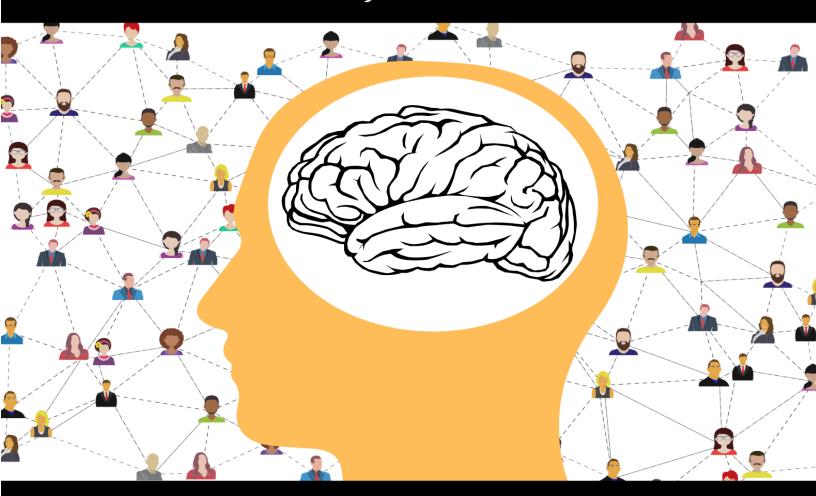PLEASE JOIN US FOR...

PSYCHOLOGY DISCOVERY CONFERENCE 2023

Sharing research and creating connections across the psychology research community

April 12, 2023
Location: Hagey Hall

....

@UW_PsychDisc

psychology.discovery.conference@uwaterloo.ca

ACKNOWLEDGEMENTS

Thank you for joining us for our annual departmental Psychology Discovery Conference! This year was particularly special, as we were finally able to celebrate the first in-person conference since 2019. A huge thank you to those who contributed their research. We received over 50 submissions and had nearly 200 participants across the University of Waterloo community registered to attend, including undergraduate students, graduate students, postdoctoral fellows, faculty, staff, and more.

Thank you to the **Psychology Department** and the **Graduate Student Endowment Fund (GSEF)** for their generous financial contributions and continued support for this conference. We would also like to thank the **Graduate Student Association for Students in Psychology (GASP)**, and the **Psychology Undergraduate Student Society (PsychSoc)** for their support during the planning and execution of this conference, and for their continued support of graduate and undergraduate students in Psychology.

 Thank you to our alumni career panelists **McLennon Wilson, Shaylene Nancekivell, Christopher Lok, Sherman Kwok,** and **Erik Jansen**, as well as our graduate student panelists **Carla Rumeo, Julianna Salvatierra, Jessica Lee, Claudia Sehl, Allister Grapes,** and **Candice Hubley**, for sharing their insights, advice, and time.

A special thank you to **Dr. Katherine White** and **Dr. Richard Eibach** for providing endless support, guidance, and encouragement as we brought this conference to life.

Finally, thank you to all our presenters and attendees for making this conference a success.

PDC 2023 Organizing Committee

Here's to DISCOVERY!

TABLE OF CONTENTS

The University of Waterloo acknowledges that much of our work takes place on the traditional territory of the Neutral, Anishinaabeg and Haudenosaunee peoples. Our main campus is situated on the Haldimand Tract, the land granted to the Six Nations that includes six miles on each side of the Grand River. Our active work toward reconciliation takes place across our campuses through research, learning, teaching, and community building, and is centralized within the Office of Indigenous Relations.

Questions? Contact us at psychology.discovery.conference@uwaterloo.ca.

SCHEDULE OF EVENTS
Check-in will take place in the SAF Atrium in Hagey Hall

TIME	EVENT	LOCATION
9:00am – 10:00am	Morning Poster Session	Hagey Hall, SAF Atrium
10:00am – 10:30am	**COFFEE BREAK**	HH 1104
10:30am – 12:00pm	Talk Session	HH 1101
12:00pm – 1:00pm	**LUNCH**	HH 1104
1:00pm – 2:00pm	Alumni Career Panel	HH 1106
	Graduate Student Panel	HH 1101
2:00pm – 3:00pm	Afternoon Poster Session	Hagey Hall, SAF Atrium

TALK SESSION

10:30am – 10:45am
Comparing encoding techniques to maximize memory for Korean characters

Brian S. Kim*, Sophia H. N. Tran, & Myra A. Fernandes

Apps such as Duolingo provide a great resource for learning a new language. Although useful, these apps do not necessarily consider known encoding techniques such as production (reading aloud) and drawing (creating a sketch). Moreover, the match between the modalities used to present new information during of encoding and to later assess memory during retrieval is not always considered. In this experiment, we examined the best ways to learn English–Korean word pairs in individuals naïve to Korean. We compared production and drawing as encoding techniques, and examined whether the benefit of the technique interacted with the type of memory test. Participants were shown English–Korean word pairs and asked to encode them either by copying the Korean character (drawing) or by repeating the Korean sound aloud (production). Later, memory for the correct Korean pairing to a given English word was assessed in either a visual or auditory two-alternative forced-choice memory test. We found an interaction between encoding technique and retrieval test type. Memory performance was higher, for Korean audio clips, when encoding required reading aloud, whereas performance was higher, for the visually presented Korean character, when encoding involved copying. Furthermore, performance was highest overall when copying was the method of encoding. Results highlight the usefulness of drawing information when learning a new character-based language. Moreover, results suggest that language learning apps, and instruction in educational settings, should take into consideration the modality of the retrieval test, to maximize memory performance.

Presenter: Brian Kim (bs8kim@uwaterloo.ca; he/him)

10:45am – 11:00am
Supporting Refugee Families in Waterloo Region to Manage Family Conflict and Prevent Domestic Violence: Application of Family Functioning Systems Framework

Jean de Dieu Basabose, Emilie Stanley, Asma Mirza*, Dillon T. Browne

This study applies Walsh's family functioning systems to understand the dynamics of family conflict (FC) in refugee families, to examine the appropriateness and effectiveness of support for the families in the Waterloo Region to manage and prevent domestic violence (DV). The study highlights the relevance and needs to provide support to refugee families and ensure that they receive appropriate services to help manage FC. It also explores the effects of FC on refugees' integration processes and critically reviews the effectiveness of existing approaches to assist refugee families experiencing intra-family conflict and/or DV. It discusses how belief systems, communication, and family organizational structures play an important role in helping families to cope with the adverse situations they have experienced throughout their forced migration and integration processes. The study intends to contribute to strengthening the resilience and effective integration of refugee families by raising awareness of the need to increase and improve their support to non-violently manage conflict and prevent DV.

Presenter: Asma Mirza (al2mirza@uwaterloo.ca; she/her)

11:00am – 11:15am
Counterfactual reasoning in childhood
Hailey Pawsey*, Stephanie Denison, & Ori Friedman

Besides thinking about events that did happen, people also think about counterfactual alternatives (events that did not happen but could have). This especially happens when the counterfactuals seem close to reality, as when a person who narrowly came second in a contest dwells on how they almost won. Recent work suggests that people distinguish between two kinds of counterfactual closeness, but here we explore this developmentally. In two experiments, young children (ages 3-7, total N = 100; data collection in progress) saw a story about a race. The runner in the lead tripped on a rock, bringing them to come in last. When children were asked who almost won the race (one measure of counterfactual closeness), they picked the runner who came in second place. By contrast, when asked who easily could have won (another measure of closeness) they selected the character who tripped on the rock. These findings suggest that children differentiate between two ways that alternative unrealized outcomes can be close to reality.

Presenter: Hailey Pawsey
(hailey.pawsey@uwaterloo.ca; she/her)

11:15am – 11:30am
Attachment insecurity and obsessive-compulsive disorder symptom severity: The mediating role of fear of compassion
Aliya McNeil* & Christine Purdon

Obsessive-compulsive disorder (OCD) is characterized by distressing intrusive thoughts and compulsions implemented to neutralize the thoughts or mitigate potential harm. Attachment-focused approaches to conceptualizing OCD are becoming more common, owing to the relationship between insecure attachment and OCD. However, the mechanism responsible for this relationship is unclear. Negative attachment experiences predict increased anxiety and fear of compassion (FOC) which can impede the expression and acceptance of affiliative emotions. FOC also mediates the relationship between attachment insecurity and emotional distress. Thus, we hypothesized that FOC may play a similar role in mediating the relationship between anxious and avoidant attachment insecurity and OCD. After pre-registering the study, 400 undergraduate students completed a set of online questionnaires. A mediation analysis using PROCESS revealed that FOC to self significantly mediates the relationship between anxious and avoidant attachment insecurity and OCD symptom severity. Exploratory analyses revealed that FOC from others is also a significant mediator. The results suggest that targeting FOC may be important when treating OCD. Although cognitive-behavioural therapy is the gold standard treatment, the efficacy is only about 50 percent. As such, research exploring adjunct treatment options is warranted.

Presenter: Aliya McNeil
(am4mcnei@uwaterloo.ca; she/her)

11:30am – 11:45am
To me, or Not To Me…: The potential unintended consequences of self-promotional messaging

Shane Gibson* & Douglas Brown

Our view of ideal leadership is moving from traditionally dominant traits (e.g., selfish, conceited) to more warm traits (e.g., sensitive, humility). Despite this, articles and widespread media on leadership commonly encourage women to engage in self-promotion and credit taking behaviours. Our first study investigates how a leader's engagement in different forms of credit allocation (taking credit vs giving credit) can influence how aligned they are with our leadership schemas. We propose that taking credit demonstrates prototypical leader traits less than the other forms of credit allocation. Our second study looks at how leaders feel toward the different forms of credit allocation. We propose competing hypotheses based on the leadership messaging directed to women and the well-established findings on fear-of-backlash. Data from the first two studies will be discussed, as well as future studies investigating the mechanisms of our findings. Implications for credit taking, leader prototypes and leader messaging will be discussed.

Presenter: Shane Gibson
(shane.gibson@uwaterloo.ca; he/him)

11:45am – 12:00pm
Broad effects of shallow understanding: Explaining an unrelated phenomenon exposes the illusion of explanatory depth

Ethan A. Meyers*, Jeremy D. Gretton, Joshua R. C. Budge, Jonathan A. Fugelsang, & Derek J. Koehler

People often overestimate their understanding of how things work. For instance, people believe they can explain even ordinary phenomena such as the operation of zippers and speedometers in greater depth than they really can. This is called the illusion of explanatory depth. Fortunately, a person can expose the illusion by attempting to generate a causal explanation for how the phenomenon operates (e.g., how a zipper works). This might be because explanation makes salient the gaps in a person's knowledge of that phenomenon. However, recent evidence suggests that people might be able to expose the illusion by instead explaining a different phenomenon. Across three preregistered experiments we tested whether the process of explaining one phenomenon (e.g., how a zipper works) would lead someone to report knowing less about a completely different phenomenon (e.g., how snow forms). In each experiment we found that attempting to explain one phenomenon led people to report knowing less about various phenomena. For example, people reported knowing less about how snow forms after attempting to explain how a zipper works. We discuss alternative accounts of the illusion of explanatory depth that might better fit our results. We also consider the utility of explanation as an indirect, non-confrontational debiasing method in which a person generalizes a feeling of ignorance about one phenomenon to their knowledge base more generally.

Presenter: Ethan Meyers
(emeyers@uwaterloo.ca)

MORNING POSTER SESSION

CLINICAL

Differential Parenting and Sibling Relationship Quality

Isha Dhode*, Laura Colucci, & Dillon T. Browne
(idhode@uwaterloo.ca; she/her)

The COVID-19 pandemic has exacerbated family challenges through increased stressors and new parenting difficulties, which may present themselves as variability in positive and negative interactions towards siblings. Sibling relationships are a prime source of emotional support but can be negatively impacted by differential parental actions. More research on differential parental treatment (DPT) towards siblings in the pandemic can increase understanding of the mechanisms in which COVID-19 related disruption is related to whole family functioning. The prevalence and unavoidability of DPT brings a need to (1) assess pandemic-specific parental stressors and mediations on DPT and (2) assess the associations of DPT with the sibling relationship quality. Data used will be from a sample of 55 Canadian mothers and their children enrolled in an Emotion Focused Family Therapy intervention. This work will examine correlations between COVID-19 stressors and differential parenting on the sibling relationship quality through a multiple mediation analysis. It is predicted that high parental stress is associated with low sibling relationship quality through DPT. Acquiring knowledge about the emergence of DPT during adversity can be an educational for parental stress management and new findings on the contextual emergences of DPT can promote strong, high-quality family relationships.

The Moderating Role of Social Support on the Relationship Between Caregiver Adverse Childhood Experiences and Family Functioning

Imogen Sloss*, Jackson Smith, Dillon Browne, Mark Wade, Sofia Sebben
(imogen.sloss@uwaterloo.ca; she/her)

Adverse Childhood Experiences (ACEs) can be passed onto future generations through complex biopsychosocial mechanisms. However, the presence of social support can lead to resilience and adaptation in caregivers who have experienced early adversity, reducing these negative intergenerational outcomes. Most research on the intergenerational consequences of ACEs has focused on mental health in subsequent generations, while overlooking family functioning as an outcome variable. Thus, the present study addresses this gap by examining the association linking caregiver ACEs (before the age of 18) and current family functioning, and the moderating role of caregiver social support, while controlling for the proximal stress of COVID-19. Data will come from a multinational non-clinical sample (n=310). Caregivers in this sample completed self-report measures to assess caregiver ACEs, family functioning, social support, and family stressors due to COVID-19. Multiple regression analysis revealed that there was a significant association between caregiver ACEs and family functioning (b = .02, SE = .009, p =.023) and caregiver social support and family functioning (b = -.05, SE = .007, p < .001); however, social support did not moderate the relationship between caregiver ACEs and family functioning (b = .003, SE = .002, p = .145). Exploratory analyses were conducted to investigate the three-way interaction between caregiver ACEs, caregiver social support, and COVID-19 stress, which was found to be significant. The results of this study will inform recommendations to potentially reduce the intergenerational transmission of ACEs using family-focused interventions and policies.

Disabled young adults lived experience with social services in the Waterloo-Wellington Region

Victoria Ikeno* & Margaret Gibson
(vikeno@uwaterloo.ca; she/her)

For those who experience disability, navigating social services can be a challenge (Pearson et al., 2021). Previous literature suggests that social support can be helpful for individuals when trying to figure out how to get their needs met (Townley et al., 2013), but most of the literature talks about how it can be used to prevent relapse, and misses how social support can assist individuals in navigating social services. The purpose of this thesis was to investigate the experiences of young disabled adults who were accessing social services in the Waterloo-Wellington Region. Using

Institutional Ethnography (IE), a research method developed by Dorothy Smith to investigate how institutions work from people's everyday experiences (Deveau, 2016), interviews were conducted with 10 participants who were 23-30 years of age, had lived in the Waterloo-Wellington Region for at least two years, had accessed or attempted to access social services, and had lived experiences with disability. Findings identified the work people did to access social services, including relying on social supports, such as networks of family and friends, or on social service providers who help them navigate what is available. Participants also highlighted what is and what is not working for them, including the impact of racism and income disparity, and offered suggestions on how things could be improved. This study adds to the current limited literature on the perspectives of young disabled adults, and can provide insight into how social services can be more accessible, equitable, and effective for those who need them.

Is high social anxiety really that common? Re-evaluating high social anxiety group cutoff scores

Sophie M. Kudryk*, Joshua R. C. Budge, Jolie T.K. Ho, Van Bui, Vanja Vidovic, & David A. Moscovitch
(smkudryk@uwaterloo.ca; she/her)

Social anxiety disorder (SAD) has a yearly prevalence rate between 6.8 – 7.1% (Harvard Medical School, 2007; Kessler et al., 2005). To better capture this prevalence rate in analogue samples, the current study presents updated cutoff scores for the Social Phobia Inventory (SPIN; Connors et al., 2000) and Sheehan Disability Scale (SDS; Sheehan, 1983), along with the recommendation of their combined use. Community-based participants (N = 941) with an SAD diagnosis were compared to non-clinical and clinical control groups. For the SPIN, sensitivity and specificity analyses using ROC curves revealed 28.5 as an optimal cutoff score when non-clinical controls were used as the comparison group. However, when the non-SAD clinical control sample was used, the recommended cutoff score increased to 37.5. For the SDS, the optimal cutoff was 3.5 when using non-clinical controls as the comparison group. This increased to 13.5 when the clinical control group was used. Logistic

regression analyses revealed that, compared to the SPIN alone, the SDS significantly increased the odds of differentiating between individuals with SAD and non-clinical controls, thus supporting combined use of the SPIN and SDS for classifying participants as high in social anxiety. In our poster, we will apply the newly determined cutoff scores to select individuals with high social anxiety from five undergraduate samples from 2018 to 2022. Descriptive statistics illustrating this sampling process will be provided. Together, our findings could improve the accuracy of selecting analogue samples of individuals with high trait social anxiety from community and undergraduate populations.

COGNITIVE

Investigating Motivated Cognition in People's Evaluation of COVID Restriction Research

Joshua R.C. Budge*, Jonathan A. Fugelsang, & Derek J. Koehler
(jrcbudge@uwaterloo.ca; he/him)

COVID-19, like many other politically charged topics today, is a highly polarizing and divisive topic. In past research, motivated cognitions have been shown to play a significant role in creating and maintaining polarised perspectives, and COVID-19 is no different. The present research investigated motivated cognition in evaluation of evidence relating to COVID-19 restrictive measure efficacy. This was investigated by presenting participants with two studies, one showing that restricting non-essential services is effective in reducing the spread of COVID-19, and one showing that it isn't. After reading each study, participants rated the study's methodology for the support it provided for its conclusions, as well as the validity of a methodological criticism of the study. Two measures of motivated cognition were created, one from judgements of study quality and the other from judgements of methodological criticisms. The primary analysis correlated these two measures of motivated cognition with a measure of prior belief, and one of the two correlations was significant. Several additional exploratory analyses were also conducted, from which the nature of motivated cognition became clearer: we found that those who believed restrictions were effective and those with a liberal

political orientation displayed motivated cognition in favour of COVID restrictions. We also found a positive relationship between motivated cognition and the AOT-E. Motivated cognition was not observed in conservative participants. Further research can help to broaden the scope of participants and methodologies employed to gain a better understanding of people's motivated assessment in a more diverse range of opinions about COVID-19.

COGNITIVE NEUROSCIENCE

The Influence of Gender and Sexual Prejudice on Empathic Responding

Seth B. Winward* & Roxane J. Itier
(swinward@uwaterloo.ca; he/him)

Using trait measures, studies indicate that sexual prejudice is negatively related to empathy, and that this relationship is modulated by participant and target gender. We investigated whether these relationships persist using behavioural (state) measures of empathy, outside of previously targeted social contexts. Participants completed trait measures of sexual prejudice and empathy online. One to two weeks later, they completed an online study advertised as a memory study. Participants read brief text vignettes describing heterosexual or homosexual male and female characters in emotionally negative and neutral scenarios and rated their empathy for the target character after each vignette. Empathy ratings were significantly higher for negative than neutral scenarios and female participants exhibited greater empathy than male participants, but there was no interaction with target sexual orientation or target gender. In line with previous research, trait empathy was positively correlated with valence differences in empathy ratings, negatively correlated with trait sexual prejudice and was higher for female than male participants (all statistically significant). Although the relationship between sexual prejudice, gender, and empathy was not supported at the behavioural level, the results illustrate a potential disconnect between trait and state measures of empathy. Issues with habituation, fatigue, and social desirability bias, which may confound state measures of empathy, have implications for online studies on empathy.

Exercising, Mind-wandering, and Being Neurotic

Joshua Leung* & Mike J. Dixon
(yh5leung@uwaterloo.ca; he/him)

Prior research on mind-wandering suggested that spontaneous and deliberate mind-wandering are differentially correlated with various cognitive (e.g., working memory, attention control) and dispositional variables (e.g., neuroticism). Prior research also hinted at the possibility that aerobic exercise could influence spontaneous and deliberate mind-wandering differently via inducing changes in these aforementioned cognitive and dispositional variables. There has, however, been a lack of research that directly examines the relationship between aerobic exercise, spontaneity of mind-wandering, neuroticism, and depression. This study thus aimed to rectify this gap by attempting to assess the inter-relations among aerobic exercise, trait and state levels of spontaneous and deliberate mind-wandering, neuroticism, and depression. This study also investigated the contents of spontaneous and deliberate mind-wandering in terms of their time orientation. 191 participants' aerobic exercise habits, trait levels of spontaneous and deliberate mind-wandering, neuroticism, and depression were assessed using self-report questionnaires, while participants' state levels of spontaneous and deliberate mind-wandering, as well as their contents, were assessed via thought probes during the metronome response task. Of utmost importance, it was found that aerobic exercise is unrelated to both spontaneous and deliberate mind-wandering, even after controlling for potential suppressors (i.e., neuroticism and depression). The results suggest that aerobic exercise is not a determinative factor in mind-wandering tendencies, and that an individual's mind-wandering patterns may theoretically be predicted by other healthy living habits (e.g., sleep, diet), instead of physical activity.

Instagram, Depression, and Dark Flow: Using Social Media as a Maladaptive Coping Mechanism

Sara Ahmed* & Mike J. Dixon
(sara.ahmed@uwaterloo.ca; she/her)

Instagram is a popular social media platform which uses algorithms to tailor content to the specific interests of individual users. We proposed that this tailored content induces a flow state where users become completely absorbed and time passes imperceptibly, creating a highly satisfying experience. For those who use Instagram to escape from depression, Instagram may provide the relief that they seek, but at a cost: neglecting real-life social supports and work/academic commitments. This neglect leads to further problems that prompt greater Instagram dependence. We demonstrated that Instagram's algorithms were effective using a repeated-measures design. Participants (n = 114) experienced significantly greater flow and positive affect when using their tailored-content Instagram compared to a generalized account based on the interests of 30 random users. As evidence for our proposed cycle of dependence, we showed significant associations between depression, flow, and a measure of problematic Instagram use, as well as associations between being motivated to use Instagram to escape problems and problematic Instagram use. These results suggest that, at least for a subset of individuals with depression, Instagram serves as a maladaptive, escape-coping mechanism which induces flow and elevates mood, but ultimately leads to more problems due to overextended Instagram use.

Looking for commonalities and differences in item and associative memory in mTBI and older adults

Adam W. Cox* & Myra A. Fernandes
(adam.cox@uwaterloo.ca; he/him)

We measured memory for single words (Item), as well as pairs (Associative), and investigated the role of attention, aging, and history of mild traumatic brain injury (mTBI) on performance. Individuals with a history of mTBI often complain of difficulties in focusing attention, and lingering memory problems. Many of these cognitive complaints are also voiced by typically aging older adults (OA). Given this, we examined whether the cognitive signatures in OA (n=34) and mTBI (n=35) would be similar, with both groups showing a memory deficit relative to young adults (n=35) when attention was divided during encoding, and in Associative memory. Participants were shown word pairs, under either full or divided attention encoding conditions. We found the expected main effect of test type on retrieval, with better performance on the Item than Associative test. We also found a main effect of attention with poorer performance under divided than full attention. Test type interacted with Group such that older adults suffered significantly more decline in memory for associations than young and young with mTBI. As well, self-ratings of pre versus post levels of mental fatigue were significantly higher in OA. Though, the mTBI group showed a greater numerical decline in Associative memory when performed under full compared to divided attention conditions, it was not statistically significant due to high variability across groups. Contrary to past suggestions, results suggest aging and mTBI manifest differently on tests of memory. Documenting reliable memory deficits in mTBI is hampered by increased variability in this group.

DEVELOPMENTAL

The relation between social fearfulness and prosocial behavior: A meta-analysis

Sebastian P. Dys, Sarah D. English*, Mya Dockrill, & Heather A. Henderson
(senglish@uwaterloo.ca; she/her)

Prosocial behavior is a hallmark of social competence and is related to positive psychosocial outcomes, such as being more accepted by peers and experiencing fewer externalizing behaviors (Howes & Phillipsen, 1998; Layous et al., 2012). Yet, whether children behave prosocially varies due to individual and situational factors. One individual-level factor that has been linked to prosocial behavior is social fearfulness, which refers to distress in social situations (e.g., shyness, social anxiety, behavioral inhibition; Eisenberg et al., 2006; Goldsmith, 1996). The findings on this relation, however, have been inconsistent, with many studies reporting negative links (e.g., Beier et al., 2017), but others finding null or even

positive relations (e.g., Farmer & Rodkin, 1996). Thus, a synthesis of these research findings is needed, as well as an examination of factors that may moderate this association. We conducted a systematic review and meta-analysis on the relation between social fearfulness and prosocial behavior and tested the moderating role of situational and demographic factors on this relation. Our meta-analysis yielded a small though significant pooled correlation of r= -.066 (p<.001). Regarding moderator analyses, we found that older samples showed weaker correlations between social fearfulness and prosocial behavior, Œ≤=.011, SE=.005, p=.024, and that level of task intensity significantly moderated this link (p=.024). In sum, these findings demonstrate a link between social fearfulness and prosocial behavior, which may vary depending on individual and situational characteristics. We will discuss these findings in relation to current theorizing on social fearfulness and prosocial development.

Which social factors are associated with school belonging? A quantitative study among newcomer and non-newcomer youth in Sweden

Serena McDiarmid*, Fatumo Osman, Anna Sarkadi, & Natalie Durbeej
(sdmcdiar@uwaterloo.ca; she/her)

Feeling a sense of belonging at school is associated with important positive outcomes for youth and requires youth to engage in positive social relationships. Yet there is a limited understanding of the social factors most associated with youths' school belonging and limited evidence about whether correlates of school belonging vary for marginalized groups like newcomers compared to majority groups. Sweden provides an important context for investigation of these issues because, over the past two decades, the country has experienced an influx of asylum seekers and educational reforms that have altered the composition and functioning of Swedish secondary schools. This study addresses these gaps by (1) investigating which of eight social factors are associated with school belonging among diverse Swedish youth, and (2) examining whether newcomer status moderates the relationship between social factors and school belonging. Hierarchical regression and moderation analyses were used to analyze data from 14 to 19 year-old (n = 233) newcomers and non-newcomers in Sweden. An exploratory factor analysis revealed that the school belonging measure contained two factors: positive perceptions and negative perceptions (reverse coded). For both, stronger school belonging was associated with lower perceived ethnic discrimination. Positive perceptions of school belonging were also associated with more prosocial behaviours and lower emotional problems. Negative perceptions of school belonging were associated with more peer problems. Notably, quantity and quality of peer relationships were not associated with school belonging. There was no consistent evidence of newcomer status moderating the relationship between social factors and school belonging. These results highlight factors associated with school belonging which are modifiable and amenable to intervention or impact by policy, ethnic discrimination, prosocial behaviour, and emotional and peer problems. The absence of moderation by newcomer status suggests that school belonging interventions or related policies are likely to affect newcomer and non-newcomer students similarly.

What goes where? Heuristics children use to infer where things belong

Terryn Kim* & Ori Friedman
(t68kim@uwaterloo.ca; she/her)

How do we learn where objects belong? We propose that people often infer that objects belong where they were first seen. We saw this pattern emerge in children between the ages of 3 and 7. We showed children (N=130) scenarios where an object was moved from a first to second location by either a human or a dog. The next day, the object appeared on the floor, and participants were asked where it belonged. Regardless of which agent had moved it, most children indicated that the object belonged in the first location, and we saw this pattern at all ages. Overall, these results suggest an early emerging tendency to infer that objects belong where they were first seen.

Inferring friendships from mutual connections

Claudia G. Sehl*, Ori Friedman, & Stephanie Denison

(claudia.sehl@uwaterloo.ca; she/her)

Facebook sends users friend suggestions when they have friends in common with others. However, do people actually consider mutual friendships when inferring whether two individuals are friends? For instance, suppose that Alice and Bob have two mutual friends, but Alice and Carl have thirty mutual friends. Based on the number of mutual friends alone, we may infer that Alice is more likely to be friends with Carl than Bob. Previous work has shown that people can infer missing relationships in incomplete triads (e.g., Freeman, 1992), however, it is unknown if people's inferences are influenced by the number and proportion of mutual friends. Across three preregistered experiments, we examined if people (N=352) rely on relevant numerical factors when judging whether individuals are friends based on their mutual connections. Participants were shown networks of two target people and their friends within a group, and judged if the targets were friends with each other. Experiment 1 manipulated the number of mutual friends and the number of friends each target had. Experiment 2 manipulated the proportion of mutual friends to the number of friends each target had. People were more likely to infer friendships when I) targets had more mutual friends; II) targets had fewer friends each; and III) there was a high proportion of mutual friends. In sum, our work shows that people consider relevant numerical information about mutual friends when making friendship judgments.

Creating Effective Surveys for Early Childhood

Ana Ljujic*, Serena McDiarmid, & Heather A. Henderson

(aljujic@uwaterloo.ca; she/her)

The Children and Youth Planning Table of Waterloo Region is developing the Waterloo Region Belonging Survey - Early Years Version (WRBS-Early) to systematically collect data about children's sense of belonging to their community and community-based programs they attend. Development of the WRBS-Early began with a literature review, examining effective methods for surveying children ages 3-6. It is important to learn more about data collection with young children so that collected data will be an accurate representation of the children's feelings and behaviour. Creating biases, such as through leading questions, must be avoided. Furthermore, surveys should maximize understanding and clarity for children, while minimizing the support needed from adults. This literature review goes over dozens of articles to find proper techniques and question formats to best collect data on belonging in young children. Information from reviewed articles was synthesized and key finds, as well as critiques of the literature will be presented. Additionally, the pilot version of the WRBS-Early will be presented, with reference to how the literature review informed its development.

SOCIAL

Identity-Based Variation in How Organizational Cues Impact Expected Inclusion

Areej Rizvi*, Jessica Trickey, & Hilary B. Bergsieker

(a22rizvi@uwaterloo.ca; she/her)

Organizations' efforts to demonstrate their commitment to equity, diversity, and inclusion (EDI) may backfire if they appear inauthentic to members of marginalized groups (Kroeper et al., 2022). The current research investigates (a) which organizational features - leader profiles or employee reviews - effectively convey an inclusive workplace and (b) whether such perceptions vary based on participants' gender, race, and political orientation. We recruited 423 American adults via MTurk (59% men, 41% women, <1% nonbinary; 71% White, 15% Black, 4% multiracial, 3% Latine, 9% additional groups; 46% liberal, 15% moderate, 40% conservative). Participants imagined being managers at a technology company presented in one of four randomly assigned (factorial) conditions: upper-level manager profiles (EDI-related vs. generic priorities) X employee reviews (inclusive vs. control environment). Inclusion conditions were designed to convey a supportive environment and values (e.g., "everyone gets a voice in decisions"). Profiles and reviews did not affect anticipated personal belonging (counter to predictions), but did influence estimates of which groups would

feel included at the company. In general, women anticipated that male employees would feel more included than female employees. However, the presence (vs. absence) of company inclusive cues improved their estimates of women's inclusion. In general, participants also estimated that White employees would feel more included than employees of colour. Paralleling results for women, participants of colour expected that the presence of inclusive cues would marginally increase their group's inclusion. Relative to liberal participants, conservatives (especially White men) anticipated feeling less personal belonging, regardless of company cue conditions.

Social Support in Response to Racism: Validating Versus Reframing

Pamela Campos-Ordóñez*, Erik J. Jansen, Sherman Kwok, Denise Marigold, & Hilary B. Bergsieker
(pcamposo@uwaterloo.ca; she/her)

People of color (POC) commonly experience racism, yet little research examines how POC wish to be supported after instances of discrimination. This research draws on close relationship and intergroup relations literature to theorize which types of social support are perceived as more responsive. In past experimental work, White people intended to give negative validation (acknowledging difficulty) more than positive reframing (downplaying negatives) after reading about racial discrimination experiences. The current experiments (N = 435) examine how such responses are received by POC (and Whites). Participants (270 POC, 165 White) viewed mock Facebook posts where POC shared racial discrimination versus nonracial negative experiences, then rated the supportiveness of validating or reframing responses from Whites. POC (and Whites) rated validation as more supportive than reframing, especially for reactions to racial (vs. nonracial) experiences. In the racial experience condition, negative validation was perceived as even more supportive when participants more strongly attributed the experience to race. Implications for providing responsive support to POC facing racism are discussed.

Effects of inclusive norms and diversity statements on intended allyship and advocacy to challenge discrimination

Jessica Trickey*, Areej Rizvi, Hilary B. Bergsieker
(jtrickey@uwaterloo.ca; she/her)

Many companies signal support for diversity (e.g., via statements and training) yet show group-based disparities, with people of color or women undervalued or underpaid relative to White or male coworkers. For White women, who may experience both race privilege and gender marginalization, what factors motivate action against bias, either as an ingroup advocate or an outgroup ally? In a 3 (company cues) x 2 (pay gap) design, 459 White American women with work experience viewed company mission statements and employee profiles containing weak, mixed, or strong inclusion cues. Next, a salary gap showed either racial or gender disparities, creating an opportunity for allyship or ingroup advocacy. Although White women were more willing to act against the race (vs. gender) gap, this difference was smaller for women who more strongly identified as White. Also, higher conservatism predicted less willingness to challenge any pay gap, but the inclusive norms condition reduced this difference for certain actions (e.g., alerting other managers about the gap). Finally, inclusive (vs. control) norms lowered fear of backlash, resulting in stronger action intentions. A follow-up study will examine the specific effects of each inclusion cue on allyship, fear of backlash, and psychological standing in response to a salary gap in a gender- and race-diverse sample.

Developing new ways to deliver effective failure feedback

Candice Rubie* & Abigail Scholer
(carubie@uwaterloo.ca; she/her)

A critical factor that facilitates progress and engagement in goal-pursuit is feedback - information about how people are doing in relation to their goals. While both success and failure feedback can be powerful tools, failure feedback is especially beneficial for subsequent goal-pursuit, as people are more likely to increase their effort, motivation, and commitment to improvement after receiving failure feedback (e.g., Fishbach et al., 2010; Vancouver et al., 2010). However, despite considerable evidence that

failure feedback can be incredibly beneficial (Abi-Esber et al., 2022; Zenger & Folkman, 2014), research also suggests that it can be difficult to receive. Indeed, feedback receivers often tune out failure feedback because they find it ego-threatening and fail to reap its benefits (Audia & Locke, 2003; Eskreis-Winkler & Fishbach, 2019). The present three studies (N = 293) build on and go beyond research suggesting that an individual's mindset influences their response to failure (Dweck, 1999) to propose and test specific tools that can be incorporated into failure feedback messages to recontextualize failure as growth and encourage feedback-receivers to learn from their failures. Initial investigations using hypothetical scenarios suggest that people experience greater motivation, goal-commitment, and self-efficacy after receiving failure feedback with the growth frame (vs. mere positivity or no frame; Studies 1 and 2). Moreover, feedback-receivers perceive the feedback-provider significantly more positively after receiving failure feedback with the growth frame (vs. no frame; Study 3). These findings suggest that the growth frame may provide a more effective way to deliver failure feedback.

AFTERNOON POSTER SESSION

CLINICAL

Effects of social anxiety and self-schemas on the nature, accessibility, and appraisals of positive versus negative social autobiographical memories

Katie E. Martin*, Sophie M. Kudryk, & David A. Moscovitch
(k35marti@uwaterloo.ca; she/her)

Individuals with high social anxiety (SA) tend to exhibit a negative memory bias, in which their sense of self is fueled by negative, schema-congruent memories, while the selective encoding and retrieval of such memories is reciprocally fueled by negative self-schemas (Moscovitch et al., in press). In this study, we investigated the effects of SA and self-schemas on the nature, accessibility, and appraisals of positive versus negative autobiographical memories. Participants recruited through Prolific (N = 358) were randomized to one of two conditions in which they were instructed to retrieve and orally narrate a positive or negative autobiographical memory. Participants rated the subjective characteristics of their memories on multiple dimensions, and transcribed memory narratives were coded using an automated software for the number of negative and positive words. Aligning with hypotheses, findings revealed that when participants recalled a negative memory, individuals who endorsed stronger negative self-schemas rated their memory as more impactful on their views of self, others, and the world. Conversely, positive memories were rated as more impactful for participants who endorsed stronger positive self-schemas. Finally, results showed that there was a significant interaction between SA and condition on participants' ratings of memory impact. These results inform our understanding of the interactive influence of self-schemas and SA on autobiographical memory retrieval and appraisal, with potential to guide future research on memory-based therapeutic interventions for SA.

Environmental Stressors, Routines, and Mental Health in Children: Are Sibling Relationships Protective?

Lillian Eckert*, Jasmine Zhang, Carey Lau, Imogen Sloss, Mirisse Foroughe & Dillon Browne
(l2eckert@uwaterloo.ca; she/her)

Family stressors, such as job loss and economic insecurity, are established correlates of mental health challenges in children, partially due to their disruption in routines. Though many children navigate routines with siblings, relatively fewer studies have explored the buffering influence of siblings during times of stress. Several studies show that close, warm, and cooperative relationships with siblings can offset the consequences of adversity for mental health. This study extended the literature by examining the relationship between family stress and children's mental health via children's own routines, and the potential protective role of sibling relationship quality. For routines, we specifically consider physical activity, sleep, and screen time. Data come from an international sample of parents/caregivers (n =343) with at least two children. Caregivers responded to online surveys between September - October 2021. A moderated meditation analysis was conducted, where the

pathway linking stressors, disruption in routines, and general mental health symptoms (i.e., internalizing, externalizing) was examined as a function of sibling relationship quality. Preliminary results have found an interaction between family stressors and sibling relationship quality on problematic child behaviours. These results suggest a positive sibling relationship offers a protective element, buffering the relationship between family life stress and problematic behaviours. Findings will be interpreted in relation to current guidelines for lifestyle behaviours.

Increasing cultural literacy in diagnostic approaches and assessment tools to provide appropriate mental health services to refugee families: Issues and challenges for delivering mental healthcare to refugees in Waterloo Region

Jean de Dieu Basabose, Benjamin Nunes*, Noor Parray, & Dillon T. Browne
(bnunes@uwaterloo.ca; he/him)

The purpose of this study is to explore and discuss the issues and challenges related to the diagnostic approaches and assessment tools used to provide mental health services to refugee families in Waterloo Region. The study highlights that refugee families, given their potential mental health vulnerabilities, should have access to better and more appropriate mental health services. It argues that the quality of services may be affected by various issues relating to the cultural appropriateness, validity and reliability of approaches and tools when used to assess and treat refugee family members with mental health problems. It also questions the appropriateness and effectiveness of standardised Western tools used to diagnose the refugee population, as well as the time allocated to screening, assessment and diagnosis of refugees. The study intends to contribute to the improvement of cultural literacy to improve mental health services for refugees by engaging researchers and practitioners to revisit and re-examine issues identified as sensitivities that may affect the quality of the service provision.

COGNITIVE

The moral risks of ownership: Exploring moral responsibility and credit for authorities of autonomous agents

Zofia Washington* & Ori Friedman
(zjwashin@uwaterloo.ca; she/her)

We often see stories of hero dogs receiving medals for bravery, and negligent dog owners being sued for dog attacks. This example highlights a praise-blame asymmetry for moral judgments towards subordinates (e.g., dogs) and their owners or authorities. We investigated this asymmetry across two experiments on 344 adult US residents. In Experiment 1, we examined praise and blame judgments for a subordinate's act over a range of subordinate-authority relationships: pet-owner, robot-owner, child-parent, and employee-employer. Participants made forced-choice ratings of praise and blame deservingness between the subordinates and their authorities. We found a clear praise-blame asymmetry in all relationships except employee-employer, where participants consistently blamed authorities (owners, parents) more than their subordinates (property, children), but praised them less or equally. Out of all the authorities examined in this experiment, owners were held the most blameworthy and praiseworthy overall for their property's actions. In Experiment 2, we examined praise-blame judgments over the four relationships through separate praise and blame judgments towards the subordinate and the authority. Furthermore, we used vignettes intended to reduce perceptions of the authorities as negligence. When subordinates produced a good outcome, all subordinates received more praise than their authorities. However, when dogs and robots produced a bad outcome, they were blamed less than their owners. Altogether, this study provides evidence for a double standard of ownership and authority, where owning semi-autonomous property poses potential moral consequences, not balanced by equal opportunities for credit.

For-Profit Associations in Charitable Donations: Implications for Charity and Donor Reputation

Ariel Burbano* & Samuel Johnson
(acburban@uwaterloo.ca; she/her)

Are all donations seen as a good donation? Past research suggests no. When fundraising organizations profit through charities, participants prefer to raise less donations in order to minimize organizational profit (Newman & Cain, 2014). Anti-profit beliefs influence donating behaviours at the charities expense (Bhattacharjee et al., 2017). As charities rely on their reputation to secure donations, this is an important consideration. As donating is often used as a reputation management strategy (Van Vugt & Hardy, 2010), donators are also concerned with reputational impacts, which rely on factors such as personal sacrifice and social benefit (Johnson et al., 2022). Charities are expected to put people's donations towards the cause and avoid profit. However, it is limiting for charities to be expected to execute all organizational services, such as fundraising, when more could be accomplished by outsourcing. The caveat is that these outsourced partners are often for-profit, bringing the weight of anti-profit beliefs. In this proposal, we aim to investigate the impacts of profit associations on charity and donor reputation and perceived donation effectiveness in various contexts. The participants of this study will be presented with vignettes that describe core transactions and subsequent ratings. We hypothesize that charities will experience more reputational costs when for-profit transactions go towards enabling the charity as an organization. On the other hand, donators will experience less reputational costs when their donations go directly towards the cause. This information will provide insight on how charities can maximize organizational efficiency while protecting the reputations of themselves and their donators.

Judgements of Generosity

Ashley Choucroun*, Alina Wirth*, Natalia Benavides Guajardo, Yvonne Fung, Derek Koehler, & Alexandra Van Der Valk
(achoucro@uwaterloo.ca, awirth@uwaterloo.ca; she/her)

To encourage charity fund-raising efforts, many governments provide rebates on charity donations through income-tax deductions or offer matching subsidies where each dollar donated is matched with a dollar from the government. Prior research has shown matched donations as more effective than functionally equivalent rebates at increasing charitable donations. One reason for the discrepancy is that the donation types have different framing effects, affecting a person's perceptions of generosity. Our study seeks to replicate a study by Chan, Knowles, Peeters, & Wolk (2022), who tested the hypothesis that matched donations are preferred and more effective as they invoke a cooperative frame unlike rebates, which invoke a reward frame. Replicating their design, participants in our study read about two hypothetical donors, one who made a charitable donation under a match incentive, and the other under a rebate incentive. They were asked whether they felt the first donor was more generous, the second donor was more generous, or if they were equally generous. Participants were then asked to provide reasoning for their answers to determine why the discrepancy between rebates and matches exists. Our results show the discrepancy between matches being preferred over rebates may not be as large as previous research suggests. Furthermore, the framing effect may be a reason why matches are preferred, however our results did not support the rational surrounding a cooperation vs. reward frame.

COGNITIVE NEUROSCIENCE

Active and visually guided navigation in virtual reality (VR) benefit route memory

Yadurshana Sivashankar*, Helene Sauzeon, & Myra A. Fernandes
(ysivasha@uwaterloo.ca; she/her)

We compared memory for routes travelled, encoded using different navigation strategies. Participants explored virtual reality (VR)

environments, created based on real-world map layouts of cities, and were asked to explore each for 40 secs with the goal of finding a gold star. Navigation strategy was manipulated within-subjects, randomly, and required either actively self-initiating decision-making about the route of travel, or following a visually-guided route, with volitional control of movements using VR paddles, relative to passive viewing of a pre-selected route. Following encoding, participants re-entered each map, and were asked to "re-trace" the exact route they had traveled. We found an effect of Navigation-type on route overlap accuracy such that actively self-initiated and visually-guided navigation benefited accuracy significantly more than passively-guided. A regression showed that total time spent at intersections at encoding predicted route overlap following active navigation, whereas number of stops and total intersections traversed was predictive following guided navigation. Findings suggest that control of movements and pausing at intersections during initial exploration maximizes memory for routes travelled.

Representation of Belief: Examining Ranking Theory

Hanbin Go* & Britt Anderson
(h2go@uwaterloo.ca)

It is unclear how humans represent environmental uncertainty. While the common stance is that humans use probability theory to represent uncertainty, this may not be sufficient to explain how humans form and represent beliefs. This study explores an alternative account of belief representation known as Ranking Theory. We investigate whether people can use ranking functions to grade degrees of belief and disbelief in various scenarios where the objective probability is unknown. Three experiments were conducted to examine the relationship between subjective probability and ranking functions. Experiment 1 and 2 (N = 168, N = 63) showed consistent negative ranking responses across all questionnaires, but revealed variability in subjective probability responses for the thresholds of disbelief and belief, which varied depending on context. In contrast, Experiment 3 (N=200) revealed a log-odds relationship between subjective probabilities and two-sided ranks, providing a clearer picture of the relationship between belief representations and subjective probability. Furthermore, our findings indicate that people struggle to understand set theory and the law of disjunctions, as evidenced by participants' ranking responses that fell between the minimum and maximum rank of the two propositions. Nonetheless, Ranking Theory provides a useful way of measuring beliefs, and people seem to be consistent in their responses. In conclusion, our findings contribute to our understanding of how humans represent uncertainty and provide insight into alternative models of belief representation. Our research suggests that probability alone may not be sufficient to explain belief formation and revision, and Ranking Theory provides a promising alternative.

Chatterbox: Exploring the effects of chat messages in online lecture environments

Jackie Heitzner*, Effie J. Pereira, Samantha Ayers-Glassey, Bruno Korst-Fagundes, & Daniel Smilek
(jheitzner@uwaterloo.ca)

The COVID-19 pandemic resulted in a drastic increase in online learning, as teaching was heavily conducted through video conferencing platforms in lieu of traditional classroom settings. Due to the recency of this shift, there is a lack of research on the topic of online learning and how cognitive processes like attention and memory are impacted by these non-traditional learning environments. For example, components of online learning like chat messages, where students can pose questions and receive answers from other students, may affect both attention during lectures and memory consolidation for lecture content. For this reason, we wanted to explore the impact of chat messages on attention and memory for an online videoconferencing lecture. To do so, we asked participants to watch an online lecture during which pre-programmed and intermittent chat messages were either a) not present, b) present and relevant to the lecture content, or c) present and irrelevant to the lecture content. After the lecture, participants were asked to answer questions about their subjective attention during the lecture, as well as to complete a short multiple-choice memory test regarding the lecture material presented to them. We will present

findings on the relationship between subjective attention and memory retention with regards to the presence and relevancy of chat messages to better understand how specific components of online learning impact cognitive processing.

Predicting Positive Affect in Video Gaming with Psychophysiological Arousal, Subjective Arousal and Subjective Flow

Monica Tsang*, Tyler B. Kruger, Chanel J. Larche, & Mike J. Dixon
(m3tsang@uwaterloo.ca; she/her)

Our study examined how arousal and flow predicted levels of positive affect in 58 videogame players using the desktop arcade game Winterbells. While arousal and flow are frequently examined in video game research, this study examined their combined effects in accounting for positive affect variance. We used an ABBA experimental design, where 'A' and 'B' denoted the control and game epochs respectively, to assess gamers' psychophysiological reactions during video gameplay while participants heart rate (HR) and skin conductance levels (SCLs) were recorded. SCLs were significantly higher in the game epochs compared to the control epochs. Surprisingly, HR failed to mirror these effects. Using a hierarchical multiple regression framework, we showed that while both subjective and objective arousal (HR) during game epochs predicted positive affect, flow significantly added to the ability to predict positive affect. Based on this research, measurement of HR, SCL and flow can aid in the predictions of positive affect for future videogame development.

Levels of Mind Wandering

Adrian Safati* & Daniel Smilek
(absafati@uwaterloo.ca)

When "mind wandering" our thoughts shift away from our current task and our immediate external environment and drift to an internal stream of consciousness. Our capacity to spontaneously generate thoughts allows for the rich inner dialogues that shape our lives. Daily experiences require us to balance our attention between our wandering thoughts and the world around us. It's clear from prior research that we have a capacity to shift the balance of our attention in response to changing environmental demands, but it remains an open question to what extent individuals can consciously direct their engagement with mind wandering while environmental demands are held constant. To test individuals' capacity to control their "levels" of mind wandering during a task, 150 participants were asked to perform 4 blocks of a simple metronome response task, in which they pressed a spacebar in sync with a steady audio tone. At the start of each block participants were given instructions to try to mind wander either 20, 40, 60, or 80% of the time. Participants were randomly assigned to one of three groups determining the order in which they received their mind wandering instructions. Group 1 was given ascending instructions and told to mind wander 20->40->60->80% of the time, Group 2 was given descending instructions (80->60->40->20%), and Group 3 received their instructions in a random order. Thought probes were distributed throughout the task to sample participants' experiences of spontaneous and deliberate mind wandering. Video recordings were used to capture how participants embodied their mental state.

DEVELOPMENTAL

Children's social perceptions and metaperceptions during an initial interaction with an unfamiliar social partner

Mya Dockrill*, Linda Sosa Hernandez, Kristie L. Poole, & Heather A. Henderson
(mdockril@uwaterloo.ca; she/her)

Children's ability to accurately perceive the impression they are making on someone else, may impact how they form friendships. In the current study, following an online dyadic interaction with an unfamiliar peer, we a) compared children‚Äôs perceptions to their metaperceptions, and b) examined agreement between dyad members' perceptions and metaperceptions. Children (N = 126, 73 dyads) aged 9-to-12 were randomly paired with an unfamiliar peer of the same age and gender and participated in a five-minute unstructured "get to know each other" interaction. Children then completed the Perceptions and Metaperceptions Questionnaire, assessing their perceptions and metaperceptions for positive and negative traits. Preliminary results suggest that children perceived their peers more positively

than negatively (t(125) = 21.10, p < .001) and believed their peer thought more positively than negatively of them (t(125) = 8.42, p < .001). Children‚Äôs beliefs about how positively their partner felt about them were unrelated to their partner's actual positive ratings (r(125) = .02, p = .873), suggesting it was difficult for children to tell when their peer was perceiving them positively. A significant association between children‚Äôs metaperceptions of how negatively their partner felt about them and their partner's actual negative ratings (r(125) = .18, p = .046), suggested that children were more accurate in noticing when their peer felt negatively about them. Overall, children consistently believed their peer felt less positive and more negative about them than they really did. This tendency to underestimate how well one is being perceived by others may be adaptive in the development and maintenance of relationships.

Children's Engagement and Learning with Museum Activities

Sabrina D. Lutchmeah*, Elizabeth Attisano, & Stephanie Denison
(slutchme@uwaterloo.ca; she/her)

Engagement and learning go hand in hand for children in a museum: hands-on experience with museum activities leads to increased interaction, which in turn fosters learning. Time spent and frequency of interaction with a museum activity are related to later learning for children (Sanford, 2010), and positive feelings such as enjoyment encourage interest in a topic (Griffin, 2004). The museum that my thesis data was collected at is the Waterloo Regional Museum (WRM). WRM is a local living history museum that shows visitors what life was like in the Waterloo Region in 1914. Forty-four parent-child dyads (children's mean age = 6.22 years; range = 4-9 years) participated in a museum staff led activity. These activities changed on a rotating basis and consisted of typical activities individuals would do in 1914, such as barn chores and cream separating. The goal for this thesis is to examine children's engagement and perceived learning opportunities when participating in these activities. Children were highly engaged in the activities, spending significant time participating. Their perceived enjoyment ratings were moderate (mean score =

3.4) on a 5-point Likert scale. Learning opportunities were assessed through the number of questions asked by children, parents and staff, and overall knowledgeability, which was high (mean score = 3.7) on a 5-point Likert scale. Some activities, like barn chores, had higher question rates than others, like paper dolls. Results will assist WRM as they can understand the effectiveness of their programming and add to the literature about how and what children learn in informal learning environments.

Examining the association between parent-child interactions and joint attention: An eye tracking study

Nadine Ghanem*, Stephanie Denison, & Heather A. Henderson
(nghanem@uwaterloo.ca; she/her)

As young children develop cognitive skills, they are supported by interactions with those who are more experienced than them, especially their parents. One way that children do this is by engaging in "joint attention", triangulating attention between a social partner and objects/events (Mundy & Newell, 2007). When faced with a challenging task, the ways in which parents guide their children's problem-solving efforts can potentially dictate the child's ability to complete the task. The goal of the proposed study is to use dyadic mobile eye-tracking to investigate parent- and child-led joint attention bids and parenting behaviours during problem-solving. Parent-child dyads will be randomly assigned to two conditions in which they are either asked to complete a challenging puzzle as they normally would or told they must complete it within a strict time limit. The frequency and duration of gaze fixations and joint attention for different target areas of interest (e.g., parent/child face, hands, puzzle, etc.) and parenting behaviours (i.e., positive reinforcement, teaching, directives, intrusion) during the task will be coded. It is predicted that the strict condition will lead to more parent-led joint attention bids and that the effect of the condition will be mediated by the observed parenting behaviours. The findings from the proposed study will provide a deeper understanding of how parent-child interactions can impact children's problem-solving efforts using a naturalistic, first-person approach. This

research will contribute to the existing literature surrounding joint attentional processes and provide clear evidence of parenting behaviours that can either support or hinder children's problem-solving skills.

Community Belonging: A Middle Years Childhood Survey

Yasmine Bulgaru*, Serena McDiarmid, & Heather A. Henderson
(ybulgaru@uwaterloo.ca; she/her)

A survey to measure the sense of belonging of 8–13-year-olds in the Waterloo Region is currently being developed in collaboration with the Children and Youth Planning Table. It is important to measure belonging among children because a strong sense of belonging can be protective. Past research shows that belonging has a significant impact on a range of factors associated with wellbeing (Allen & Bowles, 2012). Here we present the plan for a proposed validation study. The study aims to produce a validated tool that can be used by community organizations and program facilitators to make evidence-based decisions about their work. The validated tool will inform program facilitators on the program successes and areas of growth to help improve supports for local children. The validation study will examine the validity, reliability, and underlying factor structure of the survey.

INDUSTRIAL-ORGANIZATIONAL

Codeswitching in the job interview: How candidate race and nonverbal communication affect candidate trust and hiring intentions

Amrit Kaler* & Wendi Adair
(a6kaler@uwaterloo.ca; she/her)

Individuals of marginalized groups often alter their behaviours in order to be perceived as more competent, professional, and receive fairer treatment in organizations. However, little is known about how doing so impacts interpersonal and hiring outcomes, specifically in the job interview context. In particular, the proposed study is concerned with gaining an understanding of factors underlying candidate interpersonal trust and further, intentions to hire a candidate. Drawing from the stereotype content model, it is proposed that a South Asian candidate's nonverbal communication, if consistent with stereotypical cues associated with their race, may reinforce existing racial stereotypes as reflected by interviewer perceptions of candidate warmth and competence. In turn, interviewers will rate candidates as lower on interpersonal trust and be less inclined to hire them. However, if a South Asian candidate's nonverbal communication is inconsistent with stereotypical cues associated with their racial group and instead, aligns with the standard workplace norms found in Western countries shaped by the White norms of professionalism, South Asian candidates are expected to receive higher ratings of warmth and competence by interviewers. Interviewers are predicted to rate these candidates as higher on interpersonal trust and be more likely to hire them. The proposed model will be tested using 2 studies. First, we obtained empirical evidence for nonverbal communication stereotypes of South Asian people and White people. Second, we plan to investigate participants' self-reported perceptions of warmth and competence and subsequent evaluations of interpersonal trust of a fictitious job interview candidate in a between-subjects experimental study using video stimuli. The theoretical and practical implications of this research will be discussed.

Reading Between the Lines: Exploring Gender Differences in Nonverbal Communication and Conflict Management

Wendi L. Adair, Dayna van der Zande*, & Maimuna Khandaker*
(d24vande@uwaterloo.ca; she/her)

This exploratory study investigates whether the relationship between nonverbal communication norms and conflict management preferences differs by gender. We use correlational analyses to test these relationships in a sample of 357 participants who completed a two-wave on-line survey measuring nonverbal communication norms (Adair et al., 2016) and conflict management preferences (Rahim, 1983; Addie, 2020). Results indicate that the way in which communication style is related to conflict management preferences differs for men and women, for example adjusting one's communication to save face was positively related to dominating styles for men and avoiding styles

for women. We explore these results in relation to theories of social role norms. Results contribute to our understanding of demographic and communication norms that predict conflict management preferences and offer avenues for future research.

SOCIAL

Helping yourself help others: Perceptions of helpfulness in support provision

Kaitlin Bain*, Lara Kammrath, Sherman Kwok, & Abigail Scholer

(ksbain@uwaterloo.ca; she/her)

Relying on others for support can be a powerful coping strategy, making it particularly problematic when people receive unsatisfactory support. Using a goal systems framework, we propose that support providers may prioritize help aimed at alleviating others' stress in the moment at the expense of providing adequate emotional validation. Specifically, we predicted that support providers would perceive emotional validation as less helpful than other forms of support. Two initial studies exploring this hypothesis (combined N = 429) found that emotional validation was consistently perceived as less helpful, less sufficient, and less effortful than support aimed at improving seekers' mood (e.g., expressing care or encouragement) or reducing the stressor (e.g., offering advice or resources). These findings suggest that emotional validation may be undervalued because it is perceived to be less conducive to one's helping goals. Implications for the development of interventions aimed at improving support provision will be discussed.

How Intersectional Identities Affect Perceived Vulnerability to Prejudice

Grace Denney*, Richard Eibach, & Hilary Bergsieker

(glmdenne@uwaterloo.ca; they/them)

Drawing on Intersectional Invisibility theory, we hypothesized that laypeople's perceptions of identity-based discrimination are defined primarily by the experiences of a prototypical target with that identity (i.e., a straight Black man is the prototypical target of Anti-Black racism), which limits sensitivity to discrimination experienced by those with multiple marginalized identities. We showed 840 undergraduates, across three studies, a selection of identity-based discrimination vignettes that were randomly paired with identity profiles that depicted a prototypical target and a variety of non-prototypical targets (with multiple marginalized identities). Participants responded indicating the likelihood that the target received the described treatment due to their respective study's identity of interest (Anti-Black racism, Sexism/Misogyny, and Homophobia); analyses reveal that there are significant differences in how people perceive prototypical targets against non-prototypical targets: straight Black women are perceived as the least likely to be experiencing Anti-Black racism; lesbians are perceived as less likely to be experiencing sexism; and lastly, lesbians are perceived as less likely to be experiencing homophobia. I discuss future studies including alternative measures of identity attribution when evaluating the vignettes and developing research questions given the current results.

The Effects of Competition on Shared Reality and Downstream Outcomes

Asma Karovalia*, Abdo Elnakouri, & Abigail Scholer

(aakarova@uwaterloo.ca; she/her)

What makes groups work well together and cooperate? One consistent answer from previous research is the competitive threat of another group. Faced with competition from outgroups, ingroups come together and cooperate more. Yet, little is known about the psychological mechanisms underlying this effect—how does competition lead to cooperation on an individual level? We propose that shared reality—sharing similar thoughts, feelings, or beliefs about something or the world in general with at least one other person—may be one such potential mechanism. Shared reality helps people feel closer to one another (meeting belongingness needs) and better understand each other (meeting epistemic needs), both of which are known to be important ingredients for successful ingroup cooperation. To test whether competition's effects on cooperation would be mediated by an increase in shared reality, we are

recruiting randomly paired participants (expected N = 200) who will be told that they will be engaging in a cooperation task either a) in direct competition with another pair for prize money (competition condition) or b) just for fun (control condition). All participants will then engage in conversation to build a shared reality before engaging in a word-description cooperation game – Taboo. Performance will be measured by the dyads' collective accuracy in correctly guessing and identifying the most words. We expect that dyads in the competition (vs. control) condition will form a stronger shared reality, an effect that will be associated with significantly better task performance.