level postgraduate psychology students
Total time: (e.g., 1 hour, 2 hours, 1 day)	1 hour
Pre-requisites:	Very basic prior knowledge about experimental design/empirical psychological research

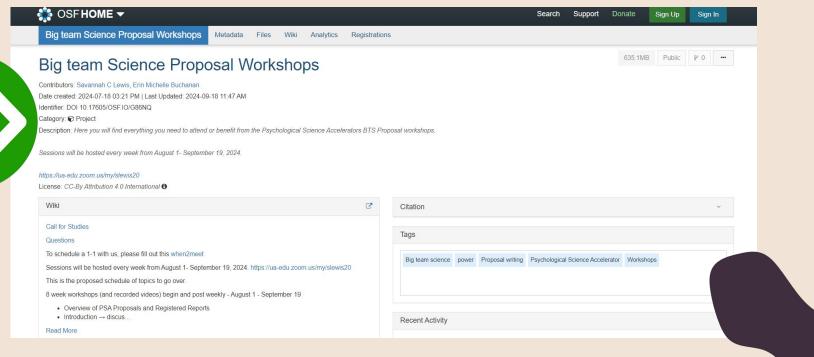
SIPS Hackathon: Desarrollando recursos para apoyar a la facultad académica e integrar contenido académico de libre acceso en el plan de estudios.

Plantilla de plan de lección

Esta es una plantilla para la estructura de un plan de lecciones, de modo que podamos comenzar a convertir nuestros recursos seleccionados en la <u>Tabla de actividades</u> en planes de lecciones completos con resultados de aprendizaje. Cree copias de esta plantilla y <u>cárguelas</u> en nuestra<u>nágina de proyecto</u> OSF o cree su propio plan de lección y péguelo en la <u>página de inicio</u>. Hay un ejemplo <u>aquí</u>.

ት +	Nombre de la ciase:  Una breve introducción a la ciencia abierta			
	Contenido adecuado: (e.g., licenciatura, posgrado)	Estudiantes de Licenciatura en Psicología     Estudiantes de Posgrado en Psicología		
	Tiempo total: (e.g., 1 hora, 2 horas, 1 día)	1 hora		
	Pre-requisitos	Conocimiento previo muy básico sobre diseño experimental/ investigación psicológica empírica		

Clearer calls for studies (and training)





Breaking down the hidden curriculum in the peer review process through training in our native languages



https://www.reviewerzero.net/



### El plan para la sesión de hoy

#### 1a Parte:

¿En qué consiste el proceso de revisión por pares y cómo funciona?

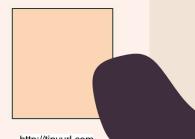
2a parte:

Estudio de caso

3a parte:

Reflexión y cierre

Puedes hacer preguntas en cualquier momento usando el QR o la liga



http://tinyurl.com

## What resources are there if you want to improve?

During the Bosnia-Serbia Hub Event, we compiled a list of useful resources related to Open/Big-Team Science

Various communities, projects, events, educational materials, funding opportunities, tools etc.

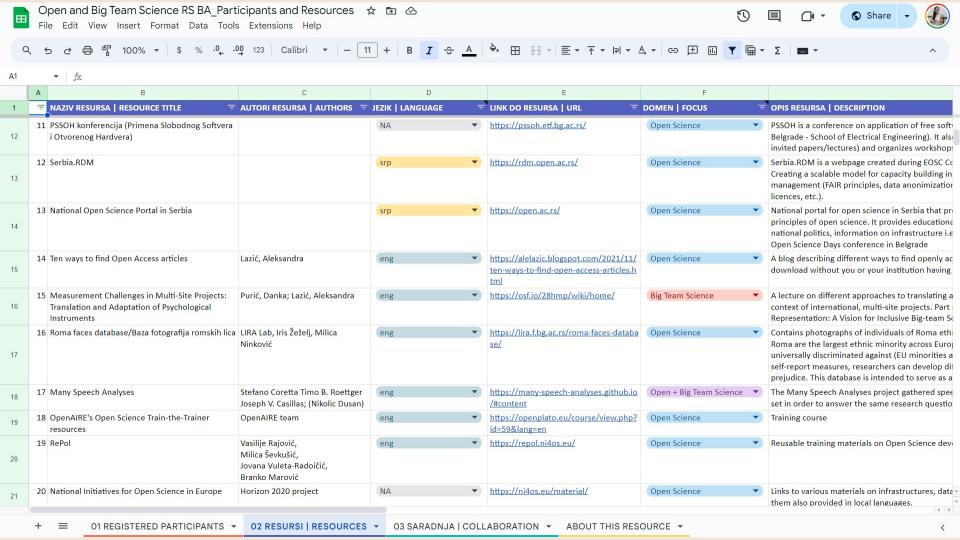
Most are focused on increasing accessibility and inclusivity, or are somehow connected to the region.

Directly access the resource spreadsheet



Visit the ABRIR Zenodo community for more resources zenodo.org/communities/abrir/





## Coming soon 23 Oct 2024



Towards greater diversity, inclusion and justice in Open and Big-team Science

#### **ONLINE HACKATHONS**

Best practices for more equitable international research collaborations

Global South led Big-team Science projects

#### PICK THE BEST TIME: JOIN US WHEN IT SUITS YOU

- 7:00 AM UTC hosted by ABRIR Africa & Asia Hub
- 3:00 PM UTC hosted by ABRIR Europe & Latin America Hub

#### More information



www.abrirpsy.org



@ABRIR\_Psy



@abrir.bsky.social



ABRIR - Big-team and Open Science



psy.abrir@gmail.com abrir.psy@gmail.com



Scan the OR code or visit bit.lv/abrir-oct2024

to sign up now!



















## Please join us!

All are welcome researchers and OS and BTS leaders from GS and GΝ

## Thank you!

Stay updated with ABRIR!

abrirpsy.org

X: <u>@ABRIR Psy</u>

Bluesky: @abrir.bsky.social



### Introducing our Executive Committee



Nadia Corral-Frías, PhD (Mexico)



Natalia Dutra, PhD (Brazil)



Alma Jeftić, PhD (Bosnia + Denmark + Japan)



Aishwarya lyer (India)



Nikita Ghodke (India)



**Aleksandra Lazic** (Serbia)



Brendan Ch'ng, PhD (Malaysia)



Rulinda Kwizera (Rwanda)



(Nepal)



Sandesh Dhakal, PhD Karolina Koszałkowska, PhD (Poland)