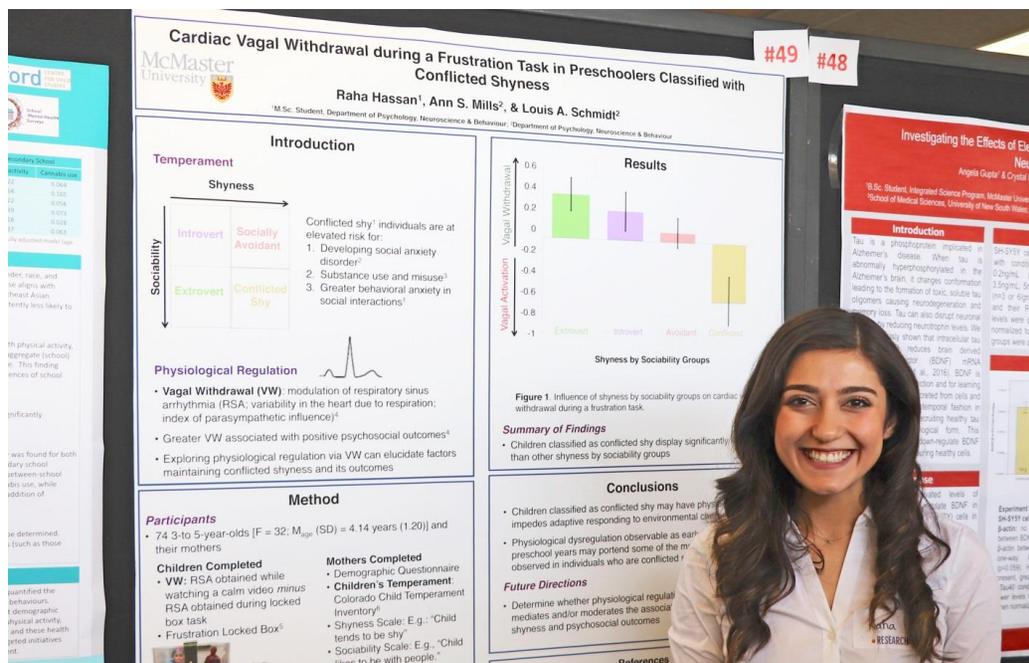




SPOTLIGHT ON RESEARCH

Research Day Top 3 Posters: Graduate – Non-Clinical



**First place Research Day poster competition award winner:
Raha Hassan - Graduate (non-clinical) - supervisor: Louis Schmidt**

1st Place

Name: Raha Hassan

Supervisors: Dr. Louis Schmidt

Education Program and Level: M.Sc in Psychology (Research and Clinical Training Stream)

About Raha:

I am a 2nd year MA student under the supervision of Dr. Louis Schmidt. My research interests are centered around the relation between children’s self-regulation (physiological and behavioral) and their temperament. With respect to my clinical work, I am currently a first year practicum student at the Anxiety Treatment and Research Centre at St. Josephs West 5th Campus, delivering supervised cognitive behavioral individual and group therapy treatments to adults with anxiety disorders. In the future I hope to marry my research and clinical interests by practicing the scientist-practitioner model, and contributing to our understanding of how dysregulation early on contributes to the development and maintenance of anxiety disorders throughout the lifespan.

Raha's Project:

Shyness and sociability are often thought of as opposing ends of one continuum. However, Cheek and Buss suggested that these two personality dimensions are conceptually and empirically orthogonal traits. Individuals who are high on shyness and sociability (i.e., conflicted shyness) are at elevated risk for developing social anxiety and substance use disorders, and manifest more behavioral anxiety during social interactions. Exploring physiological regulation early on may elucidate possible mechanisms underlying emotion regulatory factors maintaining conflicted-shyness and its outcomes. Physiological regulation indexed via modulation of respiratory sinus arrhythmia (RSA; variability in the heart due to respiration) from baseline to an emotionally frustrating task (vagal withdrawal) is one index of physiological regulation.

Cardiac vagal withdrawal was obtained by subtracting mean task-RSA during an emotionally frustrating task (where children were precluded from playing with a desirable toy) from mean at-rest RSA (obtained from children watching a calm video) to index physiological regulation. Membership to shyness and sociability groups was determined through maternal report from the Colorado Childhood Temperament Inventory.

Group membership significantly predicted cardiac vagal withdrawal. Children in the conflicted-shy (high shy/high social) group displayed significantly less vagal withdrawal than children in high shy/low social, low shy/high social, low shy/low social groups.

Conflicted-shy children are presumed to experience an approach-avoidance conflict and may have an underlying physiology that impedes adaptive responding to environmental challenges. Given that higher levels of cardiac vagal withdrawal are typically considered more adaptive, physiological dysregulation observable as early as during the preschool years may portend some of the more negative outcomes observed in individuals with conflicted shyness.



2nd Place

Name: Kristie Poole

Supervisor: Dr. Louis Schmidt

Education Program and Level: Developmental Psychology, PhD Candidate

About Kristie:

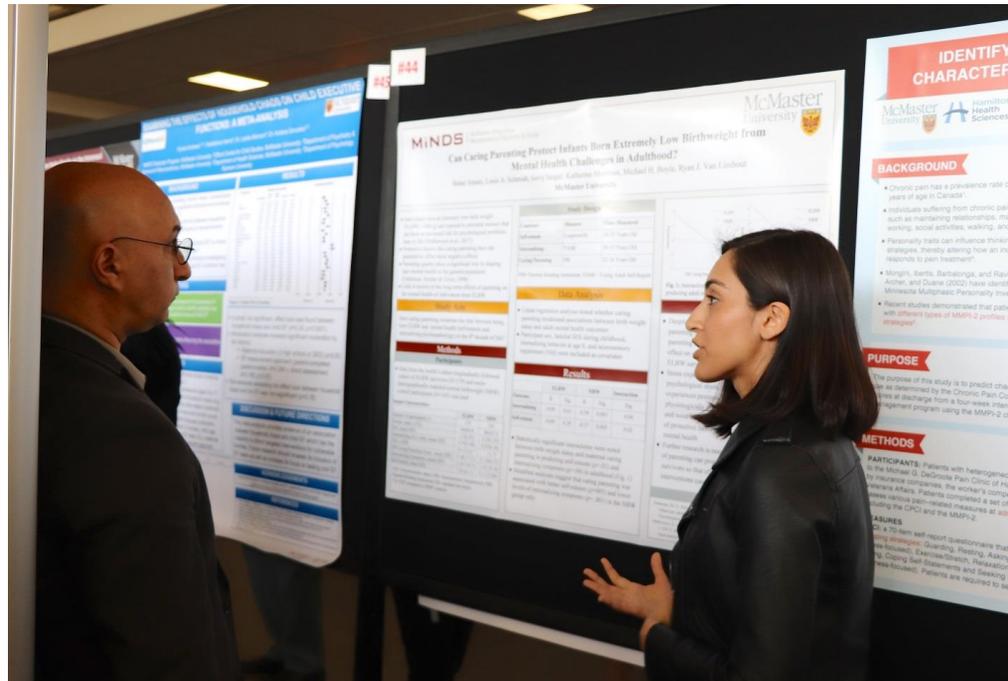
I am currently completing the second year of my PhD in Developmental Psychology under the direction of Dr. Louis A. Schmidt. Broadly, my research investigates the interaction among temperamental, physiological, and contextual factors involved in socio-emotional development. I am particularly passionate about studying the developmental origins of shyness, as well as investigating factors that maintain or alter shyness across development. To date, my doctoral research has examined the developmental antecedents, correlates, heterogeneity, and outcomes associated with shyness. Through my doctoral training I aim to further develop my methodological and conceptual skills necessary for studying children's social development. This will enable me to further elucidate biological and behavioral correlates of children's shyness and set the stage for my long-term goal of becoming an independent researcher at a research-intensive university.

Kristie's Project:

Shyness is characterized by inhibition and wariness in response to social novelty or situations of perceived social evaluation. Typically, most research treats shyness as a homogenous phenomenon when examining its correlates and consequences. However, this is potentially problematic, because not all shy individuals are alike. One source of this heterogeneity is emotional expression, such that shyness can be expressed and experienced in either a positive or negative way; that is, displaying shy behavior with or without a smile, respectively. By accounting for heterogeneity in shy children when investigating social and psychophysiological correlates, we may be able to more precisely identify specific groups of shy children who are at risk for maladaptive social outcomes than by treating shyness as a homogenous construct, as well as identify factors that may play a protective role in social adjustment for some shy children.

In the present study, we examined if positive and negative shyness in school-aged children was differentially associated with social adjustment and physiological stress-reactivity. We classified children based on their relative occurrence of avoidance behaviours and positive expressions coded while they presented a speech to a video camera. Children were told this video would be shown to other children. We operationalized three shyness groups as follows: 1) positive shy (high avoidance and high positivity), 2) negative shy (high avoidance and low positivity), and 3) non-shy (all low avoidance children). We collected parent-report and teacher-report of children's social anxiety, and parent-report of children's sociability. Further, direct observation of activity level was coded during the speech delivery given that reduction in activity level to perceived threat is considered a fear response. Finally, saliva samples were collected to index children's salivary cortisol reactivity in response to the social stressor.

We found that negative shy children were more socially anxious according to both parent- and teacher-report. Negative shy children were also rated as less sociable, and they displayed reduced activity levels during the speech than the positive shy and non-shy children. Positive shy and non-shy children were indistinguishable across all measures of social behavior. Shyness group had no influence on children's cortisol stress-reactivity. Our findings provide support that there is heterogeneity in the phenomenon of shyness, and that the expression of positive affect during social challenges may be one factor underlying these differences in school-aged children. Importantly, we report that not all shy children experience negative social consequences such as social anxiety. It appears that the expression of positivity during social situations may serve an adaptive function that buffers some shy children from social anxiety, as well as may facilitate their opportunities for social learning and socializing. This finding has important clinical implications. Since positive expressions in shy children appear to have a protective role, this may be an emotion regulatory skill that could be taught to shy children in order to help them deal with their arousal in social situations, aid in the development of social competence, and possibly prevent social anxiety.



3rd Place

Name: Bahar Amani

Supervisor: Dr. Ryan Van Lieshout

Education Program and Level: Neuroscience Graduate program, First year PhD

About Bahar:

I am very interested in understanding the effect of parenting and maternal mental health on an individual's long-term mental health outcomes. Currently I am involved in two studies which examine the effectiveness of group cognitive behavioural therapy for postpartum depression (PPD) delivered by Public Health Nurses and women who have previously recovered from PPD. We hope to find that these forms of treatment will be effective and minimize the barriers faced by women in receiving treatment. Additionally, we are examining the impact of treatment on the mother-infant relationship and infant emotion regulation because both of these have significant implications for infant development and subsequent psychopathology risk. Moving forward in my academic career, my goal is to continue to develop the skills required to conduct meaningful research with strong potential for translation that can be used to improve the health and development of women and their children.

Bahar's Project:

Preterm birth can have significant consequences that may follow an individual throughout their life. Individuals born at extremely low birth weight (ELBW; <1000 g) are exposed to early life stress that might affect their stress response system, putting them at increased risk for psychological problems. Plenty of research has found that as adults, ELBW survivors are at increased risk for problems on the internalizing spectrum, particularly depression and anxiety. Fortunately, protective experiences like caring parenting have been shown in general population samples to reduce the negative effects of early adversity. However, it is not known if such positive experiences can offset problems associated with exposure to perinatal adversity.

For this reason, we sought to examine if caring parenting moderates the link between being born preterm and self-esteem and internalizing problems (i.e. depression and anxiety) in the 4th decade of life. We used data from the world's oldest longitudinally followed cohort of ELBW survivors (N=179) and socio-demographically matched normal birth weight (NBW) control participants (N=145). Participants retrospectively reported on maternal parenting using the Parental Bonding Instrument in their early 20s. At 30-35 years of age, self-esteem and internalizing psychopathology were self-rated using the Coopersmith Self-Esteem Inventory and Young Adult Self-Report (YASR) questionnaire, respectively.

We found a statistically significant interaction between birthweight status and caring maternal parenting on self-esteem and internalizing psychopathology in adulthood ($B = .484, p = .04$). After running our analyses for each birthweight group separately, we found that caring parenting was associated with better self-esteem ($B = -.366, p = .00$) and lower levels of internalizing symptoms ($B = -.582, p = .001$) in the NBW group only. Despite the protective effect of caring maternal parenting in NBW participants, it did not appear to have the same positive effect on self-esteem and internalizing problems in adult ELBW survivors. These results suggest that ELBW survivors may be differentially susceptible to protective factors as a result of early adverse experiences (e.g., physiologically stressful procedures in the Neonatal Intensive Care Unit, maternal psychological stress). It is possible that these experiences may trigger epigenetic modifications altering the neurophysiological pathways responsible for emotion regulation and stress sensitivity. Further research is necessary to examine additional aspects of parenting to determine the potential for family-focused interventions to positively impact long-term outcomes in preterm survivors.