



Science Atlantic

SCIENCE ATLANTIC

46TH ANNUAL

PSYCHOLOGY STUDENT

RESEARCH CONFERENCE

May 3rd - May 4th, 2023

Hosted by Mount Saint Vincent University



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WELCOME MESSAGE

On behalf of Mount Saint Vincent University, the Department of Psychology, and the organizing team, we welcome you to the 46th annual Science Atlantic Psychology conference. We are excited to host the first in-person conference in three years! Furthermore, this is a special year for our academic community with the University's 150th anniversary. Our campus has been alive with special events and visitors, so this is perfect timing for our annual conference. In the spirit of celebration, we welcome our Science Atlantic Psychology family to our corner of Halifax.

Science Atlantic undergraduate conferences offer a unique opportunity for student researchers in the region to share their discoveries and make connections with other students and faculty. This year we have almost 140 student presenters and 30 faculty members from 16 institutions, as well as a number of non-presenting students, invited guests, sponsors, and other visitors. The conference will kick off with our Social Meet & Greet evening on May 3, during which we will get to know each other over snacks and games—with prizes! May 4 is a full day of posters and talks, a keynote address from Dr. Lisa Barrett, a panel discussion with several clinical psychologists, and ending with a banquet and awards ceremony.

Huge thanks to our sponsors for their generous donations; their financial support helps keep the costs affordable and contributes to the success of this conference every year. Others have contributed enormously with their time, special thanks to everyone at the University, especially the Psychology Department faculty, staff, and our student volunteers.

We hope you enjoy your time at this conference, and get a chance to explore Halifax.

Angie Birt & Donna Thompson

Conference Co-chairs

MSVU is located on unceded ancestral Mi'kmaq territory. This territory is covered by the Covenant Chain of Treaties of Peace and Friendship signed between 1725 and 1779. We pay respect to the knowledge embedded in the Indigenous custodians of this land and to the Elders, past, present, and future.

ORGANIZING COMMITTEE

Angie Birt & Donna Thompson

Conference Co-Chairs

Psychology Department

Chair & Faculty

Administration Support

Marisa Grant

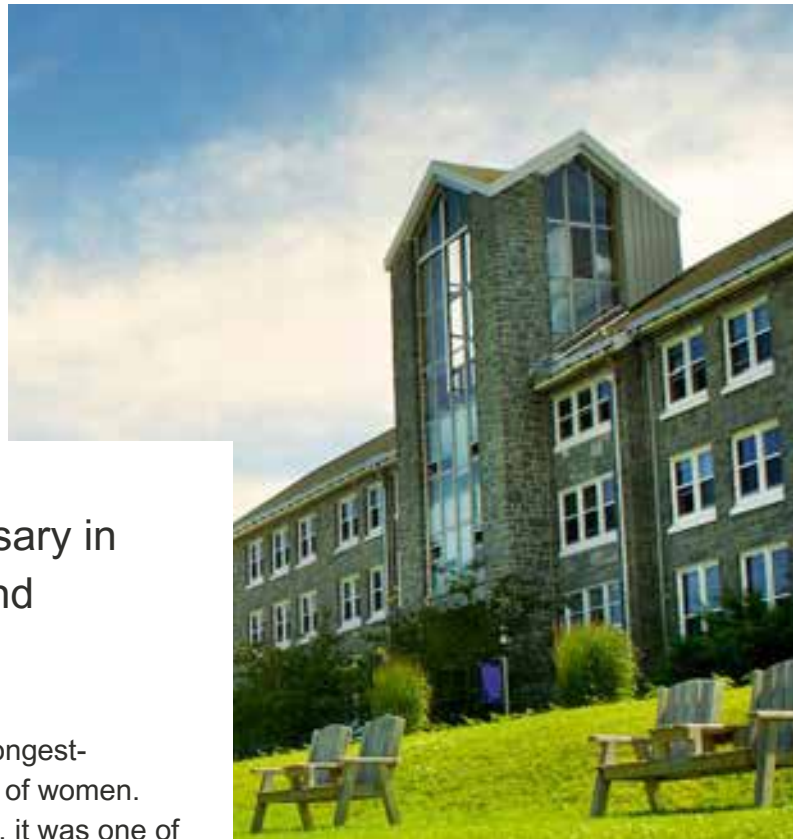
MSVU Psychology Student Society Executive

Lauren Giles, Lindsay Heyland, & Kathryn Reeves

The Psych Crew

Madyn Bourque
Hillary Brown
Raleigh Crowe
Aiden Drew
Heather Forgey
Sarah Haggett
Yaejin Kim
Natalie Lawy
Emma MacPhee
Darean McCormick
Dana McVety
Esther Purias
Sara Smith
Tam Vo

CELEBRATING MSVU'S 150TH ANNIVERSARY



MSVU is marking its 150th anniversary in 2023 through a year of reflection and celebration!

Mount Saint Vincent University is the leading and longest-standing university in Canada for the advancement of women. Founded in 1873 by the Sisters of Charity – Halifax, it was one of few institutions of higher education for women and girls in Canada, at a time when women could not vote.

For 150 years, Mount Saint Vincent University has worked to challenge the status quo. To improve access to higher education. To champion the underrepresented and underserved. We haven't always been perfect. But we will always strive to move forward and to challenge ourselves. We will always work to unlearn old ideas to make way for a bold tomorrow.

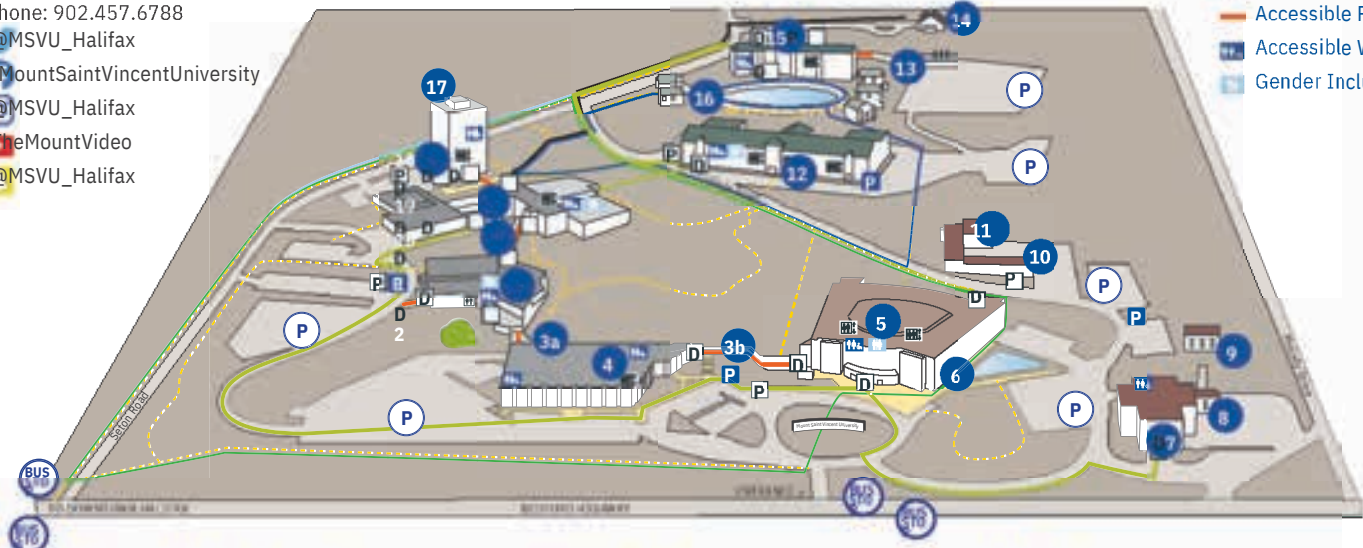




CAMPUS MAP

166 Bedford Highway
 Halifax, NS B3M 2J6
 Canada | msvu.ca/map
 Phone: 902.457.6788
 @MSVU_Halifax
 /MountSaintVincentUniversity
 @MSVU_Halifax
 TheMountVideo
 @MSVU_Halifax

- Parking
- Accessible Parking
- Emergency Phones
- Elevator
- Electric Door
- Accessible Route*
- Accessible Washroom**
- Gender Inclusive Washroom



- | | | |
|--|---|--|
| <p>1 Margaret Norrie McCain Centre for Teaching, Learning and Research (including McCain Café)
 2 Riva Spatz Women's Wall of Honour
 3a RBC West Link
 3b RBC North Link
 4 E. Margaret Fulton Communications Centre (EMF) (including Library)
 5 Seton Academic Centre (including Seton Café)</p> | <p>6 MSVU Art Gallery
 7 Sheila A. Brown Centre for Applied
 8 Research Advancement House
 9 Aboriginal Student Centre
 10 International Education Centre (Seton Annex)
 11 Child Study Centre
 12 Evaristus Hall
 13 Art Landry Building (Central Heating Plant)</p> | <p>14 The Meadows
 15 Westwood (residence)
 16 The Birches (residence)
 17 Assisi Hall (residence)
 18 Assisi (including Campus Security, Health Services and Coastal Sports & Wellness)
 19 Rosaria Student Centre (including Rosaria Dining Hall, Vinnie's Pub, Mount Fitness Centre)
 20 Student Legacy Lane (pedway)</p> |
|--|---|--|

WALKING TRAILS

- Walk the Mount - 1340 steps, 304 stairs, 30 minutes
- "Mountain" Tour - 592m, 808 steps, 7 minutes
- Pond Tour - 848m, 1147 steps, 10 minutes
- Central Campus Tour - 1.306 km, 1782 steps, 15 minutes
- Garden Tour - 352m, 480 steps, 4 minutes

Note: The Birches is an inaccessible building. Buildings (3), (5), (10), and (14) have limited accessibility. The indoor tunnels beginning at Rosaria (to Assisi and Evaristus) are accessible via Rosaria only. The pedway to the McCain Centre is available via Rosaria.

Accessible washrooms are available in Seton Academic Centre (342, 343, 453, 454), Seton Annex (1st Floor), Rosaria Student Centre (4th Floor), Evaristus Hall (C200, 2nd Floor, C300, 3rd Floor, C400, 4th Floor), E. Margaret Fulton Communications Centre (1st Floor), Westwood (3rd Floor), McCain Centre (all washrooms), and Advancement House.

Gender inclusive washrooms are available in Seton Academic Centre (453), Seton Annex (1st Floor), Rosaria Student Centre (402), Evaristus Hall (C200, 2nd Floor, C300, 3rd Floor, C400, 4th Floor) and the McCain Centre (113).

Seton Academic Centre

- Academic Advising
- Cultural Studies
- Deans' Offices
- Economics Department
- English Department
- Faculty of Education
- History Department
- Modern Languages Department
- Mount Print Shop
- MSVU Art Gallery
- Political & Canadian Studies Department

E. Margaret Fulton Communications Centre (EMF)

- Counseling and Accessibility Services
- Distance Learning and Continuing Education
- Information Technology & Services

Library & Learning Commons

- Alexa McDonough Institute for Women, Gender & Social Justice
- Business & Tourism Department
- Career Planning Services

- Centre for Women in Business
- Communication Studies Department
- Co-operative Education
- Dr. Rosemarie Sampson Centre on Aging
- Maritime Data Centre / Nova Scotia Centre on Aging
- Women's Studies (and Nancy's Chair)
- Riva Spatz Women's Wall of Honour
- Bookstore
- Crow's Nest (The Corner Store)
- Facilities & Conference Services
- Mount Fitness Centre (Athletics, Recreation and A. Garnet Brown Gymnasium)
- Students' Union Offices/Info Desk
- The Fountain Play Centre
- Vinnie's Pub

Evaristus Hall

- Admissions/Registrar's Office
- Applied Human Nutrition Department
- Biology Department
- Campus Tours/Student Recruitment

- Chemistry Department
- Child & Youth Study Department
- Communications & Marketing
- Family Studies & Gerontology Department
- Financial Services
- Financial Aid
- FoodARC
- Human Resources
- Mathematics Department
- Peace & Conflict Studies
- Philosophy/Religious Studies
- President's Office
- Psychology Department
- Research Office
- Residence Life Services
- Sociology/Anthropology Department
- VP Academic & VP Administration Offices
- Health Office & Coastal Sports & Wellness
- Safety & Security (Information Desk)
- International Education Centre
- Child Study Centre

SCHEDULE AT A GLANCE

WEDNESDAY, MAY 3RD

3:00 – 5:30 pm

Rosaria Terrace & Westwood

Reception, Registration, & Check-in at Residence

5:30 – 6:30 pm

Rosaria Boardroom (312)

Faculty Representatives Meeting

6:30 – 9:30 pm

The “Rook” Campus Pub

Welcome Remarks and Social Meet & Greet

THURSDAY, MAY 4TH

7:30 – 8:45 am

Rosaria Dining Hall

Registration & Breakfast

8:45 – 9:00 am

Rosaria MPR

Welcome Address: Dr. Joël Dickinson, President and Vice-Chancellor

9:00 – 9:45 am

Rosaria MPR

Keynote Presentation: Dr. Lisa Barrett

SCHEDULE AT A GLANCE

9:45 – 11:00 am

Rosaria MPR

Poster Session 1 and Nutrition Break

11:00 – 12:15 pm

McCain 105, 106, 301, 302, 401

Oral Presentation Session 1

12:15 – 1:00 pm

Rosaria Dining Hall

Lunch

1:00 – 2:15 pm

McCain 105, 106, 301, 302, 401

Oral Presentation Session 2

2:15 – 3:30 pm

Rosaria MPR

Poster Session 2 and Nutrition Break

3:30 – 4:15 pm

Rosaria MPR

Spotlight on Clinical Psychology: A Panel Discussion

4:15 – 5:15 pm

Rosaria Boardroom (312)

Faculty Representatives Meeting

SCHEDULE AT A GLANCE

4:15 – 6:30 pm

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Student Break

6:30 – 9:30 pm

Rosaria MPR

Banquet & Awards Dinner

FRIDAY, MAY 5TH

10:30 am

Westwood

Check-out of Residence

ORAL PRESENTATION SCHEDULE

SESSION 1 (11:00 AM – 12:15 PM)

Session 1A: Neuroscience/Behavioural Neuroscience, Room: McCain 105		
Dawson Sutherland	DAL	Using Pupillometry to Determine Whether Mental Effort Affects Endogenous Cueing Effects
Ince Husain	UNB	Demystifying Relationships Between Circadian Rhythms and Memory: How Substantially Does Gene Expression Change as Circadian Rhythms are Altered?
Ainsley Monchesky	DAL	Effects of Rapid Photostimulation on Reproductive Physiology and Behaviour in European Starlings (<i>Sturnus vulgaris</i>)
Max Seward	MSVU	Investigating the Effect of a Mindfulness Based Intervention on EEG Indicators of Cognitive Control in Youth with ADHD
Emily Escoffery	MTA	Positive Behavioral Contrast Effect on Wheel Running as an Operant Behavior
Fiona Burns-Hemmingway	DAL	The Mini-countryman Vehicle and Stimulus-Response Compatibility: Application of a Converse Spatial Stroop Task
Lauren Giles	MSVU	Examining Dispositional Optimism as a Buffer of the Association Between Maternal Childhood Maltreatment and Adverse Birth Outcomes

Session 1B: Well-Being/Health/COVID-19, Room: McCain 106

Daneesha Williams	DAL	The Effects of Parent Mental Health, Chaos, and Routine on Child Mental Health During COVID-19 Mandated Homeschooling: A Moderated Mediation Model
Emma Kenny	MSVU	Undergraduate Students' Memories for Stressful COVID-19 Pandemic-Related Events
Yuzhi(Stanford) Yang	UNB SJ	Jesus, Take the Wheel! Exploring the Association Between Religiosity/Spirituality and Resiliency in a Canadian Population
Noah Hann	MTA	Job Autonomy and Resilience as Predictors of Well-Being and Organizational Outcomes: A Comparison Between Remote and On-Site Employees
Zoey Chapman	Acadia	Intolerance of Uncertainty as a Predictor of Psychological Aggression Perpetration Amongst LGBTQ+ and Non-LGBTQ+ Individuals During the COVID-19 Pandemic
Anna George	CBU	Investigating the Psychological Benefits of Adult Colouring
Emily Tompson	UNB SJ	Well-Being During the Climate Crisis in Relation to Nature Connectedness, Climate Knowledge, Climate Anxiety, and Pro-Environmental Behaviour

Session 1C: Cognitive, Room: McCain 301

Lucas Tennen	DAL	Reassessing Inhibition Of Return's Encoding Across Two Forms of Oculomotor Activation
Victoria Matthews	UNB	Eye Movement Reading Behaviour in Schizophrenia and Developmental Dyslexia: A Comparison
Donnique Cooper	SMU	Does it Take Two to Tango: Do Post-Error Improvements in Accuracy Accompany Post-Error Reaction Time Slowing?
Danyelle Fields	STU	The Impact of Beat Hand Gestures on Memory of Listeners
Sarah Keirstead	UNB SJ	The Influence of Musical Training and Bilingualism on Selective Attention
Madeline Wiseman	UNB	Language & Laterality: Investigating the 'SNARC' Effect in Multilinguals, Bilinguals, and Monolinguals
Hannah Robertson	MTA	An Attempt to Modulate the Attentional Blink Through Meditation

Session 1D: Industrial/Organization/Sports Psychology, Room: McCain 302

Jiawei (Vivian)Huang	MTA	Does Gender Orientation Makes a Difference? Type of Support and Emotional Exhaustion Among Employed Mothers
Chantell Jebailey	SMU	Defining and Enacting Inclusion in the Retail Workplace: Developing an Inclusion Matrix for Retail Managers
Tracy Hey	MSVU	Team Cohesion, Perceptions of Control and Social Support as Predictors of Stress in Public Safety Communicators
Joey Frenette	U de M	Work ethic and resilience among Canadian athletes
Kennedy Hunt	MTA	Examining Managerial Support Through Self-Determination Theory: A Mixed Method Study on Engagement and Affective Well-Being of Remote Workers
Jacqueline Shaw	SMU	Choosing Your Words Carefully: The Effect of Workplace-Related Suicide on Employer Brand Image
Karlene Dalzell	UNB SJ	Police Officers' Opinions on the Mobile Crisis Response Team: A Qualitative Study

Session 1E: Clinical 1/Educational, Room: McCain 401

Thea Button	MTA	Actions Speak Louder Than Coaches: Eating Disorder Behaviour Among Student Athletes
Nicole Basso	DAL	Negative Control Strategies Mediate the Association between Romantic Conflict and Problem Gambling
Katie MacMillan	STU	Links Between Psychology Course Descriptions and Mental Illness Stigma
Lauren Gallant	MTA	The Impostor Phenomenon and Mental Health in Undergraduate Students: The Moderating Role of Self-Compassion
Mathieu Banville	MSVU	Gaming's Dirty Little Secret: Loot Boxes and associated Decision Making Processes
Philippe Savoie	UNB SJ	Social Media Use and Depression: Possible Moderation by Motives and Dark Tetrad Traits
Eliza Nobes	MTA	The Effects of Education About Deathbed Visions (DBVs) on Undergraduate Students' Levels of Death Anxiety and Knowledge About DBVs

SESSION 2 (1:00 PM – 2:15 PM)

Session 2A: Clinical 2/Social Developmental, Room: McCain 105

Emily Earle	UNB SJ	The Moderating Role of Religion/Spirituality on the Relationship Between Childhood Victimization and Depression
Kathryn Reeves	MSVU	“Something Most Canadians Don’t Understand”: A Qualitative Study of Military Children’s Perceptions of Parents’ Deployment to Morally Injurious Missions
Rachel Binns	MTA	How Bright is the Bright Side? Measurement and Implications of Toxic Positivity for the Self and Others
Lindsay Heyland	MSVU	Examining the Link Between Maternal Control During Childbirth and Psychological Distress in the Perinatal Period
Marcus Cormier	DAL	Sexual Script Flexibility and Sexual Wellbeing in Long-Term Couples: A Dyadic Daily Diary Study
Elka Sheinen	MTA	The Relationship Between the Development of Empathy and Executive Function in Preschool-Aged Children

Session 2B: Forensic Psychology/Morality, Room: McCain 106

Narissa Rodgerson	UNB SJ	Incremental Validity of Self-reported Strengths Over Criminogenic Risk Factors in Youth Risk Assessment
Emma Connolly	SMU	Canadian Jurors' Experiences with Jury Duty
Madison Corkum	MSVU	Online Moral Disengagement: An Examination of the Relationships Between Electronic Communication, Cognitive Empathy, and Antisocial Behaviour on the Internet
Malik Conte	MTA	Academic Misconduct: An Educational Consequence to Psychopathy
Melissa Corbett	SMU	Case Dismissed: An Exploration into Sexual Assault Victims' Experience with Institutional Betrayal
Harsha Ajith	MUN	Examining the Impact of Posttraumatic Stress and Substance Use on Perceptions of Intimate Partner Violence Victim-Witness Credibility
Jessica Frias	MTA	Age-Related Differences in Telling Health Lies in Younger and Older Adults

Session 2C: Ageing/Caregiving/Gender Differences, Room: McCain 301

James Derrah	UNB SJ	An Examination of Wellness in Informal Caregivers of Persons with Dementia
Gina Vaillancourt	Acadia	Experience of healthy older adults with a new home-based treatment for spatial neglect: A qualitative study
Dylan Rose	UPEI	Sing Like a Man: A Multifaceted Analysis on Gendered Attitudes to Singing
Denise Roy-Loar	MTA	Sexual Health Education and Attitudes Toward Gender and Sexual Minorities in New Brunswick
Amy Hyland	SMU	The Myth of the Maternal Instinct

Session 2D: Parenting/Personality/Social, Room: McCain 302

Ansam Abuswer	MSVU	The Relationship of Parenting Styles, Regulatory Focus, and Career Decision-Making Self-Efficacy in Young Adults
Abigail Daley	MTA	Why do Students go to University? Motivations for First-Generation vs. Continuing-Generation Students
Karla Kenny	SMU	Oh, That's so cringy! Exploring the Evolutionary Roots of Embarrassment
Abbie Butler	MTA	Predictors of Undergraduates' Psychological Well-Being: Social Support Stability, Campus Resource Stability, and Locus of Control
Tam Vo	MSVU	The Relationship of Parenting Styles, Regulatory Focus, and Career Decision-Making Self-Efficacy in Young Adults

Session 2E: Neuropsychology, Room: McCain 401

Mack Hancock	DAL	Understanding the Effects of Motor Imagery on Effector Mapping
J. Lincoln Inglis	Acadia	Development and Assessment of an Augmented Reality Feedback System for Prosthesis Users
Vanessa Gilbert	MSVU	The Influence of Caffeine on Brain Activity and Behaviour Throughout the Menstrual Cycle
Aidan Steeves	MTA	The Impact of Cognitive Style on Visuo-Haptic Object Identification
Emma Wheeler	Acadia	The Bilingual Superpower? Acquiring Multiple Simultaneous Sensorimotor Maps for Speech
Hillary Brown	MSVU	Influences on Social Rejection: The Impact of Sex on Social Rejection Using the Social Rejection Paradigm

POSTER PRESENTATION SCHEDULE

SESSION 1 (9:45 AM – 11:00 AM)

1A	Melanie Green	UNB	Autistic Employment: Insights and Solutions from an Ecological Systems Perspective
1B	Taylor Anthony	MUN	How We View Ourselves Matters: Examining the Roles of Self-Objectification and Self-Compassion on the Relationship Between Social Media Use and Disordered Eating
2A	Simal Dolek	DAL	When Using Locus of Slack Logic, the Output Form of IOR Operates on the Stage After the Central Bottleneck
2B	Abbey Hunter	UNB	Lived Experiences and Treatment Needs of Individuals with Comorbid Substance Use and Eating Disorders
3A	Alanna Kaser	DAL	Bullying Involvement and Mental Health Associations among Canadian Undergraduate Students During the COVID-19 Pandemic
3B	Akua Amankwah-Poku	SFX	Comparing Factors that Influence Mental Health and Help-seeking in University Students in Canada and in Ghana.
4A	Steven Jackson	DAL	Relationship between perseverative thinking and physical activity in people with mood disorders
4B	Marie-Josée Doiron	U de M	Sibling Bullying and Dating Violence: a Retrospective Study

5A	Emma Mackley	MTA	Undergraduate Students' Attitudes Towards Medical Assistance in Dying (MAiD) for Mental Illness
5B	Sana Sheikh	DAL	The Effectiveness of Interventions for Alcohol Use Disorder in Individuals with a Psychotic Disorder
6A	Daniel McLaughlin	UNB	Life Satisfaction, Depression, and Anxiety: Examining the Role of Stress, Social Support, and Problem-Focused Coping
6B	Alicia Jones	DAL	The Relation Between Receptive Vocabulary and Executive Functions in Domestic Dogs
7A	Dana McVety & Sarah Haggett	MSVU	Defiance, Compliance, and Gender as Predictors of Disordered Eating in Adolescence
7B	Alison Randell	MUN	Evaluating the Role of Prenatal Androgens on the Sex Bias in the Maternal Immune Activation Preclinical Model of Autism
8B	Audrey Caissie	U de M	L'impact de la personnalité sur la satisfaction: le rôle modérateur de l'intelligence émotionnelle.
9A	Sarah Henderson	MUN	The Long Shadow of Fear: Lasting Effects of Predator Stress on Second Generation Offspring in Mice
9B	Sailee Shringarpure	MTA	Attentional Blink Effect under Meditative Instructions
10A	Natalie Lawy, Ange Cyuzuzo, & Heather Forgey	MSVU	Internalizing Problems and Executive Functioning in Adult ADHD
10B	Lucy Coady	DAL	The Impacts of Mind Wandering on Learning in an Online Lecture Context
11A	Amanda Alwin	UNB SJ	Inhibition and Attention in Bilingualism
11B	Jayce Phillips	DAL	The Effect of Speaker Race on Accented Speech Comprehension
12A	Aaron Murphy	MUN	Influencing Adults' Earliest Memories
12B	Ravleen Bansal	UNB	Evaluating Abstract Shapes: Investigating the Role of Working Memory on Distractor Devaluation
13A	Amy Maxwell	DAL	The Effects of Adaptive Working Memory Training and Mindfulness Meditation on Measures of Working Memory and Mental Fatigue in Healthy Adults
13B	Keira Dyck	MTA	An investigation of varsity athletes and the Colavita effect
14A	Karla Kenny	SMU	Disconnected: Navigating a New Academic and Social World During a Global Pandemic
14B	Yara Bayoumi	UNB	Transition Planning and Quality of Life for Youth with Autism Spectrum Disorder and/or Intellectual Disability in Canada
15A	Sara MacEachern	MTA	Examining Transitivity in Preschooler Preferences

15B	Bridget Barry	MUN	Occupational Stress, and the Role of Peer and Formal Supports Among Career and Volunteer Firefighters: A Qualitative Study
16A	Mary Lyons	MTA	Adults' Detection of Children's Lies Through Emotional Facial Expressions.
16B	S��l��na Babin	U de M	The Effect of Sibling Bullying During Childhood and Adolescence on the Adoption of Risky Behaviors in Early Adulthood
17A	Madison Oulton	DAL	Effects of Sleep Deprivation on the Morphology of Mitochondria in Axon Terminals Presynaptic to Orexin Neurons
17B	Gabrielle Gionet	U de M	Do Adolescents from Rural and Urban Settings Share Similar Experiences?
18A	Nicole Solie	DAL	Effectiveness of Physical Activity Interventions for Improving Executive Functioning in Overweight Individuals: A Scoping Review
18B	Lillea Hohn	DAL	Do Risky Drinking and Cannabis use Motives Mediate the Links Between Bullying Involvement and Substance Use Harms Among Emerging Adults?
19A	Catherine Hunt	U de M	La relation coparentale comme m��diatrice du lien entre les croyances d'essentialisme biologique et la satisfaction conjugale

SESSION 2 (2:15 PM – 3:30 PM)

1A	Uyen Phan	UNB	The Psychological Consequences of Parents' Social Comparison of Their Children: The Role of Parents' Implicit Theory of Intelligence
1B	Emily Mak	SFX	A Pilot Approach to Indigenizing Psychology: The Pursuit of Two-Eyed Seeing in the Classroom
2A	KJ Goruk	DAL	In-Person and Technology-Facilitated Sexual Harassment in Canada: Prevalence and the Identification of Risk Factors

2B	Haley Bonnell	MUN	The Potential Impact of Meritocratic Beliefs on Perceptions of Police Legitimacy
3A	Amelia Jones	MUN	Hippocampal Astrocytic Glycogen Metabolism in a Rat Model of Early Pretangle-Stage Alzheimer's Disease
3B	Frances Hayward	DAL	Investigating the Effect of Acute Psychosocial Stress and Aerobic Exercise on Salivary Cortisol Concentrations in Young Adults
4A	Mathis Roy	U de M	Is Reasoning Always an Effective Disciplinary Strategy? The Key Role of Logical Consequences
4B	Amelie Tanner	DAL	The Impact of Cannabidiol Expectancy on Cannabis and Alcohol Cue Reactivity
5A	Madelyn Purchase	CBU	An Examination of the Relationships Between Psychological Well-Being and Ageism in Atlantic Canadian Healthcare Professionals
5B	Emma MacKechnie	SFX	Evaluating Visual Function and Symbol Digit Modalities Test Performance for People with Multiple Sclerosis (MS)
6A	Noémie Thériault	U de M	Effects of multimodal distractors on attention
6B	Charlanie Innocent	MSVU	The Interaction of Caffeine and Human Menstrual Cycle Phase on EEG Markers of Sustained Attention
7A	Kelsie Senior	MUN	Behavioural Impacts of Wild-Type Huntingtin Deletion in the CA3-CA1 Adult Mouse Hippocampus
7B	Matthew MacLeod	CBU	Exploring Motivations and Barriers to Volunteering Amongst CBU Students
8A	Kyle McVea	DAL	Seasonal, Sex, and Developmental Differences in the Vocal Control System of Wild Black-Capped Chickadees (<i>Parus atricapillus</i>)
8B	Hassaan Tariq	DAL	Highly Efficient and Generalizable Decoding of Complex Representations using Large EEG Dataset
9A	Noémie Comeau	U de M	Apologies as a Moderator of the Association Between Psychological Control and Parent-Adolescent Relationship Satisfaction
9B	Brynn Harris-Shanks	DAL	The Effects of Manipulating the Colour and Orientation of Faces on Event Related Potential Classification Precision
10A	Grace Durling	SFX	Investigating the Relationship Between Body-Image and Risky Sexual Behaviour in Adolescence
10B	Max Mascini	DAL	Exploring Classification Techniques for a Novel EEG-based Bi-Hybrid BCI System
11A	Ian Armstrong	Acadia	The Cognitive and Affective Impact of Postural Instructions on Women

11B	Wyatt Ortibus	DAL	Olfactory Discrimination Tasks and Reversal Learning in a Neurexin1 (+/-) mouse model of Autism Spectrum Disorder
12A	Kaiden Dalley	MUN	Cognitive Tasks as a Possible Entrainable Oscillator
12B	Emma Boone	DAL	Does Optogenetically Inhibiting Somatostatin Expressing Interneurons in the Primary Visual Cortex Affect Size Perception in Mice?
13A	Jack Cummings	Acadia	Real-Time Home REM Sleep Detection Using Apple Watch, Fitbit, and Cerebral
13B	Chynea Drummond	DAL	Angiotensin-Converting Enzyme 2 Expression in Different Tissues Affected by COVID-19
14A	Mila Walst	Acadia	Assessing the Current State of the Decolonizing and Indigenizing Process in Undergraduate Teachings
14B	Rebecca St. James	DAL	Examining the Effects of Probiotics In Response to Fatty Western Diet-Induced Stress and Its Impact on Maternal Care Behaviours and Corticosterone Plasma Concentration in Rats
15A	Allison Hancock	SFX	Women's Economic Empowerment Through a Financial Literacy Curriculum: A Pilot Study
15B	Mackenzie Hartley	DAL	Naturally-Formed Social Hierarchies are not Associated with Indicators of Stress in Male Mice
16A	Emily Escoffery	MTA	An Exploration of the Relationship Between Perfectionism, Culture, Self-Compassion and Mental Health Outcomes
16B	Johanna Look	DAL	The Foundations of a Worthwhile Life: Investigating the Effects of Motives on Future Eudaimonic Well-Being
17A	Mallory Murphy	UNB	Extending Our Understanding of Sexual Anxiety Sensitivity and Sexual Well-Being
17B	Shawna Brenton	MUN	Exploring the Effects of Perceived Income Inequality on School Belongingness in Undergraduate Students
18A	Yaejin Kim ¹ & Andi Kpolugbo	MSVU	Do Sleep Quality and Repetitive Negative Thinking Predict Inattention?
18B	Janessa Harker ¹	UNB	The Role of Implicit Theory in People's Evaluations of Self-Serving and Self-Improving Dating Profiles

INVITED KEYNOTE SPEAKER



Dr. Lisa Barrett

The COVID Crisis: Realtime Lessons in Communication, Empowerment and Health Ownership

Dr. Lisa Barrett is an Infectious Diseases Clinician Scientist with the Nova Scotia Health Authority, as well as an Assistant Professor in the Divisions of Infectious Diseases, Microbiology and Immunology, and Laboratory Medicine and Pathology at Dalhousie University in Halifax, Nova Scotia. She is a viral immunologist involved in COVID-19, hepatitis C, and HIV studies at the local, national and international level. Dr. Barrett's current studies assess clinical and immunologic aspects of COVID-19 disease. Her research spans laboratory-based discovery science, clinical research, and implementation science in public health systems with an emphasis on pragmatic design. She is passionate about science communication, and is an invited communicator in many public and academic spaces.

SPOTLIGHT ON CLINICAL PSYCHOLOGY

A PANEL DISCUSSION

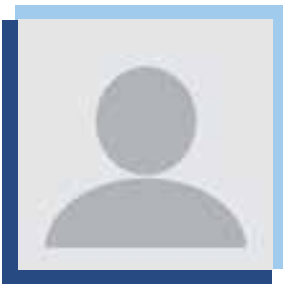
Moderated by MSVU Honours Student and Psych Society Co-President, Lauren Giles

Join our panel of clinical psychologists to get the inside scoop on what it's really like to be a clinical psychologist. You'll hear about a "day-in-the-life," the various rewards as well as the challenges, how research informs practice, and much more! Be ready to ask questions.



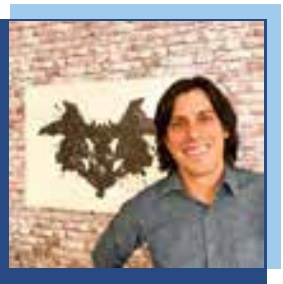
Conor Barker
Ph.D., R. Psych

Dr. Barker is a school psychologist who provides expert psychological assessments for children (8 to 11 years of age), adolescents (12 to 18 years of age) and adults (19 years of age or older) at CRUX Psychology in Halifax, and is the clinical director for Brunswick Creek Psychology Services in Swift Current, SK. Dr. Barker specializes in diagnostic and psychoeducational assessments and assessing learning disorders (or learning disabilities), attention-deficit/hyperactivity disorder (ADHD), autism, anxiety and depressive disorders, and substance use disorders. Dr. Barker advocates for best practices in mental health services and inclusive learning environments. He supports people with diverse backgrounds and believes everyone can learn when given the right instruction and support. He is also an Assistant Professor in the Department of Psychology and Faculty of Education at Mount Saint Vincent University, with research and teaching focusing on the development of future school psychologists.



Etta Brodersen
Ph.D., R. Psych

Dr. Brodersen (R. Psych) completed her graduate schooling at Simon Fraser University with a specialization in psychology and law. After completing her residency in 2018, she was employed at the Forensic Sexual Behaviour Program (FSBP) at the Nova Scotia Hospital completing comprehensive forensic risk assessments on pre-sentence and post-sentence individuals who were convicted of sexually motivated offences. Her work within the FSBP also included group and individual therapy targeting criminogenic needs and Family Safety planning for reintegrating clients within family units. Since early 2023, Dr. Brodersen has been employed within the Youth Court assessment unit at the IWK completing pre-sentence risk assessments on youth awaiting sentencing on a wide variety of offence types.



Will Shead, Ph.D.

Dr. Shead is a psychologist (candidate register) who completed his Ph.D. in Clinical Psychology at the University of Calgary (2009), an internship in the Clinical Health Psychology program at the University of Manitoba (rural stream, 2008), and a Post-Doctoral Fellowship at McGill University (2008-2010). He is currently an Associate Professor of Psychology at Mount Saint Vincent University and his primary areas of research are gambling and addictions. Dr. Shead's primary therapeutic modality emphasizes cognitive behaviour therapy, acceptance and commitment therapy, and motivational interviewing.



AWARDS

Science Communication Award

The **Science Communication Award** is offered at each of the annual Science Atlantic sponsored student conferences. The prize is awarded to the student who is best able to communicate a science topic to his or her peers. The award consists of a letter of commendation, a cash prize, and the opportunity to work collaboratively with the Atlantic Student Research Journal (ASJR) team to write and publish an article about the winner's research.

Undergraduate Research Award

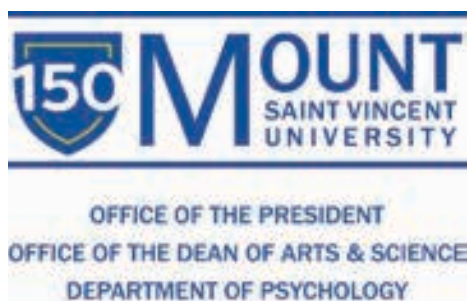
The **Undergraduate Research Award** (formerly called the NSERC Representatives' Undergraduate Student Award, 2004-2012) is presented to the student who gives the best research presentation. The criteria considered are the abstract, presentation, scientific merit, overall knowledge and response to questions, and demonstrated potential to pursue graduate studies and research.

Karen Nicholson Award in Neuropsychology

The **Karen Nicholson Award in Neuropsychology** (first presented in 2008) is presented for the best Neuropsychology undergraduate presentation (oral or poster) at the Science Atlantic Psychology Conference. Preference will be given to presentations dealing with human neuropsychology.

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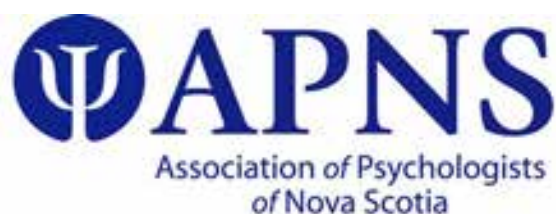
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ABSTRACTS: ORAL PRESENTATIONS

SESSION 1 (11:00 AM – 12:15 PM)

SESSION 1A: NEUROSCIENCE/BEHAVIOURAL NEUROSCIENCE (MCCAIN 105)

1. Using Pupillometry to Determine Whether Mental Effort Affects Endogenous Cueing Effects

Dawson Sutherland¹

¹ Dalhousie University

The Spatial cueing paradigm was developed by Posner & colleagues (1980) as a model task used to investigate endogenous covert orienting. From this task, performance on validly cued trials relative to invalidly cued trials (often referred to as a cueing effect), has been taken as evidence that stimulus processing efficiency is determined by an individual's knowledge of where a target might appear. Despite this cueing paradigm being well known in cognitive psychology, very little work has been done to explore how mental effort impacts performance on this paradigm. Mental effort has long been associated with larger pupil diameters when individuals are engaged with a difficult cognitive task. The present study used a Posner-style cueing task with two levels of difficulty to investigate how mental effort, as measured with pupillometry, impacts participant performance. Participants were recruited to complete our task while changes in pupil diameter were recorded on a trial-by-trial basis. Two levels of difficulty were added to investigate our first hypothesis that higher difficulty would elicit changes in pupil diameter similar to that of past literature, which was confirmed upon data analysis. However, our two other novel hypotheses, which predicted that trials associated with larger changes in pupil diameter would lead to better reaction time performance and larger cueing effects, were not supported upon final data analysis. The results of this study suggest that although task difficulty does indeed recruit heightened levels of mental effort, it does not necessarily correlate with performance enhancements in a task that has repetitious trials.

Supervisor: Dr. Raymond Klein

2. Demystifying Relationships Between Circadian Rhythms and Memory: How Substantially Does Gene Expression Change as Circadian Rhythms are Altered?

Incé Husain¹

¹ University of New Brunswick

Recent research on the relationship between circadian rhythms and memory is contentious. Some studies show that disruption in circadian rhythms causes memory deficits, whereas other studies have shown that memory is unperturbed. The current study seeks to clarify these findings by examining gene expression in the rat hippocampus in conditions of circadian alignment and misalignment. Specifically, gene expression in 18 genes at 6 time points of a 24-hour day was statistically analyzed, with data originating from a pre-collected genome dataset. Results show that gene expression differs significantly for seven genes. Our findings may potentially contribute to explaining memory-related health problems, like Alzheimer's disease, with a circadian basis, and thereby inspire clinical interventions.

Supervisor: Dr. Scott Deibel

3. Effects of Rapid Photostimulation on Reproductive Physiology and Behaviour in European Starlings (*Sturnus vulgaris*)

Ainsley N Monchesky¹, Broderick MB Parks¹, Leslie S Phillmore¹

¹ Department of Psychology and Neuroscience, Dalhousie University, Halifax NS

In seasonally breeding songbirds, increasing photoperiod, or day length, is the primary cue that signals breeding season. As day length increases (i.e., in spring), birds become photostimulated, and a cascade of physiological and behavioural changes occur to prepare birds for breeding. We can also manipulate breeding condition experimentally by altering the photoperiod of birds housed in the laboratory. While artificial manipulation induces some of the changes seen in wild birds, it typically occurs on a much shorter timeline than in the wild and its full efficacy therefore remains unclear. Here, we captured European starlings (*Sturnus vulgaris*; N=11, 6 females, 5 males) from the wild in January, when in non-breeding condition and photoperiod is considered “short”; we then housed them indoors on a long day photoperiod (16 hours light, 8 hours dark; 16L:8D) for 21 days to induce photostimulation. We collected blood samples pre- and post-manipulation to quantify changes in reproductive hormones (testosterone, estradiol) and examined how beak colour (a trait affected by high levels of reproductive hormones) changed over the 21-day experiment. We also passively recorded vocalizations (using AudioMoth autonomous recording units) throughout the experiment to examine how certain aspects of song change. Preliminary data showed that birds’ gonads (testis size, ovary stage) were consistent with those in breeding condition; analysis of beak colour and bioacoustic song analysis also revealed changes over the experiment. This evidence indicates that 21 days of 16L:8D photostimulation is sufficient to drive changes in these physiological and behavioural traits.

Supervisor: Dr. Leslie S. Phillmore

4. Investigating the Effect of a Mindfulness Based Intervention on EEG Indicators of Cognitive Control in Youth with ADHD

Maxwell Seward¹

¹ Mount Saint Vincent University

Objective: The present study aimed to investigate the impact of a mindfulness mixed martial arts intervention on EEG indicators response inhibition in children with ADHD from age 11-17 years. Method: EEG was recorded pre and post intervention during a blocked Go/Nogo task. Peak amplitude and spectral power in the theta range were measured during the Nogo N2 and P3 ERPs. Results: A significant group by time interaction was found for Nogo N2 amplitudes which indicated that treatment maintained similar levels of medial frontal function during response inhibition, whereas control participants showed significantly attenuated N2 amplitudes over time. Medication status was also found as a significant moderator of the relationship between evoked theta power and executive function. Conclusions: Findings suggest that the Integra™ intervention buffers against attenuated medial frontal function that is commonly observed in ADHD. Future research should consider stimulant medication when measuring oscillatory EEG dynamics in response to non-pharmacological treatment.

Supervisor: Dr. Stefon van Noordt

5. Positive behavioral contrast effect on wheel running as an operant behavior

Emily Escoffery¹

¹ Mount Allison University

Positive contrast was assessed when rats were required to lever press in one component and wheel run in the other component on a mult FR 15 FR 15 schedule of reinforcement. To assess positive contrast in wheel running, lever-pressing behavior was put under extinction and vice versa. Increases in lever-pressing and wheel-running rates under the contrast condition were consistent with previously observed positive contrast effects. Results showed a significantly larger increase with contrast and decrease with extinction for lever pressing effect, relative to wheel running. Similarly, postreinforcement pause (PRP) duration increased substantively with extinction and decreased markedly with contrast for lever pressing. In comparison, for wheel running, PRP duration decreased with extinction and did not change with contrast. These differences can be attributed to the automatic reinforcement that wheel-running manifests, but lever pressing does not. These findings were also the first to show a positive contrast effect using wheel running as an operant behavior.

Supervisor: Dr. Terry Belke

6. The Mini-countryman Vehicle and Stimulus-Response Compatibility: Application of a Converse Spatial Stroop Task

Fiona Burns-Hemingway¹

¹Dalhousie University

Vehicle design has long since played a crucial role in road safety. However, the counterintuitive rear signal lights on BMW's mini-countryman vehicle appear to invite cognitive conflict which may endanger road users; that is, the intent to turn or change lanes is signaled via an illuminated arrow pointing in the opposite direction. This creates incongruency between the turn signal's task-relevant spatial location and its task-irrelevant spatially oriented identity. According to stimulus-response compatibility literature, the speed and accuracy of responding are hindered when various dimensions of a stimulus and its corresponding response are conflicting. To investigate the potential performance costs of the mini-countryman's rear signal lights, the authors utilized a converse spatial Stroop task which required participants to indicate - with a right or left key press - the location of the turn signal, irrespective of its identity. This was combined with a standard spatial Stroop task in which participants responded to the direction of a road sign arrow while ignoring its spatial location, as is required when driving. Participants were 23 Dalhousie undergraduate students who completed four pure and two mixed blocks of the road sign and rear light trials in an ABABCC sequence. Planned comparisons indicated that interference in the converse (rear signal lights) and standard (road signs) spatial Stroop tasks resulted in accuracy and reaction time deficits that were greater in mixed - relative to pure - blocks. This suggests that BMW's mini-countryman rear signal lights are theoretically problematic and may impair driving abilities to the detriment of all road users.

Supervisors: Dr. Raymond Klein & Brett Feltmate

7. Examining Dispositional Optimism as a Buffer of the Association Between Maternal Childhood Maltreatment and Adverse Birth Outcomes

Lauren Giles¹

¹Mount Saint Vincent University

Background: Maternal history of childhood maltreatment (MCM) has been linked to adverse antenatal outcomes such as preterm delivery, low birth weight, and neonatal intensive care unit (NICU) admission. Given that 32% of Canadians experience childhood maltreatment, the investigation of protective factors that serve to mitigate the intergenerational transmission of negative impacts of MCM remains an important line of inquiry. Recently, research has aimed to understand how individual characteristics, including dispositional optimism, contribute to the wellbeing of individuals and extend to offspring. The purpose of the current study was to assess whether maternal dispositional optimism acts as a buffer to mitigate the negative impact of MCM on infant birth outcomes. Methods: During the third trimester, 35 pregnant individuals were assessed for MCM and dispositional optimism, using self-reports. Approximately 2 weeks post-delivery, birth outcomes (gestational age at birth, birth weight, NICU admittance) were reported. Analyses were conducted using hierarchical linear regressions. Results: A significant interaction was found between MCM and dispositional optimism predicting birth weight, such that those who reported higher levels of MCM and higher optimism, gave birth to lower weight infants. Discussion: The findings of the current study should be interpreted with caution due to small sample size, limited variability, and lack of adverse birth outcomes. Further exploration is needed to determine whether optimism - as a wellbeing strategy - applies to maltreated individuals the same way in which it has been documented in non-maltreated samples. In addition, type, duration, and severity of maltreatment should be explored in future studies.

Supervisor: Dr. Jennifer Khoury

SESSION 1B: WELL-BEING/HEALTH/COVID-19 (MCCAIN 106)

1. The Effects of Parent Mental Health, Chaos, and Routine on Child Mental Health During COVID-19 Mandated Homeschooling: A Moderated Mediation Model

Daneesha Williams¹, Mariam Elgendi,¹ Sherry Stewart,¹ H  l  ne Deacon¹

¹ Dalhousie University

The COVID-19 pandemic has caused a drastic shift in the lifestyle of many families, particularly with the novel challenges of mandated homeschooling. Families have reported fewer routines and higher levels of household chaos since the onset of the pandemic, and such changes have coincided with a striking decline in parent and child mental health. Thus, this study aimed to explore the association between parent (depression, anxiety, and stress) and child mental health (internalizing and externalizing problems) while examining chaos and routine as mediators of this relationship. To determine whether these relationships differed based on schooling circumstances, homeschooling status was examined as a moderator. Accordingly, 962 families were surveyed (332 mandated homeschoolers, 244 voluntary homeschoolers, 386 in-person learners) and asked to report on parents' and children's mental health and levels of household chaos and routine. Chaos was found to mediate the positive relationships between all parent and child mental health problems across all schooling groups. Routine was found to mediate the relationship between all parent mental health problems and children's internalizing problems for voluntary homeschoolers, but not for mandated homeschoolers or in-person learners. Mediation by routine was also found for all parent mental health problems with children's externalizing problems for mandated and voluntary homeschoolers, but not in-person learners. Overall, these results advance our understanding of the relationship between parent and child mental health during the COVID-19 pandemic and highlight the importance of targeting household chaos and routine in clinical efforts to improve family wellbeing in the face of global health crises.

Supervisor: Dr. H  l  ne Deacon

2. Undergraduate Students' Memories for Stressful COVID-19 Pandemic-Related Events

Emma Kenny¹

¹ Mount Saint Vincent University

On March 11, 2020, the world was effectively shut down due to the COVID-19 pandemic. Given that it has been just over three years since this happened, what pandemic-related events are most memorable? This goal of this study was to examine what types of stressful events undergraduate students remembered from the pandemic as well as potential factors associated with how stressful they remember those events being. Participants were asked to describe their two worst COVID-19 pandemic-related events and provide a stress rating for those events. Additionally, participants completed questionnaires on specific COVID-19 stressors, perceived social support coping styles, and resiliency. An examination of the types of events remembered as the “worst” pandemic-related events revealed that they were not necessarily the ones rated as most stressful. Several trends were observed between perceived social support coping styles and stress ratings for both the memory narratives and COVID-19 stressors. The results of this study may suggest that participants were adaptive and able to cope with the “worst” stressors they remember experiencing during the pandemic.

Supervisor: Dr. Angie Birt

3. Jesus, Take the Wheel! Exploring the Association Between Religiosity/Spirituality and Resiliency in a Canadian Population

Yuzhi(Stanford) Yang¹

¹ University of New Brunswick, Saint John

The present study examined the relationship between religiosity/spirituality (R/S) and resiliency. A large body of cross-sectional studies have supported a moderate positive association between R/S and resiliency; however, no research in this area has attempted to examine this association in population-level datasets. Existing studies have also fallen short in examining the potential moderating effect of socioeconomic status. Data from the Public Use Microdata File of the 2016 General Social Survey (cycle 30; 2016 GSS) on Canadians at Work and Home was used for the analyses. The target population of the 2016 GSS is all non-institutionalized persons 15 years of age or older across the ten provinces. A range of demographic variables were controlled for in all analyses, including age, language, education, marital status, visible minority status, region of residence, subjective well-being, and sense of belonging to the community. R/S was assessed via self-identified religious affiliation status and the importance of religious/spiritual values. Resilience and resiliency were assessed with a 10-item questionnaire, with seven items examining resiliency and three items examining resilience. Survey-weighted regression was used to examine the association between R/S and resilience/resiliency and the moderating effect of income level. The results revealed that the religious and the nonreligious reported comparable outcomes in resiliency, and the moderating role of income level in the R/S-resiliency association was not supported.

Supervisor: Dr. David Speed

4. Job Autonomy and Resilience as Predictors of Well-Being and Organizational Outcomes: A Comparison Between Remote and On-Site Employees

Noah Hann¹

¹ Mount Allison University

The COVID-19 pandemic has precipitated momentous changes in the modern workplace environment, with a greater number of employees now working from home. As such, the current study sought to determine how job autonomy and resilience contribute to job satisfaction, turnover intention, and burnout among participants working on-site, remote, and hybrid. A sample of 158 Canadian employees between the ages of 18 to 70 years ($M = 41.49$, $SD = 15.10$) completed a series of questions about their workplace experiences. The results indicated that these three groups significantly differed in their level of job autonomy, with this variable being a stronger predictor of individual and organizational outcomes than resilience. These findings suggest that job-related factors like job autonomy may be a valuable tool to all employees, irrespective of where and how they work. Future research should investigate ways of implementing job autonomy across various work environments.

Supervisors: Dr. Doruk Uysal Irak & Dr. Lisa Dawn Hamilton

5. Intolerance of Uncertainty as a Predictor of Psychological Aggression Perpetration Amongst LGBTQ+ and Non-LGBTQ+ Individuals During the COVID-19 Pandemic

Zoey Chapman¹

¹ Acadia University

Intolerance of uncertainty (IU) involves being fearful of the unknown and/or the future, with those high in IU being more likely to experience greater difficulties coping with uncertainty. IU tends to be associated with heightened anxiety, jealousy, and anger, which are also related to an increased likelihood of perpetrating intimate partner violence (IPV). Theoretically, IU might be a risk factor for psychological IPV perpetration; however, little research has been done to examine this potential relationship, especially in the context of the COVID-19 pandemic. The current study examined whether IU was a predictor of psychological aggression perpetration both cross-sectionally ($n = 1118$) and longitudinally, through daily diaries ($n = 336$) and a follow-up study ($n = 399$), among LGBTQ+ and non-LGBTQ+ individuals during the COVID-19 pandemic. It was hypothesized that higher levels of IU would be related to higher levels of psychological aggression perpetration during the COVID-19 pandemic. Results indicated that IU significantly predicted psychological IPV perpetration cross-sectionally but not longitudinally. Furthermore, psychological IPV perpetration did not increase over time during the COVID-19 pandemic. Additionally, LGBTQ+ identity did not predict psychological IPV perpetration. However, when covariates (e.g., age) were removed, LGBTQ+ individuals had significantly higher IU levels than non-LGBTQ+ individuals. Finally, the current study found that LGBTQ+ identity did not moderate the strength of the association between IU and psychological IPV perpetration. Given that those high in IU are more likely to perpetrate IPV, it may be beneficial to target IU clinically in order to reduce IPV perpetration.

Supervisors: Dr. Diane Holmberg & Dr. Kathryn Bell

6. Investigating the Psychological Benefits of Adult Colouring

Anna George¹

¹ Cape Breton University

Adult colouring has become one of the newest trends over the last decade with an increase in well-being attached to its effects, yet it is unclear how a colouring book can provide such benefits. The current study explores the potential effects adult colouring can have on psychological measures including anxiety, satisfaction with life, desire for control, and mindfulness. Using a mixed-method approach, 105 participants who identified themselves as 'adult-colourers' completed an online survey that assessed their colouring experience and how colouring has influenced their lives in regards to psychological measures. Additionally, 4 participants completed colouring sessions which altered the degree of structure throughout the colourings while mindful breathing techniques were also implemented. Semi-structured interviews were conducted after the colouring sessions to gain insight into the benefits the 'adult-colourers' experienced. Results showed several significant correlations between the psychological measures with the strongest correlation existing negatively between mindfulness and anxiety. Additionally, all participants who completed the colouring sessions reported a decrease in anxiety and an increase in mindfulness. Qualitative results showed that participants colouring structure preferences aligned with their everyday life control preferences. There were no significant differences found between participants' experience or frequency with colouring. This could be due to the benefits of colouring becoming effective immediately, however, further research is needed to support this claim. The results from the current study are consistent with previous literature supporting evidence that adult colouring has the potential to decrease anxiety, increase mindfulness, and essentially benefit one's well-being.

Supervisor: Dr. Peter MacIntyre

7. Well-Being During the Climate Crisis in Relation to Nature Connectedness, Climate Knowledge, Climate Anxiety, and Pro-Environmental Behaviour

Emily Thomson,¹Sean Roach¹

¹University of New Brunswick - Saint John

The ongoing climate crisis is becoming an increasing problem in today's society. Previous studies have shown that well-being is significantly affected by climate change, and have alluded to many factors that play a role in this relationship. These factors have been identified as pro-environmental behaviour, nature connectedness, climate anxiety and climate knowledge. The purpose of this study is to further explain the relationship between climate change and well-being, compared to previous studies. It is predicted that increased pro-environmental behaviour and nature connectedness will be associated with increased well-being. It is also predicted that increased climate anxiety and climate knowledge will be associated with decreased well-being. The proposed study will administer a survey to undergraduate students at the Saint John campus of University of New Brunswick and the general public. The survey will consist of multiple questionnaires including the Depression, Anxiety, Stress Scale (DASS-21) and Ryff's scale measuring well-being, the Nature Connectedness scale, the Climate Change Anxiety scale, the Personal Behaviors scale, and the Collective Action scale measuring pro-environmental behaviour and the Climate Change Assessment Measure to assess climate knowledge. Data from the survey will undergo bivariate correlation and path model analysis. Results suggests that those living without a local climate crisis, who have higher nature connectedness, exhibit better well-being, and that climate anxiety is less likely to be associated with pro-environmental behavior. Having increased climate knowledge is associated with increased nature connectedness and is predictive of nature connectedness, climate anxiety and pro-environmental behavior being more positively associated.

Supervisor: Dr. Sean Roach

SESSION 1C: COGNITIVE (MCCAIN 301)

1. Reassessing Inhibition Of Return's Encoding Across Two Forms of Oculomotor Activation

Lucas Tennen¹

¹ Dalhousie University

Inhibition of Return (IOR) is an attentional phenomenon whereby reaction time (RT) is slower to visual targets presented at a previously stimulated location. IOR was shown to be coded environmentally rather than retinally by Maylor & Hockey (1985), who used a saccadic eye movement in the interval between the cue and the target to distinguish retinotopic from environmental coordinates. Klein and Redden (2018) have recognized two distinct forms of IOR: an output form which is characterized by an inhibition in motor response, and an input form which is characterized by an inhibition in information processing. These forms are differentially generated depending on the activation state of the reflexive oculomotor system. As the state of the reflexive oculomotor cortex was ambiguous in Maylor & Hockey (1985), the present study replicated their design while ensuring oculomotor engagement or suppression by requiring participants to make a pro or anti saccade, respectively, following the presentation of the cue. Trends in preliminary data collection showed greater IOR for environmental than retinal coordinates following prosaccades (output IOR), but the inverse relationship following antisaccades (input IOR), further reinforcing the hypothesis that these are distinct inhibitory effects. Additionally, we observed inhibition in both baseline conditions (i.e., targets at a previously unstimulated location but on the same side as the cue), which could suggest that both IORs affect reaction time on a spatial gradient.

Supervisors: Dr. Ralph S. Redden & Dr. Raymond M. Klein

2. Eye Movement Reading Behaviour in Schizophrenia and Developmental Dyslexia: A Comparison

Victoria Matthews¹

¹ Department of Psychology, University of New Brunswick

Although clinically distinct, growing evidence suggests that schizophrenia and developmental dyslexia share a common neurodevelopmental basis (reviewed in Condray, 2005; Vanova et al., 2021; Whitford et al., 2018). Support for this notion comes from research reporting genetic and pathophysiological overlap, as well as similar deficits in reading and reading-related processes, such as phonological processing and oculomotor control (reviewed in Whitford et al., 2018). Surprisingly, however, no empirical studies have directly compared naturalistic reading performance between these disorders. The current study aims to address this issue by employing eye movement recordings to examine whether naturalistic text-level reading performance is comparably impaired in adults with schizophrenia ($n = 20$) and psychiatrically healthy adults with dyslexia ($n = 18$). We examined a variety of averaged eye movement measures, including reading rate (words/minute); total number of fixations; average fixation duration (ms); and total number of saccades (progressive and regressive). For each eye movement measure, we compared reading behaviour between: (1) participants with schizophrenia and their matched controls ($n = 16$); (2) participants with dyslexia and their matched controls ($n = 16$); and (3) participants with schizophrenia and participants with dyslexia using linear mixed-effects regression models. Results demonstrated reduced text-level reading fluency in the schizophrenia sample compared to their matched controls (e.g., reduced reading rates, longer fixation durations), no difference between the dyslexia sample and their matched controls, and comparable reductions between the schizophrenia and dyslexia samples. Taken together, our study provides additional support for a shared neurodevelopmental basis of schizophrenia and dyslexia.

Supervisor: Dr. Veronica Whitford

3. Does it Take Two to Tango: Do Post-Error Improvements in Accuracy Accompany Post-Error Reaction Time Slowing?

Donnique Cooper¹

¹ Saint Mary's University

As humans we are bound to make errors, but how we process and react to those errors is still an ongoing mystery. When people make an error, they generally respond slowly on the subsequent trials. This effect is called post-error slowing (PES). The PES is usually explained by a temporary increase in response caution where more evidence is accrued before a decision is made. This account should predict an increase in accuracy following an error. While there are some reports of a post-error improvement in accuracy (PEIA), it is not always observed with PES. Some (Danielmeier & Ullsperger, 2011) have proposed that PEIA and PES are the result of separate processes because they do not always co-occur. Alternatively, the lack of PEIA and PES coincidence might be the result of the nonlinearities in the speed-accuracy trade-off (SAT). In this article speed-accuracy trade-off is used as the basis for the cognitive explanation of PES. Here we use the response-signal approach to measure the full SAT function to explore the coincidence of the PEIA and the PES. This exploratory analysis will analyze if the PES is a shift along the same speed-accuracy trade-off function (response caution) or is it a general slowing to a different speed-accuracy trade-off function (distraction of attention) We anticipate that our findings will provide greater understanding of the relationship between PEIA and PES.

Supervisor: Dr. Jason Ivanoff

4. The Impact of Beat Hand Gestures on Memory of Listeners

Danyelle Fields¹

¹St. Thomas University

Individuals use different sensory information to learn and comprehend their surroundings, for example, verbal information such as speech and non-verbal information such as hand gestures. Here we focused on beat hand gestures—baton-like movements that draw attention to a significant point, like moving one's hand in tempo with keywords. To examine the impact of beat hand gestures on listeners' memory, we recruited 31 undergraduate students taking the Introduction to Psychology courses in this experimental study. Half of the participants ($n = 16$) watched a video of an experimenter telling a story with beat hand gestures, and the other half ($n = 15$) watched a video of the same storytelling with no hand gestures. Afterwards, participants of both conditions completed the same comprehension questionnaire to evaluate their ability to recall focal points about the story. We hypothesized that participants who watched the beat gesture video would perform better on the comprehension questionnaire compared to participants who watched the video without beat gestures. Descriptive results showed the expected pattern, which is that participants in the gesture-video condition ($M = .65$, $SD = .15$) performed better on the comprehension questionnaire than participants in the no-gesture video condition ($M = .56$, $SD = .14$). However, this difference is not statistically significant ($t(29) = 1.76$, $p = .089$, $d = .63$). Despite the statistically non-significant result, understanding the impact of hand gestures can have many applications such as classroom teaching and learning. Future research should use a larger sample to test this phenomenon.

Supervisor: Dr. Doris Chow

5. The Influence of Musical Training and Bilingualism on Selective Attention

Sarah Keirstead¹, Jonathan Wilbiks¹
¹ UNB, Saint John campus

Learning a second language (i.e., bilingualism) and learning to play a musical instrument are both associated with enhanced performance on selective attention tasks. Research has also investigated whether there is a combined effect of being both bilingual and having musical training on selective attention performance, beyond the advantage observed for bilinguals or those with musical training alone. However, research in this area has not provided clear results, due to not consistently finding a bilingual advantage in selective attention. Therefore, in the present study, English monolingual and English/French bilingual undergraduate psychology students (N=82) from the University of New Brunswick - Saint John completed a French assessment, a musical sophistication questionnaire, and a melody discrimination task. Participants also completed a revised Flanker Task, which assessed their selective attention performance. As congruent facilitation during selective attention tasks has been shown to mask a bilingual advantage, neutral trials were included as well as congruent and incongruent trials. Final analyses indicated no significant effect of being bilingual or having musical training on selective attention performance. However, although not significant, bilinguals did perform better relative to monolinguals when congruent facilitation was controlled for. There was no additive advantage observed for participants who were both bilingual and had musical training. Overall, the present study's findings do not support the hypotheses that being bilingual or having musical training increases performance on a selective attention task. However, it does provide evidence of congruent facilitation masking a bilingual advantage in selective attention performance.

Supervisors: Dr. Jonathan Wilbiks & Dr. Vanessa Morris

6. Language & Laterality: Investigating the 'SNARC' Effect in Multilinguals, Bilinguals, and Monolinguals

Madeline Wiseman¹

¹ University of New Brunswick

Though interconnected, the brain's left and right hemispheres differ in functional dominance - known as laterality. Here, we used a greyscale task to examine visual laterality in different language groups (English monolingual, English-French bilingual, and Arabic or Urdu bi/multilingual), and its relationship to 'Spatial-Numerical Association of Response Codes' (SNARC): a numerosity effect, where people internally represent numbers on a number-line in ascending order from left-to-right. Typically, when greyscale stimuli are presented with high-number (8, 9) or low-number (1, 2) SNARC overlays to English monolinguals, their laterality scores differ per-trial depending on the magnitude of the overlay (Nicholls et al., 2008). However, this phenomenon is less understood in bilinguals/multilinguals, and especially those whose first-language (L1) has a right-to-left orthography (e.g., Arabic). We hypothesized that bilinguals/multilinguals would exhibit reduced visual laterality compared to monolinguals, and that right-to-left L1 readers would exhibit a reduced SNARC effect compared to the other language groups. The results of a logistic mixed-effects regression model (N = 31 young adults; 10 monolingual, 13 bilingual, 8 right-to-left L1 readers) revealed no significant effects of language group on laterality scores (bilinguals: $p = .96$; right-to-left L1 readers: $p = .18$), as well as no significant effect of SNARC overlay on laterality scores ($p = .65$) and on the language groups (bilinguals: $p = .74$; right-to-left L1 readers: $p = .88$). Together, our findings suggest that there may not be language-group differences in visual laterality effects, although further work with large sample sizes is needed.

Supervisors: Dr. Veronica Whitford & Dr. Daniel Voyer

7. An Attempt to Modulate the Attentional Blink Through Meditation

Hannah Robertson¹

¹ Mount Allison University

The attentional blink (AB) effect reflects a deficit in selective attention characterized by an inability to recall the second of two targets when they are presented in close temporal succession, generally thought to reflect attentional resource limitations. The present study examined whether meditation experience could modulate the focus of attention to better redistribute cognitive resources. A two-target task was used to measure the influence of meditation experience and meditative instructions on temporal and spatial selective attention. For Experiment 1, it was hypothesized that experienced meditators would produce a smaller AB effect than novices. Furthermore, two types of meditative techniques—Open Monitoring and Focused Attention—were examined to determine if meditation styles modulate attentional focus differently. The results demonstrated a successful replication of the AB effect; however, the size of the effect did not differ between experienced meditators and novices. In Experiment 2, novice meditators were separated into meditation or control instruction conditions. It was hypothesized that novices who were instructed to focus less, derived from open monitoring techniques, would produce a smaller AB effect than novices who received control instructions. Although the results showed a statistical trend in the direction of the hypothesis, there was no statistical difference between groups.

Supervisors: Dr. Mitchell Lapointe & Dr. Rima Azar

SESSION 1D: INDUSTRIAL/ORGANIZATION/SPORTS PSYCHOLOGY (MCCAIN 302)

1. Does Gender Orientation Makes a Difference? Type of Support and Emotional Exhaustion Among Employed Mothers

Jiawei(Vivian) Huang¹

¹ Mount Allison University

Although the importance of social support is well-established, little is known about the type of social support that is the most effective for reducing work-family conflict among employed mothers. The purpose of the current study was twofold: a) to examine the effects of emotional and instrumental support from spouses and supervisors on work-family conflict, and b) to explore the moderating effect of gender role orientation on different types of spousal support and job-related emotional exhaustion. The data were collected from 274 Canadian employed mothers with at least one child under 18 who live with their spouses. Participants were between the ages of 19 to 60 years old ($M = 36.57$, $SD = 6.96$). Most participants worked full-time (93.8%, $n = 257$) and had a child younger than six years old (66.2%, $n = 149$). Both supervisory and spousal support was negatively associated with work-family conflict. Moreover, emotional spousal support and instrumental supervisory support were the strongest predictors of work-to-family conflict, and instrumental supervisory support was the strongest predictor for family-to-work conflict. In contrast, gender role orientation did not affect the relationship between social support and emotional exhaustion. These findings demonstrate that women employees can benefit from different sources of social support when dealing with work-family conflict.

Supervisors: Dr. Doruk Uysal Irak & Dr. Louis Wasylkiw

2. Defining and Enacting Inclusion in the Retail Workplace: Developing an Inclusion Matrix for Retail Managers

Chantell Jebailey¹

¹ Saint Mary's University

Currently, there is a gap within the literature on equity, diversity, inclusion, and accessibility (EDIA) in the retail workplace, as most research focuses on customers with disabilities instead of employees. This focus group study aims to gather First Voice knowledge to design a tool to provide retail managers with interventions for improved workplace inclusion of their employees with disabilities. In all, 6-8 retail workers with disabilities and varied demographic identities will be recruited in retail locations in the Halifax Regional Municipality, post-secondary institutions, and supported work organizations in Nova Scotia. Interested recruits will connect with researchers via a Qualtrics survey for informed consent and to sign up. Our planned focus group protocol will engage participants in a discussion about their experiences working in retail. How do they define EDIA? When have they felt included and excluded at work? What would they change about the retail workplace to make it more diverse, equitable, inclusive, and accessible? The focus group will be virtual, recorded and transcribed using otter.ai, and will take about 90 minutes over Microsoft Teams. Open coding will be used to identify meaning units in the transcript and to generate themes representing how our participants felt, the experiences they discussed, and the changes they recommended. Results are pending. These findings will give us insights from the perspective of those with disabilities in the workplace and in turn, allow us to improve the workplace environment in terms of accessibility and accommodation.

Supervisor: Dr. Lucie Kocum

3. Team Cohesion, Perceptions of Control and Social Support as Predictors of Stress in Public Safety Communicators

Tracy Hey¹

¹Mount Saint Vincent University

Public safety communicators (PSCs) are the first of all first responders to most emergency situations. Despite experiencing high levels of vicarious exposure to trauma little is known about their job-related psychological status. That which is known, suggests they are at least as vulnerable to psychological injury as are on-scene first responders. The purpose of this online exploratory study was to exam the relationship amongst and between perceptions of control, social support, resilience, and team cohesion and psychological distress, somatic complaints and perception of stress. PSCs working at two Nova Scotia emergency communication centres were surveyed and provided 36 completed questionnaires (18 females, 18 males), for an approximate response rate of 39%. Bivariate correlations revealed surprisingly little relationship between team cohesion, social support, resiliency and the outcome measures. Three stepwise regressions predicting perceived stress the measures of distress revealed the sole significant predictor to be perceptions of control. As team cohesion and social support had been hypothesized as being important in the stress-stressor process, it was surprising that these constructs were not related to outcome measures. Study findings provide little directly germane to obvious policy recommendations other than that managers should do all they can to nurture perceptions of control in a typically chaotic workplace. As limited statistical power may have resulted in the failure to find actual relationships, future researchers, working with larger samples, may yet find that modifiable variables such as team cohesion and social support actually do play a role in the psychological health of PSCs.

Supervisor: Dr. Stephen Perrott

4. Work Ethic and Resilience Among Canadian Athletes

Joey Frenette,¹ Denis Lajoie¹

¹ Université de Moncton

In sports performance research, numerous studies aim to identify predictive factors that optimize athletic preparation. Although biological factors have been a focus, there has been a surge in interest in psychological factors that contribute to performance. Resilience, the ability to maintain function through stressful situations, is viewed as prerequisite to athletic performance. Work ethic, values that emphasize appreciation of hard work, hasn't received as much attention, but is associated with performance across multiple disciplines. As such, one might surmise from psychological literature that high-performing athletes should be different from the general population, such that athletes would be higher in resilience and work ethic. In order to examine this proposition at a more fine-grained level, our study aims to investigate the relationships of both traits with sport participation, based on the premise that participation is a necessary pre-requisite for eventual performance. As such, we used resilience, work ethic and sports participation data from the 2016 General Social Survey from Statistics Canada. This study used stratified data representative of individuals aged 15 and older from all Canadian provinces. We conducted factor analyses for resilience and work ethic items to generate global scores of both traits. Our logistic binomial regression analyses did not reveal any significant predictive power for either resilience, work ethic, or their interaction regarding sports participation. Our study's contrasting findings regarding resilience in sports compared to current literature warrants further investigation. We plan to explore these traits in relationship with the desire to compete and competition history in future research.

Supervisor: Prof. Denis Lajoie

5. Examining Managerial Support Through Self-Determination Theory: A Mixed Method Study on Engagement and Affective Well-Being of Remote Workers

Kennedy Hunt¹

¹ Mount Allison University

The pandemic-forced shift to remote work resulted in adverse outcomes for employee well-being and organizational functioning. Despite the increasing prevalence of remote employment in Canada, few studies have investigated how to support this population. Extending upon Hunt and Irak (2022), employee self-determined motivation was proposed to increase engagement, affective well-being, and optimal organizational functioning. The aims of this work were twofold: (a) establish whether self-determined motivation facilitated the relationship between managerial need support and affective well-being and (b) determine managerial behaviours that support the basic psychological needs of remote employees. In the first study, 133 remote employees from the Canadian labour force participated online through LimeSurvey, where the participants' mean age was 35.15 (SD = 12.37). The results indicated managerial need support as a central correlate and predictor of engagement and affective well-being. Furthermore, self-determined motivation mediated the relationship between managerial need support and affective well-being. Ten employees who participated in the first study were interviewed in the second study. Participants were mostly female (70%) and varied broadly in age. Thematic analysis of interviews revealed managerial support fell into three themes (sub-themes): (a) autonomy, (flexibility, trust, self-direction, explanatory rationale) (b) competence, (feedback, encouragement, optimal challenge) and (c) relatedness (social bonding). The first study's results supported a multidimensional understanding of the remote manager-subordinate context, that may cultivate self-determined motivation to improve and sustain employee engagement and affective well-being. The second study's results illustrated examples of need supportive managerial behaviour, both novel and consistent with literature, suggesting generalizability to the remote work context.

Supervisors: Dr. Doruk Uysal Irak & Dr. Terry Belke

6. Choosing Your Words Carefully: The Effect of Workplace-Related Suicide on Employer Brand Image

Jacqueline Shaw¹, Kevin Kelloway¹

¹ Saint Mary's University

While there is existing research on the impact of workplace-related suicide and the importance of employer brand image independently, there is little research investigating their relationship. The current study examined the effects of workplace-related suicide, quality of employer response, and suicide victim gender on employer brand image and perceived organizational support (POS). In this vignette study, participants were asked to read an organization's email response to an employee suicide and report their perceptions. Participants (N = 357) consisted of individuals aged 18 to 66. Measures included Employer Brand Image and POS. MANOVA results suggest that a work-related cause and a bad or neutral response result in lower brand image and POS, with a good response resulting in higher brand image ratings than a bad response. However, a good response does not compensate for a work-related cause. In the competitive labour market, it is increasingly important for organizations to consider their actions and how they may be perceived to continue attracting and retaining talent. These findings may encourage employers to provide more tangible and empathetic support to all those affected. They also highlight the significant negative impact work-related causes have on employer brand image, encouraging employers to play an active role in reducing these risks.

Supervisor: Dr. Kevin Kelloway

7. Police Officers' Opinions on the Mobile Crisis Response Team: A Qualitative Study

Karlene Dalzell¹, Mary Ann Campbell¹

¹ University of New Brunswick - Saint John

Police officers frequently act as first responders to calls involving persons with mental illness and are faced with the decision to either arrest, refer the individual to mental health services, or do nothing. Co-response teams were developed to support officers in responding to such calls for service; however, there is limited research on the effectiveness of co-responder models from a police officer perspective. Therefore, the current study used data from semi-structured interviews with 30 police officers in New Brunswick to examine police officer's view on mental health-related calls, their opinions on co-response teams and the effectiveness of this service, and their view of their role during a mental health-related call when a clinician is present. Two overarching themes emerged surrounding police officers' views on mental health-related calls that centered around how they appraise the call and how they choose to respond to the call. Views of the co-responder clinicians were generally positive, but participants acknowledged little collaboration with clinicians on these teams, a preference for the original dedicated officer-clinician team model emerged, and most officers took a backseat role to the clinician when present with little deliberate collaboration occurring between them on call response. The current study advances knowledge pertaining to police officers' opinions surrounding co-response teams, their perceived value by officers, and clarifies the need for further research to assess the nature of collaboration with clinicians when co-responding.

Supervisor: Dr. Mary Ann Campbell

SESSION 1E: CLINICAL 1/EDUCATIONAL (MCCAIN 401)

1. Actions Speak Louder Than Coaches: Eating Disorder Behaviour Among Student Athletes

Thea Button¹

¹ Mount Allison University

The objective of the current study was to examine the prevalence of disordered eating behaviour among student-athletes. Two hundred participants (130 female, 70 male) completed an online survey that assessed participants eating disorder behaviour (EAT-26), behaviours consistent with the Adonis Complex (ACQ) and perceived social support (modified MPSS). The results revealed significant differences in eating disorder behaviour between female and male athletes, with females scoring significantly higher. No differences were found between how female and male athletes scored on the Adonis Complex Questionnaire. Significant differences were found between lean-sport and non-lean sport athletes, with lean-sport athletes exhibiting more eating disorder behaviours. Furthermore, non-lean sport male athletes were found to score significantly higher than lean-sport male athletes for the Adonis Complex. Significant differences were also found across club and varsity sports, with club athletes exhibiting significantly more eating disorder behaviours than varsity athletes. Perceived social support was found to be negatively correlated to eating disorder behaviour, and when considering gender variables, level of competition and type of sport, accounted for unique variance in eating disorder behaviour. These results suggest that athletes are susceptible to negative mental health outcomes, and eating behaviours vary among athletes and sport type. The results highlight the importance of having support systems in place for student-athletes and increasing awareness of athletic staff and coaches as to the seriousness and prevalence of eating disorder behaviours among their student-athletes.

Supervisor: Dr. Gene Ouellette

2. Negative Control Strategies Mediate the Association between Romantic Conflict and Problem Gambling

Nicole Basso¹, Sherry Stewart¹, Igor Yakovenko¹, Fakir Yunus¹, Sean MacKinnon¹, Debra Gilin², Lindsey Rodriguez³, Raquel Nogueira-Arjona⁴

¹ Dalhousie University, ² Saint Mary's University, ³ University of South Florida, ⁴ University of Sussex

Prior research suggests a romantic partner's attempts to decrease a drinker's alcohol intake paradoxically increase it. According to self-determination theory, a partner's negative control strategies may decrease the drinker's intrinsic motivation to change by making them feel a lack of autonomy. While this mechanistic chain may extend to other addictive behaviors like problem gambling, it has only been examined in the context of problem drinking. Specifically, this mechanism may explain the positive association between romantic conflict and problem gambling, as conflict could precede the partner's use of negative control strategies. The present study used longitudinal methods to investigate partner negative control strategies and gambler's perceived autonomy as sequential mediators of the romantic conflict to problem gambling pathway. Participants were 518 regular gamblers who responded to up to four waves of weekly online surveys and their romantic partners who responded at Wave 1. Using multilevel structural equation modelling, romantic conflict (Partner-Specific Rejecting Behaviours Scale) was examined as a predictor of the gambler's perception of their partner's use of negative control strategies (Partner Management Strategies - Gambling), the gambler's autonomy (Psychological Needs Scale - Autonomy Subscale), and problem gambling severity (Problem Gambling Severity Index) at the between- and within-subject levels. At both levels, results indicated a significant indirect effect of conflict on problem gambling through negative control strategies, but not autonomy. Future research should investigate negative control strategies and perceived autonomy as opposite poles of a single construct, as well as the impact of positive control strategies. Results have implications for couple-level gambling interventions.

Supervisors: Dr. Sherry H. Stewart & Dr. Igor Yakovenko

3. Links Between Psychology Course Descriptions and Mental Illness Stigma

Katie MacMillan¹

¹ St. Thomas University

The current study examines cognitive therapy (CT) and mindfulness skills as possible treatments for online test anxiety. It was predicted that both the CT group and the mindfulness group would experience a decrease in test anxiety after this study, and that a control group would show no reduction. A sample of 227 (50.2% women, 46.7% men, 2.2% transgender men, and 0.9% nonbinary) high school and post-secondary Canadian students receiving an online education took the test anxiety inventory (TAI) before and after being randomly assigned to one of three possible groups: CT, mindfulness, or no treatment control. CT revealed a large change ($M = 6.61$), however, mindfulness did not ($M = 1.05$). The control group did not have a reduction, in fact, their online test anxiety increased ($M = -3.61$). The findings suggest that CT is an effective treatment for online test anxiety, and that mindfulness may not be efficient for test anxious students taking courses online.

Supervisor: Dr. Sarah Vannier

4. The Impostor Phenomenon and Mental Health in Undergraduate Students: The Moderating Role of Self-Compassion

Lauren Gallant¹

¹ Mount Allison University

The impostor phenomenon (IP) refers to feelings of intellectual incompetence, despite repeated external evidence of achievement. Impostor experiences, which overlap with harmful perfectionist tendencies, are especially common among university students, and have been linked to negative mental health outcomes. Despite these links, little research has examined how impostor feelings and the negative outcomes associated with them can be mitigated. Self-compassion, which is associated with adaptive psychological functioning, may be a relevant coping skill that could act as a protective factor against IP. Thus, the purpose of the present study was to examine whether self-compassion acts as a moderator in the relationship between IP and mental health. A sample of 181 undergraduates completed an online survey which included measures of IP, perfectionism, self-compassion, and mental health. Results provided mixed support for the hypotheses. First, consistent with past research, higher levels of IP were associated with higher levels of depression, anxiety and stress. Second, higher levels of self-compassion were associated with lower scores on IP, depression, anxiety and stress. Contrary to predictions, the strength of the relationship between IP and mental health was the same regardless of self-compassion levels. Using longitudinal designs, future research should involve implementing and examining the effectiveness of self-compassion-based programs on university campuses. Overall, the present findings are consistent with past research which supports the potential protective role of self-compassion against IP and psychological distress in university students.

Supervisors: Dr. Louise Wasylikiw & Dr. Lisa Dawn Hamilton

5. Gaming's Dirty Little Secret: Loot Boxes and Associated Decision Making Processes

Mathieu Banville¹

¹ Student

Loot boxes are digital items in video games that can be bought with real money and share similarities with gambling. Delay discounting refers to the tendency to devalue rewards that are delayed in time, while probability discounting refers to the tendency to devalue rewards that are uncertain. Both types of discounting are associated with gambling and theoretically related to loot box engagement. The current study explored the relationship between delay discounting, probability discounting, and loot box purchases in video games using a novel task. Participants from Mount Saint Vincent University (n = 45, 69% women) completed several online measures including decision-making tasks to assess discounting tendencies followed by a simple “clicker game”. During the game, participants clicked on an icon to earn virtual currency which could be exchanged for items that awarded a specified amount of points or an uncertain amount of points that was revealed when purchased (i.e., loot box). Two hypotheses were tested: first, that delay discounting would be negatively correlated with loot box purchases, meaning that those who preferred smaller, immediate rewards would make more loot box purchases; second, that probability discounting would be positively correlated with loot box purchases, meaning that those who preferred larger, uncertain rewards would make more loot box purchases. Results did not support these hypotheses. However, the clicker game may be a valuable tool for screening individuals who may be vulnerable to risky loot box engagement and may be an effective teaching tool for demonstrating the negative aspects of loot boxes.

Supervisor: Dr. Will Shead

6. Social Media Use and Depression: Possible Moderation by Motives and Dark Tetrad Traits

Philippe Savoie¹

¹ University of New Brunswick Saint John

Millions of Canadians use social media on a daily basis, where many of them are negatively affected by Major Depressive Disorder. Studies have demonstrated over the years that problematic social media use can have a significant effect on depression, however, it has not been very clear on what effectively moderates this relationship. The goal was to further understand this relationship between social media use and depression by evaluating the Dark Tetrad personality traits and motives of social media use as possible moderators. The Dark Tetrad traits look at four dimensions of negative personality traits and social media use motives look at nine different categories of motives for using social media. The study included 139 participants from eastern Canada (79% female) with an average age of 20.8. Results found high rates of depression and social media use in our population with a moderate correlation between social media use and depression. Results also found that narcissism, psychopathy, and social media use for information seeking moderated the relationship between time spent on social media use and depression.

Supervisor: Dr. Sean Roach

7. The Effects of Education About Deathbed Visions (DBVs) on Undergraduate Students' Levels of Death Anxiety and Knowledge About DBVs

Eliza Nobes¹

¹ Mount Allison University

Previous research has looked at the effects of education about end-of-life phenomena (EOLPs) on knowledge about EOLPs. The current study aimed to add to the literature by studying the effect of education about deathbed visions (DBVs) on knowledge about DBVs and death anxiety. A total of 51 undergraduate students enrolled in an introductory psychology class were randomly assigned to either the control or experimental condition. Participants in both conditions completed a questionnaire about death anxiety and knowledge about DBVs. Participants in the experimental condition were subsequently invited to attend a brief education session about DBVs. Finally, participants in both conditions recompleted the questionnaires. Results showed that at the post-test level, participants in the experimental condition were more knowledgeable about DBVs but did not differ in levels of death anxiety. Suggestions for future research are provided.

Supervisors: Dr. Stephen Claxton-Oldfield & Dr. Terry Belke

ABSTRACTS: ORAL PRESENTATIONS

SESSION 2 (1:00 PM – 2:15 PM)

SESSION 2A: CLINICAL 2/SOCIAL DEVELOPMENTAL (MCCAIN 105)

1. The Moderating Role of Religion/Spirituality on the Relationship Between Childhood Victimization and Depression

Emily Earle,¹ David Speed¹

¹ University of New Brunswick, Saint John Campus

Childhood sexual abuse (CSA) and childhood physical abuse (CPA) are positively associated with developing depression in adulthood. Religion/Spirituality (R/S) may be a mechanism that protects those who have experienced CSA and CPA from developing depression by buffering the impacts of childhood stress. There has been no Canadian research done on the role of R/S in this relationship, and little research on the topic outside of Canada. The current study used a nationally representative sample of Canadians (N ≥ 12,253) from the 2012 Canadian Community Health Survey-Mental Health. Information on physical and sexual abuse prior to age 18, and importance and use of R/S in daily life, were used to predict mental health outcomes. CSA was coded by frequency as 0 (never) and 1 (six or more times); CPA was coded by frequency as 0 (never) and 1 (three or more times). I used a series of binary logistic regressions to examine the associations between child maltreatment and past-year depression and past-year suicidal thoughts, when adjusting for covariates. The results showed that R/S values and R/S use did not reduce the impact of CSA or CPA on past-year depression; however, the impact of experiencing CSA six or more times on past-year suicidal thoughts was significantly reduced at the highest levels of R/S. This study contributed to the literature on the buffering hypothesis of religion, and the findings of this study are partially consistent with the hypothesis. Additionally, it is relevant for clinicians treating clients who rate R/S as important.

Supervisor: Dr. David Speed

2. “Something Most Canadians Don’t Understand”: A Qualitative Study of Military Children’s Perceptions of Parents’ Deployment to Morally Injurious Missions

Kathryn Reeves¹

¹ Mount Saint Vincent University

Veterans and active-duty military members have garnered increased attention over the last decade in post-deployment mental health resulting from traumatic experiences (Richardson et al., 2020). While the traumatic nature of military deployment is well-recognized, the impact of morally injury and potentially morally injurious events is less understood. Moral injury has traditionally been defined as an injury to the soul, emphasizing the perspectives of researchers and medical professionals working with military members. However, the perspectives of military families, particularly military children who have a unique relationship to the serving member, continue to be neglected in academic literature (Hawkins et al., 2017). Given that family members may be some of the first to notice changes in cognition and behaviour that point towards the presence of moral injury it is imperative that researchers and clinicians improve their understanding of the perspectives provided by familial relations. Participants (n=8) consisted of Canadian adults who grew up in military families, and lived at home during a parent’s deployment to a mission where potentially morally injurious events were likely to occur. All participants took part in semi-structured qualitative interviews. Data was analyzed inductively using thematic analysis to derive themes from participants responses. Findings show that military children can serve as vital sources of information to better ascertain military members health post-deployment to potentially morally injurious missions. Furthermore, our findings indicate that there is a vital gap in deployment protocols for the Canadian Armed Forces, where military children are often unaddressed.

Supervisor: Dr. Catherine Baillie Abidi

3. How Bright is the Bright Side? Measurement and Implications of Toxic Positivity for the Self and Others

Rachel Binns¹

¹Mount Allison University

Toxic positivity refers to the belief that no matter how hard or difficult a situation is, people should maintain a positive outlook. The present research aimed to demonstrate that toxic positivity is a measurable construct through the development of the Binns Toxic Positivity Scale (BTPS). For Study One, a community sample (N = 94) completed an initial set of 13 items to index toxic positivity. Factor analysis showed that items could be reduced to two subscales: Control and Positivity. Each subscale showed acceptable reliability, and correlations between the two subscales and emotion regulation strategies provided evidence of validity. Importantly, the subscales failed to correlate with optimism, indicating that the BTPS assesses a separate construct. In Study Two, results from a sample of undergraduates (N = 142) showed that the revised Control and Positivity subscales were reliable. However, the evidence for validity was mixed. Specifically, the Control subscale was associated with more optimism, self-compassion, and better mental health, indicating that aspects of toxic positivity may have benefits for individuals. Of interest was the finding that participants who received toxic positivity feedback after reading an imaginary scenario of failure experienced more negative mood than participants who received compassionate feedback. This negative impact of toxic positivity on mood was moderated by individuals’ level of self-compassion. Overall, findings illustrate that toxic positivity is a measurable construct, that scores relate to emotion regulation strategies, and that toxic positivity statements have negative impacts on others. Future research should focus on scale refinement and its utility.

Supervisors: Dr. Louise Wasylikiw & Dr. Andrew Inkpen

4. Examining the Link Between Maternal Control During Childbirth and Psychological Distress in the Perinatal Period

Lindsay Heyland¹

¹ Mount Saint Vincent University

Perinatal experiences of psychological distress, including depression and anxiety, are highly prevalent and are associated with adverse outcomes for mothers, their partners, and their infants. There is an abundance of research linking a mother's experience of childbirth with the development of psychological distress but limited research examining the role of maternal control during childbirth—a critical and modifiable predictive factor of a mother's experience of childbirth. This study sought to examine the associations between: (1) prenatal maternal expectations of control during childbirth and prenatal anxiety and depressive symptoms; (2) maternal perceived control during childbirth and postpartum anxiety and depression; and (3) maternal unmet expectations of control during childbirth and postpartum anxiety and depression. Participants, from Nova Scotia, Canada, included 30 pregnant participants, 25 postpartum participants, and 11 participants who were assessed in pregnancy and postpartum. Perinatal depression, anxiety, and maternal control were assessed using validated measures. Results indicated that neither prenatal expectations nor postpartum perceived maternal control during childbirth were significantly associated with concurrent depressive or anxiety symptoms. In contrast, the exploratory longitudinal study results indicated that greater unmet expectations of control during childbirth were marginally associated with lower postpartum depressive symptoms and significantly associated with higher postpartum anxiety symptoms. Future research should explore these findings using larger and more diverse samples. These results can inform the development of targeted educational materials, establishing the importance of fostering realistic maternal expectations of control during childbirth, ongoing communication, and informed decision making in the perinatal period.

Supervisor: Dr. Jennifer Khoury

5. Sexual Script Flexibility and Sexual Wellbeing in Long-Term Couples: A Dyadic Daily Diary Study

Marcus Cormier¹, Katrina Bouchard², Natalie Rosen¹, Jackie Huberman¹

¹ Dalhousie University, ² University of British Columbia

Sexual wellbeing, which includes sexual function, satisfaction, and low sexual distress, is critical for the maintenance of long-term romantic relationships. Sexual challenges are common roadblocks to sexual wellbeing and are a main reason couples seek sex therapy. In sex therapy, sexual challenges are navigated in part by modifying couple members' rigid sexual scripts—that is, their beliefs and expectations about sex—into more flexible ones. However, limited empirical investigation has been conducted to establish the benefits of sexual script flexibility for sexual wellbeing in couples. In the current study, we hypothesized that sexual script flexibility when facing sexual challenges would be positively associated with one's own and one's partner's sexual wellbeing at the daily level. A sample of 143 gender/sex diverse long-term couples was recruited to participate in a study about couples' sexual and relational wellbeing. Participants completed a baseline demographics survey and 28 days of daily diaries, including measures of sexual script flexibility and sexual function, satisfaction, and distress. A final sample of 49 couples reported facing a sexual challenge at least once during the study. Using structural equation modelling, analyses followed the Actor-Partner Interdependence Model. Contrary to my hypotheses, sexual script flexibility was not associated with sexual function or satisfaction for either couple member, or with individuals' sexual distress. As predicted, on days when individuals reported greater sexual script flexibility relative to their average, their partner reported lower sexual distress. This research provides mixed empirical support for the association between sexual script flexibility and sexual wellbeing in couples.

Supervisors: Dr. Natalie Rosen & Dr. Katrina Bouchard

6. The Relationship Between the Development of Empathy and Executive Function in Preschool-Aged Children

Elka Sheinin¹

¹ Mount Allison University

The developmental advances that occur during the preschool years can play a crucial role in setting a child up for later academic and social success. The present study examined the performance of 91 preschoolers on an empathy task, the Happy/Sad Baby Task, two hot executive function (EF) tasks, the Preschool Gambling Task and the Reversal Task, and on two cool EF tasks, the Working Memory Task and the Attention Shifting Task. The results revealed a significantly more developed empathic response during the happy episode of the empathy task compared to during the sad episode. Findings also demonstrated a significant association between empathy and hot EF, as well as some evidence for an association between empathy and cool EF. These findings are mostly in line with previous research, adding to the growing body of work focused on establishing a connection between empathy and EF. Moreover, the results of this study indicate that the development of empathy is not as straightforward as older models suggested, it is much more nuanced.

Supervisors: Dr. Garon Nancy & Dr. Andrew Inkpen

SESSION 2B: FORENSIC PSYCHOLOGY/MORALITY (MCCAIN 106)

1. Incremental Validity of Self-reported Strengths Over Criminogenic Risk Factors in Youth Risk Assessment

Narissa Rodgerson¹

¹ University of New Brunswick, Saint John

There is a need for strength-based approaches toward youth risk assessment, but research on the identification and integration of these strengths with risk information is lacking. Therefore, the current study used a prospective design to evaluate whether the inclusion of self-reported strengths (Strengths Assessment Inventory - Youth Version; SAI-Y; Royer-Gagnier et al., 2016) had incremental validity over an established risk assessment tool (Youth Level of Service/Case Management Inventory 2.0; YLS/CMI; Hoge & Andrews, 2011) for delinquency prediction six months later as measured by the Australian Self-Report Delinquency Scale - Revised (ASRDS-R; Curcio et al., 2015). In addition, between-group differences in strengths were expected based on gender and ethnicity. Participants (n = 132; 55.3% male; 46.2% White/Caucasian; 40.9% Indigenous) were drawn from a sample of youth involved in a high-intensity case management program for crime prevention in Atlantic Canada. A hierarchical multiple regression found that although the SAI-Y was predictive of reduced delinquency, it did not predict self-reported delinquency six months later once controlling for the contribution of the YLS/CMI. Thus, the SAI-Y had no incremental validity over the YLS/CMI. The intake YLS/CMI, SAI-Y and ASRDS-R total scores did not significantly vary as a function of gender or ethnicity but change from intake to six-months did vary by gender and ethnicity on the SAI-Y subscales of coping, optimism, and health consciousness. The current study adds to the understanding of the importance of strength-based approaches to risk assessment and increases knowledge of gender and ethnic differences in strength-based factors in the context of antisocial behaviour.

Supervisor: Dr. Mary Ann Campbell

2. Canadian Jurors' Experiences with Jury Duty

Emma Connolly¹

¹ Saint Mary's University

Jury service is an important component of the Canadian Justice system. Although jury duty can be a positive experience for some people, it can also come with challenges. Research shows that some jurors experience stress because of their jury service. Canadian jurors may also face financial challenges. Jury fees vary between each province and territory, and despite public official's advocacy for the federal government to increase juror compensation, many provinces pay jurors less than minimum wage. Our justice system expects Canadian citizens to fulfil their civic duty; however, jurors receive minimal financial compensation and limited resources are available for jurors who wish to seek mental health support. The present study invited former Canadian jurors to share details of their jury duty experience with us by completing an online survey. Data collection is on-going. We hope the results of this study will shed light on how jury duty affects people's lives.

Supervisor: Dr. Veronica Stinson

3. Online moral disengagement: An examination of the relationships between electronic communication, cognitive empathy, and antisocial behaviour on the internet

Madison Corkum¹

¹ Mount Saint Vincent University

Research suggests the cognitive component of empathy is hindered by features of electronic communication which facilitates antisocial behaviours online. Investigations into how features of online communication inhibit cognitive empathy are lacking and findings on moral disengagement and antisocial behaviour have yet to be integrated with studies on cognitive empathy and electronic communication. The current study aims to fill this gap by exploring the relationships between these factors, including the potential mediating role of online moral disengagement between cognitive empathy and antisocial behaviour online. One hundred and three undergraduate students completed several measures including the Online Moral Disengagement Scale, Questionnaire of Cognitive and Affective Empathy, and Online Prosocial and Antisocial Behaviour Scale. Results showed a positive correlation between compulsive Internet use and online moral disengagement, as well as a negative correlation between cognitive empathy and moral disengagement online. It was hypothesized that online moral disengagement would mediate the relation between cognitive empathy and antisocial behaviour online but this mediation was not supported. However, a moderated relationship was revealed between cognitive empathy and moral justification, by liberalism. This moderation can be explored further and built upon by future research to deepen our understanding of how political ideology relates to behaviour on the Internet. Furthermore, the current findings concerning components of empathy and moral disengagement, and their role within the perpetration of antisocial conduct on the Internet, can inform future research as well as interventions focused on encouraging prosocial behaviour online and curbing cyberaggression.

Supervisor: Dr. Will Shead

4. Academic Misconduct: An Educational Consequence to Psychopathy

Malik Conté¹

¹ Mount Allison University

Abstract

Academic misconduct has long been an issue plaguing academic institutions. The trait of psychopathy has remained consistently linked to academic misconduct; however, the influences underlying this relationship are not well known. Therefore, the current study aimed to first replicate a past study that showed a facet of academic entitlement to mediate this relationship. In addition, it aimed to contribute to the literature by investigating academic motivations (extrinsic, intrinsic, amotivation) as additional mediator variables between psychopathy and academic misconduct. One hundred and sixty undergraduate students completed a survey measuring psychopathy, academic entitlements, academic motivations and academic misconduct. Psychopathy significantly predicted academic misconduct; however, neither facet of academic entitlement mediated this relationship, nor did any of the motivational variables. Overall, although psychopathy remains highly predictive of academic misconduct, the lack of influence of the other variables may suggest that academic misconduct, as well as the beliefs and culture surrounding it, have shifted within the campus community.

Supervisor: Dr. Jennifer Tomes

5. Case Dismissed: An Exploration into Sexual Assault Victims' Experience with Institutional Betrayal

Melissa Corbett¹

¹ Saint Mary's University

Sexual assault cases drop out of the justice system before receiving a conviction at nearly double the rate of other types of assault. Individuals are at risk of betrayal from trusted institutions when the institution fails to protect from or respond to traumatic events. This results in a severing of trust between the individual and institution. Victims of sexual assault may feel betrayed if their case does not proceed to a conviction, which can affect the individuals view of the legal institution and its legitimacy. The present study sampled sexual assault complainants in Canada. Participants completed measures of institutional betrayal, attitudes towards the law and police, and qualitative measures of the participants about their personal experience and likelihood of future reporting of crimes. Results from this study adds to the limited research on institutional betrayal and informing future best practices in the response of the justice system to victims of sexual assault.

Supervisor: Dr. Veronica Stinson

6. Examining the Impact of Posttraumatic Stress and Substance Use on Perceptions of Intimate Partner Violence Victim-Witness Credibility

Harsha Ajith ¹

¹ Memorial University of Newfoundland

Intimate partner violence (IPV) is any pattern of physical, sexual, financial, or psychological abuse commonly perpetrated against women. Experiencing parental IPV during childhood increases one's likelihood of experiencing posttraumatic stress and developing problematic substance use behaviours in adolescence and adulthood. Since IPV-exposed women who experience posttraumatic stress and risky substance use are a vulnerable subpopulation facing an elevated risk of IPV revictimization, this study aims to elucidate how jurors make decisions about victim-witness credibility for this subpopulation. Participants were randomly assigned to read one of four vignettes of an alleged victim testifying about IPV which was manipulated across conditions to contain (1) posttraumatic stress and illicit substance use, (2) posttraumatic stress, (3) illicit substance use, or (4) neither (control). After reading the vignette, participants were asked to rate the victim-witness for how credible they seemed, complete a measure of stigma towards substance use, and provide a judgment for the alleged perpetrator. Because mental disorders are highly stigmatized, it was hypothesized that victim-witness credibility would be negatively affected by the interaction between posttraumatic stress and substance use. A 2x2 between-subjects ANOVA revealed a significant effect of substance use on credibility. There was also a significant interaction suggesting that individuals may be perceiving comorbid psychological symptoms as a unique gestalt. Individuals who read the testimony containing illicit substance use by the victim were significantly more likely to judge the alleged perpetrator as not guilty. This research is the first to explore extralegal factors affecting victim-witness credibility in this subpopulation.

Supervisors: Dr. Brent Snook & Dr. Laura Fallon

7. Age-Related Differences in Telling Health Lies in Younger and Older Adults

Jessica Frias¹

¹ Mount Allison University

Lying is a common social behavior; however, there is limited research on lying about health and the age-differences that are present. The current study examined younger and older adults' frequency of and motivation behind telling health lies. A sample of 307 younger (N = 158) and older adults (N = 149) completed a health lies survey where they reported how often they told each lie, the lies they told to specific people, and why they told health lies. It was hypothesized that older adults would tell more health lies than younger adults. Furthermore, it was hypothesized that younger adults would tell self-serving lies about their health while older adults would tell altruistic lies about their health. Younger adults lied in a significantly greater proportion of general health scenarios compared to older adults. Younger adults reported lying more about their health because they felt ashamed or embarrassed and they worried about what others would think of them compared to older adults. These results suggest that lying about health is less prevalent among older adults, possibly because they are less concerned with impression management and feel less embarrassment discussing health topics. Implications for psychological theory on lying about one's health and health interventions are discussed.

Supervisors: Dr. Alison O'Connor & Dr. Doruk Uysal Irak

SESSION 2C: AGEING/CAREGIVING/GENDER DIFFERENCES (MCCAIN 301)

1. An Examination of Wellness in Informal Caregivers of Persons with Dementia

James Derrah¹

¹University of New Brunswick (Saint John)

The impacts of providing informal care to a person with dementia have been well established. Research suggests high rates of depression in this population and that social support is important to the well-being of caregivers. However, little research has examined substance use outcomes in this population. The purpose of this study is to compare caregivers of people with dementia and the general population on depressive symptoms, social support and problematic substance use. A total of 72 (70.83% female) dementia caregivers, as well as 67 (77.83% female) participants from the general population completed a brief online survey. Group comparisons determined that caregivers reported higher depression scores as well as lower support in comparison to participants from the general population. However, they were not more likely to report problematic substance use. The current study found low rates of problematic substance use in dementia caregivers although the sample was experiencing psychological distress overall.

Supervisors: Dr. Caroline Brunelle & Dr. Enrico DiTommaso

2. Experience of Healthy Older Adults with a New Home-Based Treatment for Spatial Neglect: A Qualitative study

Gina Vaillancourt¹
¹ Acadia University

Background. Spatial neglect is an attentional disorder characterized by an inability to orient or respond to stimuli on the left side of space following right hemispheric stroke. Prism adaptation (PA) is a promising experimental treatment for spatial neglect, but there are barriers to its clinical implementation. Peg-the-Mole (PTM) is a home-friendly PA treatment that was developed to address the lack of user engagement in the development of rehabilitation protocols. The current study was the first to examine the experience of healthy older adults using a home-based PTM protocol with the goal of incorporating their feedback prior to its clinical implementation. **Method.** Ten healthy older adults were randomly assigned to use PTM with either 5-degree or 15-degree prism goggles in their homes during four sessions taking place over four to five days. Following the final PTM session, an exit questionnaire was administered to explore the participants' experiences with the PTM protocol. Content analysis was used to code participants' responses and identify meaningful themes. **Results.** Participants found PTM to be an engaging procedure with instructions that were easy to follow. Several key issues were identified, including the instability of the iPad, the length of the procedure, and the speed of the target presentation. **Implications.** Several modifications were made to the PTM procedure to address the problems identified by participants. This study adds to the limited literature on the users' experiences with cognitive rehabilitation tools and encourages the future inclusion of patients' feedback as an integral part of the development of rehabilitation treatments.

Supervisor: Dr. Anne Sophie Champod

3. Sing Like a Man: A Multifaceted Analysis on Gendered Attitudes to Singing

Dylan Rose¹
¹University of Prince Edward Island

Although choral research has suggested that young males demonstrate a more negative attitude to singing (Dibben, 2002; Hall, 2005; Harrison, 2004; Demorest, 2000; Freer, 2021; Papageorgi, Saunders, Himonides, & Welch, 2022), the changing landscape of "masculinity" in the age of social media requires a re-examination of males' attitudes to singing (Noble, 2020). The current study attempted to assess these attitudes among a sample (N = 73) of university students (mean age = 22.7, SD = 5.90, range = 18–52) via a two-part online survey. Overall results indicated that the young male cohort demonstrated more negative attitudes to singing than females, as determined by their performance on an 8-question "attitudes to singing" survey ($p = 0.129$), their self-assessed ratings for "current" singing skills ($p = 0.078$), and lower scores on three different dimensions of the Goldsmith Musical Sophistication Index (Gold-MSI), most notably for "Singing Abilities" ($p = 0.030$). Although results indicated more negative attitudes to singing, qualitative responses in the study validated prior research by Chmiel (2020) suggesting that 18–25-year-olds began to use music more passively as a therapeutic tool for stress regulation during COVID-19. Nevertheless, singing is a social activity whose benefits are realized in a group (Lidskog, 2016; Weinstein et al., 2016), and this study reveals that, despite newfound diversity among genders, sexes, and cultures, males are still not receiving the social and physiological benefits of singing in full. Limitations for these findings include sampling bias (participants from non-Western countries, who may have been brought up in environments that fostered a collective identity around singing) and differences in variance among male (N = 17) and female (N = 51) respondents.

Supervisor: Dr. Annabel Cohen

4. Sexual Health Education and Attitudes Toward Gender and Sexual Minorities in New Brunswick

Denise Roy-Loar¹

¹ Mount Allison University

Gender and sexual minorities experience an increased risk for stigma and poor sexual health outcomes compared to their cisgender heterosexual peers. Despite national and international recommendations for comprehensive and inclusive school-based sexual health education, research has shown inconsistencies and lack of gender and sexual minority content in New Brunswick's curricula. The current study examined if adult participants' experiences of New Brunswick's sexual health education within the last 10 years included gender and sexual minority specific content and how perceptions of their sexual health education correlated with attitudes toward gender and sexual minorities. A total of 623 participants who attended sexual health education in New Brunswick between grades 6 to 12 completed an online survey. The survey measured sources of sexual health education, perceived quality of sexual health education, and homophobia, biphobia, and transphobia. Participants of all identities and orientations reported low scores for the quality of their school-based sexual health education. Gender and sexual minority participants reported their education was not inclusive of their identities, which differed significantly from cisgender heterosexual participants' experiences. Unexpectedly, higher perceived quality and inclusivity of school-based sexual health education significantly correlated with higher scores of homophobia, biphobia, and transphobia. However, since most people reported low quality, the education itself was inadequate, but those who perceived it as higher quality were more likely to endorse stigma against sexual and gender minorities. Overall, this study highlights opportunities to improve the explicit and comprehensive inclusion of gender and sexual minority content in New Brunswick's sexual health education curricula.

Supervisors: Dr. Lisa Dawn Hamilton & Dr. Geneviève Desmarais

5. The Myth of the Maternal Instinct

Amy Hyland¹

¹ Saint Mary's University

Maternal instinct, the innate and automatic knowledge of caring for and protecting offspring, is relatively unexplored. Widespread belief in this concept has strong implications. Understanding motherhood realistically could reduce shame and stigma among women who may currently be perceived as biologically flawed when asking for help with parenting or having no desire to have children. It would also place more value upon fathers who care for their children. Here prevalence of belief in human maternal instinct among undergraduate students is explored using an open-ended survey. This study posits that women's attachments to their children depend on environmental factors, such as available resources, and her, and her children's, health. Therefore, it outlines evidence to argue that human maternal instinct is a myth. Despite the evidence against maternal instinct, this study's findings indicate that belief in the concept is commonly held. Study One used a qualitative method and open-ended questions to understand how maternal instinct is conceptualized. Based on the themes that emerged in Study One, the Maternal Instinct Survey (MIS) was developed for Study Two and administered online in conjunction with an adult attachment-style survey. Support was found for the hypothesis that belief in maternal instinct will be common, with 56% of participants indicating agreement. Cultural beliefs are impactful on human behaviour and decision-making and, as such, can inform policy and interventions directed at supporting families. The MIS is a novel measure presented here that may be used in future research regarding maternal instinct, motherhood and the family structure.

Supervisor: Dr. Maryanne Fisher

SESSION 2D: PARENTING/PERSONALITY/SOCIAL (MCCAIN 302)

1. Perceived Parenting Style and Emotion Regulation as Predictors of Regulatory Focus in Adults

Ansam Abuswer¹

¹ Mount Saint Vincent University

The present study examined whether perceived parenting style (i.e., authoritative, authoritarian, and permissive styles) and emotion regulation (i.e., cognitive reappraisal and expressive suppression) were predictors of regulatory focus during early adulthood. Adults aged 17 to 41 years (M age= 23.7, n= 100) anonymously completed online measures of the Parental Authority Questionnaire, Emotion Regulation Questionnaire, and the Regulatory Focus Questionnaire. Results revealed that Authoritative parenting scores were significantly and positively correlated with Permissive parenting scores but significantly and negatively correlated with Authoritarian parenting scores. Further, Expressive suppressive scores were significantly and positively correlated with Authoritarian parenting scores but significantly and negatively correlated with Promotion focus scores. In turn, Cognitive reappraisal scores were significantly and positively correlated with each of Permissive parenting scores and Promotion focus scores. A multiple regression analysis indicated that the overall model significantly explains 25% of the variance in Promotion focus scores. Promotion focuses scores significantly increased with decreased Expressive suppressive scores, decreased Permissive parenting scores, or increased Cognitive reappraisal scores. In contrast, a multiple regression analysis indicated that the overall model did not significantly explain the variance in Prevention focus scores. These findings provide insights into the complex interplay between parenting style, emotion regulation, and regulatory focus, and may have implications for interventions aimed at promoting healthy development during early adulthood.

Supervisors: Dr. Elizabeth Bowering & Dr. Daniel Seguin

2. Why do Students go to University? Motivations for First-Generation vs. Continuing-Generation Students

Abigail Daley¹

¹ Mount Allison University

A first-generation student (FGS) is the first in their immediate family to attend university, and this group of students often starts with disadvantages that continuing-generation students (CGS) do not have. A CGS for the purpose of this study is defined as students who have at least one caregiver with a bachelor's degree. The current study examined supports and motivations for attending post-secondary education for FGS vs. CGS. There were 311 participants, 122 FGS and 189 CGS, all of whom were current university students at a small Atlantic Canadian university. Participants completed an online survey that assessed motivations for attending university, perceptions of social and institutional supports, & self-reports of college-going self-efficacy. FGS were more likely to report they had considering dropping out, perceived less support from friends and family, and had lower self-efficacy scores than CGS. FGS reported motivations based on helping family, and proving worth. CGS endorsed motivations based on expectations and encouragement from others. In regression analyses, predicting motivations, college-going self-efficacy was related to motivation for pursuing education post-bachelor's, and career/personal motivations, while students' status was not. Higher levels of family and friend support was linked to more career/personal and encouragement motivations for FGS and CGS. For CGS only, support was correlated with higher humanitarian and fewer default motivations. Overall, this study demonstrated differences in the types of motivations between CGS and FGS. FGS' lower self-efficacy and perception of fewer social supports could negatively influence their future goals and achievements.

Supervisors: Dr. Lisa Dawn Hamilton & Dr. Shelly Colette

3. Oh, That's so cringy! Exploring the Evolutionary Roots of Embarrassment

Karla Kenny,¹ Meylin Zink Yi¹

¹ Saint Mary's University

Embarrassment has been overlooked in the area of evolutionary psychology. We argue that it is inherent to being a social species, and may be caused, or felt, by one's own behaviour or by watching others. We propose four functions of embarrassment. First, it may serve as a social signal communicating a willingness to conform to social norms, or as a means to mitigate social threat by reducing the risk of negative social consequences, critical for group cohesion and survival. Second, it may have evolved as a mating strategy to appear likeable and humorous. Third, it may signal recognition of a mistake and a willingness to make amends, and fourth, it may be a form of self-regulation to help people manage emotional responses. Preliminary research on 60 participants shows the emergence of at least six contextual factors connected to embarrassment. They include the perception of other people's relational mistakes, perceived personal mistakes, the involvement of an authority figure, other people's perceived inappropriateness and the involvement of disability. We believe that by experiencing and responding to embarrassment in appropriate ways, individuals may be better equipped for navigating their complex social environment and relationships.

Supervisor: Dr. Maryanne Fisher

4. Predictors of Undergraduates' Psychological Well-Being: Social Support Stability, Campus Resource Stability, and Locus of Control

Abbie Butler¹

¹ Mount Allison University

The purpose of the present study was to investigate social and campus resources as predictors of students' psychological well-being, with locus of control (LOC) as a potential mediator. The study consisted of 138 participants who were enrolled in an Introductory Psychology course, and the students completed an online questionnaire with an incentive of 1 course credit as compensation for participating in the study. Findings demonstrated that perceived stability of resources added additional variance in students' psychological well-being, suggesting that the stability of resources should be considered in addition to the availability of resources when assessing students' psychological well-being. Results demonstrated that perceived campus support also accounted for additional variance in students' psychological well-being, and therefore should be considered alongside perceived social support when investigating support systems and students' well-being. Individual measures of perceived support did not predict LOC, nor did LOC serve as a significant mediator in the relationship between perceived support and psychological well-being. Using the findings of the present study as the foundation for future research, as well as resource organization and prioritization, it is possible to further the general understanding of students' support needs while helping to ensure a positive university experience both academically and socially.

Supervisor: Dr. Gene Ouellette

5. The Relationship of Parenting Styles, Regulatory Focus, and Career Decision-Making Self-Efficacy in Young Adults

Tam Vo¹

¹ Mount Saint Vincent University

It is undeniable that making career choices is considered to be one of the most important tasks for people in the late adolescent and young adult stages. High school and college graduates usually need resources and confidence to complete tasks that relate to making career-related choices. Career Decision-Making Self-Efficacy is the belief that one has to complete tasks in making decisions for their future career. Elements contributing to a person's career decision-making self-efficacy can be internal and/or external. The purpose of the study was to examine whether perceived parenting style (i.e., authoritative, authoritarian, and permissive) and regulatory focus (i.e., promotion-focused and prevention-focused) were related to CDMSE. A sample of 101 participants (M = 23.7, R = 17 to 41) in Canada anonymously completed an online questionnaire that included the Parental Authority Questionnaire, Regulatory Focus Questionnaire, and Career Decision-Making Self-Efficacy Questionnaire. Pearson's correlational analyses indicated that the career decision-making self-efficacy scores were significantly and positively correlated with the authoritative parenting scores ($r = 2.17, p = .029$) and the promotion focus scores ($r = .556, p = .0001$). There were no other significant correlations. Regression analysis indicated that promotion focus is the highest individual predictor of young adults' career decision-making self-efficacy, followed by authoritative parenting styles. The analysis also indicated that 34.2% of the variance of career decision-making self-efficacy could be predicted by all five variables, including authoritative, authoritarian, permissive, promotion focus and prevention focus.

Supervisor: Dr. Elizabeth Bowering

SESSION 2E: NEUROPSYCHOLOGY (MCCAIN 401)

1. Understanding the Effects of Motor Imagery on Effector Mapping

Mack Hancock¹

¹Laboratory for Brain Recovery and Function - Dalhousie University

Motor imagery (MI) is a growing area of research, yet its mechanisms are still not well understood. MI is said to encode through an effector-independent mechanism, as it perceptually plans a movement in a global, non-specific way. Overt movement is said to encode at an effector-dependent mechanism, encoding to the specific motor signals of a specific movement. To determine the effector mapping nature of MI, participants were recruited to rehearse a computerized fine motor pointing task, and assigned to either a physical practice (PP) task, a MI task or a control (CC) task. To begin the study, all participants perform a physical practice block of 10 trials, to orient themselves with the task. Participants then enter a training block of 50 trials, where the PP group will continue to perform the physical task, the MI group will imagine performing the task, and the CC group will be asked to perform a task with no PP or MI. The first hypothesis is that MI will show similar impairments in the testing block to PP, indicating MI rehearses specific effector encoding. The second hypothesis is that MI will show similar impairments to the CC group, in that MI does not rehearse specific effector encoding. Preliminary results are showing that MI and PP have similar impairments in fine-motor task, indicating MI may rehearse specific effector encoding. The findings of this study can have many important implications, such as for the use in physical rehabilitation, and mental performance in sports.

Supervisors: Dr. Shaun Boe & Dr. Austin Hurst

2. Development and assessment of an Augmented Reality feedback system for prosthesis users

J. Lincoln Inglis¹

¹Acadia University

Users of upper limb prostheses face a challenge when attempting to grasp fragile objects due to an impairment of naturalistic sensory feedback regarding grip strength. Augmented Reality (AR) has shown promise as a candidate in solving this issue. The present study introduced a novel AR application for the Microsoft HoloLens 2 and tested it using an upper limb prosthesis simulator. The AR system presented a colour overlay on top of a user's prosthetic hand that changes based on grip strength. In an experimental design, a mechanical egg grasp-and-hold task was used to assess motor learning and performance, which was compared to performance when no additional feedback was provided via a two-way ANOVA test, using presence/absence of AR feedback and training block number as independent variables, and number of broken/dropped eggs as the dependent variable. We observed no statistically significant difference in motor learning or performance. Such results call for improvements to the developed application, as well as changes to the provided task to probe more subtle aspects of motor abilities.

Supervisor: Dr. Daniel Blustein

3. The Influence of Caffeine on Brain Activity and Behaviour Throughout the Menstrual Cycle

Vanessa Gilbert¹

¹ Mount Saint Vincent University

The present study examined behavioural and neurophysiological effects of caffeine on cognition across menstrual cycle phases. 34 healthy, hormonally cycling females between the ages of 18-40 participated in a double-blind, placebo-controlled, randomized study. Saliva hormone testing was used to confirm menstrual cycle phase. Participants took a caffeine or placebo pill in counterbalanced order before the completion of a visual search task while EEG was recorded. ANCOVAs were used to examine the effects of menstrual phase and drug on behavioural (RT, accuracy) and neurophysiological (amplitude, latency of ERP waveforms previously elicited in visual search tasks; the N2pc and P300) outcome measures. Spearman's Rho was used to examine correlations between hormone levels and caffeine-induced changes for outcome measures. EEG results showed no phase or drug effects on N2pc outcome measures. P300 amplitudes in the parietal region were significantly reduced in the follicular phase compared to the menstrual phase, but only following caffeine administration. These results suggest a probable interaction between drug (caffeine), the human menstrual, and brain regions which may explain the increased efficiency of reallocation of attention towards targets during the menstrual phase. Findings contribute to a better understanding of the neurocognitive mechanisms underlying the effects of caffeine on cognition across menstrual cycle phases, which have implications for hormonal birth control, hormone therapies for transgender and post-menopausal women, and people who menstruate.

Supervisor: Dr. Derek Fisher

4. The Impact of Cognitive Style on Visuo-Haptic Object Identification

Aidan Steeves¹

¹ Mount Allison University

Haptic and visual object representations in memory rely on similar processes, equating to a multisensory memory trace that is accessible to both modalities. Past research examining the composition of this overlapping memory trace have found evidence for a visual as well as a verbal component. Therefore, the question remains: what is this shared memory trace between sight and touch composed of, and does this memory trace depend on the types of object encoded? The current study also examined whether this depends on individual differences in cognitive style, as one's preferred method for obtaining and applying information could explain the conflicting findings of past research. Participants first completed a self-report measure of cognitive style, followed by an object identification task that required them to learn to identify either simple or complex objects, either by sight or by touch. Two-thirds of participants simultaneously completed either a verbal or visuospatial distractor task. Participants learning to recognize complex objects produced more errors and required more blocks to reach criterion compared to those learning simple objects. Participants who completed the task without distraction displayed superior identification performance compared to those who experienced a visuospatial distractor, especially when identifying complex objects. Finally, we demonstrated that the information that composes this overlapping memory representation can be associated with one's cognitive style. However, the degree to which this occurs may depend on the types of objects being learned, as well as the modality in which encoding occurs.

Supervisor: Dr. Geneviève Desmarais

5. The Bilingual Superpower? Acquiring Multiple Simultaneous Sensorimotor Maps for Speech

Emma D. Wheeler¹, Daniel R. Lametti¹, Douglas M. Shiller²

¹Department of Psychology, Acadia University, ²École d'orthophonie et d'audiologie, l'Université de Montréal

This study examined whether bilinguals can develop and sustain context-specific and distinct sensorimotor maps (motor plans) for speech. Forty-five English-French bilinguals were assigned to one of three experiments in which they read English and French sentences into a microphone while hearing themselves through headphones. A sensorimotor adaptation paradigm was used where vocal feedback was altered by manipulating the first (F1) and second (F2) formants (resonant speech sound frequencies that define vowels) in real-time. This alteration changed how participants heard their vowel sounds. In Experiment 1 and 2, the vowel alteration depended on language such that when speaking English, participants heard a vowel sound alteration that was equal in magnitude but opposite in direction to what they heard when speaking French. In Experiment 3, the alteration depended on sentence colour (red or blue). Speech compensation (i.e., change in formant/vowel sound production) in response to the altered feedback was examined. Participants in Experiments 1 and 2 developed unique sensorimotor maps for speech in each language, as evidenced by significant changes in formant production that opposed the formant alterations. In Experiment 3, participants did not acquire new, consistent speech motor plans. These findings highlight the importance of cue context for the development of sensorimotor maps, demonstrating that language is an effective cue for eliciting new speech motor plans while sentence colour, the arbitrary, non-linguistic control cue, is ineffective in eliciting any significant response. These results provide evidence for the presence of language-specific and dissociable sensorimotor maps for speech in the bilingual brain.

Supervisor: Dr. Daniel R. Lametti

6. Influences on Social Rejection: The Impact of Sex on Social Rejection Using the Social Rejection Paradigm

Hillary Brown¹

¹ Mount Saint Vincent University

The current study examined whether biological sex impacts behavioral and neural responses to social acceptance/rejection feedback using the social judgment paradigm. Participants submitted a self-portrait and were told that peers would rate the participant as someone they would like or dislike. Participants were shown photos of the peers and asked whether they thought the peers liked (accepted) or disliked (rejected) their self-portrait. Results showed that female participants had greater expectations of being accepted by a female compared to a male peer and were faster when making these decisions. No significant differences were found for male participants, suggesting that expectations and decision-making is similar for female and male peers. Medial frontal theta power, a neural marker of feedback processing, revealed a main effect of expectancy and was larger when individuals expected to be liked than when they expected to be disliked. This effect of expectancy on medial frontal theta was observed for male-male, male-female, and female-male participants-peer dyads; however, female participants show similar levels of feedback processing regardless of their expectations of being liked/disliked only for female peers. These results suggest a sex divergence such that females show unique expectancies and feedback processing, particularly when making social judgments regarding potential acceptance/rejection by a female peer.

Supervisor: Dr. Stefon van Noordt

ABSTRACTS: POSTER PRESENTATIONS

SESSION 1 (9:45 AM – 11:00 AM)

1A. Autistic Employment: Insights and Solutions from an Ecological Systems Perspective

Melanie Green¹

¹ University of New Brunswick

This study establishes a foundation for future research and policy development to enhance workplace inclusion for autistic individuals. Autistic employees face unique challenges and opportunities in the workplace, such as navigating social interactions and managing sensory differences. Initially, these experiences were investigated through a thematic analysis, which was subsequently enriched by incorporating Bronfenbrenner's ecological systems theory for a more comprehensive understanding. Qualitative data from autistic participants revealed eight themes: navigating employment challenges; financial considerations and quality of life; education and skill development; personal identity and disclosure; interpersonal interactions and inclusion; accessibility, accommodations, and universal design; corporate and institutional culture; and employment transitions and life changes. Our research indicates that organizations and policymakers should prioritize accessibility, universal design, and supportive environments to foster more inclusive workplaces. This entails accommodating autistic individuals' diverse needs and cultivating workplace cultures that value and respect their unique contributions. Further research examining the interplay of distinct levels within Bronfenbrenner's ecological systems framework is essential for deepening the understanding of the complex nature of autistic employment experiences and the factors influencing them. By adopting a multi-level perspective, researchers can assess how environmental factors at individual, interpersonal, organizational, and societal levels interact to impact autistic individuals' employment experiences. This comprehensive understanding can ultimately contribute to the development of more inclusive and supportive workplaces for autistic employees.

Supervisor: Dr. Barbara D'Entremont

1B. How We View Ourselves Matters: Examining the Roles of Self-Objectification and Self-Compassion on the Relationship Between Social Media Use and Disordered Eating

Taylor Anthony¹

¹ Memorial University of Newfoundland

Previous research has found a relationship between social media, disordered eating, and body dissatisfaction. Self-objectification, viewing oneself as an object to be appraised, may strengthen these relationships while self-compassion, having a kind and accepting attitude towards oneself, may diminish these relationships. Because young adulthood is a critical period in body image development and is often when the onset of disordered eating occurs, it is important to study these variables in a sample of young adults. The goals of this study were to 1) examine whether social media use is associated with disordered eating and body dissatisfaction; 2) examine whether self-objectification mediates the relationship between social media use and disordered eating or body image; and 3) examine whether self-compassion moderates the relationship between social media use and disordered eating or body image. 104 participants completed a survey about social media usage, self-objectification, self-compassion, and disordered eating. “Selfie” photo editing was significantly and positively correlated with disordered eating as well as body dissatisfaction. Although there was a trend toward statistical significance for both variables, self-objectification and self-compassion were not shown to be a mediator and moderator respectively in the relationship between social media use, disordered eating, and body image. Results suggest that social media use in general is not harmful in terms of eating behaviour or body image. However, altering photos of oneself to make the image more consistent with the “ideal body” before posting them on social media may be associated with disordered eating and body image dissatisfaction.

Supervisors: Dr. Jacqueline Carter-Major & Darcie Valois

2A. When Using Locus of Slack Logic, the Output Form of IOR Operates on the Stage After the Central Bottleneck

Simal Dolek¹

¹ Dalhousie University

Inhibition of return (IOR) is the longer reaction times (RTs) to targets on previously cued or fixated locations. The findings on IOR had been inconsistent until Taylor & Klein (2000) suggested that there are two distinct forms of IOR. An input-based IOR biases the sensory/perceptual elements and it is produced when the oculomotor system is suppressed. While, the output form of IOR has a motoric nature and is caused by the activation of the oculomotor system. Previously, using the locus of slack logic Klein et al. (2020) showed that the input form of IOR operates on the pre-bottleneck stages of processing. As a follow up to Klein et al., the present study used locus of slack logic to determine which stage of processing the output form of IOR operates on. 14 students from Dalhousie University participated in the study. Task 1 consisted of detecting the location (right/left) of a visual stimulus and making a key-press response. Task 2 required participants to detect the frequency (high/low) of an auditory stimulus and make a key-press response. The two tasks were presented in close succession with 200, 400 and 800 ms TTOAs. Each trial began with a peripheral onset point and a cue-back to the centre to produce IOR. RT1 was prolonged but RT2 was not affected by the IOR as determined by the bootstrap CIs. We concluded that the output form of IOR operates on the stage after the central bottleneck and this is consistent with the motoric nature of the output form.

Supervisors: Dr. Raymond Klein & Dr. John Christie

2B. Lived Experiences and Treatment Needs of Individuals with Comorbid Substance Use and Eating Disorders

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¹ University of New Brunswick

Eating disorders and substance use disorders are highly comorbid and carry the highest mortality rates of any mental disorders, yet few recommendations are available to guide treatment for people who experience both disorders concurrently. To inform treatment development, this qualitative study investigated the lived experiences and treatment needs of women with comorbid substance use and eating disorders. Six cisgender women who had experienced or were currently experiencing both disordered eating and substance use were recruited online and completed semi-structured interviews. Interviews were conducted virtually and transcribed verbatim, then analyzed using Thematic Analysis. We identified four main themes: (1) Barriers to Care, representing the numerous challenges individuals often face when seeking care; (2) Not Sick Enough to Get Better, encompassing the downplaying of one's experiences with substance use and eating concerns, and the questioning of whether one's symptoms are severe enough to warrant treatment; (3) Behavioural Manifestations of Deeper Issues, representing the belief that disordered eating and substance use represent symptoms of underlying problems and trauma histories; and (4) Importance of Social Support, encompassing the benefits of social support in both seeking care and in recovery. To meet the needs of women with comorbid EDs and SUDs and overcome pernicious barriers to care, we provide recommendations for the development and evaluation of integrated treatment approaches. Data collection is ongoing; in the next wave of recruitment, we will employ targeted strategies to better capture gender diversity in our final sample.

Supervisor: Dr. Emilie Lacroix

3A. Bullying Involvement and Mental Health Associations among Canadian Undergraduate Students During the COVID-19 Pandemic

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Along with mental health declines and shifts to online learning, the COVID-19 pandemic has been associated with increased rates of cyberbullying and racialized bullying towards Asian youth. This study examined both demographic and pandemic-related differences in online and offline bullying involvement among undergraduates (N = 1435) and how each form of bullying relates to internalizing symptoms (i.e., anxiety and depression symptoms) and externalizing problems (i.e., alcohol use and risky behaviour). Overall, victimization (47.1%) was more prevalent than perpetration (26.2%) and both forms of bullying were more prevalent in-person (51.7%) than online (18.2%). Women had higher odds of cyber victimization compared to men, but there were no ethnicity differences in bullying involvement. Comparing data collected during high (Fall 2021) and low (Fall 2022) COVID-19 public health restrictions demonstrated that Fall 2022 students had higher odds of experiencing cyberbullying victimization and perpetration than Fall 2021 students. All bullying categories had positive correlations to internalizing and externalizing problems, with the strongest associations between traditional victimization and internalizing symptoms and traditional perpetration and externalizing problems. Ethnicity moderated associations between in-person victimization and internalizing symptoms, such that these associations were significant for White students, but not Asian students. University bullying involvement (particularly in-person) remained prevalent throughout COVID-19. All forms present concerning links to both internalizing and externalizing mental health challenges. To further understand university student bullying and support on-campus intervention, future research should implement a longitudinal design to monitor cyberbullying rates post-pandemic and clarify how bullying relates to undergraduate mental health over time.

Supervisors: Dr. Laura Lambe & Dr. Sherry Stewart

3B. Comparing Factors that Influence Mental Health and Help-seeking in University Students in Canada and in Ghana.

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Culture affects perceptions of mental illness (Krendl & Pescosolido, 2020). The present study compared mental health and help-seeking in 208 undergraduate university students from Canada and Ghana. A cross-sectional survey design was used to collect data on the variables sense of belonging, barriers to help-seeking, mental health/wellbeing, level of religiosity/spirituality and attitudes towards mental health. Reported rates of diagnoses of mental illness were higher among the Canadian (n=75, 54.5%) than Ghanaian (n=21, 25.6%) students. Results showed that both Canadian and Ghanaian students with a diagnosis of a mental illness had a lower sense of belonging, experienced more barriers to help-seeking, and reported more academic stress compared to students without a diagnosis. Further, Ghanaian students with a mental illness perceived more stigma than Canadian students. Ghanaian students also reported more academic stress, lower help-seeking, and higher religiosity than Canadian students. Students in both countries identified similar recommendations for things that they, their universities, professors, and peers could do to thrive academically, mentally, and socially.

Supervisor: Dr. Erin Austen

4A. Relationship Between Perseverative Thinking and Physical Activity in People with Mood Disorders

Steven Jackson¹, Barbara Pavlova¹

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Mood disorders are among the most burdensome illnesses globally. Physical inactivity and perseverative thinking are associated with unfavourable outcomes in people with mood disorders. While in experimental studies, physical activity decreases perseverative thinking immediately following exercise, the relationship between physical activity and perseverative thinking in a more ecologically valid setting remains unexamined. We hypothesized that more physical activity will be associated with less perseverative thinking in people with mood disorders. We measured physical activity using the International Physical Activity Questionnaire and perseverative thinking with the Perseverative Thinking Questionnaire at a baseline assessment and again at 6-months follow-up. The sample included 49 people with mood disorders (major depressive disorder, bipolar I disorder, and bipolar II disorder). A linear regression was performed using IPAQ scores as the predictor variable and perseverative thinking scores as the outcome variable, controlling for age, sex, and current depression severity. We found no relationship between the IPAQ and PTQ scores cross sectionally (n = 49, $\beta < 0.01$ [-0.27, 0.26], p = 0.96). Prospectively, baseline IPAQ scores did not predict PTQ scores at 6-months follow-up (N = 33, $\beta = 0.09$ [-0.17, 0.35], p = 0.50). Higher levels of perseverative thinking were not associated with lower levels of physical activity. Physical activity alone may be unrelated to perseverative thinking. Exploratory analyses revealed associations between age and perseverative thinking. Future research should explore whether cognitively demanding or pleasurable physical activity confers relief from perseverative thoughts while considering and how age and cohort effects contribute to perseverative thinking.

Supervisor: Dr. Barbara Pavlova

4B. Sibling Bullying and Dating Violence: A Retrospective Study

Marie-Josée Doiron,¹ Geneviève Bouchard¹

¹ Université de Moncton

Sibling bullying has recently emerged as a significant area of interest in psychological research. It has been shown that sibling bullying during childhood or adolescence can have lasting effects in adulthood, for instance on the quality of interpersonal relationships. In the current study, we examined relations between sibling bullying in childhood and adolescence and dating violence in young adulthood. One hundred and fifty-five participants, recruited from the SONA system platform and classrooms, completed questionnaires regarding their sibling relations and current romantic relationships. Significant correlations were found between sibling bullying perpetration and victimization. Significant correlations were also found between perpetration and victimization of dating violence. Furthermore, it was found that young adults coming from non-traditional families experienced more dating violence in their romantic relationships than those coming from traditional families. In sum, both types of violence seem to be bidirectional. However, dating violence was found to be independent of sibling bullying.

Supervisor: Dr. Geneviève Bouchard

5A. Undergraduate Students' Attitudes Towards Medical Assistance in Dying (MAiD) for Mental Illness

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On March 17th, 2024, medical assistance in dying (MAiD) will be made available to individuals suffering from mental illness as a sole condition. The purpose of this study was to examine the opinions of undergraduate students' towards MAiD for mental illness. Seventy-one undergraduate students' completed an anonymous online survey, in which they indicated their awareness and opinions towards MAiD for individuals struggling with mental illness. Participants were given the opportunity to expand on their responses to two statements, which were then categorized based on common themes. Among the students, there was little support for MAiD for individuals who are being treated for mental illness (28.2%), and only 14.3% of the students agreed/strongly agreed that individuals waiting to be treated for mental illness should be able to access MAiD. In addition to this, 52% of respondents were unaware of the decision to open MAiD to people only suffering from mental illness. These findings highlight the need for more mental health services for people living with a mental illness in Canada. It also suggests that more safeguards must be put in place to protect vulnerable people from choosing MAiD.

Supervisor: Dr. Stephen Claxton-Oldfield

5B. The Effectiveness of Interventions for Alcohol Use Disorder in Individuals with a Psychotic Disorder

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¹ Dalhousie University

Background: Individuals with early phase psychosis (EPP) enrolled in an early intervention service (EIS) face recovery barriers due to engagement in substance use, resulting in negative outcomes. Therapeutic approaches have been implemented and have worked for some but fail to be effective for a subgroup of patients who continue use despite these services. There is limited literature surrounding which interventions may be effective for this subgroup of patients with EPP and a substance use disorder. Therefore, the current systematic review examined the effectiveness of alcohol cessation treatments in individuals with early phase psychosis enrolled in an early intervention service. Methods: A systematic search was conducted using MEDLINE (via ovid), PsycInfo, CINAHL, CENTRAL, Embase, World Health Organization's clinical trial platform, Clinicaltrials.gov, Open Grey, and Google scholar. Search terms consisted of keywords centered around Psychosis, Alcohol use and Substance use reduction interventions. Three independent reviewers assessed studies based on eligibility criteria and sought to extract data on the effectiveness of the intervention. Results: 5914 articles were retrieved out of which 39 fulfilled the inclusion criteria. A total of 17 interventions were psychological in nature, 13 were pharmacological, 3 were qualitative and 1 proposed a combined intervention. Discussion: It is suggested that psychological interventions may show the greatest efficacies in reducing alcohol use in patients with a psychotic disorder. However, limitations should be considered when interpreting the findings of this review. Overall, the current systematic review increased knowledge around what should be implemented for patients in order to reduce their substance use.

Supervisor: Dr. Candice Crocker

6A. Life Satisfaction, Depression, and Anxiety: Examining the Role of Stress, Social Support, and Problem-Focused Coping

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¹ University of New Brunswick

The purpose of this study was to examine the role of stress, problem-focused coping, and social support from family and friends, in relation to three measures of subjective well-being: life satisfaction, anxiety, and depression. A total of 143 students from undergraduate psychology courses at the University of New Brunswick in Saint John participated in this study. They were directed to Qualtrics, an online survey platform, where they completed questionnaires on perceived stress, ways of coping, social support from family and from friends, depression, anxiety, and life satisfaction. The results indicated that there were no gender differences in this study, nor did age correlate with any of the variables. Life satisfaction was correlated with lower scores on stress and higher scores on problem-focused coping and support from family and friends. Depression and anxiety were both correlated with higher scores on stress and lower scores on family and friend support. Regression analyses revealed that life satisfaction was predicted by lower scores on stress and higher scores on family support. Anxiety was predicted solely by higher scores on stress, and depression was predicted by higher scores on stress and lower scores on family support. As well, family support was found to moderate the relation between stress and depression. These results are discussed in terms of the impact stress has on life satisfaction, depression, and anxiety in undergraduate students.

Supervisors: Dr. Lilly Both & Dr. Enrico DiTommaso

6B. The Relation Between Receptive Vocabulary and Executive Functions in Domestic Dogs

Alicia Jones¹

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From serving as companions to working alongside humans in various professional fields, dogs play key roles in society. To successfully fulfill these roles, dogs must demonstrate behavioural regulation, which falls under the umbrella term executive functions. In humans, various aspects of language have been identified as important predictors of executive functions. In the current study, we investigate the relation between dogs' response to spoken words and phrases (receptive vocabulary) and their executive functions. To do so, 177 dog owners completed an online survey that contained the Dog Vocabulary Owner Checklist (DVOC; Reeve & Jacques, 2022), which is an inventory of words used to measure receptive vocabulary, and two measures of executive functions; The Canine Executive Function Scale (CEFS), a new measure we created, and the Dog Executive Function Scale (DEFS) developed by Foraita et al. (2022). Correlation and regression analyses revealed that owner-reported receptive vocabulary predicted specific aspects of executive functions including instruction following, working memory, and cognitive control and that it did so even after controlling for other related variables. The findings from this study may open doors for future research using experimental designs to establish a causal relation, and may also provide information that can be used to improve the selection process of working dog programs.

Supervisor: Dr. Sophie Jacques

7A. Defiance, Compliance, and Gender as Predictors of Disordered Eating in Adolescence

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Disordered eating is related to issues of control, implicating both defiance and compliance as possible predictors. Defiance presents differently between genders, with males exhibiting external, rule-breaking behavior. Compliance includes resisting impulses and delaying gratification. In the Self-Determination Theory, the reaction to loss of control will either be defiant or compliant behavior. Our aim was to investigate whether defiance, compliance, and gender would predict disordering eating scores. We used secondary data from the NKI-Rockland sample database. Our sample included 96 adolescents aged 13-16 years, 56 males and 40 females. Defiance was measured with the Rule-Breaking subscale of the Youth Self Report. Compliance was measured by proxy, combining NEO-Five Factor Inventory Agreeableness and Conscientiousness subscale scores. Disordered eating was measured using the Three Factor Eating Questionnaire. Multiple Regression indicated that 16.9% of the variance in disordered eating was accounted for by defiance, compliance, and gender altogether. When considered individually, only defiance and gender were significant predictors. Males scored significantly higher on defiance. Females scored significantly higher on disordered eating, despite defiance being a significant predictor of disordered eating. Defiance and gender both significantly predicted disordered eating. Compliance was not a significant predictor. Disordered eating may be a form of rule-breaking behavior, especially for males. Our sample scored low on compliance; this could be due to participant age range. Future research could further investigate the relationship between defiance and disordered eating.

Supervisors: Dr. Michelle Eskritt & Prof. Donna Thompson

7B. Evaluating the Role of Prenatal Androgens on the Sex Bias in the Maternal Immune Activation Preclinical Model of Autism

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Maternal immune activation (MIA), resulting in inflammatory markers transferred from mother to fetus, can have long-term consequences for fetal development and is a risk factor for neurodevelopmental disorders, including autism spectrum disorder (ASD). Rodent models of MIA exhibit a sex bias, mirroring ASD in humans, where males are more susceptible to neurological and behavioural deficits than females. As sexual differentiation of the brain and behaviour is largely mediated by prenatal androgen exposure in males, the present study examined whether prenatal androgens in the MIA rodent model is responsible for the sex bias in MIA-associated deficits. Dams received Poly I:C or saline on embryonic day (E)12.5 or E17.5. Dams were also administered testosterone or corn oil on E16, E18, and E20, coinciding with the male-typical surge in androgens. Ultrasonic vocalizations were recorded during maternal separation trials to assess communication abilities in neonates. We found that late MIA and hyperandrogenization produced the greatest deficits in communication, but a combination of hyperandrogenization and late MIA did not have an additive effect. These results suggest timing of gestational infection relates to future behavioural deficits, with MIA during late gestation having greater effects than earlier infection. Hyperandrogenization in the absence of gestational infection produced ASD-like behaviours, suggesting that high androgen signaling alone can produce MIA-associated deficits. Follow up work will evaluate microglia density in brain regions associated with MIA/ASD to understand the involvement of the neuroimmune system in producing these deficits.

Supervisor: Dr. Ashlyn Swift-Gallant

8B. L'impact de la Personnalité sur la Satisfaction: Le Rôle Modérateur de l'Intelligence Emotionnelle.

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¹ Université de Moncton

Étant actuellement en pénurie de main-d'œuvre, l'importance de la rétention des employés devient un sujet important. Sachant que l'insatisfaction au travail est associée à l'intention de quitter et au roulement du personnel (Cotton et Tuttle, 1996), la question se pose à savoir: comment maximiser la satisfaction au travail dans le monde d'aujourd'hui? Selon la théorie des événements affectifs de Cropanzano et Weiss (2017), les événements au travail et les dispositions individuelles ont un effet sur les réactions affectives et donc sur les attitudes liées au travail. Ils relèvent notamment que la personnalité et l'intelligence émotionnelle sont fortement liées à la satisfaction. Certes, certaines études proposent que l'intelligence émotionnelle agît comme variable modératrice (p. ex. Jeong et Lee, 2022). Toutefois, cette relation reste à être approfondie. Cette recherche corrélacionnelle transversale exploratoire propose d'étudier les liens entre la satisfaction et la personnalité tout en explorant le rôle modérateur de deux composantes de l'intelligence émotionnelle, soit: intrapersonnelle et interpersonnelle. À ce stade, 74 participants, 13 hommes et 59 femmes, ont complété un questionnaire en ligne portant sur la satisfaction au travail, la personnalité et l'intelligence émotionnelle. L'analyse de régression préliminaire démontre qu'il y aurait possiblement un effet modérateur de l'intelligence émotionnelle intrapersonnelle. Ces résultats nous portent à poursuivre la collecte de données afin d'effectuer une analyse approfondie à l'aide d'un modèle d'équation structurel. Le cas échéant, des formations portant sur le développement de l'intelligence émotionnelle intrapersonnelle pourraient être proposées dans les milieux de travail et ainsi contribuer à une meilleure satisfaction au travail.

Supervisor: Dr. Mireille Demers

9A. The Long Shadow of Fear: Lasting Effects of Predator Stress on Second Generation Offspring in Mice

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It is well known that the effects of a traumatic event experienced by a parent can produce alterations in their offspring. What is less well known, however, is whether these effects are evident in the second generation (F2). We examined the lasting effects of grandparental chronic predator stress on behaviour in the grandchildren. The F0 generation (grandparents) were exposed to either seven days of predator stress or a control condition. Ten days after the last exposure, stressed mice were bred to stress mice, and control mice were bred to control mice. The first generation (F1) mice were not exposed to a predator and were bred to produce the F2 generation. Preconception predator stress in the F0 generation increased anxiety-like behaviour in F2 males but decreased anxiety-like behaviour in F2 females. These novel findings suggest a possible sex effect of how intergenerational stress impacts second generation offspring behaviour. A major limitation of the current study is the small sample size. Future studies will need more breeding pairs in the F1 generation to ensure a larger F2 generation with different litters in each group to increase the validity of the findings.

9B. Attentional Blink Effect under Meditative Instructions

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We are constantly bombarded with sensory information from the environment. Attention is required to focus on some information, while also inhibiting the rest. In this way, attention is selective and of limited capacity. Furthermore, it takes time for attention to select, process, and then disengage from a stimulus. A demonstration of these limitations is the attentional blink (AB) effect, wherein attending to one item leads to a suppression of attention for items that follow closely in time. The size of the AB effect can be modulated by several factors, including odour, positive affect, and multitasking. More recently, studies have shown that experience with meditation can also modulate the size of the AB effect, although most of these studies have used participants with extensive meditation experience or provided extensive meditation training. It remains unknown how much experience with meditation is required to modulate the AB effect. Furthermore, these studies have all limited their investigations to temporal selective attention. The current experiment used a two-target task to measure the AB effect by probing both temporal and spatial selective attention. Participants with no previous experience with meditation were randomly placed into one of two conditions. One group received a brief exposure to meditation instructions at four points throughout the task; the other group received control instructions. In contrast to predictions, the results showed no difference in the size of the AB effect across the two groups. These results indicate that extensive experience with meditation is required to modulate the AB effect.

Supervisor: Dr. Mitchell LaPointe

10A. Internalizing Problems and Executive Functioning in Adult ADHD

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¹ Mount Saint Vincent University

Research shows a significant positive relationship between ADHD symptoms and internalizing problems such as depression and anxiety. We sought to investigate whether executive functioning deficits predict internalizing problems in adults with elevated ADHD symptom levels, and specifically whether the relationship between executive functioning and internalizing is different among adults with high ADHD symptom levels and the general population. Multiple regression was used to examine ADHD symptomology and three components of executive functioning (inhibition, shifting, and updating) as predictors of internalizing symptoms. Results replicate the relationship between ADHD and internalizing and extend these findings to a non-clinical sample. Contrary to our hypothesis, we found not relationship between executive functioning and internalizing, regardless of ADHD symptom levels. Additionally, we found no significant differences in executive functioning scores between adults with low and high levels of ADHD symptomology. These results differ from published research. Implications and suggestions for future research are discussed.

Supervisor: Dr. Michelle Eskritt

10B. The Impacts of Mind Wandering on Learning in an Online Lecture Context

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With increased interest in remote learning due to the Covid-19 pandemic, how does one really know if students are paying attention during Zoom calls, or more importantly, when you don't see their faces at all in asynchronous formats? Mind wandering is defined as being characterized by a shift in attention away from a primary task, towards self-generated thoughts. Past evidence suggests that mind wandering may negatively impact lecture retention, though there is a degree of uncertainty with these results due to the difficulty of measuring mind wandering. In the present study we want to validate a behavioural measure of mind wandering in an online lecture computer task. Participants watched a video lecture and indicated when they detected an error in the lecture content, as well as reported their state of mind when prompted. Participant retention was assessed with the use of a post-lecture quiz. We hypothesize that participants will identify fewer errors in the lecture when they report mind wandering and that both missed errors and self-reported task-unrelated mind wandering will be negatively associated with lecture retention. We additionally hypothesize that periods of task-unrelated mind wandering will show the biggest negative impact on performance, followed by task-related mind wandering. Being on task was found to be a significant predictor of how well participants detected errors in a lecture, while mind wandering about a lecture and things related to it proved to be the best predictor of learning. Our findings provide evidence of mind wandering varieties and their benefits.

Supervisor: Dr. Colin Conrad

11A. Inhibition and Attention in Bilingualism

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Bilingualism is a speaker's ability to use two languages for communication. The debate in the field of psycholinguistics centres on whether inhibition or attention is associated with better performance of bilingual participants on non-verbal cognitive tasks. Better performance of bilingual participants on executive function (EF) tasks cannot solely be attributed to better response inhibition because there are other executive functions working along with inhibition, that contribute to differential performance on the cognitive tasks that affects overall performance of bilingual participants. Another explanation for the bilingual advantage is the use of attentional control, which supervises goal maintenance and conflict resolution. Improved attentional control of bilingual participants was tested using the Flanker task with five conditions increasing in difficulty. It was predicted that increased task demands within the Flanker task would lead to better performance of bilinguals than monolinguals on trials with increasing difficulty levels. Bilingual students were administered a questionnaire regarding their language background, following which the Flanker task was administered. A 2 X 2 X 4 repeated measures analysis of variance (ANOVA) was conducted to compare the difference in performance between the two language groups on the Flanker task (congruent and incongruent trials) on the four conditions. Results showed that bilingual participants had significantly greater RT than monolingual participants on congruent and incongruent trials in all five different trial conditions. Lastly, there was no significant differences in accuracy between bilingual and monolingual participants but bilingual participants had better accuracy, overall than monolingual participants.

Supervisors: Dr. Jonathan Wilbiks & Dr. Sean Roach

11B. The Effect of Speaker Race on Accented Speech Comprehension

Jayce Phillips,¹ Rebeka Workye,¹ Drew Weatherhead¹
¹ Dalhousie University

Extensive evidence has shown that speaker race is a salient factor which influences listeners expectations and perception of speech. However, the process by which this occurs remains unclear as previous studies show conflicting findings. Bias-based models argue that listeners consciously misunderstand native speech when the speaker is perceived as non-native, resulting in poorer comprehension and higher accentedness ratings. In contrast, exemplar models involve the expectation of speech, whereby listeners use social knowledge to predict and interpret speech. The present study aimed to determine which process is employed during the perception of non-native speech. Participants (N=27) were primed with photographs of an East Asian face (non-native condition), White face (native condition), or a silhouette (control) and asked to transcribe Mandarin-accented English. Participants then assessed the accentedness of the speaker. Results showed that, on average, participants primed with an East Asian face rated speaker accentedness higher than participants primed with a White face or a silhouette. On average, participants primed with a White face had higher transcription accuracy than those in the East Asian and silhouette conditions. Alone, these findings suggest that processing of accented speech matched that of bias-based models, whereby accentedness ratings were higher and comprehension was lower when viewing a non-native face compared to a native face, however, definitive conclusions cannot be made due to the study being underpowered. Regardless, the present research contributes to previous findings on how listeners contend with accented speech and how this response is influenced by speaker race.

Supervisor: Dr. Drew Weatherhead

12A. Influencing Adults' Earliest Memories

Aaron Murphy¹

¹ Memorial University of Newfoundland

Due to the theoretical implications of childhood amnesia (particularly with regard to historical child abuse), the study of the mechanisms by which children encode (and adults retrieve) memories from early life is of utmost importance. This study seeks to determine if priming (i.e., the information offered before recall) influences an adult's ability to accurately recall and date their earliest memories. Adults were primed by hearing memories from age two versus four and then given free-recall interviews about their earliest memories. Because of the verification of dates with another party (dating also performed by their parent/guardian), this study offers insight into whether the recollection of earliest memories is consistent with reality (i.e., accurate dating regardless of information provided), or rather, if it can be influenced by factors outside of simple recollection (i.e., dating is inadvertently shifted to align with primed information). Analysis of variance of child interview data showed that priming influenced dating estimates of earliest memories recalled by participants. No significant difference was found in dating estimates of the subsample of participants with parent verification. Findings suggest that dating of earliest memories is influenced by priming information. Results of analysis of participants with parent follow-up did produce differences in age estimates, but these differences did not reach statistical significance. A larger sample size of parent follow-up is necessary to determine if young adults truly recall earlier events after being given earlier primes, or if differences in dating estimates stem from dating errors being influenced by the primes adults were given.

Supervisor: Dr. Carole Peterson

12B. Evaluating Abstract Shapes: Investigating the Role of Working Memory on Distractor Devaluation

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Attention's influence on emotions has been extensively studied using the distractor devaluation effect, in which people tend to rate task-irrelevant information more negatively than task-relevant information. Working memory (WM), a resource that stores or manipulates information for a small amount of time, has been implicated in distractor devaluation. Specifically, Goolsby et al. (2009) observed that when WM is occupied with other information while performing a task, the distractor devaluation effect either reduces or disappears, likely because there is insufficient WM capacity to process the affective associations related to targets and distractors. At which stage of information processing is WM important to observing a distractor devaluation effect? Participants performed a selective attention-evaluation task, and a WM task, which was tested either after (Experiment 1) or before (Experiment 2) the evaluation task. Results from both experiments will be compared to observe any differences in ratings of target and distractor under different WM load conditions. Consistent with previous research, we expect no distractor devaluation effect in Experiment 1 when WM is occupied. Of interest is whether the distractor devaluation effect will be observed or not in Experiment 2 when WM is occupied. The absence of an effect would suggest that WM operates early, during the selective attention task. The presence of an effect would suggest that WM operates later, during the evaluation task.

Supervisor: Dr. Biljana Stevanovski

13A. The Effects of Adaptive Working Memory Training and Mindfulness Meditation on Measures of Working Memory and Mental Fatigue in Healthy Adults

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Working memory, the ability to hold and manipulate information, is a key determinant of many higher-order cognitive functions. Research has demonstrated that adaptive working memory training paradigms, namely the n-back task, are more beneficial when paired with mindfulness meditation (MM), then when used alone. The underlying mechanisms of the relationship between MM and working memory are not entirely established. MM is, however, associated with a reduction in mental fatigue, suggesting a release of cognitive exertion that may benefit working memory training. The primary objective of this study was to examine whether MM promotes working memory capacity by reducing mental fatigue. We examined the hypothesis that mental fatigue acts as a partial mediator between MM and working memory training. Eight healthy adults listened to an audio tape of either MM or a Grimm's fairy-tale (active control), were assessed on their mental fatigue, and then completed n-back working memory training. Pre- and post-intervention, participants were tested on a battery of cognitive measures, including measures of working memory, and mindfulness skills. Our results revealed that while participants in the MM group had decreased scores of mental fatigue, there was no difference in measures of working memory between groups. These findings suggest that while MM reduces mental fatigue, this reduction is not the mechanism by which MM produces gains in working memory capacity.

Supervisor: Dr. Gail Eskes

13B. An Investigation of Varsity Athletes and the Colavita Effect

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When individuals are presented with an auditory and visual stimulus simultaneously, they tend to report this bimodal stimulus as 'visual-only' more frequently than 'auditory-only'. This phenomenon is known as the Colavita effect and has been replicated across multiple studies and has been resistant to a variety of manipulations to the stimulus and environment. Our aim was to determine whether this effect could persist using language as stimuli and to explore whether cognitive enhancements from exercise in varsity athletes would impact the Colavita effect. We used a simple Colavita task where participants were presented with an auditory, visual, or bimodal stimulus and were asked to report the modality of the stimulus as quickly as possible. We manipulated the visual and auditory stimuli by including language in the tasks (e.g., spoken word or written word) and were able to replicate the Colavita effect with these language stimuli as well as with animal pictures and sounds. Preliminary analyses also found that athletes were able to respond faster across all trials, however, a larger sample is needed to make any further conclusions. Next, we plan to manipulate semantic correspondence between the visual and auditory stimulus to explore whether the Colavita effect persists if the stimuli on bimodal trials are congruent (e.g., the picture of a dog and the sound of a dog) or incongruent (e.g., the picture of a dog and the sound of a cat).

Supervisors: Dr. Jonathan Wilbiks & Dr. Geneviève Desmarais

14A. Disconnected: Navigating a New Academic and Social World During a Global Pandemic

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The sudden shift to remote learning due to Covid-19 changed academic expectations and required students to access and navigate new technology and learning environments, leaving many with feelings of uncertainty about their futures. During lockdown and the move to remote learning, data was collected at five different timepoints to get a better understanding of student needs and any complex challenges that were being experienced. This included perceptions around remote learning, awareness of available academic supports and student resources, the level of ease or difficulty in accessing and adapting to new technology, and overall attitudes and experiences around how the pandemic was impacting student transition. Data collection revealed that access to resources and adapting to new expectations were initial concerns for overall academic success, but became less challenging as students adjusted to their 'new normal'. However, the loss of on campus social connection with professors and peers continued to pose challenges which impacted students' overall well-being and sense of belonging.

Supervisors: Dr. Steven Smith & Prof. Katelynn Carter-Rogers

14B. Transition Planning and Quality of Life for Youth with Autism Spectrum Disorder and/or Intellectual Disability in Canada

Yara Bayoumi¹

¹ University of New Brunswick

Quality of life (QoL) is an individual's perceptions of their position in life based on internal and external factors. Individuals with Autism Spectrum Disorder (ASD) and/or Intellectual Disability (ID) tend to experience a lower QoL compared to the general population. The current study examines the impact of five transition planning factors on QoL in youth with ASD and/or ID who are transitioning from high school. Data was collected from 181 caregivers of youth with the ASD and/or ID via an online survey. The results suggest that youth with comorbid ASD and ID experienced less student planning than youth with either ASD or ID, and experience less student development than the youth with ASD. Regression analysis revealed that the five transition factors predict QoL, and that program structure is the only predictor of QoL. This is the first study of its kind and further research should clarify the association between transition factors and QoL, and how they are experienced by youth with ASD and/or ID. This will aid in informing effective transition plan programs that will improve the experience of transitioning to adulthood in the targeted youth.

Supervisors: Dr. Barbara D'Entremont & Lindsey McCullough

15A. Examining Transitivity in Preschooler Preferences

Sara MacEachern¹

¹ Mount Allison University

The ability to make consistent preferential choices, also known as transitivity of choice, is generally considered low in preschool aged children, and is typically considered to increase with age. The present study examined transitivity of choice compared to chance in 173 preschool children, ages three and four, and investigated transitivity differences between the two age groups using a hot executive function task. The participants first completed a ranking task, where they were given six toys and were asked to choose their favourite toy until each received a preference ranking. Participants were then exposed to 15 photo trials consisting of different toy pairings where they were asked to indicate their preferred toy of the two pictured toys for each trial. Preferences in the ranking task and the photo trials were then compared. The results indicated that children were able to display transitivity of choice compared to chance; however, there were no significant differences between the age groups. These results suggest that children ages three and four are able to make consistent preferential choices at similar rates.

Supervisor: Dr. Nancy Garon

15B. Occupational Stress, and the Role of Peer and Formal Supports Among Career and Volunteer Firefighters: A Qualitative Study

Bridget Barry¹

¹ Memorial University of Newfoundland

As public safety personnel, firefighters experience occupational stress by responding to critical incidents. In addition to these critical incidents that are considered operational stressors (i.e., inherent to the job), firefighters also encounter organizational stressors (e.g., resource limitations, conflict with coworkers) in the workplace. Firefighters are at an increased risk for mental health concerns such as Post-traumatic Stress Disorder and suicidality, and research suggests they prefer to cope through peer support rather than formal treatment. Volunteer firefighters sometimes do not have access to peer support, and given that the majority of firefighters in Canada are volunteers, the current research question is whether there are any differences among careers and volunteers as it relates to their occupational stress, preference for support, and barriers to formal treatment. Eleven focus group sessions (N = 73) with 51 career and 22 volunteer firefighters were conducted in an Atlantic Canadian province. Thematic analysis took an inductive, narrative approach and data were coded as themes emerged. Findings suggest career firefighters rely on peer support to cope with organizational stressors (e.g., conflict with management, repercussions for disclosing mental health concerns), which prevail over operational stressors (e.g., responding to medical calls). Volunteers described experiencing a lack of both peer and formal support opportunities and thus, are further impacted by operational stress. Barriers to treatment included stigma, clinician lack of understanding, and limited opportunities. Specialized mental health supports for career and volunteer firefighters are discussed.

Supervisors: Dr. Rose Ricciardelli & Dr. Laura Fallon

16A. Adults' Detection of Children's Lies Through Emotional Facial Expressions.

Mary Lyons¹

¹ Mount Allison University

Can adults detect children's lies? Typically, only slightly better than chance. Prior research using automated facial expression analyses found that surprise is the most notable facial expression demonstrated when a child is telling a lie. The present study examined if humans can be trained to use this surprise expression to detect children's lies. Participants watched 10 videos of children (half were lying to conceal a transgression and half were telling the truth) clipped to only show the child's facial expression at the start of the interview. Participants were assigned to one of two conditions where one received training on how to detect surprise expressions (training) while the other did not (control). Participants were then asked to decide if each child was lying or not based on the facial expressions. The videos were shown twice (across two rounds) and in the second round, the control group was given the surprise expression training. Results demonstrated that overall detection accuracy was greater in the training condition compared to the control condition, but accuracy hovered just above chance. Across conditions, accuracy improved in the second round. Participants also demonstrated a lie bias across rounds and conditions. These results suggest that humans have a limited ability to detect children's lies despite training in detecting surprised expressions. Although, training increases one's ability to detect lies compared to no training.

Supervisors: Dr. Alison O'Connor

16B. The Effect of Sibling Bullying During Childhood and Adolescence on the Adoption of Risky Behaviors in Early Adulthood

Séléna Babin¹, Geneviève Bouchard¹

¹ Université de Moncton

Sibling relationships influence many spheres of a person's life (Garcia et al., 2000; Solmeyer et al., 2014). Unfortunately, bullying is frequent in sibling relationships and it is also bidirectional (Odudu et al., 2020). Sibling bullying can have long-term effects on a person (Mathis & Mueller, 2015), one of them being to have greater risk to engage in risky behaviors later in life. However, few articles are available on the relationship between sibling bullying and risky behaviors. In fact, to the best of our knowledge, no study has examined the role of sibling bullying victimization and perpetration simultaneously in the adoption of risky behaviors later in life. The aim of this study is therefore to fill this gap in literature. This examination is guided by the General Strain Theory (Dantchev & Wolke, 2019) and the Problem Behavior Theory (Ingram et al., 2020). The sample is composed of 317 young Canadian adults, between the ages of 17 and 30, who have at least one sibling. Participants completed a series of questionnaires. Results showed that the more people were victim or perpetrator of sibling bullying during their childhood or adolescence, the more they engage in risky behaviors as young adults. We also observed that sibling bullying victimization and perpetration were associated in the same way with risky behavior, rather than one being a better predictor than the other. In short, the quality of sibling relationships during childhood and adolescence predicted the development of healthy or harmful behaviors in early adulthood.

Supervisor: Dr. Geneviève Bouchard

17A. Effects of Sleep Deprivation on the Morphology of Mitochondria in Axon Terminals Presynaptic to Orexin Neurons

Madison Oulton¹

¹ Dalhousie University

Orexin (ORX) neurons in the perifornical-lateral hypothalamus (PH-LH) are wake-promoting neurons (Saper et al., 2005). During sleep deprivation (SD), ORX neurons are known to remain active (Modirrousta et al., 2005). Mitochondria in various neuron types have been found to change after SD; they increase in size, density, and have larger amounts of fusion/fission (de Vivo et al., 2016; Flores et al., 2022). These changes may be reflected in the inputs to ORX neurons, which are thought to be mostly excitatory (Horvath et al., 2005), as they would likely remain active during SD. Therefore, we hypothesize that the mitochondria in axon terminals presynaptic to ORX neurons will increase in the number per axon terminal and length after SD compared to undisturbed rest controls (R). This was tested by sleep depriving rodents (n = 3), or leaving them undisturbed (n = 3), for 6 hours and using correlative light electron microscopy (CLEM) and the Reconstruct program to analyze the organelles in the axon terminals synapsing onto ORX neurons. Using a Kuskal-Wallis One-Way ANOVA, significant differences were found between the animals in both number and length of mitochondria. The evidence provided here supports the hypothesis that SD causes an increase in mitochondrial size and density in inputs which provide synaptic transmission to ORX neurons.

Supervisor: Dr. Kazue Semba

17B. Do Adolescents from Rural and Urban Settings Share Similar Experiences?

Gabrielle Gionet¹

¹ Université de Moncton

In a recent qualitative study, New-Brunswick nurses reported encountering more challenges when vaccinating adolescents in urban school settings, than in rural school settings (LeBouthillier et Lachance-Grzela, 2021). They hypothesized that adolescents from urban areas experienced more overparenting and thus developed lower levels of resilience. Research comparing youth from urban and rural areas in different parts of the world has revealed mixed findings. For instance, a study conducted in Russia and Germany, documented higher levels of stress among adolescents in rural areas compared to urban areas (Yeresyan and Lohaus, 2014). In contrast, a Canadian study revealed a higher rate of depression in urban than rural areas (Roman et al., 2014). The purpose of this study was to verify whether there are differences between adolescents residing in urban centers and in rural areas of New Brunswick in terms of parental overprotection, resilience, and psychological well-being. Our sample was composed of 359 adolescents (Grades 9 and 10) from New-Brunswick (36% living in urban areas - Moncton, Fredericton, Saint-John; 64% living in rural areas). After parental consent, participants completed the Child and Youth Resilience Measure, the Mental Health Inventory 5, and the Parental Bonding Instrument in paper-format during class. A MANOVA revealed no significant differences between adolescents from urban areas and those from rural areas in terms on the key variables. Our result suggests that adolescents from urban and rural areas fare just as well in terms of psychological functioning. Limitations and future research will be discussed.

Supervisor: Dr. Mylène Lachance-Grzela

18A. Effectiveness of Physical Activity Interventions for Improving Executive Functioning in Overweight Individuals: A Scoping Review

Nicole Solie¹

¹ Dalhousie University

An increasing percentage of the worldwide population is becoming overweight. Feasible, cost-effective, accessible interventions are needed to improve health outcomes for this population. Overweight individuals experience broad deficits in executive functions (EFs) that place them at an increased risk for weight gain. Research suggests physical activity (PA) interventions are effective at improving EFs in healthy-weight individuals. Improving EFs through PA may be a promising intervention route for overweight people as it can influence weight loss by burning calories while simultaneously improving EFs. Currently no reviews have examined if PA interventions are effective for overweight individuals across the lifespan and how the different aspects of PA impact EF and fitness-related outcomes at different ages. This scoping review was conducted in accordance with PRISMA Scoping review guidelines to inform such gaps in literature. We searched six databases, screened 6819 articles, and included 14 articles for thematic synthesis and analysis. Overall, PA interventions were found to be equally effective for improving EFs in overweight children and adults but different EFs (i.e., low vs. high order) responded uniquely to PA interventions. Additionally, results indicate that there are age-related differences in which specific aspects of PA interventions (e.g., 30 vs. 60-75-minute session duration) are effective and that improvements in EFs were associated more with improvements in fitness than with decreases in body fat. Such findings are crucial for the development of age-specific PA interventions for improving EFs in at-risk overweight individuals.

Supervisor: Dr. Sophie Jacques

18B. Do Risky Drinking and Cannabis Use Motives Mediate the Links Between Bullying Involvement and Substance Use Harms Among Emerging Adults?

Lillea Hohn¹

¹ Dalhousie University

Bullying involves repetitive acts of interpersonal aggression and a power imbalance between the perpetrator and individual being victimized. Both bullying perpetration and victimization are associated with substance use harms. Individual motivations for substance use may help to explain the link between bullying involvement and harmful substance use among emerging adults. This archival study investigated mediational pathways between bullying involvement (victimization and perpetration) and alcohol/cannabis use harms via risky alcohol/cannabis use motives (coping-anxiety, coping-depression, enhancement, and conformity). Data came from the Fall 2021 and Winter 2022 cohorts of the UniVenture Survey - a cross-sectional, self-report survey administered to 1898 emerging adults (18-25 years old; 62.4% women, 35.3% men, 2.3% non-binary) across five post-secondary institutions during Sept-Dec 2021 and Jan-April of 2022. Participants completed standardized, validated measures of bullying perpetration and victimization, alcohol and cannabis use motives, and alcohol and cannabis use harms. A series of parallel, multiple mediator models were used to examine whether risky substance use motives mediated the link between bullying involvement and substance use harms. Mediational analyses indicated that risky drinking and cannabis use motives mediated links between bullying involvement and harmful use of each substance. In general, coping and conformity motives emerged as mediators for victimization, whereas enhancement and conformity motives emerged as mediators for perpetration. Results may have implications for supporting vulnerable emerging adults. For instance, interventions could be tailored to the specific motivations for substance use in those who perpetrate and/or are targets of bullying to prevent or minimize substance use harms in these high-risk groups.

Supervisor: Dr. Laura Lambe & Dr. Sherry Stewart

19A. La Relation Coparentale Comme Médiatrice du Lien Entre les Croyances d'essentialisme Biologique et la Satisfaction Conjugale

Mylène Ross-Plourde,¹ Catherine Hunt,¹ Jean-Michel Robichaud ¹

¹ Université de Moncton

La satisfaction conjugale joue un rôle important dans l'épanouissement familial, mais cette satisfaction tend à diminuer lors de la transition parentale. C'est alors pourquoi nous nous sommes intéressés à deux déterminants pouvant jouer un rôle dans le maintien de la satisfaction conjugale lors de la transition parentale, soit la relation coparentale et les croyances d'essentialisme biologique. En cohérence avec la documentation scientifique trouvant des liens négatifs entre des concepts théoriquement similaires à l'essentialisme biologique et la relation coparentale ainsi que des liens positifs entre la relation coparentale et la satisfaction conjugale, nous avons voulu examiner si la relation coparentale pourrait jouer un rôle médiateur dans la relation potentiellement négative entre les croyances d'essentialisme biologique et la satisfaction conjugale. Notre hypothèse principale était que toute relation entre l'essentialisme biologique et la satisfaction conjugale s'expliquerait par la relation coparentale. Pour ce faire, nous avons recruté 195 parents en couple, âgés d'au moins 18 ans et ayant un enfant âgé entre 0 à 2 ans. Les participants devaient répondre à trois questionnaires en lien avec leur satisfaction conjugale (VD), leur croyance d'essentialisme biologique (VI) et leur relation coparentale (médiateur). Des modélisations par équation structurelle soutiennent notre hypothèse principale de médiation complète. Spécifiquement, les résultats suggèrent d'abord que la relation négative entre l'essentialisme biologique et satisfaction conjugale disparaît lorsqu'on ajuste pour la covariance entre l'essentialisme biologique et relation coparentale. De plus, un lien indirect négatif s'observe entre l'essentialisme biologique et la satisfaction conjugale, via la relation coparentale.

Supervisors: Dr. Jean-Michel Robichaud & Prof. Mylène Ross-Plourde

ABSTRACTS: POSTER PRESENTATIONS

SESSION 2 (2:15 PM – 3:30 PM)

1A. The Psychological Consequences of Parents' Social Comparison of Their Children: The Role of Parents' Implicit Theory of Intelligence

Uyen Phan¹

¹ University of New Brunswick

The present study builds on previous research examining the psychological consequences of parents who make social comparisons of their children (Vogels & Perunovic, 2020). Results from the previous study demonstrated that parents who made upward comparisons, in which they compared their child to another who is doing better, rated the comparison as less important and reported that the event occurred less recently than parents who made downward comparisons. In my Honours thesis, we aim to replicate these findings while also extend the research by investigating the role of parents' implicit theory of intelligence in the social comparison of their children. Specifically, we will examine the differences between entity theorists, who believe abilities are stable and unchangeable, and incremental theorists, who believe abilities are malleable and improvable (Dweck, 2000). Previous research has shown differences between these groups in how they respond to success and failure. Based on this, we predict that parents who make upward comparisons will rate the comparison domain as less important than those in the downward comparison groups and that this pattern will be more pronounced for entity theorists than for incremental theorists. Results will be discussed.

Supervisor: Dr. Elaine Perunovic

1B. A Pilot Approach to Indigenizing Psychology: The Pursuit of Two-Eyed Seeing in the Classroom

Emily Mak¹

¹ St. Francis Xavier University

In 2015, the Truth and Reconciliation Commission published 94 Calls to Action; Calls #62-65 refer to the need of “Education for Reconciliation”. These called on educators at all levels to move toward Indigenizing their curricula. The current study sought to answer call #62 by integrating Indigenous-relevant content into an Introduction to Forensic Psychology course at a small rural Nova Scotia university. This is a core course for students in the Applied Forensic Psychology program. Content included topics such as Treaty Rights, Gladue principles, and Two-Eyed seeing. Pre- and post-survey responses from 48 students were analyzed to assess changes in students’ attitudes and perceptions of racism, discrimination, and prejudice in Canada. While the results of Wilcoxon signed rank tests showed no significant difference between student responses at the time of the pre- vs. post-survey, in the open-ended questions 71% of student respondents reported changed views because of what they learned in the course. A debriefing with the instructor revealed that the effort of carrying out this project was beneficial as it increased their learning, and they will continue this process of Indigenization. The current study was only the first step, in an active and ongoing pursuit of Two-Eyed seeing in the classroom.

Supervisors: Dr. Margo C. Watt & Dr. Erin Austen

2A. In-Person and Technology-Facilitated Sexual Harassment in Canada: Prevalence and the Identification of Risk Factors

KJ Goruk,¹ Julie Blais,¹ Jennifer McArthur¹

¹ Dalhousie University

Sexual harassment is a common and damaging form of sexual violence that is perpetrated both in-person and online. Despite severe consequences reported by victims, there exists modest research examining whether well-established risk factors for sexual offending are also predictive of sexual harassment, which is essential when considering how these offences might be prevented. The purpose of this study was to determine the prevalence of sexual harassment in Canada and to identify whether established risk factors for sexual offending (i.e., younger age, sexual deviancy, and general antisociality), are predictive of both types of sexual harassment. Participants (N = 1,200) were recruited via Qualtrics' research panels and completed an online survey consisting of measures assessing demographic characteristics, sexual deviancy, and general antisociality. Participants were also asked whether they had perpetrated sexual harassment in-person and/or online in the preceding twelve months. Overall, 3.1% of the sample reported perpetrating both in-person and online sexual harassment, 4.7% reported perpetrating only in-person, and 1.2% reported perpetrating only online within the last year. As determined by area under the receiver operating characteristic curve (AUC analysis) and logistic regression for both types of perpetration, gender (man), hypersexuality, hostile aggression, anger, and the lifestyle and antisocial facets of psychopathy were the most salient predictors for both in-person and online perpetration. While there were certain factors that were more predictive of in-person or online perpetration, results suggest that similar interventions may be effective for those who perpetrate in-person or online sexual harassment.

Supervisor: Dr. Julie Blais

2B. The Potential Impact of Meritocratic Beliefs on Perceptions of Police Legitimacy

Haley Bonnell¹

¹ Memorial University of Newfoundland

Police successfully function only if they are believed to be legitimate. While understanding perceptions of police legitimacy is thus important, currently, there is limited causal evidence of the potential factors involved in these perceptions. Research surrounding broad beliefs about merit (e.g., hard work leads to success) and narrow beliefs such as police legitimacy has largely been correlational. Thus, the goal of the present experimental study was to examine whether meritocratic beliefs can affect perceptions of police legitimacy. I hypothesized that the activation of stronger meritocratic beliefs would lead to relatively higher perceptions of police legitimacy as compared to the activation of weaker meritocratic beliefs. A sample of 60 undergraduate students completed a biased questionnaire that subtly primed either strong or weak meritocratic beliefs, and then indicated perceptions of police legitimacy on four measures: trust in police, affective feelings toward the police, the obligation to obey police, and defense of the police institution. The results indicated that the strong meritocratic beliefs prime led to significantly more obligation to obey police than a control condition (i.e., weak meritocratic beliefs prime). Two of the three other measures of police legitimacy showed a similar pattern but did not significantly differ between experimental conditions. The validity and implications of these findings, including how they may impact research on police legitimacy, are discussed.

Supervisors: Dr. Martin V. Day & Dr. Daniel Kudla

3A. Hippocampal Astrocytic Glycogen Metabolism in a Rat Model of Early Pretangle-Stage Alzheimer's Disease

Amelia Jones¹

¹ Memorial University of Newfoundland

The pretangle stages of Alzheimer's disease (AD) comprise accumulation of soluble, abnormally phosphorylated tau protein beginning in the brainstem noradrenergic nuclei, the locus coeruleus (LC), that progresses into temporal lobe areas, encroaching on the hippocampus. In normal brains, glycogenolysis occurs in astrocytes, breaking down glycogen and transporting lactate into neurons as a metabolic substrate. This process is critical for learning and memory, and glycogen phosphorylase (GP) catalyzes the rate-limiting step of this reaction. As changes in metabolic processes and astrocytic inflammatory processes have been noted in the brains of AD patients, we hypothesized that the presence of AD-like tauopathies would result in significant changes in GP activity, via changes in the neuron-glia axis in the hippocampus. Using a rat model designed to mimic the earliest period of tau pathology, we selectively expressed a pseudophosphorylated human tau in the LC, and one-to-two months later, histochemically examined the amount of active and total GP in six hippocampal-dentate gyrus subregions. Relative optical density (ROD) measures revealed decreased active GP in the middle and outer molecular layers, and the subgranular zone, without a concomitant change in total GP ROD measures. These findings suggest that hippocampal metabolic dysfunction is evident early in pretangle stage AD. Specifically, these findings postulate an effect of AD-like tauopathies on the entorhinal cortex, which synapses onto the MML and OML via the perforant path. They also indicate changes in neurogenesis, given the function of the SGZ and its decreased metabolic demand.

Supervisor: Dr. Susan Walling

3B. Investigating the Effect of Acute Psychosocial Stress and Aerobic Exercise on Salivary Cortisol Concentrations in Young Adults

Frances Hayward¹

¹ Dalhousie University

When humans are stressed, they respond predominately by activation of their hypothalamic-pituitary-adrenal (HPA) axis. The HPA axis releases cortisol, a glucocorticoid; crucial in the moment but culprit to the long-term damage caused by stress. Damage caused by stress is mitigated by aerobic exercise (AE), which, if done prior to psychosocial stress exposure, mitigates cortisol response. AE, a physical stressor, is thought to accomplish this by causing early activation of the HPA axis' regulating mechanism: glucocorticoid negative feedback. The present study aimed to investigate if this impact on cortisol was still present if the order was reversed, and the AE was performed after exposure to psychosocial stress. We hoped to provide evidence that AE might be capable of mitigating negative aspects of the stress response retroactively. Three experimental conditions were conducted, each with four participants; the first group participated only in a psychosocial stress paradigm (The Montreal Imaging Stress Task; Dedovic et al., 2005), the second group participated only in moderate intensity AE, and the third group participated in the psychosocial stress paradigm, followed by moderate AE. Six saliva samples were collected throughout the session and analyzed later using an enzyme-linked immunosorbent assay. A repeated measures ANOVA revealed that cortisol levels were highest at the end of the session in those who had participated in both the stress and AE paradigms. Contrary to what we had imagined, these results indicate a potential conflation of psychosocial stress and AE when performed in this order, resulting in subsequent increase of HPA axis activation.

Supervisors: Dr. Tara S. Perrot & Dr. Heather Neyedli

4A. Is Reasoning Always an Effective Disciplinary Strategy? The Key Role of Logical Consequences

Mathis Roy,¹ Joey Frenette,¹ Geneviève Mageau,² Bart Soenens,³ Elien Mabbe,³ Jean-Michel Robichaud¹

¹ Université de Moncton, ² Université de Montréal, ³ Université de Gand

Parenting scholars recommend adding mild punishments (MP) to reasoning in persistent rule-breaking contexts to respectively promote two key socialization goals, namely compliance and internalization. However, recent studies warn against this recommendation as MP were repeatedly found to impede on reasoning's positive effects on internalization. One promising alternative to MP is logical consequences (LC), a form of constraint that directly addresses the problem created by the transgression at hand rather than eliciting aversion (as MP do). However, it remains unclear whether LC and MP differently interfere with the socializing effects of reasoning. To address this gap in the literature, we conducted two studies that examined the moderating role of parental choice of constraint (MP vs LC) on the relation between parental reasoning and key indicators of socialization. Our main hypothesis was that reasoning's positive socialization effects should be similar or greater among parents using LC than those using MP. We recruited 508 adolescents. In Study 1 (N=437; cross-sectional) and Study 2 (N=65; diary), we obtained self-reported and/or coded measures of parental reasoning, of parental choice of constraints (LC vs MP), and of indicators of youth internalization (i.e., autonomous reasons to comply) and compliance (i.e., general defiance or day-to-day rule-breaking behaviors). We found significant interaction effects between parental choice of constraints and reasoning on all socialization indicators. Examining simple effects revealed that among parents using LC, reasoning is positively or non-significantly associated with compliance and internalization. In contrast, when parents use MP, reasoning is negatively or non-significantly associated with compliance and internalization.

Supervisor: Dr. Jean-Michel Robichaud

4B. The Impact of Cannabidiol Expectancy on Cannabis and Alcohol Cue Reactivity

Amelie Tanner¹

¹ Dalhousie University

Cannabis and alcohol co-use is increasing in prevalence, posing additive harms to users' health relative to using either substance on its own. Thus, it is imperative to examine the factors that contribute to this behaviour and elucidate the mechanisms underlying therapeutic interventions. One factor thought to contribute to substance co-use is cross-substance cue reactivity, wherein one substance elicits craving for other substances. Whether this phenomenon contributes to cannabis and alcohol co-use specifically is unclear. One potential intervention for substance use is cannabidiol; however, the extent to which cannabidiol's therapeutic effects can be explained by pharmacological versus non-pharmacological factors, such as expectancy effects, is poorly understood. This study examined whether cross-substance cue reactivity was present among cannabis and alcohol users and whether cannabidiol expectancy alone could attenuate cue reactivity. Seventeen alcohol and cannabis users were asked to use an inactive vaporizer, with half of the participants being erroneously informed that the vaporizer contained cannabidiol. Participants were asked to view visual cues depicting cannabis and alcohol before indicating their craving for both substances and having their heart rates measured. Data was analyzed using Repeated-Measures Analysis of Variance. Craving and Arousal were the primary outcomes of interest. Exposure to substance-related cues elicited craving, but it was specific to the substance that was depicted—alcohol cues did not elicit craving for cannabis, or vice versa. Furthermore, cues did not elicit physiological arousal. Cannabidiol expectancy had no impact on alcohol craving; however, it did dampen cannabis craving.

Supervisors: Dr. Sean P. Barrett & Aaron Shephard

5A. An Examination of the Relationships Between Psychological Well-Being and Ageism in Atlantic Canadian Healthcare Professionals

Madelyn Purchase¹

¹ Cape Breton University

Healthcare professionals are at heightened risk of experiencing poor psychological well-being and expressing ageist attitudes. The objective of the current study was to highlight the state of psychological well-being in a sample of Atlantic Canadian healthcare professionals, as well as investigate the relationship these factors have with ageism. Method: Participants completed an online survey consisting of demographics, the 10-Item Perceived Stress Scale, the WHO-5 Well-Being Index, the Abbreviated Maslach Burnout Inventory, the 12-Item Expectations Regarding Aging Survey, and the emotional dissonance subscale of the Emotional Labour Scale. The final sample consisted of 294 professionals. Results: Frequency analyses revealed high rates of stress (17.3% and 55.1%), burnout (39.6%), and diminished well-being (63%). Pearson correlations showed that the aspects of psychological well-being were strongly related to one another, and weak-moderately with aging expectations. A path analysis revealed that stress directly affected well-being and burnout, however, emotional dissonance partially mediated these relationships. In contrast, emotional dissonance did not mediate the relationship ageism shared with the two outcome variables. The findings of this study suggest the need for interventions aimed at improving the psychological well-being of healthcare professionals in Atlantic Canada. Without addressing these factors, issues commonly associated with them such as job turnover, and resultant staff shortages may be escalated. In conclusion, healthcare professionals are suffering from diminished well-being at high rates and ageist attitudes may be a contributing factor.

Supervisor: Dr. Éric R. Thériault

5B. Evaluating Visual Function and Symbol Digit Modalities Test Performance for People with Multiple Sclerosis (MS)

Emma MacKechnie¹

¹ St. Francis Xavier University

Multiple sclerosis (MS) is an autoimmune disease where the myelin in the central nervous system is attacked. The immune response causes inflammation and can lead to the development of lesions and brain atrophy. People with MS can experience cognitive impairment and visual disturbances, among other symptoms. The symbol digit modalities test (SDMT) is considered to be the most sensitive neuropsychological test to MS-related cognitive dysfunction; however, it is visually demanding. Thus, it is important to determine whether visual disturbances confound SDMT performance so clinicians and researchers can judge the appropriateness of the measure for their purposes. The objective of the present study was to evaluate the impact of self-reported visual function measured using the health utilities index 3 (HUI3) on SDMT performance in a sample of 354 adults with MS. At baseline and one year later, we found that lower scores on the HUI3 were associated with lower raw SDMT scores ($r_1 = .16$; $r_2 = .19$). This same positive correlation was found at baseline when analyzing T-scores, but a negative correlation was revealed one year later ($r_1 = .12$; $r_2 = -.14$). We found that those in the moderate-to-severe visual disability group obtained worse raw SDMT scores than the no-to-mild visual disability group at baseline and one year later (p 's $< .05$); the same was observed for the T-scores ($p_1 = .05$; $p_2 < .05$). Our findings tell us that visual function was associated with SDMT performance, thus it may not be a valid cognitive assessment tool for everyone with MS.

Supervisors: Dr. Lindsay Berrigan & Dr. Erin Mazerolle

6A. Effects of Multimodal Distractors on Attention

Noémie Thériault¹

¹ Université de Moncton

During Pavlovian conditioning, Sign-Tracker (ST), Goal-Tracker (GT) and Intermediate (IG) phenotypes emerge. These phenotypes are characterized by the degree to which they tend to attribute incentive salience to cues associated with rewards. Research has shown that these phenotypes also differ in other aspects. For example, in humans, STs tend to favor bottom-up attention, while GTs tend to favor top-down attention. Some researchers have found the same pattern in rodents. However, the evidence supporting this finding is limited. Therefore, it is hypothesized that if the addition of a distractor increases the difficulty of the task, then the performance of the rats will decrease when distractors are added compared to the absence of distractors. It is also hypothesized that if STs favor bottom-up attention and GTs favor top-down attention, then light and auditory distractors, will particularly affect the performance of STs in sustained attention tasks. The present study evaluates the signal detection performance of rats during four different sustained attention tasks with distractors. The sample consisted of 86 Long-Evans rats. Findings show a main effect of distractors, but no clear effect of phenotypes in detection performance. These result from adding distractors increases the difficulty of the task but negates that the performance of STs is more affected, suggesting that distinction between phenotypes in terms of attention capacity is less important than previously presented. This study nuances the current findings and highlights the importance of future studies to clarify the use of bottom-up attention phenotypes. Authors declare no conflicts of interest.

Supervisor: Dr. Frédéric Huppé-Gourgues

6B. The Interaction of Caffeine and Human Menstrual Cycle Phase on EEG Markers of Sustained Attention

Charlanie Innocent¹

¹ Mount Saint Vincent University

Background: Both caffeine and menstrual cycle phase are known to influence aspects of cognition, however, to date no studies have investigated their interaction. The objective of this study was to examine the effects of caffeine on brain-based markers of sustained attention across the human menstrual cycle. Method: Cis-gender females were given 200mg of caffeine and a placebo on separate days during the menstrual (n=31), follicular (n=27), and luteal phase (n=30) of their menstrual cycle. After consuming the drug or placebo, individuals performed a sustained attention task during which EEG was recorded. Event related potentials elicited by visual targets were extracted from EEG separately in early (0-5 min), middle (5-10 min) and late (10-15 min) timeframes of the task. Amplitudes and latencies of the resulting P300 wave were analyzed at parietal electrodes. Results: Overall target P300b amplitude between the menstrual and luteal groups ($p=0.042$) showed significant difference. Followed up to account for time, this difference was observed during the early ($p=.014$) and late time period ($p=.048$) only. Caffeine reduced P300 latencies, but only in the luteal phase ($p=.019$). Discussion: P300 amplitudes were minimally affected by caffeine, however differences between menstrual cycle phases were observed suggesting that sex hormones such as progesterone may influence cortical processing during times of sustained attention. Caffeine did, however, improve the speed of target recognition during the luteal phase where progesterone is at its highest. This may indicate that there is some interaction between caffeine and progesterone in influencing the time of target detection.

Supervisor: Dr. Derek Fisher

7A. Behavioural Impacts of Wild-Type Huntingtin Deletion in the CA3-CA1 Adult Mouse Hippocampus

Kelsie Senior¹

¹ Memorial University of Newfoundland

Huntington Disease is characterized by a combination of symptoms, with its cognitive and behavioural symptoms causing the greatest impacts on wellbeing in HD patients and their families. The disease is caused by a mutated form of the huntingtin protein, but its autosomal dominant inheritance pattern results in concurrently reduced levels of wild-type, non-mutant huntingtin. The current study investigated the consequences of selectively knocking out wild-type huntingtin expression in the CA3-CA1 hippocampus of adult mice using stereotaxic injections of Cre at 2-4 months of age. 6-8 months after injection, a series of behavioural tests examining anxiety-like behaviour, depression-like behaviour, and spatial learning and memory. Wild-type huntingtin knockout mice showed increased anxiety-like behaviour and impairments in spatial learning and memory compared to controls. While there are numerous possible approaches, no effective disease-modifying therapy exists for Huntington Disease and the role played by wild-type huntingtin in the disease is not well understood. These results may contribute to improvements in both understanding and potential treatments for Huntington Disease.

Supervisor: Dr. Jacqueline Blundell

7B. Exploring Motivations and Barriers to Volunteering Amongst CBU Students

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Volunteering is a complex phenomenon with numerous motivations to start and continue to volunteer. Better understanding CBU students' motivations and barriers to volunteering could help CBU improve volunteering prevalence. The current study used a mixed methods approach for data collection and analysis. The volunteer functions inventory (Clary et al., 1998) was used to assess which of six motivations is primary for current student volunteers', and an adapted version of the volunteer functions inventory (Clary et al., 1998) was used for non-volunteers to better understand why they don't volunteer. VFI data suggests understanding and values to be common primary motivations though tied motivations were common. Adapted VFI data suggests lack of spare time and lack of assistance from CBU in connecting students with volunteer opportunities are barriers for those who do not currently volunteer. Grounded theory analysis of nine interviews with current or recently graduated student volunteers about their motivations, perceived barriers, and suggestions for improving volunteer prevalence revealed eight major themes. Highlights include (1) Appeal of readily available opportunities; (2) "Community service is part of my bringing"; and (3) Volunteering as a way of Seeking/Creating/Finding/Contributing to "My Community. This study adds to the literature by providing evidence to suggest that students often possess more than one motivation to volunteer. Additionally, student's motivations can be fluid from their initial motivation to volunteer in a particular capacity to why they continue volunteering.

Supervisors: Dr. Heather Schmidt & Prof. Geraldine Carlin

8A. Seasonal, Sex, and Developmental Differences in the Vocal Control System of Wild Black-Capped Chickadees (*Poecile atricapillus*)

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In songbirds, changes in behaviour (e.g., birdsong) are often mirrored by changes (i.e., plasticity) in the specific neural structures supporting behaviour. Here, we examined seasonal and sex differences in the brains of wild black-capped chickadees (*Poecile atricapillus*), focusing specifically on two brain regions: Area X, critical for vocal learning, and HVC (proper name), critical for vocal production. We captured male and female chickadees (N=48; 26 males, 22 females) in three seasons: spring (March-April), summer (August-September), and winter (December-January). All birds were sacrificed within ca. 1 hour of capture to eliminate any potentially confounding effects of captivity. We visualized Area X and HVC by staining brain tissue for cresyl violet and quantified neural plasticity by examining changes in the absolute and relative volumes of these structures. In adults, Area X was larger in spring than winter, likely because adults make minor adjustments to their vocalizations in spring ahead of breeding season, which may lead to structural growth. Area X was also consistently larger in males, as males produce more learned and adaptive vocalizations in response to environmental cues (mate seeking, territory protection). In contrast, HVC did not vary seasonally or between sexes, perhaps because song production tends to occur year-round. We also examined developmental (adult-juvenile) differences in a subset of birds captured in summer, however we found no differences. Given that we virtually eliminated captivity in our design, our findings are more likely reflective of the changes that occur naturally in the brains of wild songbirds.

Supervisor: Dr. Leslie S. Phillmore

8B. Highly Efficient and Generalizable Decoding of Complex Representations using Large EEG Dataset

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A major component of human brain research is brain-computer interfaces. Such devices allow researchers to analyze and translate neural signals. Many companies, such as Synchron, aim to provide treatments involving brain-computer interfaces to patients and will eventually involve the usage of the device throughout the lifetime of a patient. Therefore, it is incredibly important to ensure that the device's ability to translate neural signals is accurate across all domains. Previous research has accomplished an accuracy of 80% - 90% in simple representations. However, more complex representations have ever-changing neural signals which makes it difficult to maintain high accuracy. In this paper, we developed a decoding method for complex representations using a large open-access electroencephalography dataset of 156 subjects. It was preprocessed and a standard signal was developed using the average brain signals. The data was then split into a training and test set. The method was trained on the training set to form a predictive model which was used to measure the accuracy. The process was iterated 20 times using Support Vector Classification after which the predictive model was compared with the standard signal to determine correlation. We expected to see an average categorical accuracy of close to 90% but the model achieved an average accuracy of ~60%. We also expected to see a statistically significant correlation between the predictive model and standard signal if the first hypothesis was met. However, hypothesis 2 could not be tested. This suggests that a different model or further tuning is needed for complex representations.

Supervisor: Dr. Tim Bardouille

9A. Apologies as a Moderator of the Association Between Psychological Control and Parent-Adolescent Relationship Satisfaction

Noémie Comeau¹, Chloé McLaughlin¹, Lisane Guérette¹, Geneviève Mageau¹, Jean-Michel Robichaud¹

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Scholars have well-established the negative effects of psychological control on parent-adolescent relationships. Psychological control refers to intrusive and manipulative practices that interfere with adolescents' thoughts and emotions. Scholars have also established that all parents are at risk to use this detrimental practice at times. Given the undesirable effects of psychological control and its seemingly inevitability, it is crucial to uncover whether and how parents may mitigate psychological control's negative impact. One strategy that holds the potential to mitigate these effects but that has yet to be empirically examined is parental apologies. Parental apologies refer to expression of remorse, acceptance of responsibility and compensation for their mistake. Research has shown that parental apologies positively predict indicators of relationship satisfaction, but its moderating role on psychological control's effects has yet to be tested. To fill this gap, we recruited 96 adolescents and asked them to fill out validated measures of parental apologies, parental psychological control and two indicators of relationship satisfaction. We hypothesized that parental tendency to offer more (vs. less) apologies would weaken or neutralize the documented negative relation between psychological control and relationship satisfaction. Conducting structural equation modeling first revealed significant interactions between parental apologies and psychological control on our indicators of relationship satisfaction. Examining simple effects then revealed that among parents who offer more apologies, psychological control predicts non-significantly (or less negatively) relationship satisfaction. In contrast, among parents who offer less apologies, psychological control predicts negatively (or more negatively) relationship satisfaction. Practical implication and future directions are discussed.

Supervisor: Dr. Jean-Michel Robichaud

9B. The Effects of Manipulating the Colour and Orientation of Faces on Event Related Potential Classification Precision

Brynn Harris-Shanks¹

¹ Dalhousie University

Electroencephalography (EEG) neuroimaging signals can be used to control commands on computer technology known as brain computer interfaces (BCI). BCIs employ classification algorithms based on machine learning to identify the neural signals associated with control commands. However, good classification performance with EEG signals can be challenging due to the presence of noise. We seek to find stimuli that will enhance EEG signals and thus detectability. Green and inverted faces have each been shown to amplify some EEG signals, which in turn improves BCI classification performance by creating greater distinction between the signals elicited from target and non-target stimuli. We hypothesized that green, inverted faces would yield a better classifier performance than only one manipulation alone. In a six-alternative target selection paradigm, we altered the colour (green vs. neutral) and orientation (inverted vs. upright) of faces and their silhouettes, and then compared the classification precisions. Faces yielded better classifier performance than silhouettes when they were upright. Inverted neutral silhouettes yielded better classifier performance than upright neutral silhouettes, but this benefit of inversion was lost when using faces or green stimuli. No other effects of colour or orientation were found on precision. Given that varying the colour and orientation of faces does not compromise classifier performance, future studies should look at varying the colour and orientation of faces to mitigate EEG signal habituation.

Supervisor: Dr. Aaron Newman

10A. Investigating the Relationship Between Body-Image and Risky Sexual Behaviour in Adolescence

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Body-image and risky sexual behaviour are both important factors that impact the lives of adolescents worldwide. Given the complex findings of the relationship between these two constructs, longitudinal examinations are needed that also consider sex and sexual orientation. In the current study, we investigate the longitudinal associations between body image and risky sexual behaviour in adolescence and also the moderating effects of sex and sexual orientation on this relationship. Data from Wave 2 and 3 of the Victoria Healthy Youth Survey (V-HYS) was used which included 662 participants aged 12-18 at baseline. Linear regression analyses in SPSS was used to examine the association between body image and each sexual risk independently. Models controlled for age, socioeconomic status, sex, and sexual orientation. The findings indicate that females and individuals who identify as bisexual are at a particularly high risk for experiencing risky sexual behaviours based on their levels of body dissatisfaction at an earlier age. Overall, our main conclusion is that body dissatisfaction matters for sexual risks, but only for specific groups, such as sexual minorities.

Supervisors: Dr. Kara Thompson & Dr. Tara Callaghan

10B. Exploring Classification Techniques for a Novel EEG-based Bi-Hybrid BCI System

Max Mascini¹, Daniel Godfrey¹, Brynn Harris-Shanks¹, Aaron Newman¹

¹ Dalhousie University

Electroencephalogram (EEG)-based brain computer interfaces (BCI) have seen considerable improvements over the past few decades with novel paradigm designs and improved classification methods, but current EEG-based BCI systems still often struggle with low signal-to-noise ratios, mediocre classification accuracy, and high training data demands. Hybrid BCI designs incorporating novel stimulus features have shown improvements at mitigating some of these challenges. However, we believe that not enough attention has been placed on classifier selection. Classifiers are machine learning algorithms that use features of the elicited brain signals to differentiate the user's intentions. Therefore, we performed a study comparing the performance of different classification algorithms using an EEG-based bi-hybrid BCI designed to elicit multiple simultaneous ERPs to produce particularly feature-rich EEG responses. Using the data collected from 30 participants, we investigated and compared the performance of three commonly used classifiers: linear discriminant analysis (LDA), support vector machines (SVM), and random forest classifier (RF). We also examined the cost-benefit trade-off of hyperparameter tuning for the classifiers, as well as which stimulus feature combinations provided the best classification performances. Overall, we found that LDA had the best performance overall, while RF showed consistently poor performance. Nonetheless, LDA and SVM have differing tradeoffs in terms of precision versus recall, and in terms of the range of performance across individual users. The results thus suggest that use-case is most important when selecting a BCI classifier.

Supervisors: Dr. Aaron Newman & Prof. Daniel Godfrey

11A. The Cognitive and Affective Impact of Postural Instructions on Women

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Although the benefits of expansive (open and upright) relative to contractive (slumped) postures in men are well established, the literature regarding posture's impact on women is more complex. The present study evaluated 20 women's mood, reading comprehension, and ease of maintaining posture in two postural conditions: one using upright postural instructions used in a prior study in which women were found to suffer certain deficits while in it relative to slumped positions, and the other using modified upright posture instructions designed for this study, which aim to alleviate those deficits. Participants were also randomized between receiving their postural instructions from a man or woman, and differential impacts of posture by gender of researcher were assessed. It is hypothesised that participants in the modified postural instructions group will score higher in cognitive and affective measures than those in the original postural instructions group. It is also hypothesised that gender of researcher will interact with posture such that participants receiving instructions from a female researcher will display less negative cognitive and affective impact from posture relative to those receiving instructions from a male researcher. Results were inconclusive, perhaps due to small sample size, but some nearly-significant findings led to an exploration of possibilities for future study and for potentially improving the delivery of postural advice to women and girls.

Supervisor: Dr. Karmen Bleile

11B. Olfactory Discrimination Tasks and Reversal Learning in a Neurexin1 (+/-) mouse model of Autism Spectrum Disorder

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The Nrnx1(Nrxn1 +/-) mouse model is a novel strain with no previous research into their learning and memory performance. Neurexins (NRXN) are a family of type-1 membrane protein synaptic organizers that bind neuroligins to form Ca (2+) dependent complexes that shape synapse properties of neural networks by synapse specificity. Synaptic function is critical for learning and memory processes and Neurexins are essential for synaptic function as alterations to Neurexins are implicated in neurodevelopmental disorders (autism and schizophrenia). Our experiment examines the effects of Neurexin mutations on learning and memory using transgenic mice and operant conditioning tasks using an olfactometer. Using an olfactometer Nrnx1 (+/-) mice and wildtype (Nrnx1 +/+) littermates we scored total errors during three odor discrimination learning tasks. We predicted Nrnx1 +/- will show poorer reversal performance compared to wildtype littermate controls. The Nrnx1 (+/-) and wildtype controls did not differ in their total errors to 85% accuracy criterion in our Introduction and New Operant Odor Pair memory tasks, indicating that both genotypes are effectively able acquire novel operant pairs. Our results show significantly more errors on reversal learning in the Nrnx1 (+/-) mice compared to wildtype mice as the reversal learning task requires more cognitive flexibility than the prior learning assessments. The Nrnx1 +/- mice underperform in reversal learning olfaction tasks within an olfactometer due to the dysregulation of synaptic function compared to controls. The Nrnx1 (+/-) are shown to have difficulty unlearning past operant associations which results in a higher total or errors to 85% accuracy criterion in a reversal learning task.

Supervisors: Dr. Richard Brown & Dr. Kyle Roddick

12A. Cognitive Tasks as a Possible Entrainable Oscillator

Kaiden Dalley, Yellow Martin, Derek Wan-Yan-Chan, Francine Burke

Circadian rhythms are biological clocks that regulate many processes in the brain and body and are a result of the function of the suprachiasmatic nucleus (SCN), also known as the master clock. Zeitgebers are cues which help keep circadian rhythms on time. There are several clocks, or oscillators, that respond to zeitgebers and affect circadian rhythm including a light-entrainable oscillator (a response to light), and a food-entrainable oscillator (a response to feeding differences). In our study, we explored a potential oscillator related to learning and memory where the relationship between the consistency of time of day and a cognitive task in rats was analyzed. Twenty-four male Long-Evans rats were kept on a 12:12 light cycle and randomly divided into three groups: a group that completed the cognitive task at the same time each day, a group that completed the cognitive task at different times each day, and a control group. The cognitive task was a Barnes Maze in which rats had to find an escape hole. All groups' performance improved over the five daily trials, however there was no significant difference over the 21 days, and no effect of group on overall performance. All groups' performance on the probe trial worsened over the 21 days, which may be reflective of the rats learning there was no escape box in probe trials. These results do not support a benefit to completing a learning task at a consistent time of day, however, are foundation for future research regarding the memory oscillator.

Supervisor: Dr. Christina Thorpe

12B. Does Optogenetically Inhibiting Somatostatin Expressing Interneurons in the Primary Visual Cortex Affect Size Perception in Mice?

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The primary aim of sensory neuroscience is to understand how neural processes in the brain give rise to different perceptions. Mice have become the dominant animal model for studying the neural processes underlying vision due to the availability of genetic interventions. In particular, the targeting of light-sensitive optogenetic proteins to specific neuron subtypes has enabled the description of a cortical circuit in mouse primary visual cortex (V1), that consists excitatory Pyramidal neurons and GABAergic interneurons that express parvalbumin (Pvalb+), somatostatin (SOM+), or vasoactive intestinal peptide (VIP+). Specific roles have been proposed for these different interneuron subtypes based on in vitro and electrophysiological studies, but it is unclear how this circuit might affect perception. In this study we optogenetically targeted SOM+ interneurons because of their proposed role in surround suppression, which is when responses to a visual stimulus in the center of a neuron's receptive field is diminished by the presence of neighboring stimuli in the surrounding region. Surround suppression may relate the perceived size of objects, so we hypothesized that altering the activity of SOM+ interneurons would disrupt size perception in mice. We trained wildtype and transgenic mice on a two-alternative forced choice size discrimination task. Transgenic mice had SOM+ interneurons in V1 optogenetically suppressed during some trials. Psychometric functions were obtained from 6 wildtype and 2 transgenic mice so far. Preliminary analysis revealed no change in size discrimination performance when SOM+ interneurons are optogenetically inhibited.

Supervisor: Dr. Nathan Crowder

13A. Real-time home REM sleep detection using Apple Watch, Fitbit, and Cerebra

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¹ Acadia University

As smartwatches increase in popularity, new opportunities arise for further integration into everyday life, such as the detection and influence of dreaming. The present study uses the Cerebra home PSG system as the ground truth for detecting sleep stages. Data were also recorded using an Apple Watch and a Fitbit. The Apple Watch data was used to develop a model capable of real-time REM sleep detection, created by the Acadia Institute for Data Analytics (AIDA). The Fitbit's accuracy at detecting sleep metrics was assessed to determine how accurate a mature sleep staging algorithm can be based on heart rate and movement data. Participants (N=4) completed a minimum of six nights of sleep recording and were compensated via \$60 Amazon gift cards. The Fitbit detected true positive REM periods (Fitbit and Cerebra agreement) at a rate of 85.1%. Various tests were conducted to determine if there were any differences in the sleep metrics recorded by the Fitbit and the Cerebra, and no significant differences were found. The findings show promise for the future of new dreaming technology using wearable smartwatches.

13B. Angiotensin-Converting Enzyme 2 Expression in Different Tissues Affected by COVID-19

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Cystic Fibrosis (CF) causes pulmonary, gastrointestinal, musculoskeletal and sinus damage. People with CF experience difficulties with anion conductance which causes bacterial infections and inflammation of the lung. People with other severe lung conditions such as COPD, asthma, or smokers experienced severe COVID-19 compared to the general population whereas people with CF have not. Angiotensin-converting enzyme 2 (ACE2) is a transmembrane protein that acts to bind the SARS-COV-2 virus in various tissues including epithelial tissues of the lung and nasal cavity. COVID-19 affects the brain, lungs, cardiac, nasal and gastrointestinal tissues. Overlap in tissues affected by COVID-19 and CF provides a framework for understanding the effect of ACE2 differential expression in COVID-19 disease severity. We propose that CFTR-KO mice represent an adequate murine model to study the role of ACE2 in the relationship between SARS-COV-2 binding and COVID-19 severity. Rabbit anti-ACE2 primary antibody, goat-anti rabbit secondary antibody and DAB solution was used in immunohistochemistry analysis to measure ACE2 protein signal intensity, followed light microscopy imaging of tissues. Images representing the median signal intensity for each structure and tissue type were selected. Signal intensity was decreased in CF-KO male mice and increased in CF-KO females compared to all wildtype lung tissues. Nasal cavity structures farther from the nasal tip showed increased ACE2 signal intensity compared to closer structures. CF-KO male mice may be an adequate murine model of the role of ACE2 protein binding in people with CF, in the context of SARS-COV-2 infectivity.

Supervisor: Dr. Valerie Chappe

14A. Assessing the Current State of the Decolonizing and Indigenizing Process in Undergraduate Teachings

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In 2015, the Truth and Reconciliation Commission called on post-secondary institutions to implement Indigenous ways of knowing and being into their course curricula (2015). In response to this call (#62), a three-part study was conducted at StFX. A textbook analysis was conducted to code and record the frequency of Indigenous-related excerpts included in two leading Introduction to Psychology textbooks. Second, a 12-item survey was conducted with StFX faculty to gain an understanding of where they are in the process of decolonization and Indigenization, to identify common barriers, and to determine what is needed to move forward. Lastly, interviews were conducted with Psychology faculty to understand this process within Psychology. Results indicate a lack of Indigenous content within university classrooms and Psychology textbooks, as only 17 excerpts were found. Common themes found in the survey and interviews included the fear of getting Indigenous perspectives wrong and the need for institutional support.

14B. Examining the Effects of Probiotics in Response to Fatty Western Diet-Induced Stress and Its Impact on Maternal Care Behaviours and Corticosterone Plasma Concentration in Rats

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A potential link between maternal BMI and obesity with neurodevelopmental disorders in children has been suggested. Physiological and emotional changes experienced by the mother in response to weight-regulating factors such as diet and gut health can have socio-emotional consequences for offspring which manifest at a neurobehavioural level. Consistency of maternal care behaviours and the blood plasma concentrations of maternal corticosterone were observed in response to diet (fatty western diet, or standard diet) and probiotic treatment which has been shown to be protective against the effects of the fatty Western diet. It was expected that the fatty Western diet would result in inconsistent maternal care behaviours and elevated corticosterone concentrations and that probiotic administration would significantly counteract these effects. No correlation was found between either probiotic treatment or fatty Western diet administration and maternal care behaviour consistency, neither was a link between probiotic treatment and blood plasma corticosterone concentration observed. Diet, however, was reported to have a significant effect on blood plasma concentrations of corticosterone. The findings regarding corticosterone concentration are consistent with the literature reporting on the fatty Western Diet as an effective physiological stressor. While maternal care behaviour consistency was not altered in these subjects, little to no research has been conducted on this criterion of behaviour and ought to be considered in future studies given the strong associations between diet and stress-induced neurophysiological changes reported in this study and the literature.

Supervisor: Dr. Tara Perrot

15A. Women's Economic Empowerment Through a Financial Literacy Curriculum: A Pilot Study

Allison Hancock¹

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Financial literacy is an individual's capacity to understand and manage one's finances effectively. This skill is particularly important for women, as they are often confronted with distinctive financial challenges that can adversely impact their mental wellbeing. Unfortunately, research indicates that merely 30% of women worldwide possess necessary financial literacy skills. This study assessed the value of an online financial literacy curriculum. Participants were a sample of Canadian women from both student and community populations (mean age = 22.8; SD = 6.6). Participants completed demographic measures and a measure of emotional abuse. They then completed measures of attitudes towards financial management, economic self-efficacy (ESE), and employment both before and after completing one module of Allstate Foundation's Moving Ahead Through Financial Management curriculum. Results indicated that, overall, women showed significantly improved attitudes towards financial management and ESE pre-to-post module. Mixed results were found when emotional abuse was used as a covariate in the analyses. The results of this study have practical implications for policymakers, educators, and service providers working to enhance financial literacy and empowerment among women.

Supervisors: Dr. Christine Lomore & Dr. Margo Watt

15B. Naturally-Formed Social Hierarchies are not Associated with Indicators of Stress in Male Mice

Mackenzie Hartley,¹ Millie Bhaskara,¹ Alex MacKay,¹ Maddie Oulton,¹ Tamara Franklin¹

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Within social dominance hierarchies, lower social rank has been associated with higher levels of stress. Hdac2 is an epigenetic protein regulated by the glucocorticoid receptors activated during the stress response and, therefore, shows greater expression in individuals with increased stress levels. While the hippocampus as a whole has a role in the stress response, Hdac2 protein expression within the ventral and dorsal hippocampus may differ as the ventral hippocampus has been implicated in stress and affect while the dorsal hippocampus is more involved in cognitive functions. This study aimed to provide evidence for a correlational link between Hdac2 expression in the dorsal and ventral hippocampus and social rank. We also used the triple test to behaviourally measure general anxiety levels in mice of differing social rank. Our findings suggest that total Hdac2 and phosphorylated Hdac2 protein expression in the ventral and the dorsal hippocampus are not differentially regulated across naturally-formed social hierarchies, and that anxiety-related behaviours are largely similar across social rank. Since we found no evidence suggesting that mice of lower social rank are more stressed under normal animal husbandry conditions, we suggest that naturally-forming social hierarchies in group-housed mice are not a significant source of variation when measuring stress outcomes or anxiety-like behaviours.

Supervisor: Dr. Tamara B. Franklin

16A. An Exploration of the Relationship Between Perfectionism, Culture, Self-Compassion and Mental Health Outcomes

Emily Escoffery¹

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The purpose of the present study was to examine the relationship between perfectionism, self-construal, mental health outcomes and self-compassion in undergraduate students. It was hypothesized that interdependent self-construal and socially-prescribed perfectionism would be significantly positively related. As well, socially prescribed perfectionism would mediate the relationship between self-construal and depression. Eighty- one undergraduate students (Mage = 18.89, SD = 2.62) participated in an online survey. Interdependent self-construal was positively correlated with depression. Importantly, this relationship was explained by higher socially prescribed perfectionism and lower levels of self-compassion. In contrast, independent self-construal was negatively correlated with depression. Notably, this relationship was explained by lower socially prescribed perfectionism and higher levels of self-compassion. These findings suggest the importance of cultural schemas in understanding the conceptualization and treatment of perfectionism and negative mental health outcomes, such as depression.

Supervisor: Dr. Louise Wasylikiw

16B. The Foundations of a Worthwhile Life: Investigating the Effects of Motives on Future Eudaimonic Well-Being

Johanna Loock¹

¹ Dalhousie University

Eudaimonic well-being is a form of wellness that is a fundamental aspect of a healthy and functional society and reflects the possession of meaningful motives. This study investigates how two opposing motives - striving for achievement and fearing failure - predict future eudaimonic well-being, and whether these effects are mediated by perceived competence. An online survey was completed by 395 university students from Dalhousie and York University at two time points, 5 months apart. A two-wave cross-lagged panel model was employed to test the longitudinal hypotheses. Results showed that the effect of achievement striving on future eudaimonic well-being, mediated by competence, was small and positive ($\beta = .03$, 95% CI [-.04, .11]), and the effect of fear of failure on future eudaimonic well-being, mediated by competence, was small and negative ($\beta = -.02$, 95% CI [-.06, .02]). Two statistically significant paths were found, achievement striving to future perceived competence ($\beta = .25$, 95% CI [.10, .41]), and fear of failure to future eudaimonic well-being ($\beta = -.28$, 95% CI [-.51, -.05]). Although effects in the expected direction were found, mediation hypotheses were not broadly supported; however, due to the study's underpowered analysis, these results remain inconclusive. Additionally, the lag between data collection waves may have not captured the proper timeframe for causal effects, or the indirect effect may not exist. Significant direct effects between both achievement striving and future increases in competence, and fear of failure and future decreases in eudaimonic well-being, suggest that having low fear of failure and high achievement striving has positive implications.

Supervisors: Prof. Taylor Hill & Dr. Sean Mackinnon

17A. Extending Our Understanding of Sexual Anxiety Sensitivity and Sexual Well-Being

Mallory Murphy¹

¹ University of New Brunswick

Sexual anxiety sensitivity (SAS) refers to one's fear of physiological arousal sensations specific to sexual contexts due to the belief that they signal serious negative consequences that are categorized into three domains: physical (e.g., heart attack), cognitive (e.g., going crazy), and social (e.g., judgement). Individuals tend to avoid triggering situations altogether due to the severity of their fears and tendency to experience negative cognitive-affective responses during such situations. Byers et al. (2022) demonstrated a negative relationship between SAS and a range of aspects of sexual well-being (SWB). However, they did not report which aspects of SWB were uniquely associated with SAS, whether gender (i.e., men, women) and relationship status (i.e., committed, not committed) moderated these associations, nor possible group differences in SAS by gender and relationship status. My Honours thesis attempted to fill these gaps. The results of a multiple regression analysis showed that the frequency of non-genital sexual activities, sexual self-esteem, sexual pain, and sexual distress were uniquely associated with SAS. However, contrary to predictions, neither gender nor relationship status moderated these associations. Our predictions that women would report greater SAS than men were confirmed for total SAS, the physical and cognitive subscales, but not for the social subscale. Our predictions that individuals not in a committed relationship would report greater SAS were confirmed for total SAS and social subscale as well as the physical subscale (not predicted). This result was qualified by a significant interaction in that there was a significant difference for women but not for men.

Supervisor: Dr. Sandra Byers

17B. Exploring the Effects of Perceived Income Inequality on School Belongingness in Undergraduate Students

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The extent to which an individual feels accepted, respected, included, and supported by others in their school social environment, or school belongingness, has been previously associated with numerous positive outcomes, such as higher academic achievement and hopefulness. Therefore, identifying the barriers and pathways of school belongingness is of particular interest, as it allows the promotion of a healthy and progressive school environment. One barrier of interest is income inequality, as higher objective country-level inequality has been associated with lower rates of reported school belongingness among students. To explore whether this is a causal relationship and exists in terms of subjective inequality, I tested whether reported school belongingness differs depending on the salience of perceived income inequality. The sample consisted of 799 students enrolled in undergraduate courses at Memorial University of Newfoundland. The manipulation of perceived income inequality used did not appear to effectively alter participants' inequality perceptions; thus, the hypothesis was not convincingly tested. However, an exploratory association detected between higher perceived income inequality and lower school belongingness provides some suggestive evidence in the hypothesized direction. The present research discusses the potential impact of income inequality on feelings of school belongingness and the implications of this research to our understanding of student inclusion, equity, and fairness.

Supervisor: Dr. Martin Day

18A. Do Sleep Quality and Repetitive Negative Thinking Predict Inattention?

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The present study aimed to test the hypothesis that sleep quality and repetitive negative thinking would predict inattention. Sleep quality and repetitive negative thinking both impact levels of inattention, a construct that is understudied in adult populations. Participant data from the Nathan Kline Institute-Rockland Sample (N = 30) was analyzed using a multiple regression analysis to answer the research question. A correlation was found between inattention and repetitive negative thinking, as well as inattention and sleep quality. These results support alternative avenues for reducing inattention other than medications.

Supervisors: Dr. Michelle Eskritt & Prof. Donna Thompson

18B. The Role of Implicit Theory in People's Evaluations of Self-Serving and Self-Improving Dating Profiles

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Previous research has demonstrated cultural differences in how people present themselves in dating profiles. Westerners tend to portray themselves in a self-serving way, describing their present selves positively and emphasizing existing good qualities, whereas Easterners tend to describe how they may improve in the future. Studies have yet to address how people perceive these differing presentation styles. The current study addresses that gap in the literature and examines how Canadian university students rate self-serving and self-improving dating profiles. Data is being collected from introductory psychology students from a Canadian university using an online survey. Participants were randomly assigned to read a self-serving or self-improving profile matching their preferred interest. Subsequently, they rated the profile on various measures of likability. We hypothesized that Canadian university students would rate the self-serving profiles more favourably because this presentation style aligns more with Western cultural values. We also examined participants' implicit theory of change (i.e., the degree to which people believe attributes are changeable) and hypothesized that self-serving profiles would be rated particularly favourably by those who believe that attributes are relatively stable and non-malleable. Using regression analysis, we analyzed the effect of the independent variable of profile types (self-enhancing versus self-improving) on the dependent variable of likability ratings. Additionally, using regression we analyzed implicit theory score as a moderator for the dating profile preferences. The results of this analysis and the relationship between presentation styles, likeability ratings, and implicit theories will be discussed.

Supervisors: Dr. Elaine Perunovic

