Acadamh Ríoga na hÉireann
Royal Irish Academy

Royal Irish Academy Grants Report

Title:	Dr
First Name:	Omar
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Discipline:	Sciences
Year of Award:	2018
Project Title	c-TOM: A computerised theory of mind test for use in basic and translational schizophrenia research

1. Research background:

This travel grant allowed me to work with Prof. Christopher Bowie and his team, who are leading international experts in assessment and therapy for cognitive deficits in schizophrenia, based in Queen's University, Kingston, Ontario. The aim of this collaboration is to address a major unmet need in cognitive assessment and treatment, namely to develop sensitive and ecologically valid measures of theory

of mind (TOM), the ability to understand the thoughts and perspectives of other people. Current tests of TOM are based on stimuli with low ecological validity (e.g. cartoons) (2) and dependent on an examiner who may introduce human experimental error. This limits the use of these measures for accurately predicting changes in real-world social disability across a range of patients with different levels of impairment. My project aims to address these issues by developing a novel TOM test, Computerised Theory of Mind Test (c-TOM). This test uses realistic stimuli (videos of real people), is parametrically varied in difficulty over multiple levels with a large number of trials to ensure it is sensitive to a range of TOM abilities, and is computerised, requiring minimal supervision.

2. Please outline the findings of your research and/or milestones achieved (did you achieve the primary objectives - if not, what did you learn from the process)?

Based on consultation with Prof. Bowie, his research team, other expert staff in Queen's University in Kingston Ontario, and an individual with schizophrenia, it was recommended that we make a number of small changes to Computerised Theory of Mind Test (c-TOM), such as increasing the number and variety of the videos presented to participants during the task. Since this short Research Visit, I have addressed each of these primary recommendations and, together with staff in the School of Psychology, colleagues in the Department of Information Technology, and volunteers, I have developed a new version of c-TOM that includes brand new videos in addition to other improvements. This new version of c-TOM (c-TOM Version 2.0) is directly built upon my experience with Prof. Bowie in Queen's University, and is currently undergoing pilot testing in NUI Galway.