



GROWING WITH
BROCK

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FALL/WINTER 2021



THIS ISSUE

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ON-CAMPUS RESEARCH



Pictured above: the research assistants at the CNA lab undergoing training to run studies using the EEG system.



Protocols are being put in place to ensure the safety of everyone involved.

- Individuals are required to be fully vaccinated to come to campus. This includes both research assistants and research participants.
- Masks will be worn throughout the testing session (and throughout Brock indoors).
- All equipment will be sanitized between sessions and contact will be minimized.

Find out more about [Brock University's Vaccination Policy](#).

GEARING UP RESEARCH

We would like to thank our Growing with Brock Members for their continued engagement with the research in our labs. Without the participation of our members, our research cannot be done. With Brock University returning to some on-campus activities, some of our labs are now preparing to resume face-to-face research studies. For instance, the Campbell Neurocognitive Aging (CNA) Lab has resumed testing older and younger adults in-person for EEG studies. We are excited to invite you back to our campus with safety protocols in place.

Many studies, including those with children, will still be online. Study invitations will indicate whether a research study is online or in-person.

In addition, we want to give a warm welcome to the new graduate student members of the Growing with Brock Labs. Research is a critical part of a graduate degree and students work in close collaboration with faculty members. We are looking forward to sharing opportunities to participate in their research with you and provide updates on their progress. Check out the next page for a sneak peek of our new graduate students' research interests!

RESEARCH UPDATES FROM THE GWB LABS!

Our Brains During Spontaneous vs. Effortful Memory Retrieval - Campbell Neurocognitive Aging Lab

Memory is important for many tasks in our everyday lives, from remembering our shopping lists to telling stories with family and friends. Some memories, like shopping lists, take effort to remember, while others seem to pop into our heads spontaneously without any effort at all. Although these memories differ in how they are brought to mind, their content can be very similar. Importantly, while growing older has been linked to declining effortful memory, spontaneous memory seems to be maintained with age. In this study, we measured brain activity during spontaneous and effortful memory retrieval to better understand how aging alters the way we access these different types of memories.

Older and younger adults learned pairs of sounds and pictures. We then recorded their brain activity as they heard the sounds again and either spontaneously or effortfully imagined the pictures that had been paired with each one. We found that younger adults showed less brain activity in areas linked to effortful control when they spontaneously remembered the pictures, and more activity when they effortfully tried to remember them. However, older adults showed similarly high activity in these control areas during both effortful and spontaneous retrieval. This suggests that older adults may use these control areas to support memory retrieval even when they are not actively trying to remember something.

 Henderson, S. E., Hall, S. A., Callegari, J. M., Desjardins, J. A., Segalowitz, S. J., & Campbell, K. L. (2021). Increased alpha suppression with age during involuntary memory retrieval. *Psychophysiology*. DOI: 10.1111/psyp.13947. [LINK](#)



I'm an international student from Turkey in my first year of the Ph.D program. I am interested in the development of future-oriented cognition in preschool children.

- **Ege Kamber, M.A.**

Developing Memory and Cognition Lab
with Dr. Caitlin Mahy

My research examines children's moral evaluations of lie-telling. I'm particularly interested in how a child's reputation influences how others perceive their lies.

- **Vanessa Turchio**

Social-Cognitive Development Lab
with Dr. Angela Evans

My research focuses on visual short-term memory in relation to aging. In my current project I am examining age differences in functional connectivity during short-term memory encoding and maintenance.

- **Selma Lugtmeijer, Ph.D.**

Postdoctoral fellow at the
Campbell Neurocognitive Aging Lab
with Dr. Karen Campbell

I am interested in whether interacting with police officers and court makes teenagers' mental health worse over time.

- **Xiaoyang (Nick) Xia, M.A.**

Youth Development Lab
with Dr. Elizabeth Shulman

Oya Pakkal (M.A. Student) and **Mohammad Barzegari Khaneghah** (Ph.D. Student interested in adolescents' social behaviour and social media use)

are both new student members of **Dr. Shulman's Lab** as well.

Welcome to Growing with Brock!



Mazachowsky, T. R., McKenzie, K., Busseri, M., & Mahy, C. E. V. (in press). **“These pretzels are making me thirsty” so I’ll have water tomorrow: A partial replication and extension of adults’ induced episodic foresight.** *PLOS One*.

O’Connor, A.M., Judges, R.A., Lee K., and Evans, A.D. (2021). **Can adults discriminate between fraudulent and legitimate e-mails? Examining the role of age and prior fraud experience.** *Journal of Elder Abuse & Neglect*, 33:3, 181-205, DOI: 10.1080/08946566.2021.1934767. [LINK](#)

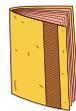
O’Connor, A.M., Lyon, T.D., Wiens, M. and Evans, A.D. (2021). **Use of global trait cues helps to explain older adults’ decrements in detecting children’s lies.** *Legal and Criminological Psychology*. <https://doi.org/10.1111/lcrp.12196>. [LINK](#)

Matthews, C. M., & Mondloch, C. J. (2021). **Learning faces from variability: Four- and five-year-olds differ from older children and adults.** *Journal of Experimental Child Psychology*. <https://doi.org/10.1016/j.jecp.2021.105259>. [LINK](#)

MORE RESEARCH UPDATES!

Children's Memory, Strategies, and Parent Reminders - Developing Memory and Cognition Lab

This study examined children’s ability to remember to carry out their future intentions, known as prospective memory. We asked parents to report on several aspects of their children’s prospective memory including strategies that children used to help them remember and how parents support their child’s memory. The results showed that in general as children got older, they used more memory strategies and parents adjusted their level of support for their children based on age: parents supported children 3- to 6-year-old more frequently with age but supported children 7- to 11-years old less frequently with age. These results suggests that parents are sensitive to children’s memory ability when providing support for them. Open-ended responses showed that parents mostly used verbal reminders with their children and children used external memory aids to help them remember to do something.



Mazachowsky, T. R., Hamilton, C., & Mahy, C. E. V. (2021). What supports the development of children’s prospective memory? Using a parent-report to examine the relation between children’s memory techniques, parent scaffolding, and children’s prospective memory. *Journal of Cognition and Development*, 22, 721-743. [LINK](#)



**RESEARCH
SNAPSHOT**

Our latest findings indicate that honesty increases during older adulthood.

Older adults were significantly less likely to cheat on a math task and had higher ratings of honesty-humility compared to younger adults.

O’Connor, A. M., Judges, R. A., Lee, K., & Evans, A. D. (2021). Examining honesty-humility and cheating behaviors across younger and older adults. *International Journal of Behavioral Development*. <https://doi.org/10.1177/01650254211039022>. [LINK](#)

CHECK THIS OUT!

RESEARCH HIGHLIGHT

Don't Know Responding in Young Maltreated Children: The Effects of Wh- Questions Type and Enhanced Interview Instructions

Kelly McWilliams, Shanna Williams, Stacia N. Stolzenberg, Angela D. Evans, and Thomas D. Lyon

WHAT IS IT ABOUT?

Two studies examined 4-7-year-old maltreated children's "I don't know" (IDK) responses to wh- questions after receiving various interview instructions.

WHO IS IT FOR?

Researchers and practitioners interested in child maltreatment, forensic interviewing, ground rules, child memory, and interview instructions.

WHY IS IT IMPORTANT?

Among young maltreated children, color/number questions elicit higher rates of guessing than other wh- questions. Instructions designed to decrease guessing and increase IDK responses have some positive effects, but also tend to reduce correct responses. Researchers and interviewers should be attentive to tradeoffs in encouraging children to answer color/number questions and the difficulties in improving children's performance by encouraging IDK responses.

Find out more here!

A publication by Dr. Angela Evans and colleagues examined maltreated children's "I don't know" responses and how different question types and interview instructions can influence such responses.

Check out the research highlights courtesy of Law and Human Behavior journal.

Celebrating Success

Campbell Neurocognitive Aging Lab's **Dr. Karen Campbell** and Social-Cognitive Development Lab's PhD student **Alison O'Connor**, along with Dr. Will Hall from the Psychology Department, received a SSHRC Explore Grant for their collaboration project looking at age differences in implicit attitudes towards children. Congratulations!

Social-Cognitive Development Lab's PhD student **Breanne Wylie** received the APLS Student Grant-in-aid Research Grant to support her research examining how emergency room nurses talk to child victims of abuse. [See page 5 for study recruitment!](#)

- Do you know if the question leads to ambiguity? No.
- No, you don't know. Or no, it doesn't lead to ambiguity?

A recent publication by Dr. Evans, graduate student Breanne Wylie, and collaborators attempted to train adults to identify referential ambiguity in children's testimony.

Although an explicit instruction improved performance on "practice" questions, this led to an overcorrection when interpreting responses in court transcripts. Instructions AND practice questions only modestly improved adults' ability to recognize referential ambiguity.

Wylie, B. E., Gongola, J., Lyon, T. D., & Evans, A. D. (2021). The difficulty of teaching adults to recognize referential ambiguity in children's testimony: The influence of explicit instruction and sample questions. *Applied Cognitive Psychology*, 35(5), 1297-1307. <https://doi.org/10.1002/acp.3863>. [LINK](#)



LOOKING FOR RESEARCH PARTICIPANTS!



HELP US GROW

Growing with Brock is looking to recruit families with young children and youth! If you have friends or family with **children aged 3 to 17 years**, we would love to have them join Growing with Brock and participate in our research!

Please have them contact us at growing@brocku.ca, or visit our website at growingwithbrock.ca.

TO PARTICIPATE CONTACT
SCDLAB@BROCKU.CA



SEEKING EMERGENCY ROOM NURSES

WITH ANY EXPERIENCE TALKING TO CHILD PATIENTS

If you know any ER nurses, please share this with them!

complete a **30 minute survey** about your experiences talking to children receive a **\$15 Amazon e-gift card**

Seeking ER nurses with experience talking to child patients to participated in our new research study led by graduate student Breanne Wylie.

If interested, email us at scdlab@brocku.ca for a link to the survey. We want to hear from you!

UPCOMING EVENTS

Never miss an upcoming event!
Follow us using these buttons:



Children's Social, Emotional and Cognitive Development - What's happening and why?



Free online webinar presented by Drs. Angela Evans, Caitlin Mahy and Cathy Mondloch

Wednesday, November 24 from 12:30 to 1:30 p.m. EST
RSVP online at www.brocku.ca/lifespan-development-research/Children-Speaker-Series



This webinar is free and open to the public. Please invite family and friends who have young children and who you think might be interested in this online talk. Don't forget to RSVP!

TRY THIS FALL-THEMED EXPERIMENT AT HOME: WHY DO LEAVES CHANGE COLOUR?



THE BIG QUESTION!
What is chlorophyll?

What you will need:

- Assorted leaves
- Jars with lids
- Rubbing alcohol
- Butter knife
- Large bowl
- Hot water
- Coffee filters
- Plates
- Scissors

Instructions:

1. Collect your leaves. You want to gather 4 to 6 leaves of each type, and around 6 different types of leaves. Try to get leaves that are at different stages of turning colour.
2. Set out one jar for each type of leaf you collected. Start ripping up on type of leaf into its jar. You want them to be in really small pieces!
3. Add just enough rubbing alcohol to cover the leaves, then use a butter knife to mash up the leaves even more. You should start to see the rubbing alcohol turn a bit green.
4. Heat the jars by setting them in a large dish bowl. Add hot water to the bowl and cover the jars with their lids.
5. Let them sit for approximately an hour. Give the jars a little swish every once in a while to help release the chlorophyll. You can also refresh the hot water if it cools too much.
6. Cut a coffee filter into quarters and place them on a plate. Using a teaspoon or a dropper, add a couple of drops of the liquid to the tip of the filter.
7. Wait approximately 30 minutes to an hour and see how the colours move up the filter paper and separate. Pretty cool!

Chlorophyll

Chlorophyll gives leaves their green colour and is so dominant that it hides the other colours in the leaves during the spring and summer. But in the fall, chlorophyll in the leaves breaks down, finally allowing the it's other natural colours to have their moment in the sun!

UPDATE YOUR INFORMATION WITH US

- If your phone number has changed recently
- If you'd prefer to receive our invitations and newsletters at a new email address
- If you have a new family member you would like to be part of GWB

Let us know by sending us a quick email at growing@brocku.ca

Stay up-to-date with the current studies. Visit our website at www.growingwithbrocku.ca/current-studies

