Social Paper – Claire Ann Banga

I am a final year PhD student in Clinical Psychology at the University of Edinburgh, though I am originally from Canada. I was fortunate to receive the Principal's Career Development and the Edinburgh Global Research Scholarships from the university, and funding from the Society for Research in Child Development to enable me to carry out my research. During my PhD I led the development of "eMoodie" (www.emoodie.com) an ecological momentary assessment app designed for research with children and adolescence – though I am not a programmer myself. It was created as a research tool for the express purpose of studying mental health, emotion and socialization patterns, digital technology use, and health factors (e.g., physical activity and sleep) in young people. The main hypotheses which my project was designed to test concern the effects of digital technologies on emotional development in early adolescence, with a particular focus on empathy. Empathy – and the lack thereof – being core components of adaptive child development and various forms of psychopathology, respectively. I carried out a large (n = 265) validation study of the app with a sample of early adolescent children from secondary schools in Edinburgh. In addition to the larger EMA study, further follow-up studies with the same core participants were conducted in our child development lab testing empathy and emotional understanding at the behavioral and neural (using EEG/ERP) levels-of-analysis. In collaboration with the Informatics Department at my university, I co-supervised the dissertation of a Master's student who conducted a machine learning analyses with the EMA and sensing data I had collected in my study. A further project will be conducted this coming summer to build on the promising work from last year.

Since my data collection finished, I have been a collaborator on a number of projects which have used eMoodie including research on: the momentary effects of stress on teachers; adolescent smartphone use and sleep; and changes in stressors in undergraduates across a university semester (burst-design). Two forthcoming projects include research into emotion regulation in autistic children, and the role of rumination in depression in older adults.

I have worked on NHS projects alongside my PhD including: the development of a clinical supervision questionnaire in the context of the training of clinical psychologists in NHS funded programs; and the Youth Risk and Resilience Study (YouR). The latter project is a multi-site study based in Glasgow and Edinburgh with a 3-year longitudinal follow-up period, seeking to find a neural marker which predicts the onset of psychosis in young people using a combination of MEG and structural fMRI. This study represents the highest level of clinical research in mental health and has enabled me to develop a critical skill set which will help me in pursuance of my goal of helping to develop the next generation of digitally delivered, evidence-based interventions.

Interdisciplinary collaboration has been at the heart of my project and I fundamentally believe that bringing the latest informatics analytic techniques to bear upon mental health research and interventions will fundamentally advance a field which is facing a growing epidemic world wide. It is only in combining our respective skill sets that problems of this magnitude can be addressed. I am hoping to meet with informatics researchers who would be interested in collaborating on EMA and EBI mental health research.