Testing theory and interventions within individuals: Theoretical issues and the use of n-of-1 and related methods of data analysis

Receiving the Synergy Grant allowed me to travel to Hersonissos in Crete and take part in the Synergy workshop entitled “Testing Theory and Interventions within individuals: theoretical issues and the use of n-of-1 and related methods of data analysis”, as well as the 25th EHPS conference this September.

The workshop covered several theoretical and practical issues related to n-of-1 designs, ranging from aspects concerning testing theory and interventions within individuals to specific simple as well as complex data analysis methods. The facilitators, Derek Johnston, Marie Johnston and Diane Dixon, did a wonderful job describing theoretical and data analysis issues, facilitating discussions during the workshop and stimulating the exchange of information between participants. Some of the workshop participants had a vast experience with conducting n-of-1 studies. Group work exercises and general discussions provided a great framework for sharing experiences from studies conducted in different countries and on various topics and learning from each other. Relevant questions regarding measurement (i.e. the instruments that one can use, frequency of data collection) and data analysis (i.e. what would be the best methods and software to use) were raised and possible solutions were discussed during the two and half days workshop. Participants had been asked to collect data on themselves prior to the workshop to test the Karasek demand control model of work stress during the Synergy workshop. This provided hands on experience with testing theory in individuals and analysing data using both Simulation Modelling Analysis (SMA) software and SPSS.

All in all, I enjoyed being part of this year’s Synergy workshop as I believe it offered the context for acquiring knowledge and new skills as well as plenty of social opportunities to interact with other delegates, share experiences and explore the possibility of future research collaborations.

I will apply the testing theory knowledge and practical data analysis skills gained during the workshop to conduct research and support my teaching activity at the Babes-Bolyai University in Cluj Napoca, Romania. I am currently coordinating a project where we will use an n-of-1 research design in order to test how a therapeutic story helps decrease the anxiety and procedural pain in children with cancer. This type of design offers the possibility to test for theory and intervention effectiveness in the oncology hospital context, where each case is very specific and requires the tailoring of the intervention to the patient needs (i.e. type of diagnostic, how long a child stays in hospital). Using the information I received during the Synergy workshop I will train some student assistants to help me conduct the project in the Oncology Clinic in Cluj Napoca and analyse the data we will gather. Moreover, what I have learned during the Synergy workshop will also help me strive to achieve the goal of being a scientist-practitioner and test for the effects of therapeutic interventions when working with patients who need to undergo behaviour change.