

JOHN EUSEBIO

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EDUCATION

BA hon, DEVELOPMENTAL COGNITIVE NEUROSCIENCE

(SEPT 2009 – APR 2014)

University of Western Ontario

THESIS: *Dynamic Changes in the Functional Connectivity of the dACC Across Response and Magnitude Conflict*, with Dr. J. Bruce Morton.

GPA: 3.7

Dean's Honor List (2011 & 2012)

ACADEMIC / RESEARCH INTERESTS

Executive functioning

Memory; the role of dopamine in modulation of the hippocampus

Learning; learning of statistical regularities

Reward-driven attention

Functional and effective connectivity of neural networks

Development of executive functioning and memory

fMRI, PET, EEG/ERP, MEG

RESEARCH EXPERIENCE

VOLUNTEER RESEARCH ASSISTANT | *Center for Addiction and Mental Health*

(DEC 2014 – PRESENT)

SUPERVISOR: Dr. Doris Payer

Study uses a pharmacological challenge paradigm in combination with fMRI and PET imaging to study dopamine transmission in participants addicted to cocaine and alcohol. We are particularly interested in how stress-induced striatal dopamine responses (esp. D2/D3 receptors) differ between addicted and healthy participants, and the role dopamine plays in stress-induced drug cravings in addicted individuals.

RESPONSIBILITIES:

fMRI and PET data analysis using SPM and MATLAB

PET data analysis using PMOD and ROMI (proprietary CAMH software)

MATLAB scripting

Administering participant questionnaires and cognitive/neurophysiological tasks

Analyzing data using SPSS and Microsoft Excel

Writing up findings for publication

VOLUNTEER RESEARCH ASSISTANT | *Rotman Research Institute, Baycrest*

(NOV 2014 – MAR 2015)

SUPERVISOR 1: Dr. Rosanna Olsen

SUPERVISOR 2: Jordana Wynn

The primary goal of the current investigation is to better understand neural systems associated with changes in eye movement patterns as a function of repeated viewings of a stimulus. We are also interested in how these eye movement adaptations and their neural correlates may change as a function of normal aging.

RESPONSIBILITIES:

fMRI data preprocessing & analysis using AFNI

Participant recruitment

Testing participants and collecting eye tracking data

Analyzing data using SPSS and Microsoft Excel

Writing up findings for publication

VOLUNTEER RESEARCHER | *St. Joseph's Health Center, Outpatient Mental Health*

(JUL 2014 – FEB 2015)

DEPARTMENT CHIEF: Dr. Jose Silveira

MANAGER 1: Gwen Yorston

MANAGER 2: Dr. Tara Burra

Current project uses an experience-based design to ensure highest quality mental health care. This involves the development and administering questionnaires as well as interviews to outpatients and staff. We will also be examining factors associated with greater frequency in hospital visits among outpatients.

RESPONSIBILITIES:

- Development of surveys and questionnaires
- Administer quality assurance surveys to participating outpatients
- Patient database management
- Writing programs to automate tasks
- Analyzing collected data

RESEARCH ASSISTANT | *University of Western Ontario*

(SEPT 2013 – PRESENT)

SUPERVISOR: Dr. J. Bruce Morton

Explored dynamic changes in effective connectivity between neural regions while participants performed a size-congruency task in an MRI scanner to assess differences of effective connectivity patterns during different forms of conflict processing. Data were analyzed using a Dynamic Causal Modelling analysis.

RESPONSIBILITIES:

- Aid in the construction of hypotheses regarding neural network integration
- Programming and data analysis using MATLAB
- Interpreting the data in light of past relevant research

VOLUNTEER RESEARCH ASSISTANT | *Center for Addiction & Mental Health*

(NOV 2013 – MAY 2014)

SUPERVISOR: Dr. David Dewit

Evaluated the Big Brother Big Sister mentoring program using nationally-collected longitudinal data. Study aimed to identify factors which positively impact children's emotional and social functioning.

RESPONSIBILITIES:

- Organizing database of mentor, mentee, and parent questionnaire responses
- Encoding and analyzing the collected longitudinal data using SPSS
- Interpreting data in light of past research
- Proposing potential explanations for observed trends

THESIS STUDENT & LAB ASSISTANT | *University of Western Ontario*

(SEPT 2012 – MAY 2013)

SUPERVISOR: Dr. J. Bruce Morton

Examined neural networks employed by participants for different forms of conflict processing during a size congruency task. Statistical analyses of fMRI data were carried out using a psychophysiological interaction (PPI) analysis.

RESPONSIBILITIES:

- Review and criticism of new literature relevant to what is being done in the lab
 - Working with my thesis supervisor to design analysis procedures to be used in our study
 - Analyzing test data using MATLAB and Statistical Parametric Mapping (SPM8)
 - Interpreting the data in light of past relevant research
 - Writing up findings
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TECHNICAL SKILLS

Skilled in Python and MATLAB programming
Experienced in fMRI data analysis utilizing MATLAB, SPM8, and AFNI
Experienced in PET data analysis utilizing MATLAB, SPM8, ROMI, and PMOD
Knowledgeable in neuroscience research methods, including MRI, PET, CT, EEG, MEG and NIRS
Skilled in experimental design using E-prime
Skilled in use of SPSS
Trained in the use of eye-tracking equipment
Experienced in development and administration of clinical research questionnaires
Familiarity with DSM-V and DSM-IV
Knowledgeable of TCPS, ICH-GCP and privacy guidelines
Experience in utilizing online academic research databases, such as PsycINFO, Pubmed, and Google Scholar
Proficient with various reference management programs (incl. Mendeley, Zotero, EndNote and RefWorks)
Skilled in Microsoft Office (incl. Word, Excel, PowerPoint, Outlook, Access, Visio, and Publisher)
Knowledgeable of Windows, MacOSX, and various Linux distributions
Skilled in Adobe Photoshop and Adobe InDesign

ADMINISTRATIVE SKILLS

Excellent oral communication and presentation skills
Able to summarize complicated information in an accessible manner
Skilled in the production of educational media
Hard working, able to multitask effectively, and attentive to detail
Works well independently or as part of a team
Excellent time management skills
Superb organizational skills and capable of meeting strict deadlines
Takes initiative
Quick learner

LANGUAGES

Bilingual: English & Portuguese

REFERENCES

*** References available upon request.
