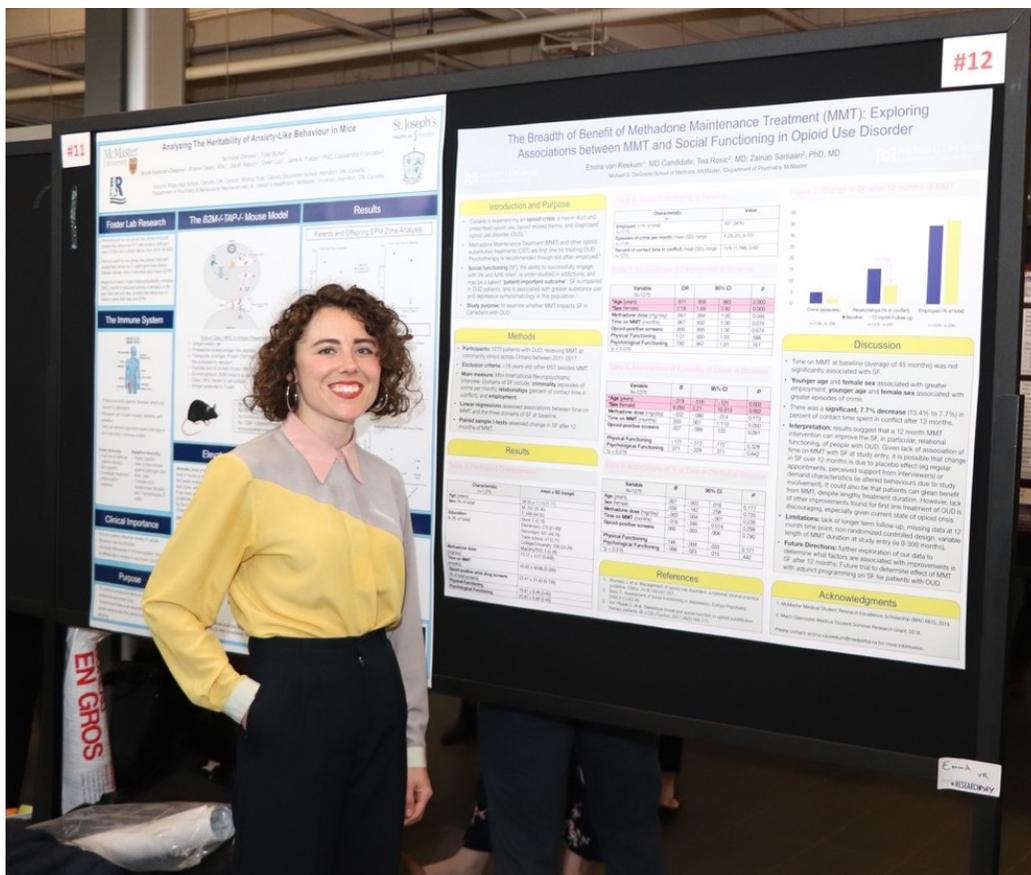


SPOTLIGHT ON RESEARCH

Research Day 2019 Top 3 Posters: Undergraduate – Clinical/Education



**First place Research Day 2019 poster competition award winner:
Emma van Reekum – Undergraduate (clinical/education) – supervisor: Zena Samaan**

1st Place

Name: Emma van Reekum

Supervisors: Drs. Zainab (Zena) Samaan & Tea Rosic

Education Program and Level: Undergraduate Medical, Year 2

About Emma:

Hi! I am a second-year medical student at McMaster's Hamilton campus. I am fortunate to have been given the opportunity to take part in a funded study through the Department of Psychiatry and Behavioural Neurosciences, exploring whether methadone impacts social functioning in Canadians living with Opioid Use Disorder. This research piqued my interest in the opioid crisis and further inspired my goal to try to create positive change in our community. As such, myself and a peer group successfully advocated to politicians to support supervised consumption sites in Hamilton. I have also held educational events pertaining to mental illness, including workshops on addiction, and have developed various wellness and mentorship initiatives for medical students. My goal is to become an academic psychiatrist at McMaster; one who strives to make a significant contribution as both a clinician and an educator/researcher. I am very interested in finding meaningful ways to support people with mental illness and to address the many inequities this inspiring population faces.

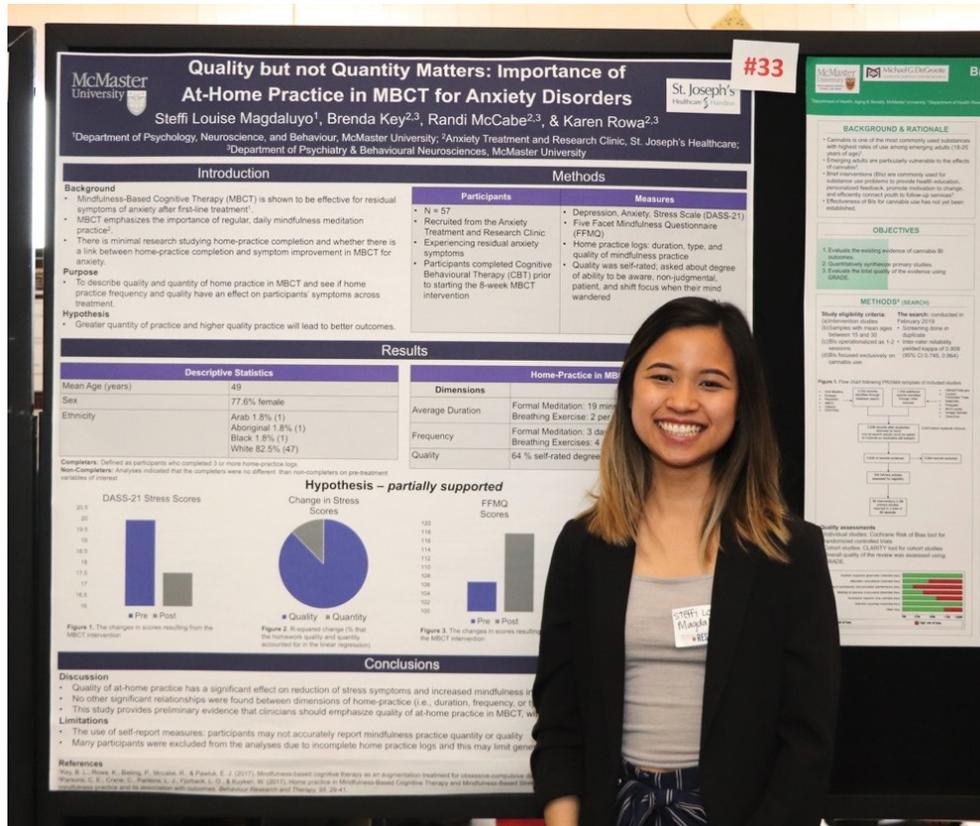
Emma's Project:

Canada is in the midst of an opioid crisis – a rise in opioid use, in opioid-related harms, and in diagnosed opioid use disorder (OUD). Methadone Maintenance Treatment (MMT) is a common harm reduction modality used to treat OUD, in which patients are provided with licit opioids in order to prevent withdrawal and craving. Research in addictions tends to define successful treatment as a decrease in illicit drug use (in keeping with an abstinence model), however, there is a movement to begin thinking about 'success' in terms of what is meaningful for the people actually impacted by the disease. Social functioning (SF), the ability to successfully engage with life and fulfill roles, is impaired in OUD and is associated with a host of difficulties, such as greater drug use and depressive symptoms. As such, we examined whether SF, a potential patient important outcome, is impacted by MMT in OUD.

We examined 1275 participants with OUD who were receiving MMT at various community clinics across Ontario between 2011-2017. Participants had been on MMT for varying lengths of time when they enrolled in the study; for instance, some were just beginning and others had been in treatment for up to 25 years. Participants were assessed using the Mini-Neuropsychiatric Interview in order to determine whether MMT can improve SF. The interview defines SF in terms of (1) employment; (2) crime; and (3) conflict in relationships. When we explored SF at study entry, we found that just 34% of participants had a job. On average, participants engaged in 4 episodes of crime per month and spent 15% of contact time in serious conflict with friends, family, or partners.

We sought to answer our study question in two ways. First, because participants had been on MMT for different lengths of time, we explored whether length of treatment was associated with SF at study entry. We did not find that being on MMT for greater duration was associated with better SF. However, younger age and female gender were associated with more employment and more reported episodes of crime per month. Second, we looked for potential changes in SF over 12 months of being in our study; we found that there was a significant improvement in relational functioning, as evidenced by a 7.7% decrease in percent of contact time spent in conflict.

Our findings suggest that a 12 month intervention of MMT can improve one aspect of SF for people with OUD. However, given the lack of significant associations with length of treatment and SF at study entry, it is possible that the change in SF after 12 months is due to placebo effect (e.g., perceived support from interviewers) or to demand characteristics (i.e., the bias in which people alter their behaviours due to study involvement, such as hearing interview questions). It could also be the case that participants can glean some small benefit from MMT, however, the lack of improvements shown in criminality and employment is discouraging. As such, future trials should explore whether MMT with adjunct programming specific to SF can impact patients with OUD.



2nd Place

Name: Steffi L. Magdaluyo

Supervisor: Drs. Karen Rowa and Brenda Key

Education Program and Level: Undergraduate; Psychology, Neuroscience, and Behaviour (Honours BA); Level 4

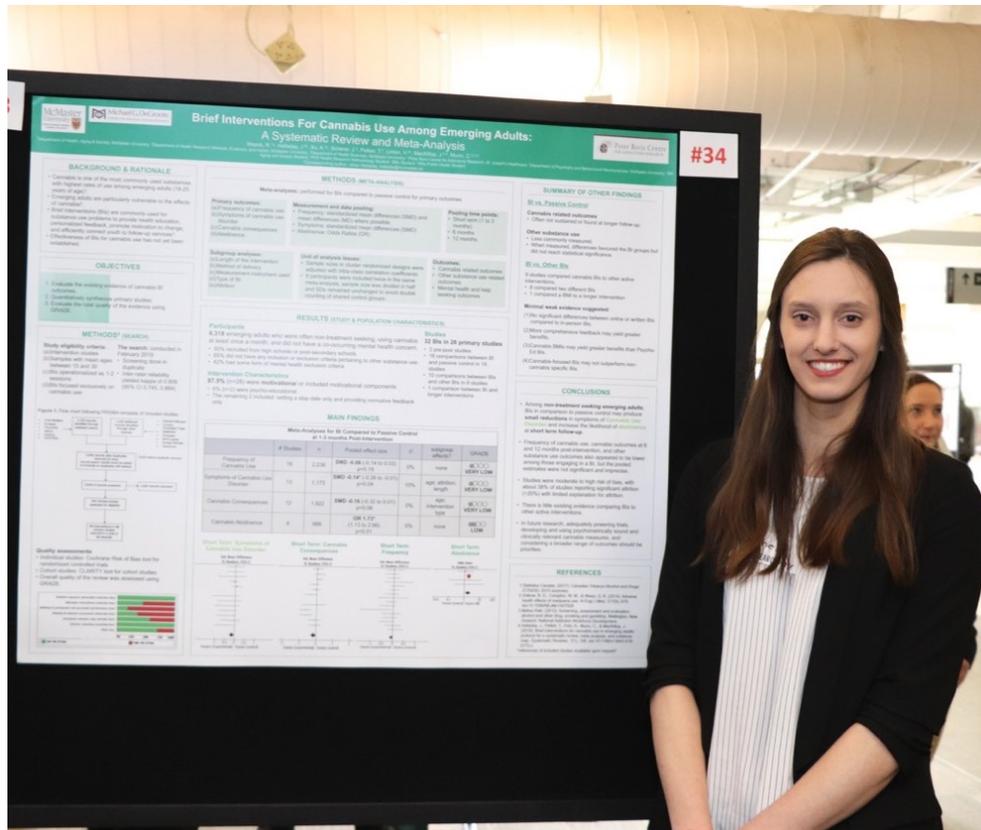
About Steffi:

In addition to completing this study, I was a part of two other research projects throughout my last year in undergrad, working part-time, and volunteering at St. Joseph’s Healthcare at the West 5th campus. My interest and passion lie in working with and helping individuals with mental illnesses and concerns. I am going to pursue graduate studies in clinical psychology and/or counselling psychology with the goal of becoming a psychologist and to work with individuals—more specifically, children— with mental health concerns.

Steffi’s Project:

Mindfulness-Based Cognitive Therapy (MBCT) emphasizes the importance of regular, daily mindfulness meditation practice. There is minimal research studying home-practice completion and whether there is a link between this and symptom improvement in MBCT for anxiety. The aim of the current study is to

describe home practice in MBCT and see if home-practice frequency and quality have an effect on symptom improvement. Participants with a variety of anxiety disorders completed an 8-week MBCT intervention for residual anxiety symptoms after completing Cognitive Behavioural Therapy (CBT) for anxiety. We collected pre- and post-treatment symptom scores using the Five Facet Mindfulness Questionnaire (FFMQ) and the Depression, Anxiety, and Stress Scale (DASS-21). Additionally, we collected participants' home-practice logs where they indicated the duration, type, and quality of their practice. Participants completed a mean of 19 minutes of practice, 3 days a week, and 2 brief breathing exercises daily across the intervention. Mean quality rating for home-practice was 64%. Finally, quality of home-practice predicted these improvements in stress symptoms across treatment. The results of this study suggest that participants complete less home-practice than assigned in a mindfulness intervention and that quality, but not quantity, of home-practice is associated with decreased stress symptoms across MBCT.



3rd Place

Name: Rachel Woock

Supervisor: Drs. Catharine Munn & Jillian Halladay (supervised Dr. K. Georgiades)

Education Program and Level: Honours Health and Aging (Undergraduate, Level 4)

About Rachel:

I am a fourth year undergraduate student in the department of Health and Aging as well as a member of the McMaster Women’s Varsity Volleyball Team. Over the past six months, I have been assisting Ph.D. candidate, Jillian Halladay, on two of her current projects, which focus on substance abuse and mental health in adolescents and emerging adults. In the upcoming year, I will be finishing my degree as well as completing my undergraduate thesis with my supervisor, Dr. Catherine Munn. Following completion of my degree, I hope to be admitted into the RCT stream of McMaster’s Psychology graduate program and pursue a career in Clinical Psychology.

Rachel’s Project:

Globally, cannabis is one of the most commonly used substances with the highest rates of use in emerging adults (18-25 years of age). Due to ongoing brain development, emerging adults are particularly vulnerable to the effects of cannabis, and insight into effective interventions for cannabis

misuse in this age group is critically important. Brief interventions for cannabis use, also known as BIs, are commonly used for substance use problems to provide health education, personalized feedback, promote motivation to change, and efficiently connect youth to follow-up services. Brief interventions are, currently, of interest for decreasing cannabis use in emerging adults.

We conducted a systematic review to evaluate and summarize the existing literature of brief interventions for cannabis use. We conducted an exhaustive search of the literature, then conducted a meta-analysis, which combined the results of a number of independent studies to identify overall patterns and trends in the effectiveness of brief interventions. In addition to determining the effectiveness of brief interventions, we also assessed other outcomes including cannabis-related outcomes, other substance use, mental health, and help seeking behaviours.

During our literature search, we identified eligible studies as brief interventions which were 1-2 sessions and focused exclusively on cannabis use. Samples had mean ages between 15 and 30. In total, 32 brief interventions in 26 primary studies were included.

Our results showed that participants were typically non-treatment-seeking and using cannabis at least once per month. Most interventions were motivational, single sessions, and delivered in person, with only a few discussing concurrent mental health. Pooling results at 1-3 months post-intervention, brief interventions compared to a passive control slightly reduced symptoms of Cannabis Use Disorder and increased the odds of abstinence from cannabis. Additionally, pooled results favoured brief interventions compared to control for frequency of use and cannabis consequences, although not significantly. Other outcome results often favoured BIs but were not significant. Results of studies comparing types of brief interventions or brief interventions to longer interventions are discussed narratively. Quality assessment suggested low to very low quality evidence.

In conclusion, this review indicates that, among non-treatment seeking emerging adults, BIs in comparison to passive control may produce small reductions in symptoms of Cannabis Use Disorder and increase the likelihood of abstinence at short term follow-up. Frequency of cannabis use, cannabis outcomes at 6 and 12 months post-intervention, and other substance use outcomes also appeared to be lower among those engaging in a brief intervention, but the pooled estimates were not significant and imprecise. The studies in this review generally had a moderate to high risk of bias, with a large percentage of studies reporting significant attrition.

Overall, there is little existing evidence comparing brief interventions to other active interventions. In future research, adequately powering trials, developing and using psychometrically sound and clinically relevant cannabis measures, and considering a broader range of outcomes should be priorities.