

I was awarded an INTERDEM academy research travel fellowship (Sept - Nov 2017). This fellowship gave me the opportunity to spend three months with the CACTUS (Cognitive Accessibility and Technology Use when aging in home and Society) group, Karolinska Universitet under the supervision of Prof Nygård and Dr Walles Malinowsky. Prior to this, I worked as a researcher on the PRIDE project, Institute of Mental Health, University of Nottingham.

The CACTUS group lead by Prof Nygård, Karolinska Institutet are involved in an extensive programme of research relating to participation in the world and its technological landscape for people with dementia or mild cognitive impairment. The research group aims to identify new knowledge that can enable increased access and usability of technology for people living and aging with cognitive impairment. It is hoped this will help better facilitate engagement and performance of everyday activities, and therefore participation in society.

Prof Nygård, Dr Rosenberg and Prof Kottorp developed the ETUQ (Everyday Technology Use Questionnaire) and the META (Management of Everyday Technology Assessment) was developed and evaluated by Prof Nygård, Prof Kottorp and Dr Walles-Malinowsky. These two instruments target the ability of people with dementia or cognitive impairment to use technology and have been involved in studies systematically evaluating the psychometric properties.

My main aim of the fellowship was to learn more about assessment tools, scale development (in particular the use of Rasch models), alongside a better understanding of how to access the perspectives of people with cognitive impairment and dementia and incorporate their preferences and needs into assessment and evaluation.

My fellowship started with an excellent introduction and warm welcome to the research group by Prof Nygard, an introduction to KI and training opportunities within both the department and the doctoral school, and plans were made for the upcoming months to utilise the time most effectively over the 3 months.

I begin my fellowship with a thorough introduction by Dr Walles-Malinowsky to the assessment tools, relevant literature and an overview of the field. I was provided with material on Rasch models, introduced to the software used (WINSTEPS and FACETS) and an online training course. Rasch is a unique approach of mathematical modelling for psychometric testing which allows us to obtain objective, fundamental, additive measures to documents and evaluate instruments. For example, when analysing categorical data such as answers to question it allows a “trade-off calibration” between respondent abilities, attitudes or personality traits and the item difficulty. Analysis at the response level indicates to what extent ideals are realized within a particular data set. A particular advantage with Rasch analysis is that it provides an internally valid measure that is independent of the particular sample it was applied to, this means the findings extrapolate to its population.

I attended a training course on the two instruments, ETUQ and META which target the subjective perceived ability and objective ability to use technology. The course gave a fantastic overview of the instruments, the background to development, use and potential opportunities to use these tools. The course was interactive and allowed the chance to try out the tools using video case studies.

I was able to put my newly learnt skills into practice during the fellowship, as Prof Nygård very generously provided a set of already collected data. Together, with Sara Bartels (INDUCT PhD student on secondment) and Dr Walles-Malinowsky, we designed and conducted a small-scale study evaluating the tools in order to help validate them for use in designing, conducting and evaluating intervention outcomes. Rigorously evaluated measures that can specify an individual’s cognitive capacities related to functioning in everyday life are essential for us to understand and implement new ideas and designs for environment, devices and care practice. Working together with Sara allowed the bouncing of ideas, sharing of experiences and we both benefitted from each other’s differing backgrounds. Dr Walles-Malinowsky supervised us and shared her expertise, insights and guided us through our findings. I am very grateful for her time and patience in teaching me new concepts and her enthusiasm to teach and pass on skills. Our discussions helped shape the research and develop new ideas.

From my experience, the idea of “synergy”, the creation of a whole that is greater than the simple sum of it’s parts was at the heart of the CACTUS group’s research and this collaborative sharing atmosphere made for an invaluable learning experience.

During my visit, I was given many opportunities to share ideas, engage in academic debate, learn new skills and contribute to others learning and development through sharing my knowledge and experiences. I attended CACTUS research group meetings, a range of lectures and seminars at Karolinska and a conference, "Advances in Health Care Sciences" which had the theme "Co-creation in Health Care". I was also able to visit a care home in Sweden and hear from both people with dementia and care workers about their experience and contrast this with the UK. I gave an interactive talk on the brain and dementia to a class of school children with interesting discussions and I was involved in writing a scoping review.

As Karolinska Institute is home to the Nobel Award Committee, I was present for "Nobel week", and able to attend inspiring Nobel Forum lectures and meet a Nobel laureate.

Prior to my fellowship I had in-depth knowledge of differential diagnoses affecting cognition, and the evaluation and management of these diseases. I had also previously gained great exposure to many clinical aspects of older age through earlier placements. Additionally, I had been involved in scale design and validation studies.

This fellowship provided a much greater awareness of the effects of normal aging and diseases of aging on use of technology, a greater appreciation of the diversity and complexity of older adults needs and increased recognition of cognitive aspects of accessibility and participation in society, particularly in relation to technology use for people with dementia or cognitive impairment.

The fellowship allowed me to become more acquainted with "new frontiers" in the areas of dementia research, interventions, the use of technology and accessing the perspectives of people with dementia and cognitive impairment. It provided an opportunity to compare and contrast the healthcare system with my previous experiences in UK and India.

It allowed me to better understand the role of multidisciplinary team members in caring, supporting and researching people with cognitive impairment and dementia, and the process of continuous development through knowledge translation, implementation and further collaborative research and evaluation.

Furthermore, it provided the opportunity to meet and socialize with other researchers in Sweden and develop a wider network of researchers to continue to collaborate and share knowledge and experience with. It was of particular value to meet so many mothers in academia that shared their experiences of the opportunities and challenges faced combining academic life with family life.

Outside of my research placement I had the privilege of spending 6 months in Sweden with my family. We were able to explore and experience many aspects of Swedish life and the opportunities of both Stockholm city and the archipelago islands. Furthermore, my three young children attended school in Stockholm providing them with an invaluable opportunity to engage in a different culture, participate in another education system and learn a new language.

The fellowship has benefitted me professionally and personally and I am very grateful to Prof Nygård, Dr Wallis Malinowsky, Prof Orrell and the INTERDEM academy for facilitating this visit, and everyone that has supported me to make this an enjoyable and memorable experience.