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By Queen's Psychology  
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For Queen's Psychology faculty and graduate students, conducting research over the past 18 months has been anything but business as usual. COVID-19 restrictions have meant that researchers have had to literally think 'outside the box' of their normal lab spaces in Craine Building and Humphrey Hall.

**Dr. Beth Kelley** of the **Autism Spectrum Disorders Lab** (part of the Developmental Psychology program in the Department of Psychology) says that during the pandemic she and her lab have adopted a research model that allows a mix of online and in-person interaction with study participants.

"We have still been able to do some in-person testing at Ongwanada and we have put strict health protocols in place there", Beth explains. "Unfortunately, it means that we can't test young children for the time being as they don't want to wear masks or sit behind plexiglass."

Beth's Ongwanada study is a large, multi-site study that has been ongoing since 2016. Beth's ASD Lab team sees children and adolescents with ASD and/or ADHD and/or Intellectual Disability, as well as typically-developing controls. "We collect genetic, immune, brain imaging, cognitive and language functioning, adaptive behaviour and psychosocial functioning on these kids as well as a detailed family history.

For another study, the ASD Lab is interviewing parents and their adolescents entirely over Zoom. This online study is a study of depression in adolescents with ASD and/or ADHD (as well as typically developing controls). Beth's team is trying to develop a measure of depression that is normed on adolescents with ASD and/or ADHD as all of the measures currently used to measure depression in these populations have been normed on neurotypical individuals. Adolescents and their parents are surveyed about the presence of 55 different autism symptoms, and parents are asked if they think that symptom stems from depression or their disorder or something else.

"Our research focus has changed pretty drastically", Beth recounts. "Normally I have at several projects on the go, but now I have two main projects. Recruitment is very slow. I think a lot of this is due to the major impact that COVID has had on the mental health of these youth[EK1] "

Beth is also involved with two studies that are being run out of Toronto's SickKids Hospital that are looking at mental health of children with ASD, ADHD, or typical development in response to COVID. "We have found that the pandemic seems to have negatively affected many of our study participants' lives. About 70% of kids are doing more poorly in terms of their mental health, about 20% don't seem to be impacted much one way or the other, and about 10% of kids are doing better," Beth says. "We are still looking into those kids who are doing better, but suspect that it might have something to do with not having to go to school. Many kids with these conditions have a really hard time at school and so they might actually enjoy online learning more."

Interestingly, Beth and her team have discovered upsides to using Zoom and remote technologies. "My team have found that Zoom interviews have gone more smoothly than we expected," Beth recalls. "Team members and participants do not seem to have any technical problems, and we're pleased to see that the adolescent participants (many of whom have ASD and/or ADHD) are doing better with the platform than I thought that they would."

Beth has made use of Department of Psychology and Queen's University resources to go remote for teaching. She and her team also use the Queen's Zoom platform for online interviews, and research assistants enter the participants' answers directly into Qualtrics.

ASD Lab team members keep up to date with a weekly lab Zoom meeting. Beth also meets with each of her graduate and honours thesis students once a week via Zoom, and every two weeks with directed lab students. "Staying in touch with students is critical for students who are isolated or living alone," Beth explains. "Many students have struggled over the past couple of years, both academically and emotionally, so I try to do all I can to support them at this difficult time - most times they just need someone to vent to."

Beth is hoping that a return to in-person, in-lab studies will allow for an increase in study activity, although admits that recent surges in COVID-19 cases have raised concerns among Team members about returning to the lab. "I think it might be a long time before people really feel comfortable coming into the lab, but we would like to get back into the lab as soon as it is safe to do so," Beth says. "Being in the lab provides us with a far greater range of what we can do with participants - eye-tracking studies, administering a variety of tests, behavioural assessments. Once we can get back to testing kids in person, we'll be able to get the lab running at full speed again."