



ELEMENTAL

*The Official Mental Health Magazine
of the University of Toronto*

INTERVIEWS

SPOTLIGHTS

, TREATING GENERAL
ANXIETY, OCD, AND THE
GENETICS OF MENTAL
HEALTH

HOW TO DISCUSS ANXIETY
WITH YOUR PROF,
GETTING THROUGH GRAD
SCHOOL

ARTICLES

ANXIETY

POSITIVE COPING
STRATEGIES FOR
STUDENTS

COMPASSION & ANXIETY,
MENTAL HEALTH IN MED
SCHOOL, ART THERAPY,
VISION & HOW IT
IMPACTS MOOD

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[1] INTERVIEWS

+
—
2
—
+
+
+
+

SPOTLIGHT

PAGE

BASICS OF COGNITIVE BEHAVIORAL
THERAPY / **DR. KHUSH AMARIA**

6-7

ROLLING WITH THE RESISTANCE:
A NEW APPROACH FOR TREATING
GENERALIZED ANXIETY DISORDER /
DR. MARTIN ANTONY

8-9

MANAGING OCD THROUGH
MINDFULNESS, SELF-COMPASSION,
& ACCEPTANCE / **DR. LANCE HAWLEY**

10-12

HOW DO I TALK TO MY PROF ABOUT
MENTAL HEALTH? STARTING THE
CONVO WITH THE GRAD CRC /
HEATHER MCGHEE

12-13

FLOWING THROUGH GRAD SCHOOL /
LAUREN DE FREITAS

14-19

SPECIALIZED HR SERVICES MAY
BRIDGE THE GAP IN AUTISTIC
EMPLOYMENT / **JULIA MARTENSSON
& LAUREN ABRAMSON**

19-20

INSIGHT INTO THE MENTAL HEALTH
FIELD / **DR. JOHN CAIRNEY**

21-22

IMPROVING PERSONALIZED MENTAL
HEALTHCARE THROUGH PSYCHIATRIC
GENETICS / **DR. GWYNETH ZAI**

23-24



[2] ORIGINAL ARTICLES

TOPIC	PAGE
TO SCROLL OR NOT TO SCROLL: CAN TECH IMPROVE MENTAL HEALTH?	25-26
A COMPASSION-BASED APPROACH TO HELP OVERCOME ANXIETY	26-27
SUICIDE AS CONTAGION AND THE USE OF THE MEDIA AS DISSEMINATOR	27-28
FINDING YOUR MEDIUM: THE POWER OF THE ARTS FOR MENTAL WELNNESS	28-29
MENTAL HEALTH IN MEDICAL SCHOOL: A UOFT STUDENT'S PERSPECTIVE	29-30
"SO, WHAT ARE YOU DOING NEXT?"	31
VISION & MOOD: WHAT'S THE CONNECTION? A PRELIMINARY INVESTIGATION OF THE LITERATURE	32-33



+
—
4
—
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LETTER FROM THE EDITORS

We are thrilled to introduce the third issue of *Elemental*, the University of Toronto's official tri-campus mental health magazine. The theme of the current issue is anxiety. Anxiety disorders are the most prevalent of mental health issues, with an estimated 1 in 10 Canadians affected by them [1]. Anxiety disorders affect behavior, thoughts, emotions, and physical health, and are thought to be caused by a combination of neurobiological, genetic, and personal circumstances, combined with social and economic factors. There are many manifestations of anxiety disorders, some of which include panic disorders, phobias, obsessive compulsive disorder, and post-traumatic stress disorder. People can often suffer from more than one form of anxiety, and those with anxiety disorders often suffer from depression, eating disorders or substance abuse as well. Fortunately, in many cases, anxiety disorders can be successfully treated and managed once they are recognized.

It can sometimes feel as though anxiety and

post-secondary education fall hand in hand – a symbiotic relationship where one can seemingly not exist without the other. There is, however, a healthy level of stress and anxiety that fuels optimal productivity and performance. For example, feeling the pressure to cram before an exam or getting butterflies as you prepare to give your first lesson as a teaching assistant. While these situations are uncomfortable, they may be more severe for individuals with an anxiety disorder. Furthermore, when these anxieties start to accumulate and exist over a prolonged period of time, it can be easy to start feeling overwhelmed and for the feelings of discomfort to evolve into something greater. In fact, a 2016 national online survey that collects information on students' health behaviours, attitudes, and perceptions, indicated that depression, anxiety, and suicide attempts are increasing among Ontario's post-secondary students. More specifically, 65% of students reported experiencing overwhelming anxiety and 14% had seriously considered suicide in the previous year [2]. There is

tremendous importance in understanding these anxieties and providing information, resources, and safe environments that promote constructive discussion for all students and individuals experiencing these pressures.

In this issue, we explore anxiety as it presents itself at the University of Toronto and higher education ecosystem – through the perspectives of students, staff, faculty and within the greater Toronto community. We learn about ways to tackle anxieties in undergraduate and graduate school, including ways to talk to professors about anxiety, practical methods for destressing, and the impacts of technology and the media on our mental health. We also hear about the various therapeutic approaches to treating anxiety, including cognitive behavioural therapy from Dr. Khush Amaria, a Senior Clinical Director from CBT Associates, research in alternative treatments for generalized anxiety from Dr. Martin Antony, the Director of Anxiety Research and Treatment at Ryerson University, as well as a discussion with clinical psychologist Dr. Lance Hawley, on ways to manage OCD through mindfulness, self-compassion, and acceptance.

We would like to extend our gratitude to the Elementaleditorial team as well as Grad Minds, for their hard work and dedication in contributing to mental health initiatives and education at the University. This initiative would not be a success without the support from faculty, students, staff, and community mental health advocates who have let their stories be heard. To our sponsors at the Faculties of Arts and Science, Engineering, and Medicine – we are humbled and appreciative for all of the support you have given on our behalf. And of course, a special thank you to our readers – without your continued enthusiasm and support, this endeavor would not be a success. This magazine was created as a forum for healthy discussion at the University and beyond, and we thank you for keeping the conversation alive!

Sincerely,

Kate Rzaadki and Rachel Dragas
Editors-in-Chief, Elemental

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THE BASICS OF COGNITIVE BEHAVIORAL THERAPY

JEFFREY LYNHAM

AN INTERVIEW WITH DR. KHUSH AMARIA

Cognitive behavioral therapy (CBT) is considered the gold standard for treating depression and anxiety. The central principle of CBT is that the way we think powerfully affects our feelings and behaviors. CBT helps people recognize and challenge their negative or anxious thoughts in order to help them experience a sense of joy in life.

Dr. Khush Amaria is a Senior Clinical Director at CBT Associates, a leading Toronto-based psychology practice, who provides CBT treatment for children, adolescents, and adults with anxiety disorders, depression, and other health-related problems. She completed a BSc. at the University of Toronto, a PhD in Clinical Psychology at the University of Waterloo, and a Post-Doctoral Fellowship in Clinical-Health Psychology at SickKids Hospital. Dr. Amaria has been practicing as a clinical psychologist for nine years, and I was fortunate to have a conversation with her to learn more about the basics of CBT.

CAN YOU EXPLAIN TO OUR LAY READERS WHAT CBT IS AND HOW IT WORKS?

CBT is an umbrella term because it includes multiple methods. The key piece is that it involves a structured goal-oriented approach that is focused on how our thoughts impact our behaviors and our emotion. It focuses on present day challenges, thoughts and behaviors, and it

does not tend to focus on your past experiences. CBT is time limited; the goal is to not keep you in therapy forever.

What you're doing in the process is learning new skills to change your approach on how to manage problems and stressors. The individual isn't just told what to do; they are guided by a therapist at a comfortable pace so that they can learn these new skills and make those changes outside of session time. With CBT, there is an expectation to do "between session" work, and these can be written exercises, behavioral experiments, or activities.

HOW EFFECTIVE IS CBT IN TREATING ANXIETY AND DEPRESSION RELATIVE TO MEDICATIONS?

Of all the different approaches to therapy, CBT has been one of the most well studied. Academic institutions and hospitals have been trying to understand what changes take place in the individual if they're using a structured CBT approach. Medications and CBT are often compared side by side, but there's no rule, for the most part, that says you can't use both if that's necessary. We have what we call "pathways" to understand when either CBT or medication would be the first line of treatment. But for the most part, CBT is one of the first lines of treatment with the exception of specific concerns such as a psychotic disorder, with schizophrenia being an example. Of course, CBT on its own would not cure a severe mental health condition, but it can be used as an adjunct so that the individual can

learn ways to reduce the risk of it coming back.

The key difference with medications is that they can work faster. But we also understand that, when they are removed, some of the previous challenges can re-emerge. By contrast, when you provide CBT, not only are the outcomes better at the end of treatment, but they can continue to improve even after treatment.

WHAT ARE THE MOST COMMON THINKING ERRORS AMONG PEOPLE WITH GENERAL ANXIETY?

One of the most common ones we see are jumping to conclusions. It's this belief that you know the future. Of course, if you think you know the future and you're worrying and anxious, it's not because you're thinking that good things are going to happen, it's because you're thinking that bad things are going to happen.

Another common error is catastrophizing. That's when you take something, and maybe that something is not going the way you want it to go, and you blow it up way bigger than it needs to be. Another common one is all-or-nothing thinking. What you're doing is you're seeing the world as black or white, and there are no shades of grey. When we think like this, there is often a sense of doom, especially if we have high expectations of ourselves.

ARE THERE ANY CBT METHODS THAT YOU HAVE FOUND TO BE THE MOST EFFECTIVE FOR TREATING GENERAL ANXIETY?

The first thing we do is get people to understand what their beliefs are about worry. People have beliefs that their worry can do good things for them, or that it will protect them from bad things happening. But, they may also be worried that their nervous thoughts are dangerous and that they can cause physical harm to them, or that they are going to make them go crazy.

When they understand their beliefs about worry, we get them to shift those beliefs. We can do that in a couple of ways. We get people to challenge their beliefs by getting them to find evidence that the belief is not true. We also get them to do experiments; for instance, we can see if they are able to purposely postpone their worry by getting them to schedule a "worry time."

We have also found that many people who have anxiety are uncomfortable with uncertainty. They want to know what's next, and maybe that feels safe and comforting, but it comes with a cost of worrying quite a bit. We encourage people, typically through experiments, to increase their

tolerance of uncertainty. For example, we could have someone go to their usual restaurant, but instead of ordering the dish that they always get, we would encourage them to order something else off the menu.

WHAT ARE THE MOST REWARDING EXPERIENCES YOU HAVE WHILE DOING YOUR JOB?

I think it's being able to teach somebody and give them an understanding of what they're going through. When I'm able to do a systematic or diagnostic assessment with someone, they often feel less alone, and I can help them build hope really quickly. Whatever they're feeling, experiencing, or suffering from has a possible solution or strategy. Sometimes we get to see immediate effects even if they're minor.

For example, for generalized anxiety, we might teach relaxation techniques early on. We know that people with generalized anxiety tend to have fewer relaxed periods during their day. We can have them start with taking a long bath, doing yoga, or walking the dog. With these techniques, we often see an immediate effect.

WHAT ADVICE WOULD YOU GIVE TO SOMEONE WHO IS THINKING ABOUT BECOMING A COGNITIVE BEHAVIORAL THERAPIST?

This is quite a rewarding field to be part of and I think it's only going to grow. I think that if you are planning to be a therapist, it's important to know that CBT is not a panacea. It's not going to treat and fix everything, but we know that it's the most well studied and is generally successful. If you want to make a difference, that's the treatment approach you're going to use.

Another important part is that you need to believe in the CBT model. I'm not saying that you should do therapy on yourself, but you must buy into this idea that a lot of our suffering comes from our interpretations and perceptions of the world, and this is something that we can change and have more control over through CBT.

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ROLLING WITH THE RESISTANCE: A NEW APPROACH FOR TREATING GENERALIZED ANXIETY DISORDER

JEFFREY LYNHAM

AN INTERVIEW WITH DR. MARTIN ANTONY

Dr. Martin Antony is the Director of the Anxiety Research and Treatment Lab at Ryerson University. He also holds faculty appointments at the University of Toronto, McMaster University, and the University of Waterloo. Previously, he was based at St. Joseph's Healthcare Hamilton, where he served as the Psychologist-In-Chief and the Founding Director of the Anxiety Treatment and Research Clinic. Dr. Antony served as president of the Canadian Psychological Association (2009-2010) and is currently president-elect of the Association for Behavioral and Cognitive Therapies.

Dr. Antony has published 30 books and more than 250 journal articles and chapters on anxiety disorders and cognitive behavioural therapy (CBT). He has also given more than 425 presentations to audiences across four continents. His research interests include understanding and treating anxiety-related disorders such as obsessive-compulsive disorder, social anxiety disorder, and generalized anxiety disorder. I sat down with Dr. Antony to learn more about some of his current research.

COULD YOU TELL ME ABOUT YOUR MOST CURRENT RESEARCH LOOKING INTO THE CAUSES OF ANXIETY?

There are a lot of different factors that seem to contribute to anxiety, and no two people's anxiety problems have the exact same causes. It's really how those things come together for a particular individual that matters. One factor is genetics, and although I don't do research in genetics, it's important to acknowledge the role of genetics in anxiety. Anxiety-based problems run in families, and to some extent that process is genetically based, but then there are also lots of other factors that may contribute to the transmission of anxiety from one generation to the next.

We now know that watching other anxious people can contribute to anxiety. If we see somebody else really scared in a situation, we're more likely to be scared as well. An undergraduate honors thesis student in our lab completed a project looking at what we call "emotional contagion." She had people watch videos of an actor giving a presentation, who was either anxious or calm. What we found is that people watching an anxious person give a presentation became anxious themselves, whereas people watching the calm presentation were not anxious. If someone is growing up around someone else who's anxious, it's possible that some of that anxiety will rub off on them.

Another thing that can contribute to anxiety is information (or misinformation). The media constantly presents information about all the different things that can get us, but they're usually not the things that actually do get us. In

the media, we're more likely to see stories about bioterrorism, hijackings, terrorist attacks, plane crashes, school shootings, and all these things that actually don't kill most of us. The things that do kill most of us are cardiovascular disease and cancer, for example, but there are fewer stories about those sorts of things. Information, or misinformation, from the media, from the internet, and from our peers, all contribute to anxiety.

COULD YOU TELL ME ABOUT YOUR RESEARCH
LOOKING AT THE EFFECTIVENESS OF
DIFFERENT ANXIETY TREATMENTS SUCH AS
CBT OR MOTIVATIONAL INTERVIEWING?

In terms of motivational interviewing, Henny Westra at York University, Michael Constantino at the University of Massachusetts Amherst and I completed a project looking to see whether motivational interviewing would enhance standard CBT for generalized anxiety disorder. What we found was that standard CBT is effective, but we can make it even better if we combine it with motivational interviewing. Motivational interviewing is basically a way of communicating with our clients particularly around moments of resistance. If the client is ambivalent about change, and if the client and therapist are not on the same wavelength, how we respond to clients in those moments seems to be very important.

From a motivational interviewing perspective, we don't engage in arguments or pushback when clients are resisting. Instead, we do what we sometimes call "rolling with the resistance." This may involve listening to the client and then reflecting back what we're hearing or maybe changing the focus in that moment. If a client is ambivalent about change, we would not start listing all the reasons why they should be changing, because we know that sometimes that makes them even less inclined to change. We found that when we add motivational interviewing to standard CBT, we get better outcomes, particularly at follow-up. If we look at people six months later or a year later, they're less anxious.

WHAT WOULD YOU SAY IS YOUR MOST
SIGNIFICANT RESEARCH ACCOMPLISHMENT TO
DATE?

The research I'm most excited about is some of our newer research on motivational interviewing, as well as our research on how communication with clients during moments of resistance in standard CBT can affect outcomes. With this study, some clients received CBT with motivational interviewing, and some clients received CBT without motivational interviewing. We found in the CBT alone group, how a therapist responded to client resistance had an impact on outcomes (Adi Aviram, a recent PhD graduate from York University, was the lead author on this paper).

When therapists responded in a more motivational interviewing-like way in the CBT alone group (and I should say these therapists had no training in motivational interviewing – rather, these therapists naturally tended to respond in a more supportive way during moments of resistance), we found that their clients were less resistant, and they were less anxious at the end of treatment.

I think that's an exciting finding because it tells us that there may be a gap in how we train our therapists. We focus so much on CBT strategies that we sometimes forget about the importance of the therapeutic relationship and other ways to interact with people that are not just about the CBT strategies. In terms of significant findings, I think that this is some of the more important research.

WHAT DOES THE FUTURE HAVE IN STORE FOR
ANXIETY TREATMENTS AND INTERVENTIONS?

There's a lot of people who can't afford private therapy and hospital waitlists can be years long sometimes. I think the biggest challenge is trying to find ways to make treatment more accessible, and people have been looking at alternative strategies. One is stepped care where we don't give everybody a full CBT course. Some people may just need two or three sessions, and if we can figure out who those people are, that opens up more therapist time to do more intensive therapy for people who need it. There's also been quite a bit of work researching online treatments. We know that online treatments, and self-help treatments more generally, can be useful, especially when they're combined with occasional therapist visits or online coaching.

I think the governments are beginning to recognize that it saves them money to treat people's anxiety. In the short term, there's an outlay of money, but in the long term, it gets people back to work, there's fewer people on disability, and people are more productive. In the UK, they are training thousands of new CBT therapists to treat anxiety and depression, and when they rolled this program out, they found that it was actually saving them money. A number of other jurisdictions are now following in the steps of the UK. I think that increasing access to evidence-based treatments is something we'll see more of in Canada as well.

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MANAGING OCD THROUGH MINDFULNESS, SELF-COMPASSION, AND ACCEPTANCE

JEFFREY LYNHAM

AN INTERVIEW WITH DR. LANCE HAWLEY

Cognitive behavioral therapy (CBT) and mindfulness-based cognitive therapy (MBCT) are effective interventions for treating depression, anxiety disorders, and obsessive-compulsive disorder (OCD). CBT is an empirically validated psychological approach that focuses on the “here and now” problems instead of the “root causes” of distress. Clients who benefit develop specific skills that help them to manage mood symptoms more effectively. By contrast, MBCT is an integration of CBT and mindfulness concepts that involves cultivating experiential awareness – as a result, clients become aware of their current experience while adopting a curious, accepting, and non-judgemental stance toward their thoughts. MBCT is the first line of treatment for preventing depressive relapse. Further, emerging evidence indicates that MBCT is a viable treatment option for treating OCD²; however, the specific mechanisms underlying treatment response remain unclear.

Dr. Lance Hawley is a clinical psychologist who teaches CBT and MBCT approaches to mental health professionals for the treatment of mood and anxiety disorders. He is the Clinical Lead (Outpatient Service) and Co-Director of Clinical Training at the Frederick W. Thompson Anxiety Disorders Centre at Sunnybrook Health Sciences. Dr. Hawley’s clinical and research focus involves understanding the underlying mechanisms that contribute to improved treatment response in CBT and MBCT treatment. I sat down with Dr. Hawley to learn about some of his latest research.

COULD YOU GIVE A BRIEF OVERVIEW OF WHAT CBT AND MBCT ARE, AND HOW THEY ARE DIFFERENT FROM ONE ANOTHER?

CBT is the most empirically validated psychological treatment out there! In most cases, randomized clinical trials examining treatment efficacy demonstrate that CBT treatment for mood or anxiety disorders is either on par or somewhat more effective when compared to medication treatment alone. The idea of CBT is to empower people to develop and use adaptive mood management skills in order to intervene more effectively when they experience significant mood symptoms. One misconception about CBT is that this involves promoting “positive thinking,” which I believe is inaccurate – ideally, when someone benefits from CBT, they

become able to use cognitive and behavioral strategies in order to manage difficult situations more effectively, in a more authentic, realistic manner. CBT involves cognitive restructuring strategies (reconsidering whether our thought processes may be entirely realistic) and during CBT treatment, clients are also encouraged to collaboratively set behavioral goals that may help them to better manage difficult situations.

CBT and MBCT approaches have considerable empirical support, and both have been developed based on rigorous clinical science. Both approaches consider how to support individuals experiencing psychological distress by considering the onset and maintenance of their symptoms – however, CBT is a more goal-directed approach. With CBT, the treatment rationale is clear, and when someone comes in and spends the time and effort, they can experience substantial improvement in their symptoms—overall, it’s relatively clear why they’re doing the things they’re doing. The rationale is relatively concrete, straightforward, and transparent all the way through.

With MBCT treatment, there’s somewhat of a “leap of faith” in the sense that clients are asked to try engaging in mindfulness practices without having a clear, well-established goal in mind (in terms of what is “supposed to happen” during the practice). All that is required is to take the opportunity to become more aware of our moment-to-moment experiences by intentionally bringing our attention to the present moment—when we practice mindfulness, we do our best to be curious about our experience first, then we discuss the experience afterwards. This can be difficult for most of us, myself included—often, our default approach is to have the goal of fixing and changing our experience to better suit our needs, rather than bringing our full attention to the things that happen in our lives. Unfortunately, the “side effect” of this approach to life can involve substantial suffering—viewing our lives as a series of problems that need to be solved—it can be exhausting! In the first few sessions, we ask people to notice the tendency to be in “automatic pilot mode.” This happens to all of us—we might find that we’re “going through the motions” without very much awareness or intention. People often see the effects of going through the motions: one day turns into one week, one week turns into one month, and then one month turns into one year. You might find that you’re missing important and valuable moments

of your life, simply because our attention is focused elsewhere. Overall, mindfulness involves the decision to become more experientially aware, being more present as your life unfolds, “showing up” with curiosity, and being open to whatever emerges as opposed to having a fixed goal involving “how things should be.”

COULD YOU COMMENT ON HOW MBCT COULD HELP SOMEONE WITH OCD?

Individuals who experience OCD symptoms experience distressing thoughts or images that feel very “out of character,” considering their character and values—as a result, they engage in rituals which are behaviors that provide them with a sense of a relief in the moment. Even if you haven’t experienced this yourself, you may have experienced a somewhat odd and/or distressing thought at some point in your life, and wondered to yourself “What does that thought mean?” There have been numerous studies demonstrating that the thought itself isn’t actually the problem—it’s our relationship with our thoughts that can cause distress. If someone experiences OCD symptoms, you could imagine why it would be hard to engage in mindfulness practices—being present and experientially aware would be difficult for them because these intrusive images or thoughts may also emerge during a mindfulness practice. However, MBCT can be an empowering approach, providing an alternative to the obsession-compulsion cycle. By paying attention to difficult thoughts with curiosity, we can develop a different relationship with our thoughts—rather than trying to fix/suppress/avoid these experiences, we can try to develop a more accepting, compassionate view of these events. Although the strongest research evidence involves MBCT and depressive relapse, there is emerging literature (including our studies) which demonstrates the value of MBCT treatment for OCD. In our experience, when individuals are able to find the time and commit to “doing the work” and engaging in these practices, they can experience substantial improvement in the symptoms they experience by the end of treatment.

Although mindfulness concepts have been developed over many years, it’s still somewhat unclear why someone may benefit—that’s why we’re interested in the mechanisms underlying treatment response. In some studies, there’s a measure called the AAQ (Acceptance and Awareness Questionnaire) which indicates that mindfulness practices may cultivate “experiential awareness.” Another important concept is called “decentering”—this involves “stepping back” and observing thoughts as events, rather than finding ourselves enmeshed and entangled with our thoughts. This can be particularly important in OCD—by viewing a difficult thought or image as an experience that can be

observed, this can provide an opportunity to develop a different relationship with thoughts.

For instance, in our article, we described a case study where we collaborated with a kind, conscientious woman who was an accomplished professional and an artist who also struggled with OCD symptoms². The way she approached her mindfulness practice was quite admirable—she showed up to all of the sessions regularly and engaged in the suggested mindfulness practices throughout the week—but the reasons why she experienced improvement in her life was entirely idiosyncratic to her. She became more comfortable with experiencing and expressing emotion, which is actually quite essential if you’re an artist because it’s certainly not ideal to set the goal of becoming an emotionless robot! This is worth noting since many people think that it would be desirable to no longer experience any significant mood or anxiety symptoms, having the goal of negating emotion. This would be problematic for a number of reasons, as well as being unachievable. In any case, it was so interesting to hear from her every week—there were new, valuable insights that she discussed that were not directly related to any of the concepts we specifically discussed. For example, she became more socially connected and compassionate towards herself and others, and she was more engaged/less avoidant with a friend who was experiencing health-related difficulties. Her experience was entirely unique. Overall, it was a somewhat non-intuitive route to OCD symptom improvement, but somehow, she ended up experiencing substantial improvement as a result of her efforts. I really appreciated the opportunity to collaborate with individuals who are able to consider how this set of ideas may apply to their own lives.

COULD YOU TELL ME A BIT MORE ABOUT SOME OF YOUR CURRENT RESEARCH WITH MBCT?

Our top priority is to ensure that our clients have a positive experience in our service. We have an integrated clinical and research approach, considering all elements of clinical care. Although wait times are improving, it can be difficult to access MBCT treatment opportunities, and MBCT is not offered consistently in publicly accessible mental health agencies. One area of research that we are involved in relates to this set of ideas—we were thinking that perhaps we could offer mindfulness treatment in a more flexible, approachable manner, and offer this to clients who are awaiting our treatment services.

We are wrapping up a research study involving an EEG biofeedback device that can be used at home. The “Muse” headset pairs with your smartphone, and users can engage in guided mindfulness practices whenever their schedule allows. The device also records frontal lobe

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activity during guided meditation practices. It records alpha, beta, and theta waves that would represent changes in attentional focus and “mind wandering.” It’s a very user-friendly experience—when someone puts on the device, they will hear someone walking them through a mindfulness practice focusing on awareness of the breath and body. When it detects “mind wandering,” the background sound becomes somewhat louder, providing feedback to the user that they might re-focus their attention.

One of the reasons that we are studying attention and “mind wandering” is that mind wandering may relate to psychological symptoms. For example, if someone experiences an obsessive thought or image, at some level, it makes sense to direct attention away from such an aversive experience. Unfortunately, this strategy may lead to further distress. When someone experiencing OCD experiences a difficult thought, they may believe that this thought has many personal negative connotations. It may be that practicing mindful acceptance of thoughts can allow people to notice a distressing thought or image, be curious about it, and then come back to their breath and body rather than engaging in the typical OCD cycle. Our primary measure is looking at OCD symptom changes over the course of eight weeks, and preliminary analyses are looking positive overall. Once all of the data has been collected, we’ll start the analysis and begin to understand our effects before moving forward.

WHAT DOES THE FUTURE HAVE IN STORE FOR MINDFULNESS-BASED INTERVENTIONS?

I would say the path forward involves knowledge translation—once we understand that an approach has merit, the next steps would be to integrate these ideas into regular clinical practice. Based on the feedback from our clients in the Muse study, this could represent a more accessible, flexible, and approachable way to engage in mindfulness practices at home. We’ve had a mixed response to the metrics provided by the device, as well as the biofeedback element. For example, the personalized metrics may make the practices more motivating for some, while others do not entirely see the value in this feedback. Regardless, if we are staying true to the main concepts of MBCT, and if we may be able to provide something to our clients that allows them to better manage their symptoms, then perhaps this new approach could improve the accessibility of mindfulness-based interventions. I think that’s where the future is.

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HOW DO I TALK TO MY PROFESSOR ABOUT MENTAL HEALTH? STARTING THE CONVERSATION WITH THE GRADUATE CONFLICT RESOLUTION CENTRE

ALEKSANDRA UZELAC

An Interview with Heather McGhee

The endless demands and high performance expectations that come with graduate school can contribute to student stress, burnout and even stigma surrounding the idea of needing help. The all-work no-rest mentality of graduate school can further pose as a barrier for students who need support with their mental health. However, in times when graduate students can no longer sustain the demands of graduate school without negative impacts to their mental wellbeing, students may wonder: “How do I speak to my professor/graduate supervisor about my mental health?”

Whether you want to speak to your supervisor about creating a more manageable workload or taking time off to take care of your mental health, the initial task of sharing personal information with your supervisor may seem daunting at best. Although every student deserves to take care of their mental health, student comfort levels or relationships with graduate faculty and staff may make the act of reaching out for support a challenge. Every student’s experience and challenges are different, but resources exist at the University of Toronto that may make that first step of asking for help just a little bit easier.

One of these resources is the Graduate Conflict Resolution Centre (Grad CRC). Equipped with trained grad-to-grad (G2G) Peer Advisors, the Grad CRC is an anonymous service that provides graduate students with a safe, confidential space to discuss conflicts that arise in graduate school. The G2G Peer Advisors can talk through the challenges you are facing and help you come up with tools, a list of resources or plans of action to tackle these problems in a way that feels best for you. By not being a solely mental health resource, the Grad CRC can provide support where academic life, mental health and personal issues intersect. Below, Heather McGhee, Manager, Grad CRC highlights the diversity of the interactions they have with students, most of which cover issues beyond simply mental health concerns and graduate school pressures:

"In our Graduate Conflict Resolution Centre (Grad CRC) coaching sessions, the issues described by students are often complex. As one of the G2G (grad-to-grad) Peer Advisors, noted about her coaching experiences: "I would often notice that a student's current crisis was having a multi-layered impact on their lives. Specifically, the crisis or conflict was not only impacting a student's academic experience, but also their mental and physical health, and their academic and personal relationships." We hear from students about the intense power imbalance that they feel in their relationships with their supervisors and about avoiding conversations because of the fear that it could make a difficult situation worse. In addition to helping a student to understand their options and priorities in dealing with a particular issue, the G2G listen carefully in order to make referrals to appropriate campus supports. U of T is a large university with a multitude of supports for graduate students – challenging to navigate at the best of times. As another G2G observed, "...the informal nature of our [the Grad CRC] service means that we don't try to fit students' experiences in a certain "box" i.e. academic concerns; health concerns; personal concerns, etc. This is often a barrier for students to accessing services because they ask themselves "does my issue fit with this service?" Instead, we meet students where they are at—which is often in situations where the academic, personal, health and career components are inextricably intertwined."

Even when students know they are struggling with their mental health, there is a lack of discourse surrounding the nuances involved in conversations around mental health disclosure. Many students may be unclear of what this conversation entails or even what they hope to achieve from this conversation, adding yet another barrier to their ability to ask for help. According to Heather, students who connect with the G2G advisors might be asked the following types of questions if they are they are considering disclosing their mental health

or personal issue to a professor/supervisor:

Where do you want to start? What are your priorities? We will listen and help you to highlight the parts of your problem you would like to work on, and get clarity on your goals – what you hope to achieve by disclosing the issue.

What information do you need? Information is an important source of power – what are some of the questions you might need to be asking to get the information you need about university processes, your rights, your responsibilities...BEFORE you have the conversation with your supervisor.

What would be helpful for you to prepare for such a conversation? We can help you to figure out what campus resources might be helpful and how to connect with them, for example, Accessibility Services, the SGS Wellness Portal, or the Better Coping Workshops for Grads. Want to role-play how a conversation might play out with your supervisor? A G2G can do that too! No issue is too small to discuss."

For some students, they have a good rapport with their graduate supervisor and feel comfortable and supported enough to share their mental health concerns. For other students, this may not be the case. Additionally, students may be facing a mental health crisis or handling long-term chronic mental health concerns, both of which come with their own unique set of challenges and support requirements. In any case, how much or how little you may choose to disclose about your mental health status while discussing graduate school burnout, expectations or general mental health concerns is up to your own discretion. Your comfort, autonomy and privacy always comes first. By speaking to support services such as G2G advisors, students may be able to better define their comfort zone and understand the support they may need to succeed in graduate school. Moreover, G2G sessions empower students to make the best decision for themselves in the long-term by providing them with information and available resources. Thus, the Grad CRC aims to help students start productive conversations with their supervisors or academic advisors that address the unique needs of that particular student in addition to helping students identify potential alternative avenues for accessing the support they need.

It is important to highlight again that everyone's situation, comfort level and graduate school experience is different, so, unfortunately, there isn't one easy answer to the question: "How do I tell my graduate school professor that I am struggling with my mental health?"

However, the Grad CRC's individualized support

tailored towards graduate students can help ease students' stress about starting this conversation and advocating for their own mental health. By providing a safe space for students to consider and learn about their options, the Grad CRC can support students in the process of navigating the complex professor-student dynamic and asking for the space, support or assistance they need to ultimately get the most out of their graduate school experience.

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FLOWING THROUGH GRAD SCHOOL

MARIJA ZIVCEVSKA



AN INTERVIEW WITH LAUREN DE FREITAS

Yoga is a practice that intersects the physical and spiritual, bringing together the mind, body and spirit. In Western society, yoga has become synonymous with physical well-being, with numerous advocates suggesting that it can significantly reduce anxiety and stress, improve sleep and increase strength and flexibility. So as graduate students can we too reap these benefits? How can we incorporate yoga among our busy schedules?

For this article, I sat down with one of our very own students, and my dear friend, Lauren De Freitas. Lauren is a certified yoga instructor, with over 10 years of experience, who understands the importance of wellness, particularly in graduate school. We discussed her perspective on yoga, its ability to strengthen the graduate school experience and her personal journey. Lauren also shares with us a quick breathing exercise, as well as a full yoga flow to try out during your free time. Each movement offers a modified version for beginners and an advanced version for those with previous experience. So without

further ado, let's hear what Lauren has to say:

CAN YOU TELL US A BIT ABOUT YOUR RESEARCH?

I am currently finishing up my Master's Program at the Institute of Medical Science at UofT and CAMH, with a Collaborative Program in Addiction Studies. My research focuses on cannabis and mental health, specifically exploring the effects of different chemicals in the plant (THC and CBD) on efficacy and safety. I am also the Education Coordinator for Beleave Inc., a Health Canada Licensed Producer of cannabis, responsible for creating their educational and social responsibility strategy.

WHAT DREW YOU TO PRACTICE YOGA? HOW DID YOU GET STARTED?

Growing up, I found dance when no other sport or activity really spoke to me. Although I was far from being the best dancer, I knew my body was meant to move. Fast-forward to Grade 11, when high school stress was at an all-time high, my sister introduced me to yoga as an 'alternate' workout style. It was not until I took an undergrad course on the history of yoga however, that I began to realize that it was much more than just a 'workout'. Yoga helps restore my faith, not by requiring a belief in specific god(s) or people, but by guiding me inward, so I can internally connect, reflect and develop a deep understanding of my purpose.

This past February, I travelled to India to further my practice. This trip gave me a unique perspective that has since shaped the way I teach and my overall view of the world. The most eye-opening moment on the trip was my experience in the sweat lodge, during a traditional Shaman ceremony. The sweat lodge took me through a deep spiritual awakening by shining a mirror up to the strength I forgot was there and by allowing me to understand when, why and how it fades. Taking this reflective mental break helped me ground myself, let go of unnecessary worries and trust the process. I try to incorporate this notion of trust and mental strength in my classes, giving people the opportunity to reflect on their own lives.

HOW HAS YOGA SHAPED YOUR GRADUATE SCHOOL EXPERIENCE?

The practice of yoga and meditation, despite optics, is not an easy one, especially when the expectation is to 'sit and relax' or 'move and relax'. Rather, the mind will wander, write grocery lists, have a whole 30-minute phone conversation, and want to do anything but come to 'stillness' by focusing on solely the present. By continuing to practice, we are training the mind to be less reactive, to utilize the pause between the stimulus (i.e. stress)

and response (e.g., our knee-jerk reactions).

Graduate school is overwhelming so it is important to carve out time for self-care, even when it feels like ‘wasted’ time. Have you ever ‘stepped away’ from a situation, and found it gave you clarity/alternate perspective? We are all equipped with the answers, and yoga sheds light on how to harness these answers through self-exploration and discovery.

If you don’t have time to roll out your mat, you can simply come to stillness wherever you are for a few minutes (see below for a breathing exercise). Even this will send a cascade of physiological responses to activate the parasympathetic nervous system, slowing down your ‘fight or flight’ response. When we slow down our sympathetic nervous system, we become more efficient/productive because we have more ‘energy’ that is not directed towards ‘fighting’ (rapid heart rate, fleeting thoughts, tension, etc.) but can instead be targeted more efficiently elsewhere (our higher cortical processes).

CAN YOU TELL US A BIT ABOUT THE FLOW YOU DESIGNED?

The flow I created is a quick way (approx. 30 min) to increase circulation and to open up the hips. It will leave you feeling revitalized, spacious and calm. But if you’re at work, school, or in an area that you may not have the space to roll out your mat, there are a few things you can do to slow down the breath, heart rate and mind, right at the comfort of your lab or office chair:

BREATHING EXERCISE (5-15 MINUTES)

Starting seated in your chair, place the soles of your feet directly on the ground, allowing all four corners to feel rooted. Grow tall through the spine, feeling your shoulders melt away from the ears as the crown of the head reaches towards the sky. Take a deep inhale through the nose, filling up the chest and then the belly, hold at the top, then open the mouth and draw out a big sigh as you exhale. Take two more just like this. Then gently place your palms on your knees. Inhale to draw your shoulders together and down your back, opening up through the heart, pushing the belly forward and allowing the head to draw back softly. Exhale to come through the opposite motion, reaching your belly button to your spine, rounding, arching through the back, allowing your shoulder blades to draw away from each other as your head comes forward and with your gaze you can look softly down. Take 5 more rounds just like that, at your own pace, knowing there is no need to rush, maybe closing the eyes, but staying curious with the breath. When you’ve completed however many rounds your body needs, come to

pause in neutral, or center, shrug your shoulders all the way up to your ears on the inhale, and then exhale as you release them down your back. Take two more just like that. Gently open the eyes, noticing how the body and mind feel now.

FLOW PRACTICE

Starting with your feet hip distance apart, roll your shoulders down your back, bringing your arms to your side with your palms facing forward. Standing upright, close your eyes here in Mountain Pose while you root down through all four corners of your feet and reach the crown of your head towards the sky. Breathe deeply here for three full breaths. Gently open the eyes.

EXERCISE 1: TREE POSE (VRIKSHASANA)



MODIFIED (MARIJA, LEFT): Place your hands on your hips and shift your weight into your left foot. Bring a bend into your right leg and begin to open your right leg, placing the sole of your right foot onto your inner left calf (as shown by Marija) or by bringing the right toes and ball of the foot to touch down on the mat while the right heel and arch rest softly on the left ankle. Bring your right hand to your belly and place your left palm over your heart. Begin to observe the breath as it expands through the chest, lifting your left hand slightly, and the belly, letting your right hand rise and following it as it travels out compressing the abdomen and melting the chest down. Take four rounds of breath on this side. Gently bring your right knee back towards centre and place your right foot back down on the mat next to the left, bringing the hands back down by your sides with your palms facing forward, just the way you began. Ground down, shifting the weight into the right foot and begin to come into tree by lifting the left leg and following the same steps above.

TIP: Reach your frontal hip bones up to engage your core and protect compressing the low back.

ADVANCED (LAUREN, RIGHT): Place your hands on your hips and shift your weight into your left foot. Bring a bend into your right leg and begin to open your right leg, placing the sole of your right foot onto your inner left thigh. Begin to observe the breath as it expands through the chest, lifting your left hand slightly, and the belly, letting your right hand rise and following it as it travels out compressing the abdomen and melting the chest down. Take four rounds of breath on this side. Slowly bring your right knee back towards centre and place your right foot back down on the mat to meet the left, bringing the hands back down by your sides with your palms facing forward, just the way you began. Ground down, shifting the weight into the right foot and begin to come into tree by lifting the left leg and following the same steps above.

TIP: Press into the sole of your foot with your standing leg just as much as you are pressing into that leg with that foot. Reach your tailbone towards the mat to protect the lower spine.

EXERCISE 2: WARRIOR 2 (VIRABHADRASANA II)



PART 1

Starting in Mountain Pose, with your feet hip width apart at the top of the mat, palms facing forward, reaching the crown of the head tall. Place your hands on your hips and take a big step back with your right foot so that it is perpendicular and centered with the left foot. Bend deeply into your left knee, keeping the right leg straight and bring your arms out wide into a T-shape. Peak down at your left knee to make sure it is stacked directly on top of your left ankle and not tracking to the left or right. Reach your fingertips in opposite directions feeling a nice stretch through the biceps.

TIP: Draw your shoulders down your back and away from your ears to create length through all

sides of the neck and prevent tension holding in the shoulders. Engage through the core here by drawing your belly button to your spine.

PART 2



Flip your left palm up and begin to reverse your Warrior, coming into Exalted Warrior. Allow your right palm to slide gently down your right leg, placing minimal weight through the hand, or alternatively, you can wrap your right arm behind your back so that your right forearm comes to rest on the low spine. Send the breath to your left side ribs, feeling them expand with every inhale and feeling your fingertips reach a little further behind you with every exhale.

TIP: Protect the neck by reaching the crown of the head in the same direction as your left arm and fingertips. Distribute the weight evenly between both feet.

PART 3



Begin to reach your left arm forward, coming back through Warrior II. Softly place your left

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forearm onto your left thigh. Begin to flow like this, from Warrior II, to Exalted Warrior, to Side Angle, at your own pace, letting your breath be your guide, taking as many rounds as your body is craving today. Then coming to stillness in Warrior II, bring your hands to your hips and step your right foot back to meet your left at the top of the mat. Inhale to bring your hands all the way above your head, exhale to allow the to flow back down by your sides. Bring your hands to your hips and take a big step back with your left foot, coming into the Warrior II flow on this side.

TIP: Grow long through the left side of the waist by not placing a lot of weight into the left forearm and reaching evenly through both sides of the waist.

EXERCISE 3: WILD THING (CAMATKARASANA)



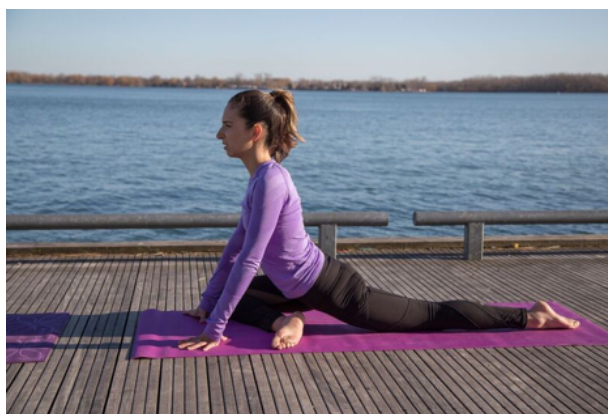
MODIFIED (MARIJA): Plant your hands on the mat directly underneath your shoulders and step your feet back coming into plank pose. From plank, with your shoulders stacked directly over top of your wrists and with your core engaged, place your left knee onto the mat. Swivel onto the inner edge of your right foot while you turn your left shin to the left, off of the mat. Peak down at your right foot to make sure it is in-line with your left knee. Ground down through all four points on your left palm to reach your right arm towards the sky and then to the front of the mat. Spin your ribs and gaze up towards the ceiling, opening through the heart. Take 3 generous breaths here. Place your right hand back down on the mat, so that it is shoulder-width apart with the left. Step your right toes and then left toes back into plank. Take 2 breaths to reset, and then place your right knee onto the mat to take this pose on the other side.

TIP: Push through your knee and rooted hand to lift your hips higher, intensifying the stretch along the length of the side body. Reach your fingertips in the opposite direction of your planted foot to find length.

ADVANCED (LAUREN): Starting in plank, with your hands shoulder-width apart and tailbone reaching towards the heels, push back into downward-facing dog. Lift your left leg straight up in the air and then bend the left knee and flexing the left foot. Keeping your shoulders and upper back the way they are in down dog, begin to open up at just the hip by kicking the left foot back in space. Ground down firmly through both hands, beginning to shift the weight more into the right hand as you continue to open up through the hip. Lift your left hand and rotate through your right toes so they face the back of your mat, as you flip your dog, allowing the left foot to touch down on the ground. Reach your left fingertips towards the front of the mat as you press down through the right hand and foot to lift the hips up, feeling a nice stretch through the side of the body. Take 3 full breaths here in Wild Thing. Plant your left hand back down on the mat, swivel on your right toes to bring your left leg, and then left foot to meet the right back in downward facing dog for 1 breath, and then pushing forward to plank for 2 breaths. Taking this same flow by pushing back into down dog and then lifting the right leg up.

TIP: Protect the neck by finding length. Reach the crown of the head forward, not allowing the head to collapse toward the ground. Option to release any tension through the shoulder here by creating circles with the lifted arm.

EXERCISE 4: PROUD PIGEON (ARDHA KAPOTASANA)+ KING PIGEON (EKA PADA RAJAKAPOTASANA)



PART I

Starting in downward facing dog, kick your right leg straight out behind you, coming into three-legged-dog pose for one breath. Bring your knee to your nose and then gently place your right knee beside your right wrist crease. Flex your right foot to protect the knee. Moving your shin more parallel to the top of the mat will increase the stretch in the right glutes and outer hip, whereas moving the foot and shin closer to the body will provide a

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less intense stretch. It is really important to listen to your body and protect it from injury by not pushing too far or to the point of pain. Peek back to make sure your left leg is straight and directly behind you. Walk your fingertips towards your hips and stand tall in your pigeon pose. If this feels like a very intense stretch, send the breath to where you feel it and pause here. Slide the shoulders away from the ears and down the back.

PART 2



If you feel stable in your pigeon and want to take this pose into a deeper quadricep stretch (on the left side) begin to reach your left arm straight out behind you as you bend at your left knee. Grab a hold of your left foot with your left hand, maybe sliding the top of your foot into your left elbow crease.



Remember to turn the corners of the mouth up as you inhale and exhale. Release the grip on your left leg, plant your left hand back down on the mat, curl your left toes under, step your right foot back and come into downward facing dog. Walk out the glutes and hips here in downward dog, doing whatever feels nice to release the muscles you just stretched. Reach your left leg straight out behind you and begin to set up for pigeon on the left side.

EXERCISE 5: CAMEL POSE (USTRASANA)



MODIFIED (MARIJA): From downward facing dog, walk your fingertips towards the back of your mat to meet your feet. Inhale to slide your hands up your shins as you halfway lift. Exhale fold, releasing the grip. Reach your arms all the way up, guiding your torso upright. Place the palms of your hands onto your sacrum or, lower back, where the two dimples are. Reach your frontal hip bones towards the sky to engage the core and begin to draw your shoulder blades together, imagining that you are holding something between them, and away from your ears. Begin to bend back, making this movement solely from the upper and mid back, allowing the hips to stay stacked on top of knees and ankles, and imagining that someone has attached a string to the centre of your heart, and is lifting you up from there. Ground down firmly through all four corners of your feet as you slowly start to draw your upper body back to centre, allowing the hands to come by your sides, palms face forward, eyes can softly shut. Take 3 generous breaths here.

TIP: Protect the neck by lengthening through all four sides of the neck and not allowing the head to fall heavy behind.

ADVANCED (LAUREN): From downward facing dog, allow the knees to touch down softly onto the mat. Beginning on your shins, so that the shoulders are stacked directly on top of the hips and knees. Place the palms of your hands onto your sacrum or, lower back, where the two dimples are. Reach your frontal hip bones towards the sky to engage the core and begin to draw your shoulder blades together, imagining that you are holding something between them, and away from your ears. Begin to bend back, making this movement solely from the upper and mid back, allowing the hips to stay stacked on top of knees, and imagining that someone has attached

a string to the centre of your heart, and is lifting you up from there. Option to stay right here with the hands on your low back, or if you want to take it a bit further and have blocks handy, place the blocks on the outside of each foot, grabbing a hold of them. Alternatively, you can curl the toes under to make the heels more accessible to grab, or to come into the full variation, the tops of the feet are flat on the ground as you reach for your heels. Do not allow the head to drop by lengthening through all sides of the neck. Take 3 breaths here. To come out of this pose, bring the hands back to your lower back and as slowly as possible, slowly coming back up through centre, and then coming to sit on your calves. Reach your arms straight out in front of you on the mat, coming into child's pose. Stay here for at least 4 breaths or as long as you would like.

Tip: Send your hips slightly forward as you bring your shoulder blades closer together to deepen the stretch through the chest.

If you want to attend Lauren's classes, she teaches a Yoga Flow every Wednesday (6:45 - 7:45 am) and a Flow. Breathe. Meditate class every Sunday (7:30 - 8:30 pm) at Tribe fitness. Follow them on instagram @tribefitness



SPECIALIZED HR SERVICES MAY BRIDGE THE GAP IN AUTISTIC EMPLOYMENT

PAULINA SCHECK

AN INTERVIEW WITH JULIA MARTENSSON & LAUREN ABRAMSON

There is a dip in support services that comes with growing up on the Autism Spectrum. This dip becomes especially apparent in adulthood. Our needs change as we age, and these needs become more difficult to address within the traditional framework of support services, partly because they require corresponding societal change. Employment is one such area that has seen creative intervention, with multiple avenues for

the purposeful hiring and retention of autistic talent opening in recent years. Among them, specialized HR services stand out for their focus on redesigning the hiring process, to suit the communication needs of people on the spectrum. As such, they not only reflect an increasingly prominent view that autistic support should primarily focus on adapting social structures but hold a promise for the accommodation of a wider range of disabilities in the future.

Specialisterne Canada, a subsidiary of Specialisterne Denmark, is a not-for-profit organization that provides specialized HR services for companies looking to hire autistic people. Here, Julia Martensson and Lauren Abramson, of Specialisterne Canada, discuss their approach to employment and provide information for autistic students that are about to enter the job market.

HOW ARE YOU WORKING TO PROMOTE THE HIRING OF AUTISTIC PEOPLE IN CANADA?

Julia Martensson and Lauren Abramson (Specialisterne Canada): Our goals reflect our ambition to have a significant impact on the labour market and our focus on achieving meaningful societal and systemic change. We are working to reach that goal by continuously proving the value of hiring people on the spectrum and by building the capacity of employers to attract, recruit, integrate and retain neurodiverse talent.

Because of standard recruitment processes, many employers overlook great talent. Research has already shown that an interview, or many cases a resume, is a poor indicator of what a person is capable of or how well they will perform in a role. We are working hard to make employers aware of this, and to promote alternative processes that can help expand and diversify their talent pools. By building awareness and encouraging businesses to re-think their hiring practices we make a big step towards the inclusion of those who may think and experience the world differently.

In addition, we work very closely with our employer partners to help them develop effective management and communication strategies and to build an organizational culture appreciative of differences between people. In many cases, that means providing education to foster an understanding of autism and neurodiversity. All of this helps ensure that our recruits are not just getting a 'foot in the door', but that they will be on track for long-term success in their role.

As of today, we have worked with employers in many different sectors, including CIBC, TD, RBC, BMO, ScotiaBank, IBM, Accenture, Ericsson, SAP, Metrolinx, Medisystem Pharmacy and Kinaxis to name a few. Many of them have

become long-standing partners and repeat customers, which indicates the value our program and our recruits are adding to their organizations.

WHAT ARE THE PRINCIPLES THAT INFORM YOUR APPROACH?

JM and LA: Our approach and core values are closely linked to the Dandelion Model, which reflects the belief that context and perception are key. Many of us view the dandelion as a nuisance in homogeneous lawns and flowerbeds, but what a lot of people don't realize is that, when cultivated, the dandelion is one of the most valuable and useful plants in nature, known both for its nutritional and medicinal properties. So, a dandelion is only a weed in an environment where its positive attributes are not appreciated. If you place it in a welcoming environment, where it is valued and nurtured, it becomes an herb. Similarly, if we focus on strengths and seeing the abilities of people while welcoming difference, we can empower a currently under-engaged pool of great talent.

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Our goal is to create that work environment where everyone can thrive and be accepted for who they are. This will, in turn, allow them to be comfortable and productive in their role. And while our primary focus is on autism and neurodiversity, the successful employment of this part of the population will work as a proof of concept. Ultimately, we are striving towards a hiring process that benefits all people with disabilities, as well as anyone who might face barriers due to perceived disadvantages or deviations from the "norm".

WHAT SERVICES DO YOU PROVIDE FOR STUDENTS?

JM and LA: We know that many talented and qualified neurodiverse students are overlooked by employers because of barriers embedded in the traditional recruitment process. Therefore, we have partnered with several post-secondary institutions and employers in Ontario to bring our hiring model to the application process for co-ops, internships and summer job opportunities. Our approach differs from the traditional recruitment process, because it doesn't include any interviews. We take a very structured and competency-based approach to recruitment with a focus on reducing bias and making students feel comfortable throughout the process. We also work closely with managers to help them understand the strengths of their employees and implement strategies to help them thrive in the workplace.

Our pilot project provides great opportunities for co-ops, paid internships and summer job with employers interested

in diversifying their workforce, including IBM, TD Bank, Ericsson, RBC and BMO.

HOW SHOULD STUDENTS REACH YOU?

JM and LA: Any students and graduates who are interested in learning more about our Post-Secondary Employment Bridging Program can visit our website at specialisterne.ca/bridge or email us at bridge@specialisterne.ca.

DO YOU HAVE ANY ADVICE FOR YOUNG ADULTS ON THE AUTISM SPECTRUM THAT ARE ENTERING THE JOB MARKET?

JM and LA: Try, either on your own or with the help of someone else, to identify your key skills and strengths, and practice how to communicate them verbally and in writing. This will make it easier for you to advocate for yourself in different job search scenarios.

Keep in mind that the job market can be challenging and a competitive place at times, so don't feel discouraged if it takes time to secure a job. That is not a reflection of one's capabilities, or a measure of one's employability. See the job search as a learning opportunity and be curious and creative, both when it comes to ways of finding a job and the types of jobs you apply for. Searching for a job means an opportunity to learn about different strategies and reflect upon what you experience in the process. Just as in any stage in your career, learning and growing can play a key part in your success.

Do not feel stressed about finding the perfect job straight away. Sometimes trying different fields, roles and workplace environments can help you understand what works best for you and the kind of work you enjoy doing.

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INSIGHT INTO THE MENTAL HEALTH FIELD

EMILY VECCHIARELLI

AN INTERVIEW WITH DR. JOHN CAIRNEY

Mental health research and awareness has changed profoundly in the last few decades. As an accomplished leader in this area, we spoke with Dr. John Cairney about some of his work and his insights on some of the developments in the field.

Dr. Cairney is the current Director of Graduate Studies and Professor in the Faculty of Kinesiology and Physical Education at the University of Toronto. Previously, Dr. Cairney held a Canada Research Chair in Psychiatric Epidemiology and was a Senior Scientist at the Center of Addiction and Mental Health (CAMH).

CAN YOU PLEASE GIVE ME A BRIEF OVERVIEW OF YOUR ACADEMIC TRAINING?

I completed my doctoral work at Western University where I had training in social psychology and epidemiology, with a focus on 'stress and mental health.' My first academic appointment was at the Center of Addiction and Mental Health (CAMH) during which I held the first Canada Research Chair in Psychiatric Epidemiology. Before that, I worked alongside Dr. Dan Offord who was a well-known child psychiatrist credited with conducting the first community-based study of mental health problems in Ontario. Dan's passion for working with kids strongly influenced my interests in child and youth mental health, which eventually led me to focus on studying the effects of Developmental Coordination Disorder (DCD) on children's mental health.

YOU HAVE HELD A VARIETY OF ROLES IN THE MENTAL HEALTH FIELD. CAN YOU HIGHLIGHT SOME OF THE DIFFERENT WORK YOU HAVE BEEN INVOLVED IN OVER THE COURSE OF YOUR CAREER?

In the early part of my career, I was leading studies that explored poverty and mental health. Some of our research demonstrated how single mothers were at a significantly greater risk for mental health problems, and this was attributed to socioeconomic disadvantage. My work in this area brought awareness to the mental health perspective of being a single parent. This also led to the book I co-edited and wrote, *Mental Disorders in Canada*, which was the first book to explore the epidemiology of mental illness in Canada.

More recently, I have served as a lead evaluator on the Child and Youth Mental Health Strategy in the province of Ontario. One of the goals was to ensure that children who were experiencing mental health problems were getting the appropriate care they needed from community services. Part of the strategy involved attempting to get commitment from ministries in the province (for whom either 'children,' 'youth' or 'mental health' was in their portfolio) to coordinate and share health data so we could track the various ways a child receives health services. A lot of our work stemmed from the fact that children who could not track children and youth through the multiple systems of care that they use.

Relatedly, I contributed to the creation of a

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mental health ‘report card,’ which allowed us to track changes in children’s primary care utilization for mental illness. The mental health report card demonstrated how not only how many children are affected in Ontario, but often that they receive part of their care in places that are really not the most effective for treatment (e.g., the Emergency Room).

OVER THE PROGRESSION OF YOUR CAREER, HOW HAVE YOU SEEN THE MENTAL HEALTH LANDSCAPE CHANGE?

When I started publishing in 1996, I often found it difficult to get my work published in mainstream medical journals because some reviewers simply were not interested in things like the social determinants of mental health. Relative to other health fields, we were under funded, both from a treatment and research perspective. Many argue we are still not doing enough to support children and families who have mental health problems. However, I believe the social climate around mental health has shifted. When I started my work, there was no “Bell Let’s Talk” campaign, and there was still a perception that mental health was something to be dealt with privately. There is an increased willingness and inclination to talk about mental health problems now. I see that as a positive shift, and although we still have more to do, we have come a long way.

WHERE DO YOU SEE THE FUTURE OF MENTAL HEALTH RESEARCH OR INITIATIVES GOING?

Firstly, I believe our understanding of the connections between mental and physical health problems is shifting. In the past, we used to think of psychiatry as studying disorders of the mind, which was distinctly different from studying the physical body. This distinction has changed. For example, work is coming out that shows connections between chronic physical illnesses like diabetes and depression. Chronic inflammation in the body may be one common pathway. In the past, we may have looked at this from a ‘cause and effect’ perspective – is one condition the cause of another? Now, we are looking at common pathways that may explain the basis of these disorders. I think we will be breaking down these mind-body distinctions, which will allow us to obtain a more complete picture of mental health.

Secondly, I also see the encouragement and usage of nontraditional therapeutic approaches to treat mental health problems. For instance, exercise and physical activity is starting to be recognized for its role in the prevention and treatment of physical and mental disease. I think an exciting area to explore is the psychology, biology, and social factors that explain why exercise works for mental health.

IN YOUR OPINION, WHAT ARE SOME IMPORTANT THINGS WE SHOULD BE DOING IN ORDER TO PROMOTE MENTAL WELLNESS?

I believe we still have work to do in removing stigma surrounding mental health problems. It’s important for us to create opportunities that let people know there is a support in the community that will validate their experiences, and offer programs that are designed to help people with coping. This magazine is a great example of one of the ways we can encourage this process.

HOW HAVE YOU INTEGRATED SOME OF YOUR OWN RESEARCH INTO THE FACULTY OF KPE?

One great example of this would be our shift in focus to intervention-based work. Our lab has had a role in implementing physical activity based interventions in the schools, such as ‘physical activity breaks.’ These interventions are designed to target cognitive function and mood. We are particularly interested in the relationship between exercise and the improvement in executive function, such as working memory. We know that executive functioning deficits are associated with depression and anxiety. In our interventions we assess how students are feeling before, during, and after physical activity breaks. We found that even just ten minutes of activity can improve cognitive function, memory, and mood state. These all link to better learning, engagement, and behavior. We are encouraging physical activity as a simple cost effective intervention that schools can do to make things better for kids.

DO YOU HAVE ANY ADVICE FOR ANY YOUNG INVESTIGATORS OR GRADUATE STUDENTS WHO ARE STARTING OUT IN YOUR FIELD?

I believe you need to follow your passions. Hard work and dedication are essential but they are not enough on their own; if you follow your passion, all of those things will fall in line. I also think collaboration is key. When I was a graduate student it was rare to collaborate with individuals outside of ones’ own discipline. We cannot answer important mental health questions from one-dimensional perspectives; we will not answer them from a psychology or kinesiology lens alone. The exciting generation of new knowledge comes at the intersections between those disciplines. I encourage students to collaborate, and to take advantage of opportunities to learn from people outside of your disciplinary area. You will be amazed at the connections you can make.

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IMPROVING PERSONALIZED MENTAL HEALTHCARE THROUGH PSYCHIATRIC GENETICS

JEFFREY LYNHAM

AN INTERVIEW WITH DR. GWYNETH
ZAI

The etiology of mental illness is highly complex; both genetic and environmental factors contribute to all psychiatric disorders. Research suggests that some mental illnesses such as Major Depressive Disorder have a stronger environmental influence, while many others, such as Schizophrenia and Autism, have a stronger genetic component. The effects of environmental risk factors on mental health, such as history of child abuse or neglect, have been well documented, while research investigating the genetic contribution to mental illness has only just begun to take a leap forward with the advancement in technology.

Dr. Gwyneth Zai is a clinician scientist in the General Adult Psychiatry and Health Systems Division at the Centre for Addiction and Mental Health who investigates the genetics of obsessive-compulsive disorder, generalized anxiety disorder, schizophrenia, and mood disorders. Dr. Zai completed all of her formal education at the University of Toronto. After finishing her medical degree and psychiatry residency, she pursued a PhD in psychiatric genetics to study a relatively new field known as pharmacogenetics that explores how genetic variations in certain populations affect treatment response. I interviewed Dr. Zai to learn more about her research on the genetics and pharmacogenetics of mental illness.

COULD YOU TELL ME ABOUT SOME OF YOUR
CURRENT RESEARCH?

I've been looking at the genetic factors of mental illness for quite some time. I actually started this back when I just came out of high school. Initially, it was more of a candidate gene approach, meaning that you pick a specific gene because we—at the time—believed that it was one gene causing the illness. But over time, we now know that multiple changes across the whole genome contribute to mental illness. There are at least hundreds, and possibly thousands, of genetic factors where a combination of them will give you a slightly increased risk, but not one hundred percent risk, for developing a mental illness.

I have looked at the pharmacogenetics of antipsychotic treatment response and antipsychotic induced weight gain. There are a lot of side effects related to antipsychotic use. Conventional antipsychotics give you stiffness and irreversible movement disorder, so that is why second-generation antipsychotics were developed. Unfortunately, these second-generation antipsychotics give you metabolic syndrome, which includes weight gain, blood pressure problems, cholesterol problems, and an increased risk of cardiovascular diseases. That's kind of where the dilemma comes in: which way do we want to swing treatment? I'm interested in seeing if individuals are more susceptible to developing side effects in one medication versus the other medication in order

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to help choose the best course of treatment.

HAVE YOU LOOKED INTO THE GENETICS AND PHARMACOGENETICS OF GENERALIZED ANXIETY DISORDER?

The genetics of generalized anxiety disorder is relatively new. There's not a lot of studies and research groups who work on the genetics and pharmacogenetics of anxiety. That's why it's definitely lagging behind schizophrenia or mood disorders research.

Dr. James L. Kennedy, who is the principal investigator, and I, as a junior clinician, received a grant in 2012 for the Individualized Medicine: Pharmacogenetic Assessment & Clinical Treatment (IMPACT) study (<http://impact.camhx.ca/en/home.php>). It sponsors individuals to complete a genetic panel of liver enzymes and brain markers to look at the side effects and response to psychiatric medications, antidepressants and antipsychotics. Any physician in Ontario can order this particular test and can refer patients to this study. After the referral, the patients will spit in a tube – saliva kit, and then we will extract their DNA from the saliva sample. They will also do an in-person interview or an online assessment. If they have a more severe type of mental illness, then they have to come in person for an interview, just to make sure that they are eligible, but for mild to moderate mental illnesses, they can choose the online assessment option for convenience. We basically ask them which medication(s) they are taking, how they are responding, and whether they have any side effects associated with these medications.

This study is across all psychiatric disorders. People in the study will either be starting on a medication or switching to another medication. Although this particular study is only interested in antidepressant and antipsychotic medications, we do capture many patients with mood and anxiety disorders. In total, we have collected data from over 11,000 individuals. For a subset of this particular sample, we also have a genome wide association study and an epigenetic study. Epigenetics looks at how DNA modifications affect whether or not certain genes are expressed, and these DNA modification patterns are different for everybody. These studies involve any type of diagnosis. We have already looked into generalized anxiety and we have found some interesting pilot data.

HOW WILL DATA FROM THE IMPACT STUDY BE TRANSLATED INTO CLINICAL PRACTICE?

In clinical practice, it will affect the doctor's prescribing behavior. It's simple, the doctor will get a piece of paper, and there's basically a green, yellow, or red bin. When they see medications in

the green bin, they will pretty much prescribe these as usual, but when they see medications in the red bin, it tells them to avoid these medications or consult with a psychiatrist before they make a decision. They don't have to think about anything else, just prescribe. It gives the prescribing physicians and patients more confidence with pharmacological treatment of mental illnesses.

The data from this study will also be used to compare drug efficacy and toxicity across populations. For example, say there is a rare but serious side effect that affects less than 1% of the population that takes a medication. Well, then what about the other 99% that actually benefit from the medication? Should we really be that worried to the point that we are not going to prescribe this excellent medication that can still help a lot of people? We want to have a way to profile people in order to identify this 1%. I think that has definitely been the forefront of psychiatric research that you see translating into clinical practice.

WHAT DOES THE FUTURE HAVE IN STORE FOR PSYCHIATRIC GENETICS?

I think we are still finding a lot about what psychiatric genetics really means. There are all sorts of intermediate phenotypes in psychiatry. It's very difficult to categorize people into different types of mental illness. If one person has depression and another person has anxiety, each person can present completely different symptoms from yet another person who suffers from both depression and anxiety.

Also, because of your background, because of the way you were brought up, because of what stressors you have, and because of your genes, everything is different. When I see a patient, everybody's different; they all have a different story. Everybody has stress, but why is it that some people who went through a war, with bombs going off everywhere, never develop post-traumatic stress disorder, while some people do? What's the resilience there? These types of questions are very interesting. The genome is so big, and the data we generate is so large, so I think the next step that's happening in psychiatric genetics research is learning how to integrate and understand this big data.

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TO SCROLL OR NOT TO SCROLL: CAN TECHNOLOGY IMPROVE MENTAL HEALTH?

ANDREA DIAZ



How many times a day would you say you check your phone? And how many of those times would you say you experience feelings of anxiety? Some would say that these are in direct correlation—but it doesn't have to necessarily be this way. Every day, a host of new apps and technologies arrive at our fingertips, making our phones (and lives) smarter, faster, and, in theory, better. In the last ten years alone, hundreds of thousands of apps for smartphones have been released, and people have become increasingly dependent on the use of smart devices for daily tasks. As helpful as this has been in many respects, there have also been concerns as to the potential noxious effects of using this much technology. Take, for instance, social media. An activity that some years ago was reduced to meeting others in person and making phone calls on a landline, we suddenly have access to information about millions of people at our fingertips on our devices. More often than

not, we are using social media apps to receive live updates with a simple scroll or engage with notifications in real time with a swipe. It is easy to imagine how we can become overwhelmed simply by the sheer amount of information we are exposed to. Adding to that the propensity for negative comparisons that social media enables as well as an increased exposure to cyberbullying, technology is painted as a villain of our own creation. Indeed, there are many findings that support the idea of social media being detrimental for our mental health, particularly with respect to anxiety and depression. In fact, daily social media use has been associated with an overall greater likelihood to experience anxiety and have an anxiety disorder.¹ There have been studies contesting these findings,¹ but the plethora of research tilts the balance towards a positive association between social media use and anxiety.

This begs the question, however, of whether technology could be used for good in the mental health space. Despite our heavy diet for social media apps, and the associated potential harmful effects it may have, there is much more to a smartphone than Instagram and Facebook. From apps that aim to connect patients and therapists such as Talkspace, to apps that help you look at your thoughts using Cognitive Behavioural Therapy principles such as Woebot, the emerging mental healthcare technology space is ever growing.^{2,3,4} Additionally, bringing artificial intelligence (AI) into the field has the potential to completely redefine the way in which mental healthcare services are administered and used—for instance, IBM is in the process of developing a tool which can predict the onset of psychosis with stunning accuracy.² The current paradigm was built in a world that did not have a fraction of the technology that we have today.⁵ Hundreds of new tools are available to clinicians, counsellors, and patients alike to not only enhance, but reinvent mental healthcare practice as a whole.² The goal is not, and should not be, to replace the patient-doctor relationship or the therapeutic process, but rather to augment and improve it.⁴ This is the opportunity we have before us.

However, as great as the opportunity is, it is important to approach these new tools and techniques objectively. Many apps are released daily, becoming available to the general public without much regulation or scientific evidence to back their efficacy. Specifically with anxiety, many of the apps do not disclose the theoretical foundations on which the

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intervention is based.⁶ This is not to mean that the apps could not be helpful for any particular person or that the field of mental health technologies as a whole is not incredibly promising. Rather, we must be smart consumers and always question where the information we are receiving comes from, how accurate it might be, and whether it can actually serve us.

Bringing technology into the field of mental health has the potential to make resources more accessible to the millions of people that might not be able to afford weekly therapy sessions, the people for whom travel to a mental health clinic is not possible, and to the people who might be afraid of the still pervasive stigma surrounding mental illness. Although our current user behaviour with smartphones and similar technologies does expose us to some serious mental health issues, there is definitely a case to be made for the great potential for a mental healthcare revolution that could be brought upon by the use of technology in a clinically-proven, accessible way.

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A COMPASSION-BASED APPROACH TO HELP OVERCOME ANXIETY

JEFFREY LYNHAM

Practically everyone knows what it's like to feel anxious. If you feel nervous while attending a party, you might be telling yourself, "Everyone seems so charming and relaxed. No one wants to talk to me because I don't have anything interesting to say. They must think I'm boring or some kind of weirdo. I shouldn't be so shy all the time."

If you feel distressed about writing a final exam, you might be saying to yourself, "My mind will go blank, and I will forget everything I studied. If I don't get a 90% on this exam, my life will be ruined. I might even fail the exam and look bad in front of all my family and friends."

If you feel uneasy about giving an important presentation, you might be thinking, "I'll stutter and tremble. People will notice how nervous I am. I won't be able to answer any questions, and I will make a complete fool of myself."

Of course, when you tell yourself these things, they can only act as a self-fulfilling prophecy. At the party, people might be repelled away from you if they sense how nervous you are. Ruminating about flunking the exam will only cripple your concentration when you're trying to study. During a presentation, if you focus too much on not embarrassing yourself, the audience will notice how tense you are and conclude that you are indeed a little neurotic.

What many of us don't realize is that we tend to operate on a double standard. When we are worried, we think that it is perfectly okay to think that something terrible is going to happen. It's like we have a crystal ball that can see into the future, but it only foresees bad things happening. When we are upset over a mistake, inadequacy, or failure, we beat ourselves up mercilessly and rip ourselves to shreds. But take a moment to consider this: Would you ever speak like this to a dear friend? Would you ever predict a grim future for them or ruthlessly criticize them for their mistakes? For most of us, the dialogue we have with ourselves is much harsher and crueller than what we would ever say to someone else.

For example, say your best friend Amanda calls you in a panic. She is waiting for her husband John to arrive home from work. She has called his phone many times, but it goes straight to voicemail. John usually finishes work at 5:00 PM, and it only takes half an hour for him to come home, but

it's now 6:00 PM and he has still not returned. What would you say to Amanda in this situation? Would you tell her that John has been in a terrible accident on the highway? Would you say that he lost his job and is now drinking himself into a stupor at some bar? Would you say that he is tired of Amanda and that he is likely having an affair?

Of course not! You would tell Amanda that John might have had a meeting that ran late, or that he got stuck in traffic, or that he is out planning something special for Amanda's birthday coming up in a few days. Of course, you would also say that he missed Amanda's calls because his phone is dead since he forgot his charger at home. You would say these things because you want to show your friend kindness and compassion.

When faced with a problem that makes us feel anxious, we tend to catastrophize, jump to conclusions, or blame ourselves. But we are much kinder and realistic when we have a friend who has the exact same problem. Why not talk to yourself in the same sympathetic and objective way? Telling your friend that they will embarrass themselves and that they will look like a fool right before a presentation is cruel, so why would you do that to yourself? Recognizing this double standard may be an important first step for relieving our anxiety. But when you give up this double standard, by treating yourself with the same love and compassion as you would your best friend, you will feel more at ease.

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SUICIDE AS A CONTAGION & THE USE OF MEDIA AS DISSEMINATOR

KAVITA KANDHAI

Worldwide, approximately 800,000 people die by suicide annually¹. Dr. David Goldbloom from the Centre for Addiction and Mental Health attributes 90-95 percent of suicide-related deaths to mental illness¹. CAMH also estimates that an average of 11 suicide-related deaths occur daily in Canada. Suicide is a national and global epidemic, making it vital how we, as a society, frame, understand, and perceive mental health and suicide.

The intentional loss of life can leave others suffering in silence and trapped within their own mental anguish. The consequence of suicide propelled through media can lead to the re-examining of suicide as a viable option by those already struggling with their mental

health. Media can also, quite oppositely, aid in the de-stigmatization of mental health, provide information on community resources, and use compassionate rhetoric to encourage viewers that are also suffering to get help.

Suicides, mental health, and addiction issues within the media need to be responsibly framed alongside healthy ways to cope. Importantly, this message should be shared with compassion for those vulnerable to mental health triggers. When suicide is glossed over or discussed using glorifying rhetoric in the media, surges in suicide within the larger population can occur. Also known as "suicide contagion", this ripple effect within a population following a suicide can lead to others desiring to follow the act².

Notable celebrity suicides such as Marilyn Monroe, Kurt Cobain, Robin Williams, Anthony Bourdain, Kate Spade, Avicii, Verne Troyer, and others saw increases in suicide rates as much as 10 to 12 percent after news of their death^{3,4}. This suggests media portrayal of death is important as masses who identify with, look up to, or already feel alienated and hopeless are particularly susceptible to also identifying with celebrity suffering. While mass media and social media have been instrumental in connecting people and information, it also has a responsibility to provide 'safe' coverage about suicides. Some television shows have been accused of glamourizing suicide such as '13 Reasons Why', which led to a 19 percent increase in web searches concerning suicide back in 2017⁵. This trend appears to suggest increases in suicidal ideation among the general population following the release of the show. However, it also opened a discussion on the role of media companies in promoting education and increased awareness around suicide and mental health issues.

Very similarly, when tobacco advertisements associated coolness with cigarette smoking, such as the Marlboro Man and Joe the Camel, there were rises in the social introduction of new smokers. However, when responsible packaging, labeling, and advertisements were mandated, increased awareness led to less consumption and utilization⁶. Similarly, alcohol consumption in movies and media is a known predictor for youth to experiment with alcohol and binge drinking even for those who previously had a low affinity for drinking⁷. Unintentionally, suicide in the media can have similar discursive effects, especially in the absence of balancing it with protective strategies⁸. Protective strategies include disclaimers, framing suicide as an adverse outcome in a mental health journey, and providing information about local support networks. These strategies can all instill messages of hope and resilience for those that are struggling, while also responsibly educating the general public on suicide through the use of mass media. While suicide clusters are common in

some parts of Canada, community crisis planning is another layer of engaging with those suffering with the loss of loved ones from suicide. For those that are moderate to high risk, check-ins by friends/family members, doctors, and therapists are additional supportive strategies that we can implement to help those around us. Self-care, mental preparation, and talking about mental health are key practices that can also be adopted to negate feelings of hopelessness and alienation, in addition to building resilience. While media has begun to embark on some of these supportive measures more can still be done to de-stigmatize mental health, de-stabilize misinformation on suicide, and provide the public with resources and safe dissemination of suicide information.

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FINDING YOUR MEDIUM: THE POWER OF THE ARTS OF MENTAL WELLNESS

EMILY VECCHIARELLI

"ART WASHES AWAY FROM THE SOUL THE DUST
OF EVERYDAY LIFE" – PABLO PICASSO

We are all too familiar with stress. Whether it was the time you started a new job, began graduate school, or were juggling coursework and family obligations, everyone has experienced challenges in one way or another. As millennials, however, we may be experiencing more stress than any current generation according to the American Psychological Association¹. Young people between 15 and 24 are more likely to experience mental illness compared to other age groups². Now, more than ever, we need to develop different abilities and strategies to effectively manage stress and prioritize our mental wellness.

So, what can we do to cope with stressful moments or overwhelming situations? Evidence suggests that getting a little creative might help. The potential for art and music to elicit emotional responses has long been recognized throughout history. Aristotle and Plato, for example, believed music could have a healing effect on the body and soul³. More recently, the arts have been recognized for their power to manage stress and promote mental wellness. Several hospitals have begun to incorporate art displays in waiting rooms and entrances, and some even offer art therapy classes. An exciting pilot study is underway in Canada in which a group of Montreal doctors are beginning to prescribe trips to the Montreal Museum of Fine Arts to help patients cope with a variety of mental health issues⁴. Research suggests that levels of depression and anxiety are lower in patients who had exposure to visual arts⁵.

The arts are not just for patients, however, as the benefits extend to everyone. One study examined the effects of creative arts on levels of anxiety in undergraduate students. Participants chose to partake in a single 30-minute session of painting, clay modeling, collage-making, or drawing in the week prior to their final examinations. In comparison to participants in the control group who did not partake in any activity, anxiety levels were significantly reduced in the art group⁶. In a similar study of university students and staff, 45

minutes of creative arts notably reduced salivary cortisol levels, which is a marker of physiological stress⁷. Interestingly, cortisol levels were lowered irrespective of prior experience with art, suggesting creative arts could be an effective stress-reduction strategy for people regardless of skill level.

One way art may be helping is through its ability to be relaxing, and to provide an engaging, creative activity that refocuses attention from stress-provoking thoughts to the task at hand⁵. Painting, creative writing, or playing music can increase self-esteem and encourage the development of problem-solving skills⁸. Moreover, visual arts production helps stimulate neuronal connectivity in the brain, and is associated with promoting psychological resilience⁹, which is an important attribute for coping with stress. While there is no defined ‘dosage’ of the arts required to reap its benefits for mental wellness, it seems that small amounts can be helpful. Just looking at art displays appear to have favorable effects⁵. More importantly, the best dosage of creativity is one that works best for you.

So what can we do to cope at times of pressure or when things seem overwhelming? Well, one way might be a blank canvas and a splash of paint.

TIPS FOR GETTING CREATIVE:

1. Go to a fun painting class. There are plenty across the GTA that you can attend, and you can bring a friend too!
2. Adult coloring books are widely available for purchase and can be a great start. Try out the coloring page in this magazine.
3. Painting to music is a great way to get your creativity flowing and can be quite calming.
4. Collecting old or recycled materials around the house and building something new is a fun way to be creative and helps to change perspective.
5. You don’t need to be the next Picasso to reap the benefits of the arts. Let your mind wander free and express whatever you feel!

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MENTAL HEALTH IN MEDICAL SCHOOL: A UOFT STUDENT’S PERSPECTIVE

GIL YERUSHALMI

It’s no secret that medical school is stressful. From the extensive amount of school work, the desire to stand out among a class of extremely talented peers, and the fear of joining a growing pool of unmatched graduates, Canadian medical students have plenty to stress over. It is therefore not surprising that medical students experience an increased prevalence of mental health issues—27% have depressive symptoms while 11% demonstrate suicidal ideation¹. Additionally, no significant change was found in the rate of mental health symptoms in medical students between 1982 and 2015, suggesting that unfortunately this issue

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is ongoing¹. Mental health issues are similarly prevalent in Canada, with 42% of students reporting clinical levels of psychological distress². It's clear that the current state is troubling and unsustainable—something needs to change.

This is not to question the importance of rigorous training or suggest that medical school should be easy—after all, human lives will depend on the expertise of these future physicians. Rather, I urge us to question just how far we need to push medical trainees before the harms exceed the benefits. Must excellence come at the cost of mental health? Or should our traditional structure of medical education be reconsidered? Thankfully, the medical community is acknowledging the need to address student mental health and is gradually implementing changes in medical education. In 2015, The Canadian Royal College of Physicians and Surgeons added self-care as a core competency of physicians³. This trend is echoed at earlier stages of training in medical schools across Canada.

As a first-year medical student at the University of Toronto, it's been clear to me that the faculty is strongly committed to student wellness. The administration understands that a large component of student success lies in our wellbeing and thus regularly checks in to ensure that we are well. For those in need of help, the faculty offers individualized support. Not only is this approach sensible in addressing challenges early but it also affirms the University's genuine desire to help students succeed. Beyond these check-ins, additional resources for students include the Office of Health Professions Student Affairs (OHPSA), the faculty's leadership, and the various academies, all within arm's reach.

Unfortunately, the ironic reality is that those training to help others in distress seldom access help themselves, with only 15% of students with depressive symptoms seeking professional help^{1,2}. To address this, the faculty at the University of Toronto has structured its curriculum to encourage self care, build a community of support, and offer avenues for students to advocate for their needs. For example, students have one day off every week, which allows time for studying, career exploration, hobbies, or self-care, as they choose. Additionally, the faculty takes a proactive approach by providing structured time for students to debrief and reflect on their experiences. By meeting with the same small group throughout medical school, my peers and I benefit from a supportive environment that allows us to discuss hardships that may have otherwise been buried and left unaddressed. Despite some initial skepticism, many students soon realized the value of talking about the unique experiences of medical school with those they share them with. Lastly, the faculty are

receptive to student feedback and consistently seek ways to improve student wellbeing.

However, despite the best efforts of the university, the situation is still far from ideal. What remains unchanged is a culture that demands perfection—we are pushed to excel under pressure, work excessive hours, all while volunteering, running a club, and curing cancer. This hypercompetitive culture inevitably leads to stress and burnout². Medical students and physicians have kickstarted numerous wellness campaigns advocating for a culture change. While I am confident that change is on its way, it may take some time for the entire medical community to adopt this message.

Until then, we can start by advocating for policy changes that alleviate systemic factors that reinforce this unhealthy culture. One factor that particularly affects medical students is the growing worry of not matching to a residency program following graduation. Last year, 10% of graduates at the University of Toronto failed to match to a residency position, the highest rate in the country. This means that after at least 7 years of post-secondary education, significant student debt, and an enormous investment by the province, some students face yet another barrier to their career in medicine. Policy changes that provide students with more security in their future careers are sorely needed to back up messages of wellness with real actions.

Fortunately, I am not the first to discuss these issues and I certainly won't be the last. With the younger generation of doctors prioritizing self-care, I'm hopeful that the culture of medicine will shift so that physicians are able to care for themselves as well as they care for their patients. For now, my classmates and I continue to exercise our skills in resilience, balance, and effective coping. For me, this means dedicating time to family and friends, hobbies, and sometimes even Netflix.

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“SO, WHAT ARE YOU DOING NEXT?”

ASHLEY B. ZHANG &
FARINAZ GHODRATI

Imagine this ... after years of late nights in the lab, countless hours of writing and editing your thesis, and litres of coffee, you have finally tackled one of the largest milestones to date in your academic career – you have successfully submitted your thesis and will be defending soon! The next morning, you walk into the lab with a smile on your face when you hear a co-worker ask casually, “So, what are you doing next?”

—RECORD SKIPS—

WAIT, WHAT? BUT, YOU BARELY JUST FINISHED
YOUR LAST GOAL!

In today’s society, it is easy to feel constantly one step behind. Even when you have scratched off everything on your to-do list, there is always something creeping right behind the corner. It is no surprise that in academia, many graduate students feel this baseline stress. Just think about it, from an early age, we are asked “What do you want to be when you grow up?”. While that can be a playful spin, poking fun at the absurdly ambitious or stereotypically endearing answers that children give, as we get older the same inconspicuous question is suddenly not as playful.

Why are we not spending a few seconds celebrating what we have already accomplished before deciding on the next step? When faced with such a question, it is natural to feel nervous, but what matters is how you proceed after the stress settles. Here are some long-term strategies to overcome the stress and harness it into productivity.

[1] Hit pause and reflect on what you have already accomplished. Keep on celebrating your academic victories, no matter how significant they may be! Live in the moment and for that split-second, focus on the past and present instead of worrying about the future. Self-reflection and recognizing your accomplishments serve as a source of motivation and a reminder that you are more than capable of tackling whatever obstacles are in your way!

[2] F.R.I.E.N.D.S. The TV show, but more

importantly, your support network! Do not underestimate the value of your support system whether it be your friends, family, colleagues, or mentors. Having people around that will support and guide you throughout your studies is a powerful asset that we should all take advantage of. Moreover, do not gloss over the value of humour in good and bad times!

[3] It is okay to not know the answer. This just means you get the opportunity to do a little more exploring to figure out which path you want to pursue. Instead of seeing the giant question mark looming ahead as entering turbulence, see it as an adventure and approach it with an open mind and a sense of curiosity. Perhaps this is the time in your life to try a whole myriad of novel activities and to discover something new about yourself and your passions.

[4] Go at your own pace. Maybe your classmates already know what they want to do after graduate school, and that is okay! You know yourself best, so set personal goals and deadlines. Not having concrete plans does not mean that you are not working towards your goals. It is easy to feel peer pressure, so remember to check in with yourself once every so often and remind yourself of your own trajectory.

[5] “The whole is greater than the sum of its parts.” It is surely overwhelming to try and decide your future plans, but the key is to deconstruct the question. That mentorship program you partake in, the cause you are passionate about, and the research project you tirelessly worked towards, if you combine all your strengths and passions you just may come to the realization that the answer has been there all along and ultimately obtain a better idea of what career path suits you.

[6] Stay motivated. Even if you actually know what you plan on doing next and have been slowly working towards your long-term professional goals, it is important to realize that the whole picture or path might not be crystal clear yet. Stay focused and passionate, and, as cliché as it sounds, keep reminding yourself that every incremental step you take each day will be paving your path to success years down the road.

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VISION & MOOD: WHAT'S THE CONNECTION?

A PRELIMINARY INVESTIGATION OF THE LITERATURE

MARIJA ZIVCEVSKA

We know light is important to vision, but is light also related to mood? Why is it that as the winter months come upon us, many students report difficulty concentrating, have reduced energy, and often feel more agitated and sluggish? Seasonal affective disorder (SAD) is a form of depression that affects 0.8-2.2% of the North American population, typically in late autumn and winter, when daylight hours are reduced.¹ Since its initial classification as a clinical condition in the 1980s, three evidence-based treatment approaches have been described: antidepressant medications, psychotherapy and light therapy). Yet, treatment efficacy can significantly vary across patients.² So what accounts for this variability? What do we know about the neurological underpinnings of SAD? Evidence suggests we must direct our attention to a novel visual system discovered in the early 21st century, the intrinsically photosensitive retinal ganglion cell (ipRGC) pathway.

The ipRGCs are a specialized subset of retinal ganglion cells interspersed across the mammalian retina. Classical ganglion cells are final output neurons, responsible for collecting information from rod and cone photoreceptors and for subsequently generating signals that are then sent to the brain. Yet unlike classical ganglion cells, ipRGCs express melanopsin, an opsin-based photopigment, which allows the ipRGCs to detect light directly, without any input from rods and cones.^{3,4} As a result, the ipRGCs are now classified as the third photoreceptor of the visual system. Functionally, these photoreceptors primarily mediate subconscious, non-image forming visual processes, including circadian entrainment and sleep cycle modulation through innervation of the suprachiasmatic nucleus (SCN, master circadian clock), extra-SCN sites (ventral supraventricular zone, intergeniculate

leaflet of lateral geniculate and ventrolateral preoptic nucleus) and pineal inhibition of melatonin.⁵

So what does the literature tell us? In 2009, Roecklein and colleagues suggested that sequence variation in the melanopsin gene may increase vulnerability to SAD, whereby those homozygous for a ProL (proline-to-leucine) polymorphism have a 5.6-fold greater risk for developing SAD in relation to age-matched SAD controls.⁶ Furthermore, when examining healthy controls, it was found that those with ProL polymorphism experienced seasonal shifts in sleep.⁷ Although direct mechanisms are not clear, these studies suggest an intriguing link between this melanopsin genotype variant and SAD pathogenesis. In vivo work has shown reduced melanopsin activity in SAD patients relative to healthy controls with no history of depression.² Furthermore, studies examining the effectiveness of light therapy variants suggest that short wavelengths (blue light) may be most effective in mitigating SAD symptoms. Interestingly, melanopsin peak sensitivity is in the blue range of the visual spectrum (at approx. 480 nm), suggesting that the effectiveness of this light therapy treatment may stem from melanopsin stimulation.^{8,9} It is clear that melanopsin system plays a role, however, whether melanopsin cells are primary in mediating such responses remains unclear.

Although the relationship between light, melanopsin and SAD is a relatively new phenomenon, it presents an intriguing opportunity to develop more tailored treatments, by describing the optimal light therapy conditions (i.e., length, duration and wavelength) for maximal efficacy. For patients less responsive to light therapy, in vivo measures of melanopsin activity may also serve as predictors of response to treatments such as antidepressant medication or cognitive behavioural therapy.² Genetic variants may also serve to further delineate patient groups.

Since its discovery close to two decades ago, the ipRGC pathway has revolutionized our understanding of the mammalian visual system, especially in the context of pathology and disease states. This insight marks a promising future path of scientific inquiry, and

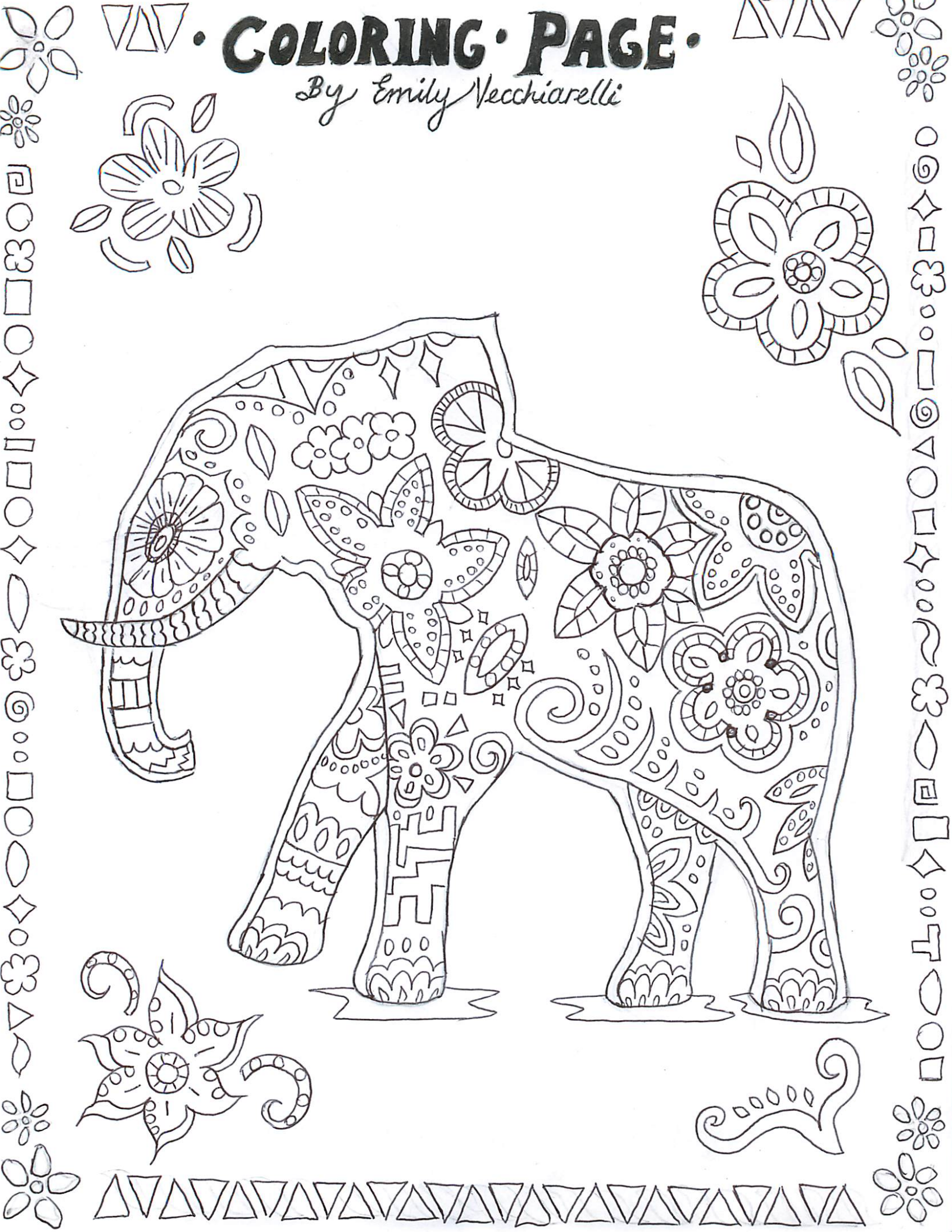
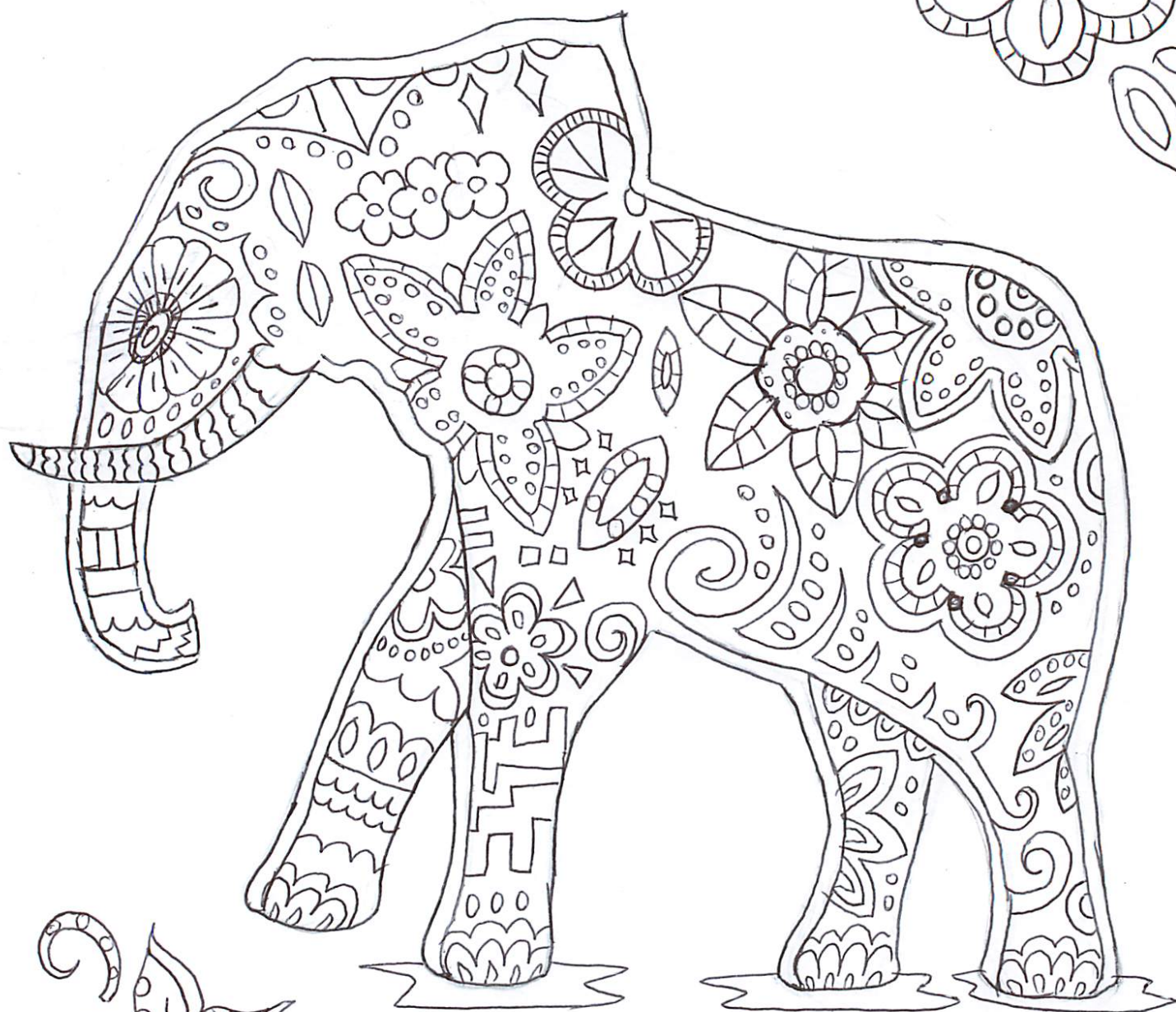
potential development of therapeutic applications.

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