Join us in celebrating five great years of the Wales Autism Research Centre (WARC)!
WARC was officially launched in Sept 2010 within the School of Psychology, Cardiff University. As the first national centre for autism research in the UK, its goal is to advance scientific research and influence practice, policy and public awareness. This newsletter summarises some of the highlights of our achievements across these five years. You can read more about us on our website http://sites.cardiff.ac.uk/warc/about-us/warc-5-year-plans/

We would like to take this opportunity to thank everyone who has supported us across these five important years! We look forward to some very exciting changes as we move in 2016 to a new building - the Centre for Translational Developmental Science. This innovative new centre at Cardiff University will place the work of WARC at the leading edge of neurodevelopment research in the UK.

Prof Sue Leekam
Director, Wales Autism Research Centre

Current members of WARC, L-R: Prof Sue Leekam, Sarah Barrett, Sarah Thompson, Katy Unwin, Silvia Colonna, Francesca Bottinelli, Dr Catherine Jones, Dr Elisabeth von dem Hagen, Dr Kate Langley, Dr Katherine Shelton, Charlotte Fry, Beverley Winn, Zoe Williams.

Additional WARC members or associate members: Prof Dale Hay, Dr David McGonigle, Dr Georgie Powell, Lynda Morgan.
Research highlights from the last 5 years

Interdisciplinary Collaboration: Example - New attention training method tested

This Wellcome Trust project brought together research from Psychology, Optometry, and Clinical Genetics. WARC researchers, Dr Georgie Powell and Prof Sue Leekam worked together with researchers from the Optometry (Prof Jon Erichsen) and Medical Genetics (Prof Angus Clarke) departments at Cardiff University and the MRC Cognition and Brain Sciences Unit at Cambridge University (Dr Sam Wass). The group carried out a feasibility study to test children’s responses to an eye-tracking method that was devised to target flexibility of attention control. Results showed that children in a school setting responded well to the tasks and this method is suitable to be adopted for a future trial. The results of the research study are reported in an article now published in the journal Autism.

WARC doctoral success: Example - PhD graduate Dr Mirko Uljarevic

Mirko trained in Medicine in Serbia. He joined us in 2010 to start his PhD, focusing on repetitive behaviours and sensory sensitivity and exploring how these features were related to anxiety. His PhD was funded by the Wales Office of Research and Development for Health and Social Care, National Institute for Social Care. Mirko also worked with Dr Jane Lidstone at WARC on a highly successful research project funded by the Baily Thomas Charitable Fund and he collaborated with us on numerous other WARC projects. Mirko’s PhD results provide the first findings that repetitive, restricted and sensory behaviour affect anxiety not only in children with autism and also in their parents. We are proud to have supported his success as an international researcher with 7 WARC publications in scientific journals achieved during and since his PhD. He continues his pioneering work as a postdoctoral research fellow at the Olga Tennison Research Centre, Australia http://www.latrobe.edu.au/otarc/research

Advancing research and contributing to practice and policy: Example -The Diagnostic Interview for Social and Communication Disorders (DISCO)

Many of WARC’s scientific research discoveries, especially on sensory and repetitive features in ASD have been based on the early concepts of the autism spectrum introduced by Lorna Wing. The DISCO is a diagnostic interview method that measures these concepts. Working with this method we have carried out a number of research studies and applications. We have published with research collaborators in K-U Leuven, Newcastle and Leiden Universities and the National Autistic Society.

WARC PhD student Rachel Kent (now a postdoctoral associate at the Institute of Psychiatry) completed an ESRC PhD in 2014 using the DISCO to show that a range of behaviours are associated with the ‘core’ features of autism. In 2013 the WARC team published the first algorithm that could be used as a single measure to apply the new international classification system criteria, DSM-5.

Dr Carrington (WARC postdoctoral associate, now Lecturer at Aston University) led a series of studies to identify ‘key essential’ items for an abbreviation of the DISCO, resulting in two important scientific articles that form the basis for DISCO-Abbreviated interview. The Welsh Government has adopted the ‘DISCO family’ of abbreviated and full interviews as part of a national network. We have carried out training for clinicians throughout Wales and now start new training for researchers.
New Research at WARC

Welsh Crucible funding to understand experiences of diagnostic pathway
Kate Langley

A diverse team of researchers, including a statistician, creative writing lecturer, doctor, education expert, psychologist and business logistics expert have come together to try to understand the pathway experienced by children with ASD from recognition to diagnosis and post-diagnostic care, as well as how this is viewed differently by families, teachers and healthcare professionals. It is hoped that the findings of this study can feed into both the Welsh Government ASD strategy and also new legislation looking at supporting students with additional learning needs.

There are lots of studies and anecdotal reports that communication between these groups can be difficult and we’re looking at how they communicate the experiences and issues that they face. To do so, we’re using an innovative study design combining not only traditional focus groups but also seeing how different groups express their experiences through creative writing. It may be that by using creative writing we can identify more similarities between the groups than can be seen on the surface.

The study has already met with separate groups of parents, teachers and healthcare professionals and their different experiences are really interesting, whilst the stories written are extremely poignant and enlightening. The next stage of the project is to analyse the data to understand exactly what the similarities and differences between the groups may be – and how best to encourage supportive communication between them.

Hellos and Goodbyes

The past 5 years have seen a number of new faces join us at WARC, but we’ve also said goodbye to a few familiar faces.

The arrival of Dr Catherine Jones in 2013, Dr Kate Langley in 2013 and Dr Elisabeth von dem Hagen in 2015 provided a catalyst for research expansion in WARC and each now lead our priority areas of Behaviour and Diagnosis and Biological and Cognitive Processes. In 2013 Dr Katherine Shelton joined WARC to guide new work in the Families and Relationships priority area.

Last year, we said goodbye to Dr Sarah Carrington who took up a lectureship at Aston University. Sarah continues to work closely with WARC however and has been appointed an Honorary Research Fellow at Cardiff University.

Jane Lidstone (WARC Research Associate, 2010-2012) is now a Teaching Fellow at the Dept Psychology, at Durham University and a Fellow of the Wolfson Research Institute for Health and Wellbeing

WARC PhD students graduated:

- Mirko Uljarevic (graduated 2013) is now a postdoctoral researcher at the Olga Tennison Autism Research Centre, La Trobe University
- Rachel Kent (graduated 2014) is now a postdoctoral researcher at the Institute of Psychiatry
- Linda Iao (graduated 2012) is now a lecturer at Nottingham Trent University
Promotions and honours

- Dr Catherine Jones promoted to Senior Lecturer 2015
- Prof Sue Leekam appointed Honorary Professor at York University 2015
- Dr Sarah Carrington appointed Lecturer at Aston University and Honorary Research Fellow at Cardiff University 2015
- Dr Catherine Jones: Enriching Student Life Award, Cardiff University 2015
- Dr Katherine Shelton: UK Innovate’s Societal Benefit Award, 2015 Cardiff University’s Innovation and Impact Awards 2015
- Prof Sue Leekam: Life Achievement Award from South Wales community (Autism Cymru) 2014
- Sarah Barrett, Master’s prize 2013
- Katy Unwin: Poster prize. School of Psychology Postgraduate conference, 2015

Sensory processing in ASD

Catherine Jones, David McGonigle, Francesca Bottinelli, Katy Unwin, Georgie Powell

Parents and individuals with ASD have long reported that unusual sensory responses are common in ASD. These responses include experiences such as being unable to tolerate certain sounds or textures or, conversely, having a strong liking for a particular sensation. Dr Catherine Jones and Dr Dave McGonigle are interested in the processes that might cause these very distinctive sensory responses. They plan to test whether people with ASD have unusual sensitivity to very basic sounds and textures. They also want to learn more about the sounds and textures that people with ASD like and dislike by asking them to rate certain common noises and materials.

This summer a visiting Italian student, Francesca Bottinelli, worked hard with help from Catherine and Dave to set up the study. Francesca’s excellent work is being continued by Katy Unwin, WARC’s new PhD student. Katy shares Catherine and Dave’s interest in investigating sensory responses in ASD. In addition, Katy would like to understand if and why multi-sensory environments are effective for people with ASD.

Multi-sensory environments are interactive rooms that include a variety of lights, sounds and textures that can stimulate or calm the senses. Although there is anecdotal evidence for their benefit there is very little research to support this claim. Katy is therefore planning a study to look at the effectiveness of multi-sensory environments for people with ASD.

Katy’s research is being supported by Mike Ayres Design, one of the leading creators of multi-sensory environments in the UK. WARC is really excited by this partnership and is looking forward to having its own multi-sensory environment!
Bringing researchers and the autism community together

WARC is playing an important part in a new seminar series called New Directions for UK Autism Research sponsored by the Economic and Social Research Council (ESRC). The Cardiff seminar is in February 2016. The seminars bring researchers together with the autism community – (autistic adults, parents of children with autism, policy workers and practitioners in health, education, social services and the third sector) to develop an agenda for future research. For more details see: http://www.shapingautismresearch.co.uk

WARC works with the Welsh Government to raise awareness of the signs of autism

We’ve been working with Jo Manikiza, ASD National Coordinator of the Welsh Government. Local Government in a new poster campaign to raise public and professional awareness of autism. The posters will feature ‘red-flag’ signs of autism in children and adults, taken from our published evidence on signposting for autism spectrum. The posters will be distributed throughout Wales including to every GP practice in the country.

Autism – do you know the signs?

Children and Younger Adolescents

Social Interaction and Verbal Communication

Limited use of language

Does not seek comfort when in pain or distress

Does not offer comfort to others

Indifferent to, or no interest in, age peers

Approaches others in an awkward way or on own terms

Unaware of other’s feelings

Picky eating and difficult to get them to eat

Can be over-familiar or over-familiar

Does not respond to greetings and farewells

Emotional responses to others are inappropriate, rude and unempathetic

Problems with turn-taking or turn-taking

Do not spontaneously join in or interact with others of the same age

Do not enjoy social situations that most children like (e.g. birthday parties)

Imagination, ideas and creativity

Lack of imaginative pretend play (pretending that dolls and toys are real and enacting out scenarios with them or role play)

Imaginative pretend play or role play is repetitive

Imaginative pretend play is over-focussed or obsessive or copied (not invented)

Struggles to predict reactions of others

Imaginative pretend play is suitable or plays near but not with other children

Play imaginative pretend play with others but not equally shared – may passively copy another’s imaginative game, or insist that others follow their own themes and rules

Empathy reduced or absent

Lack of spontaneous gesture that expresses emotion (e.g. putting arm around someone)

Poorly integrated gestures, facial expression, posture, body language or eye contact when having conversations

Lack of social smile

Odd or flat/repetitive tone of voice

Reduced or unusual eye contact

Narrow range of interests, routines and repetitive behaviours

Displays repetitive behaviours or habits that negatively affect daily activities

Repetitive stereotypical movements such as hand waving, rocking, head nodding

Self-harming activities are limited and unusual

Over-focused, unusual or highly specific interests and hobbies

Has strong adherence to rules of fairness that leads to arguments

Favors familiar routines, likes things to be ‘just right’

Unusual sensory responses to sound, touch, taste, smell, movement and/or pain

www.walesautismresearchcentre.com
Taking part in our research

WARC Research Recruitment Register

The success of WARC owes so much to individuals with ASD, and their families, who are willing to give their time to help us in our research. We have many and varied research projects at WARC. This year some participants took part in a study of imagination, others completed a task that investigated looking patterns to faces, and some took part in a study that looked at gesture use. We also ran online studies, where participants completed questionnaires at home and submitted their answers electronically.

Individuals with ASD who would like to take part in our research are invited to join our Research Recruitment Register (RRR). Both children and adults with ASD are invited to join. Parents should register children under 16.

Joining the RRR lets us know that you are interested in our research. It means we can contact you with information about research projects that you may like to take part in.

To find out more or to join our register, please visit http://sites.cardiff.ac.uk/warc/get-involved/ or email us at warc@cardiff.ac.uk.

Thank you to all our RRR members!

WARC Schools’ Network

Much of WARC’s research with children takes place in schools. WARC is hugely indebted to the fantastic local schools that support our research and allow us to visit and work with their children. We work with special schools and mainstream schools, and test children on the autism spectrum as well as children without a diagnosis.

We would like to take this opportunity to thank the schools that have helped us with our research in the past 12 months: The Hollies, Cardiff; Llanishen High School, Cardiff; Pentrebane Primary School, Cardiff; Rhiw Syr Dafydd Primary School, Oakdale; St Illyd Primary School, Llantwit Major; St Joseph’s RC Primary School, Penarth; St Peter’s RC Primary School, Cardiff; Ysgol Y Deri, Penarth.

If your school would like to join our Schools’ Network or you would like to find out more then please contact us at warc@cardiff.ac.uk

Thank you to all the schools in our Network!

If you would like to be added to the mailing list for news of upcoming seminars and research projects, please contact us at: warc@cardiff.ac.uk or Wales Autism Research Centre, School of Psychology, Cardiff University, Tower Building, 70 Park Place, Cardiff, CF10 3AT