

**Sheffield  
Hallam  
University**

Centre for Behavioural  
Science and Applied  
Psychology

# CeBSAP

Annual Report 2018 -19



## Message from CeBSAP Director Professor Maddy Arden

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**I am very proud to present the first annual report for the Centre for Behavioural Science and Applied Psychology (CeBSAP) 2018/19. CeBSAP aims to apply contemporary psychological theory, using innovative and diverse methods, to provide real-world solutions to issues of well-being, health, social inclusion, cognition, and behaviour change. It has been a really exciting year.**

Our year started with the excellent news that we had been successful in our bid to conduct some behavioural insights research as part of Doncaster Council's Local Delivery Pilot, Funded by Sport England to address low levels of physical activity. We have used behavioural science theory and a methodology in which members of the community undertook qualitative research for this work and we are about to start the next phase - where we are working with members of the community to co-design solutions. This has been a fascinating project that has led to some significant insights about barriers to physical activity in people living in disadvantaged communities.

In October we held our internal launch poster event which was attended by academics, researchers and students from across the University. It was fantastic to see so many people reading the posters, asking questions, and gaining a better understanding of the research that we do.

In November Prof Ann Macaskill led a research trip to Thailand. Funded by the British Academy and a Newton Fellowship grant this work aimed to assess and improve Health Literacy and Wellbeing in Thai families at risk of Non-Communicable Diseases.

Our work has also had press attention. Our comics research group led by Dr Paul Aleixo had two articles in the Conversation, about the role of comics in education and Paul was interviewed on BBC Radio Sheffield. Dr Alessandro Soranzo also co-wrote a piece in the conversation about the way in which Leonardo da Vinci used visual illusions in his paintings.

We held a really successful research seminar series this year. A particular highlight for me was Dr Jamie Ward who talked about the science of synesthesia - where people experience a cross-over in their senses so that they smell words, or see colours associated with letters. Another highlight was Dr Jo Hart and Dr Lucie Byrne-Davies from University of Manchester, our Behavioural Science Consortium partners, talking about their 'Change Exchange' work which uses behavioural science to address health professional behaviour in developing countries. Our own CeBSAP researcher, Dr Martin Lamb, is currently in Ghana working alongside Jo and Lucie on a project looking at health professional behaviour change in relation to the challenge of antimicrobial resistance.

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We have lots to look forward to. On 13th June 2019 there will be an event to share the findings of the Cog-LAB project which profiles a new cognitive assessment tool developed by Dr Lynne Barker. The day will also feature Dr Nick Morton talking about the problems associated with neuropsychological assessment. On Friday 28th June we have our external launch event: A conference showcasing the work of CeBSAP which includes practical workshops about behavioural science, neurocognitive testing and a number of applications of psychological theory and methods, with a keynote presentation by Dr Tim Chadborn, Lead for Behavioural Insights and Evaluation at Public Health England. We hope that this event will give attendees an insight into the work that we do and how this can be applied in a range of different settings, including health, government and the public and voluntary sectors, education, policing, and business.

Here follows a summary of the activity of CeBSAP during 2018/19. We hope that you find it interesting and informative and will contact us to discuss if you think we can help you or your organisation or business. We also hope that you will join us for some of our future events.

**Professor Madelynne Arden**

is the Director of Centre for Behavioural Science and Applied Psychology (CeBSAP), Project Director for the Behavioural Science Consortium and Professor of Health Psychology at Sheffield Hallam University



**Keep up to date with the latest CeBSAP news:**

[www.shu.ac.uk/research/specialisms/centre-for-behavioural-science-and-applied-psychology](http://www.shu.ac.uk/research/specialisms/centre-for-behavioural-science-and-applied-psychology)



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# CeBSAP Mission and Aims

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**Our mission is to transform lives. We do this by creating knowledge and providing innovative, practical solutions to real challenges.**

CeBSAP aims to apply contemporary psychological theory and behavioural science to issues of wellbeing, health, social inclusion, cognition and behaviour change. We provide access to leading academics and researchers and undertake research and consultancy work with a variety of funders and clients.

## **CeBSAP's areas of expertise include:**

- Developing interventions focused on behaviour change and well-being based on psychological theory and behavioural science
- Using non-invasive neuro-cognitive testing to explore impairments to the brain and the resulting changes to cognition and behaviour
- The application of psychological theories to provide evidence-based solutions using rigorous research methodology

We have extensive experience conducting psychological research to provide tailored evidence-based solutions. We have worked with local governments, police forces, social services, schools, charities and commercial organisations.

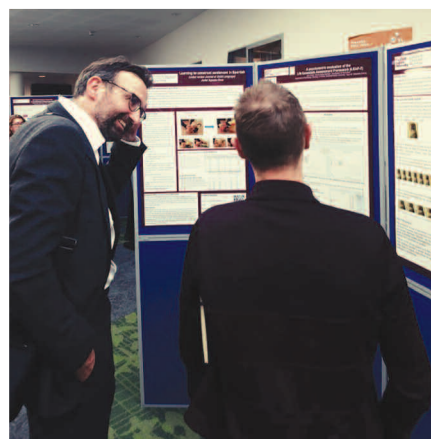
## **We have expertise in a wide range of research methods:**

- Quantitative methods including: randomised control trials, multi-level modelling, questionnaire and survey design, psychometric testing
- Qualitative and mixed-method approaches including: interviews and focus groups, IPA, narrative approaches, discourse analysis, thematic analysis, framework analysis
- Our laboratory facilities include: Eye tracking, EEG, visual perception, retinal imaging, video suite, and focus group and interview facilities.

# CeBSAP

## Events 2018-19

The Centre for Behavioural Science and Applied Psychology (CeBSAP) has been involved in a wide variety of events from seminars to conferences.



## Internal Launch



October 2018 saw the internal launch of CeBSAP. The event provided an opportunity for members of staff across the University to find out more about CeBSAP and the research being conducted across the centre.

Professor Maddy Arden (Director of CeBSAP & Project Director of the Behavioural Science Consortium) opened the centre alongside Professor John Reidy (Head of Department for Psychology, Sociology, & Politics) and Professor Chris Wigginton (Pro-Vice Chancellor for Faculty of Social Sciences and Humanities)

The opportunity was used to announce the success of recent bids that CeBSAP have recently won (<https://getdoncastermoving.org/ldp>)

**More information about these bids is provided on Page 16 >**

**Over 20 research posters were on display covering the research being conducted by members of the CeBSAP team. The research topics showcased the wide range of work, and included:**

- Developing behavioural interventions to: improve adherence to medication in long-term conditions, reduce children's dental anxiety, reduce workplace sedentary behaviour, improve the effectiveness of alcohol warning labels
- Development and/or evaluation of: computer based assessment of cognition in neurological groups, self-report tools to assess vulnerable adults needs, medical devices to diagnose and treat sleep disorders
- Understanding: language, sleep, memory, vision, well-being, doping behaviour, taste perception...and lots more!

Demonstration  
of Cog-LAB  
presented at the  
internal launch



Copyright Dr Lynne Barker

**In November, Sheffield Hallam University and the University of Sheffield jointly curated a series of free public engagement events as part of the ESRC Festival of Social Sciences. CeBSAP was involved in a number of events.**

Professor Maddy Arden presented research from behavioural science on the power of habits to drive and maintain behaviours, including why it can be difficult to make changes to our behaviours using will power alone. The session included a practical workshop where people could learn how to make personal plans for the changes they wanted to achieve.

## Cross-government Behavioural Insights conference

**In January Professor Maddy Arden joined colleagues in London to represent the Behavioural Science Consortium on a discussion panel at the Cross-Government Behavioural Insights Conference.**

The emphasis of the conference was the growing impact of behavioural science across Government. As one of the six providers on the new Behavioural Insights Framework (and the only University supplier) Professor Maddy Arden discussed the need to consider how many behaviours (e.g. healthy eating) are very complex and so we need to make sure that we really understand the challenges, including what needs to change, before designing interventions to address it.



## Civil Service Live

**Civil Service Live 2018 is a learning event, bringing together influential figures from across the Civil Service, the wider public sector and the private and voluntary sectors.**

These events enable civil servants to engage with colleagues from across all departments, as well as with industry experts and private sector organisations, through a variety of sessions and activities, including keynote addresses, workshops, networking, advice clinics and spot mentoring.

Prof Maddy Arden attended Civil Service Live on Wednesday 13 June 2018 at NEC, Birmingham to give a workshop entitled 'Improved outcomes using behavioural insights' which was attended by around 50 civil servants. The workshop introduced attendees to the Capability, Opportunity, Motivation model of behaviour and explored how this model might help to address key change issues in the workplace.

**Feedback from the session was very positive with 100% of people agreeing or strongly agreeing to being happy - making it the most successful one that day!**





# CeBSAP

## Research 2018 - 19

The Centre for Behavioural Science and Applied Psychology (CeBSAP) undertakes research and consultancy work with a variety of funders and clients

### Using Behavioural Science to Understand and Prevent Drug Use in Sport

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The use of performance-and-appearance enhancing drugs (PAEDs) is an ongoing and multifaceted problem both in amateur, grassroots and elite sport. Research conducted by Dr Lambros Lazuras, Reader in Social Psychology in CeBSAP has focused on the different aspects of PAEDs use in sport, from athletes' attitudes towards anti-doping policies, to the social and psychological drivers of PAEDs use across levels of sport and age groups.

Dr Lazuras has received funding from the World Anti-Doping Agency, the International Olympics Committee and the European Commission (Erasmus+ Sport) to develop and evaluate a range of education-based interventions against PAEDs use in sport. Those interventions target athletes, coaches and other sport stakeholders and policy-makers from across Europe. In 2019 Dr Lazuras was awarded funding from the European Commission to lead Project IMPACT, an innovative project that will create, for the first time, Communities of Practice for Clean Sport Education in 6 European countries. IMPACT will build communities of sportspeople, coaches, educators and policy-makers and learn them how to effectively use the existing knowledge and resources to prevent drug use in sport.

#### **You can find out more about this research in the following websites:**

**Project WHISTE: Promoting whistleblowing against doping in sport:** <https://sportwhistle.eu/>

**Project SAFE YOU: Promoting informed decision-making against drug use in sport and exercise settings – received a “European Success Story” award from the European Commission:** [https://ec.europa.eu/programmes/erasmus-plus/safe-you-strengthening-anti-doping-fight-fitness-and-exercise-youth\\_en](https://ec.europa.eu/programmes/erasmus-plus/safe-you-strengthening-anti-doping-fight-fitness-and-exercise-youth_en)

**Project CSI: Enabling coaching education against doping and sport corruption:** <http://csi.phed.auth.gr/>

**Project GAME: Developing serious gaming application to promote clean sport education in young people:** <http://projectgame.phed.auth.gr/>

#### **You can also read more about this research in the following paper:**

<https://www.frontiersin.org/articles/10.3389/fpsyg.2017.00717/full>

# Researching the Psychology of Comic Books

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The Comics Research Group within CeBSAP consists of three core members: Dr Paul Aleixo, Dr Jane Morgan and Dr Diarmuid Verrier, who carry out research into the educational benefits of comics and their psychological properties.

## The Comics Research Group has three main projects currently ongoing:

- 1** The first involves further research into our initial findings that presentation of educational material in comics format improves memory and comprehension compared to other mediums.
- 2** We are also investigating how readers read comics using eye-tracking equipment to measure scan paths and viewing times.
- 3** Finally, we are interested in how readers infer meaning in comics, including how the passage of time and movement are perceived.



## You can find out more about this research in the following articles:

### The benefits of comics in education:

<https://theconversation.com/how-the-humble-comic-book-could-become-the-next-classroom-superhero-73486>

### How the Tintin books could be used in educational settings:

<https://theconversation.com/tintin-as-the-eternal-youth-turns-90-hes-still-teaching-children-about-the-world-109533>

## Supporting self-management in people living with HIV

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Professor Maddy Arden and Dr Martin Lamb have been working with colleagues in the Faculty of Health and Wellbeing at SHU to research the impact of co-morbidities on quality of life in people living with HIV.

The CeBSAP team are providing behavioural science support and expertise to explore how people living with HIV receive treatment for their comorbidities, as well as what can be done to reduce the impact of these comorbidities and improve quality of life. Martin is also working on an additional HIV project in partnership with the Faculty of Health and Wellbeing and Sheffield Teaching Hospital. The project is funded by Gilead and aims to design and test a pilot intervention aimed to re-engage people with HIV who have stopped their medication.

## Reducing Dental Anxiety in Children

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Dr Jenny Porritt is a CeBSAP Health Psychologist and was part of a multidisciplinary team that developed the first evidence-based self-help CBT guide aimed at reducing dental anxiety in children aged 11-16 years old.

A series of self-help resources (*paper based and online* <https://littf.com/home/dental-anxiety/>) were developed for children, their parents and dental professionals. The evaluation revealed there was a significant reduction in dental anxiety and increase in health-related quality

of life following use of the CBT resources. The child dental anxiety guides have been approved by the British Society of Paediatric Dentistry (BSPD) and were second place in the BSPD Outstanding Innovation Award 2017.



### **You can find out more about this research in the following paper:**

Rodd, H., Kirby, J., Duffy, E., Porritt, J., Morgan, A., Prasad, S., Baker, S. and Marshman, Z., 2018. Children's experiences following a CBT intervention to reduce dental anxiety: one year on. *British Dental Journal*, 225(3), p.247.

# Assessing and Improving Health Literacy and Wellbeing in Thai Families at risk of Non-Communicable Diseases

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Professor Ann Macaskill, CeBSAP, is leading a research programme in collaboration with Dr Ungisnun Intarakmhang, from the Behavioural Science Research Institute (BSRI), Srinakharinwirot University, Bangkok, Thailand. This is two-year research programme is jointly funded by the British Academy Newton Advanced Fellowship fund and the Royal Thai Research Fund.

Thai families are prone to preventable chronic non-communicable diseases, from lack of exercise, malnutrition, stress, smoking, obesity, and alcoholism. The World Health Organisation in 2014 identified developing health literacy (HL) as core to improving health and well-being. HL is defined as 'cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health'. A culturally relevant and comprehensive measure of health literacy and health behaviour was developed and then used to survey over 2,000 families in areas previously identified as having poor levels of HL. We have now designed and are beginning to deliver interventions based on positive psychology to develop HL knowledge and levels of self-efficacy, hope, optimism and thereby increase resilience in communities with low levels of HL

This programme of work was awarded a prestigious prize from the Thai Department of Public Health for the Development work on the Measure of Health Literacy

## Improving Adherence to Medication in Adults with Cystic Fibrosis

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CFHealthHub is a programme of research funded by an NIHR Programme Grant for Applied Research and focuses on the development and evaluation of an intervention to improve nebuliser adherence in adults with Cystic Fibrosis (CF). Professor Maddy Arden is a co-applicant and the Behaviour Change lead for this programme.

The work was developed in several stages:

1. Qualitative research to explore the barriers and facilitators to nebuliser adherence in adults with CF
2. Iterative development of an intervention (CHHealthHub – delivered through a website and healthcare professional consultation) using patient feedback
3. Pilot feasibility trial with 64 people with CF
4. Randomised controlled trial at 19 sites in the UK with over 600 people with CF.

### You can find out more about this research in the following paper:

Arden, M.A., Drabble, S., O'Cathain, A., Hutchings, N, & Wildman, M. (2019). Adherence to medication in adults with Cystic Fibrosis: An investigation using objective adherence data and the Theoretical Domains Framework. *British Journal of Health Psychology*, 24(2), 357-380.

Hind, D., Drabble, S.J., Arden, M.A., et al. (2019) Supporting medication adherence for adults with cystic fibrosis: a randomised feasibility study. *BMC Pulmonary Medicine*, 19(1), 77.

## Innovations in Traumatic Brain Injury Research - CogLAB

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Dr Lynne Barker, CeBSAP is leading the Cog-LAB study, which focused on the development of innovative ways of diagnosing cognitive impairment.

Dr Barker designed a task-based test for cognitive impairment that centres around a cooking simulation. This cooking task (CT) prototype named Cog-LAB has the ability to measure multiple different aspects of cognitive function at once. Forty-six non-impaired participants took part in the CT as well as various sub-tests from standardised neuropsychological tasks. They found that the CT performed well, providing a proof-of-principle that Cog-LAB could be used as a novel approach for determining cognitive impairment in head injury patients. Clinical trials are planned to assess how well CT can perform in patients with various neurological impairments, namely TBI, stroke and early dementia. This work was awarded the MEDIPEX award for NHS innovation in 2016 and a subsequent MRC Confidence in Concept grant to develop Cog-LAB.



**You can find out more about this research in the following website:**

<https://researchoutreach.org/articles/new-innovations-traumatic-brain-injury-research/>

## The new Crown Commercial Service (CCS) Behavioural Insights framework supports public bodies to procure the expertise of organisations that offer Behavioural Insights



**Sheffield Hallam University, in collaboration with the University of Manchester, is the only University-led supplier. We draw on the expertise of academics across several departments and Research Centres:**

- Centre for Behavioural Science and Applied Psychology, Sheffield Hallam University
- Centre for Economic and Social Research, Sheffield Hallam University
- Centre for Development and Research in Education, Sheffield Hallam University
- Centre for Sport and Exercise Science, Sheffield Hallam University
- Manchester Centre for Health Psychology, the University of Manchester
- Manchester Implementation Science Collaboration, the University of Manchester

**The Behavioural Insights Framework is changing the way policy is developed and public services are designed, making them more efficient and in tune with the needs and preferences of the public.**

Since 2010, the government has used **behavioural insights research** to inform policy, with an emphasis on using a strong evidence base about human behaviour to find innovative ways of encouraging, enabling and supporting people to make better choices for themselves. The **framework is available** for use by central government departments and other public sector bodies including NHS Trusts, schools, universities, colleges, local authorities and the Police and Fire Services.

**Prof Maddy Arden is the Project Director and Sheffield Hallam University Lead for the Consortium**

For information email: [behaviouralinsights@shu.ac.uk](mailto:behaviouralinsights@shu.ac.uk) or follow us on twitter @BSciConsortium

The Behavioural Science Consortium recently won a contract through the Crown Commercial Service's Behavioural Insights Framework, to work with Doncaster Metropolitan Borough Council to explore physical inactivity.

Doncaster is one of 12 areas in England selected by Sport England to be a local development pilot area (<https://www.sportengland.org/our-work/local-delivery-pilots/>). These areas were selected to explore, design, and test different projects aimed at reducing physical inactivity. The Sport England local pilot delivery approach has a strong emphasis on learning through the pilots and sharing findings with other areas of the country. The Behavioural Science Consortium has been working with Doncaster Council to explore opportunities for physical activity and design interventions to increase physical activity within the communities. The project consists of three phases; we have completed Phase 1 and 2, with Phase 3 currently underway!

## Phase 1

We conducted a **survey** to assess the current physical activity levels of communities

## Phase 2

**Interviews** were then conducted with members of different communities within Doncaster, carried out by other members of their community

## Phase 3

We are currently **co-designing** physical activity interventions with the different communities.

The Behavioural Science Consortium will deliver key results to **Doncaster Council** and **Sport England** to aid the development of future physical activity interventions. Increases in physical activity will lead to improvements in the mental and physical well-being of communities

### To find out more about this project

Email us at [behaviouralinsights@shu.ac.uk](mailto:behaviouralinsights@shu.ac.uk) or follow us on twitter @BSciConsortium



# PhD

## News and events

Doctoral students are conducting diverse research within CeBSAP, using a broad range of methodologies.

### Research topics include:

#### Social Psychology Applied to Health

- **Transition to Fatherhood** (Suzy Hodgson)

#### Mental Health

- **Mental Health in Student Populations** (Lucy Cooper)
- **Autism** (Helen Basu Chaudhuri, Amanda Wilcox)
- **Death and Bereavement** (Simon Ashe, Ben Partridge)
- **Self-Disgust** (Anna Robson)

#### Education

- **Bilingual Lexicon** (Nikki Dean Marshall)

#### Forensic Psychology

- **Sex Offending and Child Grooming** (Sarah Wefers, Oliver Merry)
- **Self-Harm in Secure Hospital Settings** (Alexandra Rabjohns)

#### Health Psychology

- **Adherence to Treatment in Cystic Fibrosis** (Rosie Martin)
- **Exercise Support in Advanced Prostate Cancer** (Rebecca Turner)

### Rebecca Denniss is a Doctoral Researcher and Associate Lecturer, in the Cognition and Neuroscience Research Group



Her research aims to evaluate the efficacy of a **multi-micronutrient supplement** (vitamins, minerals and n-3 fatty acids) on cognitive rehabilitation outcomes in post-acute **traumatic brain injury** (TBI).

#### You can read more about this work in the following paper:

Denniss, R., Barker, L. A., Day, C. (2019) Improvement in cognition following double-blind randomised micronutrient interventions in the general population. *Frontiers in Behavioural Neuroscience*. (In press).

#### You can also find out more about this research in the following blogs:

[www.concussionalliance.org/nutrition](http://www.concussionalliance.org/nutrition)  
[www.psychreg.org/omega-3-brain](http://www.psychreg.org/omega-3-brain)  
[www.psychreg.org/vitamins-mineral-brain](http://www.psychreg.org/vitamins-mineral-brain)

## CeBSAP to host the PsyPag Conference

CeBSAP are delighted to host the **34th Annual PsyPag Conference** at Sheffield Hallam University, on the 23rd - 26th July 2019. This year's conference will focus on physical, emotional and mental health and wellbeing. Acknowledging the significant mental health issues faced by postgraduate students and the isolated rollercoaster ride of the PhD journey, our conference will not only provide the space to shine in a **safe academic forum** but will focus on the wellbeing of all those attending. For further information on PsyPAG please visit their website at [www.psypag.co.uk](http://www.psypag.co.uk)

**Last Booking Date for this Event is the 5th July 2019.**

**Follow PsyPag on Twitter for more updates @PsyPAG2019**

## PhD research presented at national and European conferences

Doctoral students have presented research at a range of conferences.

### Behavioural and ERP responses to stimuli that elicit lightness contrast and assimilation

**Stephanie Acaster**

European Conference on Visual Perception, 2018

### Toes in pies: Using interlingual homographs to explore the challenges of bilingualism

**Nikki Dean Marshall**

SEPEX, SEPNECA and AIP experimental European Conference, 2018

### 'Crying On The Bus': New Fathers' Perspectives on Paternity Leave and Their Return to Work

**Suzy Hodgson**

SIPS PhD poster Event, Sheffield Hallam University, 2018

### Current knowledge on the differences between contact and non-contact child grooming offenders

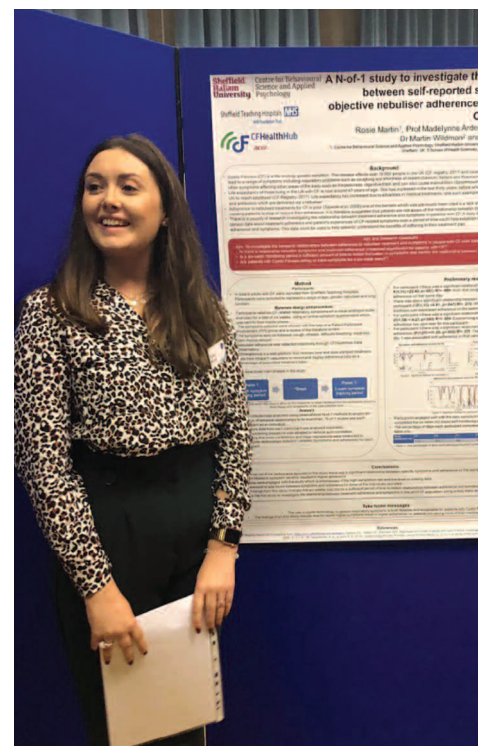
**Oliver Merry**

British Psychological Society Division of Forensic Psychology Conference, 2018

### N-of-1 study on the relationship between self-report symptoms and adherence in Cystic Fibrosis

**Rosie Martin**

UCL Centre for Behaviour Change Conference, 2019



PhD student Rosie Martin presents her N-of-1 study on the relationship between self-report symptoms and adherence in Cystic Fibrosis at UCL Centre for Behaviour Change Conference

# Key Publications

## 2019

1. ARDEN, Madelynne, DRABBLE, Sarah, O'CATHAIN, Alicia, HUTCHINGS, Marlene and WILDMAN, Martin (2019). **Adherence to medication in adults with Cystic Fibrosis: An investigation using objective adherence data and the Theoretical Domains Framework.** British journal of health psychology, 24 (2), 357-380.
2. HIND, Daniel, DRABBLE, Sarah J, ARDEN, Madelynne, MANDEFIELD, Laura, WATERHOUSE, Simon, MAGUIRE, Chin, CANTRILL, Hannah, ROBINSON, Louisa, BEEVER, Daniel, SCOTT, Alexander J, KEATING, Sam, HUTCHINGS, Marlene, BRADLEY, Judy, NIGHTINGALE, Julia, ALLENBY, Mark I, DEWAR, Jane, WHELAN, Pauline, AINSWORTH, John, WALTERS, Stephen J, O'CATHAIN, Alicia and WILDMAN, Martin J (2019). **Supporting medication adherence for adults with cystic fibrosis: a randomised feasibility study.** BMC Pulmonary Medicine, 19 (77).
3. PHELAN, Ivan, FURNESS, Penny, FEHILY, Orla, THOMPSON, Andrew, BABIKER, Nathan, LAMB, Martin and LINDLEY, Shirley (2019). **A mixed-methods investigation into the acceptability, usability and perceived effectiveness of active and passive virtual reality scenarios in managing pain under experimental conditions.** Journal of Burn Care & Research, 40 (1), 85-90.
4. KYRIAKIDOU, Marilena, ZALAF, Alexia, CHRISTOPHOROU, Stephanie, RUIZ-GARCIA, Ariel and VALANIDES, Constantinos (2019). **Longitudinal fluctuations of national help-seeking reports for domestic violence before, during, and after the financial crisis in Cyprus.** Journal of interpersonal violence, 088626051984327-088626051984327
5. MACASKILL, Ann, DENOVA, Andrew, DAGNALL, Neil and PAPAGEORGIOU, Kostas (2019). **Future time perspective, positive emotions and student engagement: a longitudinal study.** Studies in Higher Education.
6. MARSDEN, Rachel, FRANCIS, John and GARNER, Iain (2019). **Use of GFCF Diets in children with ASD. An investigation into parents' beliefs using the theory of planned behaviour.** Journal of Autism and Developmental Disorders.
7. BUX, Sarah, PORRITT, Jenny and MARSHMAN, Zoe (2019). **Evaluation of Self-Help Cognitive Behavioural Therapy for Children's Dental Anxiety in General Dental Practice.** Dentistry journal, 7 (2), e36.
8. SORANZO, Alessandro and GILCHRIST, Alan (2019). **Layer and framework theories of lightness.** Attention, perception, and psychophysics.
9. GILCHRIST, Alan and SORANZO, Alessandro (2019). **What is the relationship between lightness and perceived illumination.** Journal of Experimental Psychology: Human Perception and Performance.
10. DI NUOVO, Alessandro, VARRASI, Simone, LUCAS, Alexandr, CONTI, Daniela, MCNAMARA, John and SORANZO, Alessandro (2019). **Assessment of Cognitive skills via Human-robot Interaction and Cloud Computing.** Journal of Bionic Engineering.
11. YPSILANTI, Antonia, LAZURAS, Lambros, POWELL, Phillip and OVERTON, Paul (2019). **Self-disgust as a potential mechanism explaining the association between loneliness and depression.** Journal of Affective Disorders, 243, 108-115.
12. THIRKETTLE, Martin, THYOKA, Mandela, FERNANDES, Nadiyah, GOPALAN, Padmini, STAFFORD, Tom and OFFIAH, Amaka (2019). **Internet-based measurement of visual assessment skill of trainee radiologists: developing a sensitive tool.** The British journal of radiology, 92(1097), p. 20180958.
13. HAVARD, Catriona, RICHTER, Stephanie and THIRKETTLE, Martin (2019). **Effects of changes in background colour on the identification of own- and other-race faces.** i-Perception, 10 (2), p. 204166951984353.
14. THORNELOE, Rachael Jane, HORNE, Rob, SIDE, Lucy, WOLF, Michael Scott, and SMITH, Samuel George (2019). **Beliefs About Medication and Uptake of Preventive Therapy in Women at Increased Risk of Breast Cancer: Results From a Multicenter Prospective Study.** Clinical Breast Cancer, 19 (1), e116-e126.
15. HODGE, Nick, RICE, Emma J. and REIDY, Lisa (2019). **'They're told all the time they're different': how educators understand development of sense of self for autistic pupils.** Disability and Society.
16. AQUILI, Luca, THIRKETTLE, Martin, BARKER, Laura-Marie, GALLAGHER, Thomas and NAYEB, Nazgol (2019). **Dissociable effects of tryptophan supplementation on negative feedback sensitivity and reversal learning.** Frontiers in Behavioral Neuroscience.

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[www.shu.ac.uk/research/specialisms/centre-for-behavioural-science-and-applied-psychology](http://www.shu.ac.uk/research/specialisms/centre-for-behavioural-science-and-applied-psychology)



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