

## The University of Manchester Mental Health Research Workshop, Collated Forms November 2023

Click on the name of the researcher or their affiliation to be taken to a one-page summary (if available) on their research interests, gaps, current and desired collaborators, and more.

### [Rebecca McPhillips](#)

*Social Care and Society (SCS), Division of Nursing,  
Midwifery and Social Work*

### [Paul Clarkson](#)

*Nursing Midwifery and Social Work, Social Care and  
Society*

### [Ola Demkowicz](#)

*Manchester Institute of Education*

### [Michael Harte](#)

*Pharmacy & Optometry*

### [Matthias Pierce](#)

*Psychology and Mental Health/Centre for Women's  
Mental Health*

### [Mark Johnson](#)

*Centre for Occupational and Environmental  
Health/Public Health*

### [Laoise Renwick](#)

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### [Katherine Berry](#)

*Section lead for the Centre for New Treatments and  
Understanding in Mental Health (CeNTrUM) within the  
Division of Psychology and Mental Health*

### [Thomas Allen, Rachel Elliott, Sean Gavan, Luke Paterson, Gemma Shields, Fanyi Su](#)

*Manchester Centre for Health Economics*

### [Filippo Varese](#)

*Psychology and mental health*

### [Daniela Montaldi](#)

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### [Chris Sutton](#)

*Division of Population Health, Health Services Research  
& Primary Care; Centre for Biostatistics*

### [Stuart Allan](#)

*Geoffrey Jefferson Brain Research Centre ('Jeff')*

### [Anne Clayson, Mark Johnson, David Fishwick, Nicola Gartland, Martie van Tongeren \(...\)](#)

*PHHSRPC, EPGH, Centre for Occupational and  
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### [Fong Kuan Wong](#)

*Division of Developmental Biology and Medicine*

### [Nina Milosavljevic](#)

*Division of Neuroscience/SBS/UoM*

### [Helen Brooks](#)

*MHRG, Division of Nursing, Midwifery and social work*

### [Shruti Garg \(UoM\) and Dr Kate Saunders \(Oxford\)](#)

*NIHR Mental Health Mission – Capacity Development  
workstream (national project)*

### [Goran Nenadic](#)

*Department of Computer Science*

### [Biomedical research centre Mental health theme](#)

*PMH*

### [NIHR Applied Research Collaboration Greater Manchester](#)

*n/a*

### [Gillian Haddock](#)

*PMH*

### [Shruti Garg + Caroline Lea-Carnall \(SPIN lab- Studying Plasticity In Neurodevelopment\)](#)

*PMH+ PCHN*

### [Rebecca Elliott](#)

*Psychology and Mental Health*

### [Sophia Ananiadou](#)

*Computer Science, National Centre for Text Mining,  
IDSAI*

### [Pauline Whelan](#)

*IIDS, Pankhurst Institute, Centre for Health Informatics  
at UoM & GM.Digital Research Unit at Greater  
Manchester Mental Health*



<p><b>Researcher name:</b></p> <p>Rebecca McPhillips</p>
<p><b>Division/ Centre/ Institute:</b></p> <p>Social Care and Society (SCS), Division of Nursing, Midwifery and Social Work</p>
<p><b>Please very briefly outline key research questions that you've been working on, or would like to work on:</b></p> <ul style="list-style-type: none"> <li>• What are the characteristics of people excluded from services at the point of a mental health crisis and why does this happen? (PI on project investigating this area)</li> <li>• What are the factors that drive the underrepresentation of underserved people in qualitative research and explore how these can be modified using different data collection techniques? (RfPB bid)</li> <li>• What are the experiences of people diagnosed with 'personality disorder' in relation to physical health care and social care?</li> <li>• 'Personality disorder' and stigma in social care</li> <li>• Integrated health and social care in the context of mental and physical multimorbidity</li> <li>• I would also like to develop my skills and expertise in the areas of complex intervention development and clinical trials.</li> </ul>
<p><b>What are the gaps (in skills, expertise, technology etc) relating to this area of research?</b></p>
<p><b>Who do you currently collaborate with (key people/groups who could help you to address the research questions)?</b></p> <p>Currently collaborate with academics including Professor Catherine Robinson (SCS, Manchester), Dr Krysia Canvin (Keele), Dr Mike Clark (LSE), Rob Poole (Bangor), Yu Fu (Liverpool) Maria Panagioti (Manchester).</p> <p>I would like to collaborate with trialists re developing skills in clinical trials.</p>
<p><b>Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?</b></p> <p>NHS mental health trusts, social work and care organisations, third sector organisations.</p>
<p><b>Which theme does the research question relate to (please highlight the most relevant):</b></p> <ul style="list-style-type: none"> <li>• Adolescent mental health</li> <li>• Digital tech for early intervention</li> <li>• Neuroscience for understanding mental health</li> <li>• <b>Anxiety</b></li> <li>• <b>Depression</b></li> <li>• Psychosis</li> </ul>

<p><b>Researcher name:</b></p> <p>Paul Clarkson</p>
<p><b>Division/ Centre/ Institute:</b></p> <p>Nursing Midwifery and Social Work, Social Care and Society</p>
<p><b>Please very briefly outline key research questions that you've been working on, or would like to work on:</b></p> <p>Mental health of military veterans  Mental Health Social Work – statutory provisions under Mental Health Act; home care for people with diagnosed MH conditions.  Older people's mental health in care homes</p> <p>Can a social work/social care link worker based in primary care result in more effective care for people with dementia, or those with psychosis?</p>
<p><b>What are the gaps (in skills, expertise, technology etc) relating to this area of research?</b></p> <p>Social care and social work researchers; primary care practice recruitment</p>
<p><b>Who do you currently collaborate with (key people/groups who could help you to address the research questions)?</b></p> <p>Prof. Catherine Robinson; Pennine Care NHS Foundation Trust; Bury PCN;</p>
<p><b>Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?</b></p> <p>NHS Trusts (Pennine Care NHS Foundation Trust), other universities (KCL); home care providers.</p>
<p><b>Which theme does the research question relate to (please highlight the most relevant):</b></p> <ul style="list-style-type: none"> <li>• Adolescent mental health</li> <li>• Digital tech for early intervention</li> <li>• Neuroscience for understanding mental health</li> <li>• Anxiety</li> <li>• Depression</li> <li>• Psychosis</li> </ul>



**Researcher name:**

Ola Demkowicz

**Division/ Centre/ Institute:**

Manchester Institute of Education

**Please very briefly outline key research questions that you've been working on, or would like to work on:**

- What are the determinants of psychological distress (low mood and anxiety) among adolescent girls?
- What are the mechanisms underlying the development of psychological distress in adolescence, including in relation to risk and inequality (e.g., systemic mechanisms, emotion regulation, stress appraisal, etc.)?
- How do social connection and support influence the emergence and/or development of psychological distress in adolescence?
- What is the role of school in the development of good youth mental health, as well as poor youth mental health?

**What are the gaps (in skills, expertise, technology etc) relating to this area of research?**

- Poor measurement of low mood and anxiety (reliance on SDQ in community work for instance, conflation in many cohort studies of the two constructs without distinct measurement)
- Expertise and understanding of how gender functions (i.e., much mental health research does not engage well with sociologists and feminist expertise here)
- Policymaker helplessness around school processes and mental health (i.e., that the school system cannot be subject to meaningful change) – makes it hard to engage policymakers in systemic research processes meaningfully including as advisory members

**Who do you currently collaborate with (key people/groups who could help you to address the research questions)?**

- Epidemiology colleagues at UoM and UCL
- Third sector and charity collaborations (e.g., Anna Freud Centre, Children's Society)

**Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?**

- Would particularly like to increase policy partnership and charity partnership links moving forward

**Which theme does the research question relate to (please highlight the most relevant):**

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**Researcher name:**

Michael Harte

**Division/ Centre/ Institute:**

Pharmacy & Optometry

**Please very briefly outline key research questions that you've been working on, or would like to work on:**

- In the lab we utilise a number of preclinical models for studying aspects of schizophrenia symptomatology.
- We work with validated models that display behavioural deficits of relevance to the positive, negative and cognitive deficits seen in people with schizophrenia.
- We utilise these models to identify underlying mechanisms / novel treatment targets.
- We use these models to test of novel pharmacological / non-pharmacological interventions.
- Our most recent work is focusing on the question below.  
**Beyond dopamine D2 receptor antagonism for the treatment of psychosis – myth or reality?**
- We work with pharmaceutical industry to test efficacy of novel compounds prior to progression to the clinic. A lot of this work is through our university based contract research organisation b-neuro. ([www.b-neuro.com](http://www.b-neuro.com)).

**What are the gaps (in skills, expertise, technology etc) relating to this area of research?**

Post-mortem techniques for identifying biomarkers for translational drug studies. E.g. Measuring brain markers, that translate to those assessed in the clinic, in the model and the effect of treatment.

**Who do you currently collaborate with (key people/groups who could help you to address the research questions)?**

We work with pharmaceutical industry to test efficacy of novel compounds prior to progression to the clinic. A lot of this work is through our university based contract research organisation b-neuro. ([www.b-neuro.com](http://www.b-neuro.com)). We also work with other companies (e.g. Pharmidex) to offer a wider range of post-mortem analysis.

We work with collaborators from academia to identify other biomarkers related to the behavioural deficits.

**Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?**

University and industry partners.

**Which theme does the research question relate to (please highlight the most relevant):**

- Adolescent mental health
- Digital tech for early intervention
- **Neuroscience for understanding mental health**
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<p><b>Researcher name:</b></p> <p>Matthias Pierce</p>
<p><b>Division/ Centre/ Institute:</b></p> <p>Psychology and Mental Health/Centre for Women's Mental Health</p>
<p><b>Please very briefly outline key research questions that you've been working on, or would like to work on:</b></p> <p>Key areas of interest: Epidemiological projects relating to children and young people's mental health, current trends in CYP mental health, intergenerational transmission of risk, maternal effects, and family environment as a mechanism for mental health. Have been using secondary data from healthcare datasets and large population surveys to address these questions, as well as a range of methodologies, including: causal mediation analysis, causal inference methodologies, psychometrics, network analysis.</p> <p>I am also interested, and have methodological expertise in, how multiple biomarkers can be used to stratify patient populations according to potential treatment benefit. These methods require large randomised trial data (or multiple, similar trials).</p>
<p><b>What are the gaps (in skills, expertise, technology etc) relating to this area of research?</b></p> <p>To inform the CYP work, it would be useful to have access to genetic epidemiology &amp; CYP clinical experts.</p> <p>For stratified medicine, need to team with clinical experts who want to apply these methods.</p>
<p><b>Who do you currently collaborate with (key people/groups who could help you to address the research questions)?</b></p> <p>Yes – within the Centre for Women's Mental Health – Professor Kathryn Abel. Also external collaborators include: Tamsin Ford (Cambridge), Tamsin Newlove-Delgado (Exeter), Sally McManus (City University/NATCEN), Sam Cartwright-Hatton (Sussex).</p>
<p><b>Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?</b></p> <p>Would be good to work more with charity sector to maximise impact of my outputs.</p>
<p><b>Which theme does the research question relate to (please highlight the most relevant):</b></p> <ul style="list-style-type: none"> <li>• Adolescent mental health</li> </ul>



**Researcher name:**

Mark Johnson

**Division/ Centre/ Institute:**

Centre for Occupational and Environmental Health/Public Health

**Please very briefly outline key research questions that you've been working on, or would like to work on:**

My research background is in systems (cybernetic) approaches to communication, which has a long tradition of examining the affective dimensions of communication, drawing on anthropology, sociology, philosophy, information theory, and education research. I am also heavily involved in AI research. Systems approaches have had great significance in psychotherapy (Gregory Bateson's concept of "double-bind" and R.D. Laing's family therapy), social psychology (Rom Harre's positioning theory), and communication studies (Korzybski's "pragmatics of human communication"), Stafford Beer's "viable systems", art and music (the latter I have done a lot of work on) to name a few.

Some key questions fall from this:

1. What are the mechanisms which connect physiology, affect, communication and socio-technical environments? Can they be modelled? Can their effects be predicted?
2. To what extent is the socio-technical design of work to improve mental health feasible? What new intellectual and practical tools can be brought to bear on this?
3. What is the relationship between viable organisations and viable people – particular with regard to how people feel? (Stafford Beer developed an "algedonic meter" – to measure wellbeing – can we do better now?)
4. How do fundamental cybernetic categories of "variety", "amplification", "attenuation", "regulation", "homeostasis/homeorhesis" – map onto the challenges of mental health?
5. How might the implementation of effective measures to address mental health be assisted with more effective modelling of the socio-technical environment?
6. What might music tell us about this?

**What are the gaps (in skills, expertise, technology etc) relating to this area of research?**

The biggest gap/problem in this domain is epistemology: what are we talking about? – work is needed to bring greater clarity without reducing the complexity of the problem

More generally, we need better theory

There is a clear gap in the connection between physiological research and understanding and social behaviour.

There are issues to address in implementation science – particularly around complex interventions around mental health

**Who do you currently collaborate with (key people/groups who could help you to address the research questions)?**

A transdisciplinary set of connections would be very valuable – so currently:

Physiology:

Prof. John Torday, UCLA – evolutionary biology and systems

William Miller (author of [The Sentient Cell - Arthur S. Reber, Frantisek Baluska, William Miller - Oxford University Press \(oup.com\)](#)) – evolutionary biology

Cybernetics:

I have collaborated with (late) Prof. Loet Leydesdorff (Amsterdam) who was eminent in the field of communication, and currently with other scholars associated with this work



Prof. Louis Kauffman, Illinois – mathematician and cybernetics  
Many others in the cybernetics community who would be interested in this.

Education:

Prof. Rupert Wegerif – dialogue in education

Music:

Prof. Michael Spitzer, University of Liverpool (author of [The Musical Human: A History of Life on Earth – A BBC Radio 4 'Book of the Week': Amazon.co.uk: Spitzer, Michael: 9781526602763: Books](#))

Physics:

Dr Peter Rowlands, University of Liverpool

**Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?**

Tavistock Institute for Human Relations (UK) would be a good connection  
University of Liverpool – both for my AI work and the work around music  
Cambridge university education department  
University of Copenhagen education department

**Which theme does the research question relate to (please highlight the most relevant):**

They all could be relevant – but we need better theory.

- Adolescent mental health
- Digital tech for early intervention
- Neuroscience for understanding mental health
- Anxiety
- Depression
- Psychosis



<p><b>Researcher name:</b></p> <p>Laoise Renwick</p>
<p><b>Division/ Centre/ Institute:</b></p> <p>NMSW</p>
<p><b>Please very briefly outline key research questions that you've been working on, or would like to work on:</b></p> <ol style="list-style-type: none"> <li>1. Development and testing of psychosocial interventions to treat and prevent illness onset for people with at-risk-mental-state (psychosis) in LMICs</li> <li>2. Development and testing of culturally relevant psychosocial interventions for people with early psychosis/schizophrenia in ethnic minority groups and majority groups in LMICs</li> <li>3. Acceptability and feasibility of EMDR for at risk mental state and early psychosis</li> </ol>
<p><b>What are the gaps (in skills, expertise, technology etc) relating to this area of research?</b></p> <p>Effectiveness and applied health, drivers of implementation of evidence-based interventions</p> <p>Experimental medicine for at risk mental state to understand predictors of outcome in at risk mental state</p>
<p><b>Who do you currently collaborate with (key people/groups who could help you to address the research questions)?</b></p> <p>Nusrat Husain, Bill Deakin (Rebecca Elliott collaborated on bid number 1 also) Karina Lovell, Helen Brooks, Penny Bee</p>
<p><b>Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?</b></p> <p>EPPIC Australia/University of Melbourne Vrije Universiteit Amsterdam</p>
<p><b>Which theme does the research question relate to (please highlight the most relevant):</b></p> <ul style="list-style-type: none"> <li>• Adolescent mental health</li> <li>• Digital tech for early intervention</li> <li>• Neuroscience for understanding mental health</li> <li>• Anxiety</li> <li>• Depression</li> <li>• <b>Psychosis</b></li> </ul>

<p><b>Researcher name:</b> Katherine Berry</p>
<p><b>Division/ Centre/ Institute:</b> Section lead for the Centre for New Treatments and Understanding in Mental Health (CeNTrUM) within the Division of Psychology and Mental Health</p>
<p><b>Please very briefly outline key research questions that you've been working on, or would like to work on:</b></p> <p>CeNTrUM consists of psychologists, psychiatrists and other specialists in mental health research. We are research partners with NHS sites across the North West in both a research and clinical service capacity.</p> <p>Research within the section involves the integration of psychological and biological theories to derive understanding, prevention and intervention, often in the form of clinical trials.</p> <p>We are committed to the involvement of service users and NHS partners in our research and this has resulted in research which is relevant and implementable within services.</p> <p>Our research is spread across a range of areas, including:</p> <ul style="list-style-type: none"> <li>• Psychosis and other severe mental health problems</li> <li>• Suicide and self-harm</li> <li>• Complex trauma</li> <li>• Women's mental health</li> <li>• Parenting and families</li> <li>• Functional somatic syndromes and symptoms</li> <li>• Anxiety, mood and metacognitive therapy</li> <li>• Dementia and mental health in later life</li> <li>• Digital Health</li> <li>• Cultural adaptation of psychological therapies</li> </ul> <p>The section encompasses significant expertise across a range of methodologies, from</p> <ul style="list-style-type: none"> <li>• qualitative approaches,</li> <li>• quantitative methods,</li> <li>• trial expertise,</li> <li>• neuroscience/neuroimaging.</li> </ul>
<p><b>What are the gaps (in skills, expertise, technology etc) relating to this area of research?</b></p> <p>We are reliant on collaborations with statisticians, health economists and experts in qualitative research but these are often difficult to find within our University as existing staff are stretched so thinly. We are also now lacking a clinical trials unit and the previous unit seemed to lack expertise in trials of psychosocial interventions.</p>
<p><b>Who do you currently collaborate with (key people/groups who could help you to address the research questions)?</b></p> <p>The section collaborates with other sections within our division (Mental Health and Safety and Health Psychology), Mental Health Nursing and also methodologists within Population and Health</p>
<p><b>Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?</b></p>



We have close partnerships with local NHS Trusts especially GMMH and Pennine Care. We have some examples of industrial partners but this area of collaboration is relatively less well developed.

**Which theme does the research question relate to (please highlight the most relevant):**

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**Researcher name:**

Thomas Allen, Rachel Elliott, Sean Gavan, Luke Paterson, Gemma Shields, Fanyi Su

**Division/ Centre/ Institute:**

Manchester Centre for Health Economics

**Please very briefly outline key research questions that you've been working on, or would like to work on:**

The Manchester Centre for Health Economics has an established and extensive mental health economics theme works on mental health related projects including (but not limited to) including both methodological work (outcome mapping, utility validation methods, dealing with heterogeneity, handling data missing not-at-random, designing research capture tools); and applied research (economic evaluation alongside trials, decision-analytic modelling and preference studies) in a range of settings (primary and secondary care, prisons, non-healthcare settings, digital delivery).

**Current themes within the MCHE mental health economics group (MMHEG):**

**Co-leads (Rachel Elliott, Gemma Shields)**

- complex interventions
- digital interventions,
- culturally-adapted interventions,
- psychological intervention,
- self-harm and suicide prevention,
- maternal mental health,
- child and adolescent mental health,
- psychosis and severe mental illness,
- systems change,
- non-healthcare setting intervention delivery,
- interventions in a prison setting,
- economic evaluation analysis and related methods
  - using routine data to estimate effectiveness and cost-effectiveness
  - economic evaluations alongside randomised controlled trials,
  - decision-analytic modelling,
  - acknowledging patient heterogeneity in economic evaluation,
  - design of tools to capture service user reported resource use,
  - validation of utility measures,
- preference research,
- utility and outcome mapping,

Alongside mental health projects, the group has extensive experience in related fields (e.g., dementia and autism spectrum disorder) as well as experience of populations with comorbid mental and physical health conditions.

**Current/recent projects (RAE)**

1. NIHR Programme Grants for Applied Research: PGfAR Competition 17 Stage 2. (RP-PG-0615-20016.) PI: Mike Slade. Personal experience as a recovery resource in psychosis: Narrative Experiences ONline (NEON) Programme. Duration: 66 months. Bid: £2,319,358. 01/04/2017-30/09/23



2. MRC/NIHR EME 13/161 Self-harm and suicidal behaviours: A psychological intervention for suicide applied to patents with psychosis: the CARMS trial (cognitive approaches to remedying suicide). Host: Manchester Mental Health and Social Care Trust. Chief investigator: Patricia Gooding, CARMS £1,340,102.20 (plus NHS costs: £395,464.00, 48 months).
3. European Union's Horizon 2020 research and innovation programme (grant No. 668648). SENSE-Cog. Ears, Eyes and Mind: The "Sense-Cog Project" to improve mental well-being for elderly Europeans with sensory impairment H2020-PHC-22-2015. Promoting mental wellbeing in the ageing population. CI: Iracema Leroi. University of Manchester. 01/16- 06/22
4. NIHR Programme Grants for Applied Research. PI: Mike Slade University of Nottingham. RECOLLECT Programme (Recovery Colleges Characterisation and Testing (RECOLLECT) 2). Duration: 60 months. Bid: £2.5million. August 2019-February 2025
5. NIHR Three Research Schools Fellowship: Holly Hope. Centre for Women's Mental Health; Division of Psychology and Mental Health; School of Health Sciences; FBMH; University of Manchester. 2022-2025. Prenatal maternal mental health.
6. National Institute for Health Research (NIHR). RfPB. Relational Approach to Treating Self-Harm (RelATe): A Feasibility Study of Cognitive Analytic Therapy for People who Self-Harm. Taylor, P., 12/12/22 → 11/12/24 £66,581.
7. National Institute for Health Research (NIHR). RfPB. Parenting Intervention for Parents with Psychosis in Adult Mental Health Services (PIPPA): An acceptability and feasibility trial. Gregg, L., Wittkowski, A. 1/01/23 → 31/08/25 £262,658
8. [NIHR PSRC - refunding call Feb 22. Ashcroft, D., Arden Armitage, C., Elliott, R., Panagioti, M., Walshe, K., Phipps, D., Van Staa, T., Dowding, D., Sanders, C., Blakeman, T., Kapur, N., Webb, R.](#) & National Institute for Health Research (NIHR): £5m. 1/04/23 → 31/03/28. (Self harm and suicide workstream).

**Current/recent projects (GES)**

9. NIHR Global Health Research Unit on Neurodevelopment and Autism in South Asia (NAMASTE) - NIHR Global Health Research Units and Groups £6,955,024 PI Jonathan Green
10. Remote psychosocial interventions to prevent avoidable psychiatric hospital admissions in people with serious mental health problems: a multi-arm multi-stage trial (RAPID) - NIHR HTA £2,209,405.80 PI Anthony Morrison
11. Youth Metacognitive Therapy (YoMeta): A Single Blind Parallel Randomised Feasibility Trial - NIHR RfPB £247,700 PI Adrian Wells
12. Cognitive behavioural therapy in comparison to treatment as usual in young adults at high risk of developing bipolar disorder (Bipolar At Risk): A randomised controlled trial to investigate the efficacy of a treatment approach targeted at key appraisal change (BART II) - NIHR EME £1,787,165.80 PI Sophie Wells
13. Motiv8: A randomized feasibility trial of a weight management intervention for adults on secure forensic mental health inpatient units - NIHR RfPB £248,162 PI Rebekah Carney
14. iMAGery focused therapy for PSychoSis (iMAPS-2): A feasibility randomised controlled trial - NIHR RfPB award amount £255,909 PI Chris Taylor
15. Enhancing the quality of psychological interventions delivered by telephone (EQUITY) - NIHR PGfAR £2,524,745 PI Penny Bee
16. The Resilience Hubs: A multi-site, mixed-methods evaluation of an NHS Outreach, Screening and Support Navigation service model to address the mental health needs of key workers affected by the COVID-19 pandemic - NIHR HS&DR £474,380.60 PI Filippo Varese
17. Understanding the cost-effectiveness of identifying and treating perinatal depression using secondary data analysis - NIHR RfPB award amount £107,730 PI Elizabeth Camacho

**Current/recent projects (LMD)**

18. The Prevention Of Suicide Behaviour in Prison: Enhancing Access to Therapy (PROSPECT) Programme – NIHR PGfAR £1,576,929.00 PI Dan Pratt



19. The effect on relapse of Culturally-adapted Family Intervention (CaFI) compared to usual care among African & Caribbean people diagnosed with psychosis in the UK: a Randomised Controlled Trial – NIHR HTA £2,533,073.82 PI Dawn Edge
20. Improving prediction of psychosis in ARMS using a clinically useful prognostic tool: IPPACT – NIHR HTA £1,204,360.20 PI Filippo Varese

**What are the gaps (in skills, expertise, technology etc) relating to this area of research?**

There are a number of research gaps related to methodological in the context of economic evaluation in mental health, for example:

- Acknowledgment of patient heterogeneity in economic evaluation
- Appropriate measures for utility to inform quality-adjusted life-years
- Application of methods to explore equity
- Economics of implementation to ensure increased uptake in underserved populations
- Use of patient and public involvement and engagement (PPIE) to inform methods
- Better data (routine and self-report)

Furthermore, there are conditions and settings (in particular, low- and middle-income countries) that have a lack of robust economic data.

**Who do you currently collaborate with (key people/groups who could help you to address the research questions)?**

University of Manchester Centre for Women’s Mental Health; Division of Psychology and Mental Health; School of Nursing, Midwifery and Social Work; Social Research with Deaf People  
Manchester Mental Health and Social Care Trust University of Nottingham  
Norwegian University of Science and Technology  
NIHR GM PSRC  
KCL  
GMMH

**Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?**

We would like to partner with a range of organisations, e.g., NHS, charities, patient organisations, globally.

**Which theme does the research question relate to (please highlight the most relevant):**

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<p><b>Researcher name:</b></p> <p>Filippo Varese</p>
<p><b>Division/ Centre/ Institute:</b></p> <p>Psychology and mental health</p>
<p><b>Please very briefly outline key research questions that you've been working on, or would like to work on:</b></p> <p>Efficacy of psychological trauma-focused interventions for trauma supervisors with first episode psychosis / other severe mental health problems</p> <p>Efficacy of preventive trauma-focused interventions for trauma supervisors at risk of developing psychosis / severe mental health problems</p> <p>Prognostic research to improve the prediction of first episode psychosis in young people / adults at clinically elevated risk.</p> <p>Psychological therapies for survivors of sexual violence / abuse, including online abuse (including a study on a digital intervention, as a co-app)</p> <p>Services to support various mental health needs in high risk groups and general populations following large-scale or regional crises (Resilience Hub model)</p>
<p><b>What are the gaps (in skills, expertise, technology etc) relating to this area of research?</b></p> <p>Interested in linking up with people with expertise in routinely collected health datasets, to potentially expand ability to gather long term outcomes on interventions etc.</p>
<p><b>Who do you currently collaborate with (key people/groups who could help you to address the research questions)?</b></p> <p>Many collaborators – fields are clinical psychology, statistics and health economics primarily</p>
<p><b>Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?</b></p> <p>I am very well connected with NHS and other Unis so I am not looking for a specific external partner. Possibly HEI staff with expertise sought above</p>
<p><b>Which theme does the research question relate to (please highlight the most relevant):</b></p> <ul style="list-style-type: none"> <li>• <b>Adolescent mental health</b></li> <li>• Digital tech for early intervention</li> <li>• Neuroscience for understanding mental health</li> <li>• Anxiety</li> <li>• Depression</li> <li>• <b>Psychosis</b></li> </ul>



<p><b>Researcher name:</b></p> <p>Daniela Montaldi</p>
<p><b>Division/ Centre/ Institute:</b></p> <p>PCHN</p>
<p><b>Please very briefly outline key research questions that you've been working on, or would like to work on:</b></p> <p>I don't work directly in mental health but in cognitive neuroscience and in neurology/clinical neuroscience. But my work is relevant to mental health. My research covers:</p> <ul style="list-style-type: none"> <li>• Human memory</li> <li>• Cognitive decline</li> <li>• Amnesia</li> <li>• fMRI</li> <li>• Eye-tracking/pupil dilation</li> <li>• Hippocampus</li> <li>• Medial temporal lobe</li> </ul> <p>I have a newer interest in memory and PTSD as my work has implications for that area, and I am also interested in the adrenergic triggering of memory.</p>
<p><b>What are the gaps (in skills, expertise, technology etc) relating to this area of research?</b></p> <p>Cant really answer this one – my answer above is too broad.</p>
<p><b>Who do you currently collaborate with (key people/groups who could help you to address the research questions)?</b></p> <p>I have a collaboration with colleagues in alcohol addiction (wrt amnesia). But with nobody else in mental health – I have had a brief discussion with Filippo Varese to share ideas, about 2 years ago.</p>
<p><b>Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?</b></p> <p>Any</p>
<p><b>Which theme does the research question relate to (please highlight the most relevant):</b></p> <ul style="list-style-type: none"> <li>• Adolescent mental health</li> <li>• Digital tech for early intervention</li> <li>• Neuroscience for understanding mental health</li> <li>• Anxiety</li> <li>• Depression</li> <li>• Psychosis</li> </ul>



**Researcher name:**

Chris Sutton

**Division/ Centre/ Institute:**

Division of Population Health, Health Services Research & Primary Care; Centre for Biostatistics

**Please very briefly outline key research questions that you've been working on, or would like to work on:**

I work as a trial methodologist and statistician on various mental health trials, largely in bipolar disorder and psychosis. The trials and studies that I'm involved in (or are in the process of reporting) are answering the following clinical and methodological research questions:

1. **a)** To what extent is CBT<sub>BAR</sub> (Cognitive Behavioural Therapy tailored to people at risk of developing bipolar disorder) effective in reducing distressing mood swings when compared to Treatment As Usual (TAU) in individuals who are 'Bipolar at Risk'?  
**b)** What is the impact of the addition to the BART II trial recruitment materials of an animation video, co-developed with a PPI group formed by young people from diverse ethnic backgrounds, on the referrals and recruitment to the trial of people from UK ethnic minority groups?
2. **a)** What are the barriers and enablers to recruiting a representative sample in trials recruiting individuals experiencing mental ill health?  
**b)** What are promising interventions or strategies to improve the recruitment of underserved groups in trials recruiting/targeting individuals with mental ill-health?
3. What is the clinical and cost effectiveness of an online integrated bipolar parenting intervention?
4. Is it feasible to conduct a randomised trial to examine the (clinical and cost) effectiveness of an imagery focused psychological therapy in psychosis?
5. Is it feasible to evaluate the Broad-Minded Affective Coping (BMAC) intervention for university students at risk of suicide in an efficacy trial and is BMAC itself feasible to deliver and acceptable to stakeholders?
6. What is the feasibility of recruiting and retaining participants (care coordinators and service-users) in a cluster-randomised controlled trial comparing the effects of Method Of Levels-trained care coordinators versus treatment as usual on outcomes (engagement and recovery) for people experiencing first episode psychosis.
7. Is it feasible to examine the Empowered Conversations intervention for carers of people with dementia within a multi-centre randomised controlled trial?
8. What is the feasibility of introducing and evaluating a parenting intervention within adult mental health services, exploring whether parents with psychosis will engage with it sufficiently and what additional support they may need to derive benefit?

I'm also currently involved in two further funding applications for mental health trials:

1. Is a feasible and acceptable to deliver low-intensity psychological interventions according to the principles of PLAS (Patient-led appointment scheduling) by Psychological wellbeing practitioners at Step 2 of NHS Talking Therapies services and conduct a (cluster-) randomised controlled trial to evaluate the effectiveness and cost-effectiveness of this mode of service delivery?
2. What is the clinical and cost-effectiveness of Recovery-focused therapy for people with bipolar disorder on personal recovery?



**What are the gaps (in skills, expertise, technology etc) relating to this area of research?**

Gaps include the methodological skills to develop and conduct trials in mental health, including those relating to inclusive recruitment of under-represented groups (including but not restricted to ethnic minority populations).

**Who do you currently collaborate with (key people/groups who could help you to address the research questions)?**

Key collaborators include mental health researchers, including the Psychosis Research Unit at GMMH and the Spectrum Centre at Lancaster University, and the Trial Conduct researchers in the MRC-NIHR Trial Methodology Research Partnership (in recruitment, retention and inclusivity).

**Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?**

Unsure but very broad – see above.

**Which theme does the research question relate to (please highlight the most relevant):**

- Adolescent mental health
- Digital tech for early intervention
- Neuroscience for understanding mental health
- Anxiety
- Depression
- Psychosis

<p><b>Researcher name:</b></p> <p>Stuart Allan</p>
<p><b>Division/ Centre/ Institute:</b></p> <p>Geoffrey Jefferson Brain Research Centre ('Jeff')</p>
<p><b>Please very briefly outline key research questions that you've been working on, or would like to work on:</b></p> <p>The focus of the Jeff is to gain greater understanding of different neurological diseases and to develop new treatment and care pathways that will improve patient lives. At present the disease areas of focus are Brain Tumours, Dementia, Parkinson's Disease and Stroke. A key underpinning mechanism being investigated is neuroimmunology, with nanotechnology as a cross-cutting theme also. The research is underpinned by pathology, imaging and neurorehabilitation.</p> <p>Each disease theme within the Jeff has its own key research questions, examples being:</p> <ul style="list-style-type: none"> <li>• Understanding the tumour microenvironment</li> <li>• Developing novel biomarkers</li> <li>• Preventing post-stroke cognitive decline</li> <li>• Immune/inflammatory mechanisms contributing to disease</li> </ul> <p>For more details these can be viewed on the Jeff website - <a href="https://gibrainresearch.org">https://gibrainresearch.org</a></p>
<p><b>What are the gaps (in skills, expertise, technology etc) relating to this area of research?</b></p> <p>Research focussed on neuroimmune mechanisms could easily be translated to mental health, where there is growing evidence of an important role</p> <p>Enabling infrastructure to allow studies across the translational pipeline – from discovery science, through preclinical translation, experimental medicine and applied health is key to driving future progress. This includes investment in the latest technologies and support for areas where direct comparisons can be made between experimental and clinical studies e.g. imaging, immunophenotyping, biomarker discovery</p>
<p><b>Who do you currently collaborate with (key people/groups who could help you to address the research questions)?</b></p> <p>The Jeff is a collaborative venture between academics in the University of Manchester – principally from neuroscience, immunology, cardiovascular sciences and cancer – and the Manchester Centre for Clinical Neurosciences and MCRC. There also reach to the Children's Hospital.</p>
<p><b>Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?</b></p> <p>Any that drives forward the research and vision of the Centre.</p>
<p><b>Which theme does the research question relate to (please highlight the most relevant):</b></p> <ul style="list-style-type: none"> <li>• Adolescent mental health</li> <li>• Digital tech for early intervention</li> <li>• Neuroscience for understanding mental health</li> <li>• Anxiety</li> <li>• Depression</li> <li>• Psychosis</li> </ul>



<p><b>Researcher name:</b></p> <p>Anne Clayson, Mark Johnson, David Fishwick, Nicola Gartland, Martie van Tongeren (...)</p>
<p><b>Division/ Centre/ Institute:</b></p> <p>PHHSRPC, EPGH, Centre for Occupational and Environmental Health</p>
<p><b>Please very briefly outline key research questions that you've been working on, or would like to work on:</b></p> <p>Causes of Work-related stress and mental health outcomes and effectiveness of interventions to reduce the risk of these. We are collecting data from occupational physicians and GPs across UK and Ireland collecting data on work-related disease, including stress and mental health outcomes</p> <p>Does algorithmic management affect mental health and other health and safety outcomes. In particular we are investigating mental health and road safety amongst delivery drivers, who often use platforms/apps for accessing work.</p> <p>Mental and physical health outcomes in police force. We are involved in a large cohort of police officers and staff in the UK to investigate mental and other health outcomes.</p> <p>We are exploring setting up a national inception cohort of teachers to investigate cause of early drop out, stress and mental health.</p>
<p><b>What are the gaps (in skills, expertise, technology etc) relating to this area of research?</b></p> <p>The impact of work and work-related stress on sickness absence due to mental ill-health has increased greatly in the last 2 decades. We broadly understand the causes of this, but despite this, as a nation we are unable to address the epidemic of work-related mental health. The Covid-19 pandemic and changes in the way we work, has added to the complexity of this. Although there are many individual examples of interventions that appear to be affective, there are also a large number where interventions were not successful. We need to develop an improved understanding of what contextual conditions determine the effectiveness of risk mitigation measures to reduce stress and mental ill-health due to work.</p>
<p><b>Who do you currently collaborate with (key people/groups who could help you to address the research questions)?</b></p> <p>Health and Safety Executive/Thomas Ashton Institute Imperial College GPs and Occupational Physicians across the UK and Ireland</p>
<p><b>Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?</b></p> <p>Industry in particular SMEs NHS and other public sector bodies</p>
<p><b>Which theme does the research question relate to (please highlight the most relevant):</b></p> <ul style="list-style-type: none"> <li>• Adolescent mental health</li> <li>• Digital tech for early intervention</li> <li>• Neuroscience for understanding mental health</li> <li>• Anxiety</li> <li>• Depression</li> <li>• Psychosis</li> </ul>



<p><b>Researcher name:</b></p> <p>Fong Kuan Wong</p>
<p><b>Division/ Centre/ Institute:</b></p> <p>Division of Developmental Biology and Medicine</p>
<p><b>Please very briefly outline key research questions that you've been working on, or would like to work on:</b></p> <p><b>Current research work</b></p> <ul style="list-style-type: none"> <li>Understanding the molecular mechanisms between microglia-pyramidal cell communication in regulating cortical circuit development and how dysregulation of this communication can lead to neurodevelopmental disorders</li> </ul> <p><b>Future research work</b></p> <ul style="list-style-type: none"> <li>Elucidating the role of circadian rhythm in regulating brain development and how their dysregulation can contribute to neurodevelopmental disorders</li> <li>Application of current research models to human tissues</li> <li>Understanding the long-term consequences of altered cellular communication during development on lifelong mental and neurological health</li> <li>Relationship of other immune cells in the developing brain and its communication with neuronal and glial cells</li> </ul>
<p><b>What are the gaps (in skills, expertise, technology etc) relating to this area of research?</b></p> <p>In vivo electrophysiologist looking at the developing brain          In vivo imaging looking at the developing brain          Epidemiologist/Data scientist</p>
<p><b>Who do you currently collaborate with (key people/groups who could help you to address the research questions)?</b></p> <p>Rachel Jennings – Clinician with access to human fetal tissue          Mino Belle – Electrophysiology working on circadian rhythm          Shruti Garg – Understanding how cellular interactions are altered in NF1 patients</p>
<p><b>Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?</b></p> <p>Biobanks – HDBR          MRC – Cohort studies</p>
<p><b>Which theme does the research question relate to (please highlight the most relevant):</b></p> <ul style="list-style-type: none"> <li>Adolescent mental health</li> <li>Digital tech for early intervention</li> <li>Neuroscience for understanding mental health</li> <li>Anxiety</li> <li>Depression</li> <li>Psychosis</li> </ul>



<p><b>Researcher name:</b></p> <p>Nina Milosavljevic</p>
<p><b>Division/ Centre/ Institute:</b></p> <p>Division of Neuroscience/SBS/UoM</p>
<p><b>Please very briefly outline key research questions that you've been working on, or would like to work on: Light and mood; Vision-driven mood regulation</b></p> <p>Light is not only important for vision. In the last decade, it has become apparent that light responsiveness extends to fundamental aspects of mood, cognition, and performance. This has direct implications for human health and well-being, especially since one of the most striking changes we are experiencing in modern life is how much we are exposed to artificial light. People in developed countries now spend &gt;90% of their time indoors exposed to artificial lighting of various qualities. Furthermore, with new technologies booming, adults spend &gt;10h and children &gt;4h a day in front of screens of numerous devices (TVs, phones, computers, etc.). Conversely, light can be used as an effective and non-invasive therapeutic option with little to no side effects, to improve sleep, mood, and general well-being. Light therapy is the treatment of choice for seasonal affective disorder and is emerging as a treatment for many other psychiatric disorders. <b>Despite this, the biological mechanisms involved in these light-induced effects on mood are still poorly understood. We do not know what light qualities and which visual features affect our mood and how.</b> Without knowing this, we cannot successfully control these systems and their positive and negative effects. Therefore, it remains unclear how best to adjust artificial lighting, visual displays, and therapeutic approaches to maximise health and wellbeing. Currently we are working on these two streams of research:</p> <ol style="list-style-type: none"> <li>1) <b>Discovering mechanisms underlying visual influences on mood and affective state</b> – combining in vivo multichannel electrophysiology with bespoke approaches for circuit tracing and manipulation in rodents, as well as a range of behavioural tests for laboratory animals (nocturnal mice and diurnal rodent <i>Rhabdomys pumilio</i>)</li> <li>2) <b>Studying associations between light exposure and mood in a sample of UK adults in everyday life</b> – participants use wearable light monitors; fitbit to measure continuous heart rate, step count, sleep stages, oxygen saturation, skin temperature; and perform an emotion recognition objective task at home with self-report of mood.</li> </ol>
<p><b>What are the gaps (in skills, expertise, technology etc) relating to this area of research?</b></p> <p>This area requires multidisciplinary approach combining visual neuroscience, psychology, applied health as well as different model systems from animals to humans.</p>
<p><b>Who do you currently collaborate with (key people/groups who could help you to address the research questions)?</b></p> <p>From UoM: Robert Lucas, Timothy Brown, Riccardo Storchi, Beatriz Bano otalora, Annette Allen From Oxford University: Catherine Harmer Industrial partner: Signify (formerly Philips Lighting)</p>
<p><b>Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?</b></p> <p>I would first like to form new collaborations within the UoM, then partner with NHS, and other organisations that may be interested.</p>
<p><b>Which theme does the research question relate to (please highlight the most relevant):</b></p> <ul style="list-style-type: none"> <li>• Adolescent mental health X</li> <li>• Digital tech for early intervention X</li> <li>• Neuroscience for understanding mental health X</li> <li>• Anxiety X</li> <li>• Depression X</li> <li>• Psychosis</li> </ul>



<p><b>Researcher name:</b> Helen Brooks</p>
<p><b>Division/ Centre/ Institute:</b> MHRG, Division of Nursing, Midwifery and social work</p>
<p><b>Please very briefly outline key research questions that you've been working on, or would like to work on:</b> Experience of mental illness, social networks and mental health management, young people's mental health, digital interventions for mental health, mental health literacy, global mental health.</p>
<p><b>What are the gaps (in skills, expertise, technology etc) relating to this area of research?</b> Impact</p>
<p><b>Who do you currently collaborate with (key people/groups who could help you to address the research questions)?</b></p>
<p><b>Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?</b> Third sector organisations.</p>
<p><b>Which theme does the research question relate to (please highlight the most relevant):</b>  <b>Adolescent mental health</b>          Digital tech for early intervention          Neuroscience for understanding mental health          Anxiety          Depression          Psychosis</p>

<p><b>Researcher name:</b> <b>Leads:</b></p> <p>Shruti Garg (UoM) and Dr Kate Saunders (Oxford) Programme Manager: Aiste Adomaviciene, PhD (UoM)</p>
<p><b>Division/ Centre/ Institute:</b></p> <p>NIHR Mental Health Mission – Capacity Development workstream (national project)</p>
<p><b>Please very briefly outline key research questions that you’ve been working on, or would like to work on:</b></p> <p>We lead the capacity building initiative of the Mental Health Mission (MHM) funded for 5 years (2023-2027.) We are based at UoM although our remit for capacity building in mental health is national. We want to collaborate with funders and organisations to help them build their mental health research.</p>
<p><b>What are the gaps (in skills, expertise, technology etc) relating to this area of research?</b> Think broadly e.g. immunology and inflammation, experimental medicine, applied health, discovery science, platform technologies.</p> <p>We have a number of gaps in mental health research, which include:</p> <ul style="list-style-type: none"> <li>A lack of mental health researchers</li> <li>Limited industry engagement</li> <li>Limited engagement in research training programmes</li> <li>Elusive career progression pathways</li> <li>Service demands competing with research opportunities.</li> </ul>
<p><b>Who do you currently collaborate with (key people/groups who could help you to address the research questions)?</b></p> <p>The Capacity Development workstream works closely with the other key priority workstreams and demonstrator sites within the MHM to build mental health research capacity and enhance research capability across the UK, and help deliver MHM objectives aligned to BRC outputs coming through the translational pipeline.</p>
<p><b>Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?</b></p> <p>Mental Health NHS Trusts, charities, universities, MHRA, industry.</p>
<p><b>Which theme does the research question relate to (please highlight the most relevant):</b></p> <ul style="list-style-type: none"> <li><u>Adolescent mental health</u></li> <li><u>Digital tech for early intervention</u></li> <li>Neuroscience for understanding mental health</li> <li><u>Anxiety</u></li> <li><u>Depression</u></li> <li><u>Psychosis</u></li> </ul>

<p><b>Researcher name:</b></p> <p>Goran Nenadic</p>
<p><b>Division/ Centre/ Institute:</b></p> <p>Department of Computer Science</p>
<p><b>Please very briefly outline key research questions that you've been working on, or would like to work on:</b></p> <p>Using natural language processing to extract key clinical variables and social determinants from mental health electronic health records. I have collaborated with Akrivia in a number of projects to facilitate access to unstructured mental health data including clarifying governance expectations and safeguards for data access.</p> <p>Data linkage and analyses of hospital records, mental health records and police reports to better understand domestic violence. The objectives were to examine the concordance between mental illness mentions extracted from the police's event narratives and mental health diagnoses from hospital and emergency department records; extraction of mental health information on individuals suspected/charged with a domestic violence offense and their victims, abuse types, and victim injuries from police narratives.</p> <p>Generation of patient-friendly clinical documentation: exploring how to generate hospital (out-patient) communication that is tailored for service users.</p>
<p><b>What are the gaps (in skills, expertise, technology etc) relating to this area of research?</b></p> <p>Platform technologies: secure access to relevant data sources; Applied health: requires multi-disciplinary teams.</p>
<p><b>Who do you currently collaborate with (key people/groups who could help you to address the research questions)?</b></p> <p>Mental health researchers who are keen to use real-world data in the form of clinical letters or police reports.</p>
<p><b>Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?</b></p> <p>UK CRIS, GMMH, GM Police</p>
<p><b>Which theme does the research question relate to (please highlight the most relevant):</b></p> <p>Adolescent mental health  <span style="background-color: yellow;">Digital tech for early intervention</span>          Neuroscience for understanding mental health          Anxiety          Depression          Psychosis</p>



Researcher name:

Biomedical research centre Mental health theme

**Division/ Centre/ Institute:**

PMH

**Please very briefly outline key research questions that you've been working on, or would like to work on:**

The BRC Mental health theme is led by Profs Gillian Haddock and Roger Webb.

The key projects funded within the BRC are:

**1. A developmental neuroscience programme (led by Profs Green, Elliott)**

Project 1 focuses on adverse childhood experiences and their relationship to immunophenotypes, neurobiological and cognitive markers in adolescence that predict development of mental health problems. The findings will be used to develop and test feasibility/tolerability of social cognition interventions for resilience.

Project 2 is investigating non-Invasive Brain Stimulation (NIBS) and its impact on cognitive and phenotypic (autism/ADHD) outcomes through impact on GABA/Glutamate E/I modulation. The project will also focus on two clinical groups - Neurofibromatosis 1 and Noonan syndrome to refine models to define experimental strategies for future clinical trials.

**2. Digital and Data Science programme**

Project 1 (Prof Roger Webb): This project is examining temporal trends and geospatial patterning in Greater Manchester in incidence and prevalence of psychiatric illnesses and risks of non-fatal self-harm and suicide and how deprivation and psychopathology combine to influence healthcare utilisation, disability and premature mortality risk in people with multi-morbidity.

Project 2 (Profs Bucci, Lewis, Ainsworth): This project is undertaking exploratory investigation on existing data sets which contain validated real-time data. Statistical approaches will be used to identify the latent models that generate correlated patterns of MH symptoms. The second aspect of the project will work alongside the Wellcome funded CONNECT project to test the models and will link the CONNECT data to electronic health record data (GP, mental health) to create detailed phenotyping data. Findings will be used to develop a prototype Just In time Adaptive Intervention and pilot study.

**3. Psychological science programme (Haddock, Morrison, Lovell and colleagues)**

This stream of work is not directly funded by BRC, currently, but will form a key part of future BRC applications. Pilot work on further understanding some of the key psychological mechanisms underpinning the development of mental health problems will be undertaken alongside other funded programmes in this area to ensure a clear, consolidated platform for experimental work is in place to drive this sub-theme in future BRC awards.

**What are the gaps (in skills, expertise, technology etc) relating to this area of research?**

Think broadly e.g. immunology and inflammation, experimental medicine, applied health, discovery science, platform technologies.



Mental health research in Manchester has a broad range of expertise so there are no major gaps, per se, although there are areas where resources appear depleted.

The CTU is a resource that was well used by our group so losing it has been an issue.

We could do with greater investment in posts, particularly, clinical psychology and psychiatry. Succession planning is a constant concern due to difficulties attracting some professions into academia.

Imaging resource has been highlighted as an area of concern.

The cyber attack has had a significant impact on some of the work in our group particularly within the data and digital theme.



<p><b>Researcher name:</b> NIHR Applied Research Collaboration Greater Manchester</p>
<p><b>Division/ Centre/ Institute:</b> n/a</p>
<p><b>Please very briefly outline key research questions that you've been working on, or would like to work on:</b></p> <p>The NIHR Applied Research Collaboration Greater Manchester (ARC-GM) is supporting applied health and care research that responds to, and meets, the needs of local populations and local health and care systems</p> <p>The Mental Health theme in ARC-GM is developing, evaluating and implementing new initiatives to protect, sustain and improve mental health and resilience in local communities, marginalised populations and patient groups, with a focus on:</p> <ul style="list-style-type: none"> <li>• Research aimed at improving the quality of and access to mental health services, co-produced with service users, e.g., parents of children with OCD and other stakeholder-identified marginalised groups.</li> <li>• Piloting co-produced intervention (SUSTAIN) supporting service users to manage anti-psychotic-induced hunger. A systematic review on the delivery and reach of physical health checks for people with severe and enduring mental health illness.</li> <li>• Enhancing the inclusion and experience of service users (including children and young people) and VCFSE sector stakeholders in mental health research and evaluation.</li> </ul> <p>Our Economic Sustainability theme have worked on the following areas:</p> <ul style="list-style-type: none"> <li>• The impact of COVID-19 on physical and mental health</li> <li>• Measuring community resilience at a population level</li> <li>• The effect of fuel poverty on mental health</li> <li>• The parallel pandemic COVID-19 and mental health</li> </ul> <p>For more information see our <a href="#">website</a></p>
<p><b>What are the gaps (in skills, expertise, technology etc) relating to this area of research?</b></p> <p><b>Who do you currently collaborate with (key people/groups who could help you to address the research questions)?</b></p> <p>ARC-GM is a collaboration between the four HEI's; the ICS; health and care providers; local authorities; Voluntary and Community Groups and industry.</p> <p>We have strong community links with diverse communities and work closely with GMMH/Pennine Care research teams.</p> <p>There is a cross-ARC network for mental health research to support collaboration across England and Prof Karina Lovell and Prof Penny Bee have global links</p>
<p><b>Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?</b></p> <p>We have excellent links already within and beyond Greater Manchester</p>
<p><b>Which theme does the research question relate to (please highlight the most relevant):</b></p> <ul style="list-style-type: none"> <li>• Adolescent mental health</li> <li>• Digital tech for early intervention</li> <li>• Neuroscience for understanding mental health</li> <li>• Anxiety</li> <li>• Depression</li> <li>• Psychosis</li> </ul>



**Researcher name:**

Gillian Haddock

**Division/ Centre/ Institute:**

PMH

**Please very briefly outline key research questions that you've been working on, or would like to work on:**

My main areas of research are focused on:

1. Psychopathology and mechanisms underpinning psychotic symptoms e.g. hallucinations and delusions and mechanisms relating to complex presentations
2. The development and evaluation of complex psychological interventions for people with psychosis and co-morbid complexities such as suicide/self harm, substance misuse, anxiety, sleep disturbance etc. This is usually in the context of preliminary feasibility and acceptability trials, experimental mechanism trials and efficacy and effectiveness within services.
3. Development of assessment tools for measurement of psychotic symptoms
4. Implementation and innovation within the NHS and third sector.

The main funding streams I have been involved in are MRC, Wellcome and NIHR. I have close partnerships in the NHS, particularly Greater Manchester Mental Health where I co-direct the Suicide and Self Harm Research Unit. I am mental health theme lead for the Manchester Biomedical Research Centre.

**What are the gaps (in skills, expertise, technology etc) relating to this area of research?**

Think broadly e.g. immunology and inflammation, experimental medicine, applied health, discovery science, platform technologies.

Mental health research in Manchester has a broad range of expertise so there are no major gaps, per se, although there are areas where resources appear depleted e.g. psychiatry.

The CTU is a resource that was well used by our group so losing it has been an issue.

We could do with greater investment in posts, particularly, clinical psychology and psychiatry.

**Who do you currently collaborate with (key people/groups who could help you to address the research questions)?**

A multi-disciplinary group including psychology, psychiatry, nursing, neuroscience, pharmacy, statistics, health economics, data and digital science, social and primary care, education and key people in the NHS and charitable associations

**Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?**

Current NHS mental health partners include several in the North West, particularly GMMH, Pennine Care, Lancashire Care, MFT, MerseyCare. We could develop stronger links with some of



those e.g. MerseyCare where they have recently been developing academic posts. It is also a Mental Health Mission development site.

We have good link with other universities nationally (and some internationally). We could develop better links with North West universities who do not have good MH infrastructure (John Moores, MMU, Edge Hill, Bolton, UCLAN, Cumbria etc)

**Which theme does the research question relate to (please highlight the most relevant):**

- Adolescent mental health
- Digital tech for early intervention
- Neuroscience for understanding mental health
- Anxiety
- Depression
- Psychosis

<p><b>Researcher name:</b></p> <p>Shruti Garg + Caroline Lea-Carnall (SPIN lab- Studying Plasticity In Neurodevelopment)</p>
<p><b>Division/ Centre/ Institute:</b></p> <p>PMH+ PCHN</p>
<p><b>Please very briefly outline key research questions that you've been working on, or would like to work on:</b></p> <p>We are a research group interested in brain plasticity over development. Using advanced brain imaging and computational methods, we want to understand how brain plasticity is altered in certain genetic conditions and how that in turn might relate to learning difficulties. There is a translational focus to our work where we examine the physiological mechanisms of learning/memory identified in animal models in human clinical cohorts, thereby addressing critical translational gap from animal models to humans. We use this mechanistic understanding to optimise and personalise pharmacological and non-invasive brain stimulation treatments to for the amelioration of learning difficulties in children with rare genetic conditions.</p> <p><b>Garg is a clinician scientist and child psychiatrist. Caroline Lea-Carnall a a computational neuroscientist.</b></p>
<p><b>What are the gaps (in skills, expertise, technology etc) relating to this area of research?</b> Think broadly e.g. immunology and inflammation, experimental medicine, applied health, discovery science, platform technologies.</p> <p>Statistics, physics support for MR imaging, radiographers for MR imaging</p>
<p><b>Who do you currently collaborate with (key people/groups who could help you to address the research questions)?</b></p> <p>Laura Parkes (imaging), Nelson Trujillo-Barreto (computational modelling), JeYoung Jung (Uni of Nottingham – neurostimulation), Alex Casson (engineering), Kimber lab, Wong lab, Roger Webb, Darren Ashcroft, charities</p>
<p><b>Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?</b></p> <p>Industry</p>
<p><b>Which theme does the research question relate to (please highlight the most relevant):</b></p> <ul style="list-style-type: none"> <li>• Adolescent mental health</li> <li>• Digital tech for early intervention</li> <li>• <b>Neuroscience for understanding mental health</b></li> <li>• Anxiety</li> <li>• Depression</li> <li>• Psychosis</li> </ul>

<p><b>Researcher name:</b></p> <p>Rebecca Elliott</p>
<p><b>Division/ Centre/ Institute:</b></p> <p>Psychology and Mental Health</p>
<p><b>Please very briefly outline key research questions that you've been working on, or would like to work on:</b></p> <p><b>What are the cognitive biomarkers for common mental health problems and for serious mental illness?</b>  <b>How is social cognition impacted in common mental health problems and serious mental illness?</b>  <b>Do cognitive and social cognitive impairments predate and/or predict symptoms?</b>  <b>What are the structural and functional brain imaging markers of common mental health problems and SMI and how do these relate to cognitive features?</b>  <b>What are the neurocognitive and neurobiological mechanisms by which life stress, and particularly early adversity, confers increased risk of mental health problem?</b>  <b>Can we identify transdiagnostic risk profiles based on biomarkers and cognitive markers in high risk adolescents in order to predict onset of symptoms?</b>  <b>If so can we develop preventative/early interventions for young people at high risk of mental health problems?</b></p>
<p><b>What are the gaps (in skills, expertise, technology etc) relating to this area of research?</b></p> <p>Need an established link between mental health research and immunology in order to explore immunophenotypes, proteomics and metabolomics for biomarker detection and predictive modelling.          Need more established links with schools and services for high risk children and young people in order to recruit to studies and trials.          Need to develop ways to link predictive biomarker research to health, social care, education and criminal justice systems in order to explore the spectrum of outcomes.</p>
<p><b>Who do you currently collaborate with (key people/groups who could help you to address the research questions)?</b></p> <p>Establishing dialogue with Lydia Becker Centre.          Some previous work with Dept of Education.          Imaging.</p>
<p><b>Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?</b></p> <p>Improved links with schools and children's services          Potential links with probation services.          Charities and third sector organisations working with marginalised young people.</p>
<p><b>Which theme does the research question relate to (please highlight the most relevant):</b></p> <ul style="list-style-type: none"> <li>• Adolescent mental health</li> <li>• Digital tech for early intervention</li> <li>• Neuroscience for understanding mental health</li> <li>• Anxiety</li> <li>• Depression</li> <li>• Psychosis</li> </ul>

<p><b>Researcher name:</b></p> <p>Sophia Ananiadou</p>
<p><b>Division/ Centre/ Institute:</b></p> <p>Computer Science, National Centre for Text Mining, IDSAI</p>
<p><b>Please very briefly outline key research questions that you've been working on, or would like to work on:</b></p> <p>I am working towards interpretable mental health analysis based on Natural Language Processing (part of AI) and Deep Learning using Large Language Models (ChatGPT, GPT4). I am deploying my methods on social media, a rich source for mental health analysis and early intervention. Manual analysis is impossible, hence the use of NLP methods. I have developed finetuned LLMs for mental health such as MentalLLaMA (the first interpretable LLM for mental health which is open). To avoid problems of interpretability using LLMs, I am working on a number of solutions such as mental health knowledge infusion. This allows us to explicitly introduce common sense knowledge to model the mental states of the speakers and their intent. I use techniques such as emotion detection, sentiment analysis to capture the mental state of speakers. I call this "mentalisation" ability which allows automated models to capture the mental states of others. Other work is related with the causal analysis of mental health conditions, by infusing useful information (such as patient health questionnaire) which supports the interpretability of AI methods. My methods look closely how AI and LLMs perform in generalised mental health analysis, how well ChatGPT can generate explanations and which are the best strategies to adopt. Human evaluation is hugely important in this work and I seek collaborations with mental health experts to evaluate the interpretability of the AI models.</p> <p>My methods have been applied to depression, suicide detection from notes, anxiety but the techniques can be applied to any mental health disorder. I would like to explore these methods further with domain experts. Another area of research is the development of a platform (RobotAnalyst) which supports all processes of systematic reviews (search, screening and summarisation). My methods are knowledge aware for medical interventions (i.e. PICO).</p>
<p><b>What are the gaps (in skills, expertise, technology etc) relating to this area of research?</b></p> <p>Think broadly e.g. immunology and inflammation, experimental medicine, applied health, discovery science, platform technologies. In AI and the LLM era, human evaluation is important. Gaps exist in collaborations which produce new evaluation metrics. Platform technologies must be knowledge aware.</p>
<p><b>Who do you currently collaborate with (key people/groups who could help you to address the research questions)?</b></p> <p>I have collaborated with Lana Bojanic (department of psychology and mental health); I had an MRC project with Prof. Nusrat Husain (Psychiatry) on suicide; using RobotAnalyst for systematic reviews. Human feedback is paramount to the success of AI methods.</p>
<p><b>Which external organisations would you like to partner with (other universities, charities, NHS, industry etc)?</b></p> <p>NHS, the Samaritans, suicide helplines, HSE.</p>
<p><b>Which theme does the research question relate to (please highlight the most relevant):</b></p> <ul style="list-style-type: none"> <li>• Adolescent mental health</li> <li>• Digital tech for early intervention</li> <li>• Neuroscience for understanding mental health</li> <li>• Anxiety</li> <li>• Depression</li> <li>• Psychosis</li> </ul>



**Researcher name:**

Pauline Whelan

**Division/ Centre/ Institute:**

IIDS, Pankhurst Institute, Centre for Health Informatics at UoM & GM.Digital Research Unit at Greater Manchester Mental Health

**Please very briefly outline key research questions that you've been working on, or would like to work on:**

- Digital mental health - software engineering to build digital interventions across a range of mental health conditions
- Co-designing digital mental health tools with people with lived experience of mental health problems
- Building digital tools to support public engagement / involvement
- Evaluating commercial digital mental health products
- Implementation of digital mental health tools within clinical services
- Implementing digital tools in disadvantaged areas (e.g. low socio-economic communities)
- Deploying digital interventions in school settings

**What are the gaps (in skills, expertise, technology etc) relating to this area of research?**

- Reusable digital tools to support mental health research
- Innovative approaches to digital mental health evaluation
- Implementation of digital tools within clinical settings
- Sustainability of digital mental health technologies
- Working with people with lived experience to co-design digital tools

**Who do you currently collaborate with (key people/groups who could help you to address the research questions)?**

Many academic researchers across the UK and internationally working in co-design; digital health and digital mental health.

GM.Digital Research Unit – a research unit focused on digital mental health

CAMHS.Digital Research Advisory Group – a young people's advisory group focused on digital mental health

MQ

Digital Navigator Programme at GMMH – implementation of digital mental health technologies in services

DATAMIND