

Annual Report 2023



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Message from the Executive Directors Professor Brian Castellani and Dr Barbara Bechter

Welcome to the Durham University Wolfson Research Institute for Health and Wellbeing (WRIHW) Annual Report covering our activities in 2023 and looking forwards into 2024 and beyond. It has been an incredible year with lots of incredible developments and new and exciting developments on the horizon.

Thank you, Amanda Ellison, former Executive Director (2015-2023)



The 2023-2024 academic year began with the departure of our former Executive Director, Amanda Ellison, after eight remarkable years of leadership. We would like to extend our deepest gratitude to Amanda for her exceptional guidance and for transforming the Wolfson Research Institute for Health and Wellbeing (WRIHW) into a truly inspiring place to work and thrive. Her tenure from 2015 to 2023 was characterized by unwavering dedication, fostering a sense of camaraderie, mutual respect, and shared joy, and creating a community where colleagues felt more like friends united by a common purpose.

Amanda began her journey as Executive Director in 2015, a pivotal moment following the departure of the School of Medicine, Pharmacy, and Health (SMPH) from the university. Recognizing the need to redefine the Institute's direction, she led a comprehensive review of health-related research across all faculties at Durham University. This effort revealed the university's extensive engagement in health research, providing crucial evidence for clinical decisions made by health professionals and laying the foundation for Durham's current Health Strategy.

In 2018, Amanda played a significant role in establishing a formal Health Strategy Group

and served as the chair of the Health Research Strategy Group, further solidifying the university's commitment to health research. That same year, she took another crucial step in supporting the next generation of scholars by establishing the Early Career Researcher (ECR) Committee, building upon the work initiated by Professor Paul Chazot. Her vision was to instil the value of interdisciplinarity in emerging academics, exposing them to new methodologies and perspectives to foster intellectual growth. This initiative led to the successful launch of the Annual ECR Conference. Amanda's exceptional contributions were recognized with her promotion to Professor in 2018.

Her leadership extended beyond the university when, between 2018 and 2019, she guided the North East and North Cumbria Applied Research Collaboration (NENC ARC) Durham submission, ensuring that Durham University played a significant role in this regional collaboration. In 2021, Amanda continued to expand her impact by establishing the Wolfson Doctoral Training Centre, which now welcomes a new cohort of students each year under the leadership of Co-Director Jonathan Wistow. During this same period, she introduced the Challenge Academy Matrix, a framework that encapsulates the Institute's work and reflects the intricate connections between health, wellbeing research, and various aspects of the human experience.

Throughout her tenure, Amanda curated an enriching annual program of events, including lectures, seminars, research discussions, and roundtables, both online and in person. Her dedication culminated in the "Celebrating Health Festival" in June and July 2023, which offered an interdisciplinary series of events in Durham City and online, bringing together diverse voices in health research. Professor Amanda Ellison's leadership has left an enduring legacy, and her contributions will continue to shape the Institute's future, making her tenure a defining chapter in the WRIHW's story.



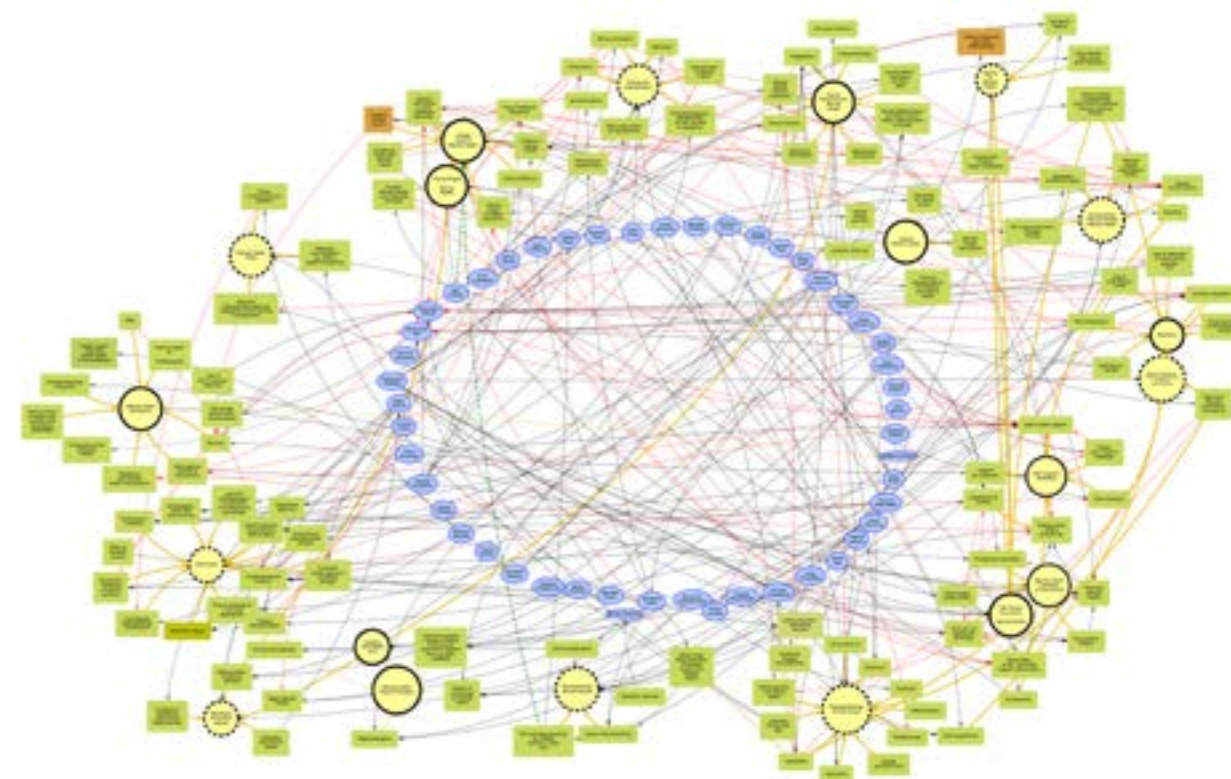
What We've (You've) Been Up to

When we say "we," we truly mean everyone here at Durham University. The Wolfson Research Institute continues its proud tradition of supporting the incredible health research we do at Durham, embracing creativity, crossing disciplines, and engaging both our local and global communities. Whether it's through our Early Career Researcher program, our Challenge Academies, or the Health@Durham strategy, our community has achieved so much together. In this report you will find the incredible work happening at Durham University over 2023.

In 2023 and 2024, we have also focused on strengthening our partnerships with the County Durham and Darlington NHS Foundation Trust (CDDFT) and Durham County Council (DCC). In collaboration with the Durham Research Methods Centre, we're thrilled to launch a new CPD program called "Bridging the Gap" in autumn 2024. This initiative aims to enhance the research skills of CDDFT staff and foster collaborative research relationships, marking another step forward in our shared journey.

This year, we also embarked on an exciting journey to map out the diverse range of mental health research happening across Durham University. Through a series of dynamic workshops with university staff and the Research and Innovation Services (RIS), we've been uncovering the incredible work taking place in this field. Our aim is to carry this momentum into 2024 and 2025, strengthening Durham's mental health research and helping staff build strong networks for collaborative, grant-driven projects. If you're interested or haven't connected with us yet, we'd love to hear from you. Reach out, and we'll make sure you're involved!

Our Mental Health Research Map



New Executive Director

Starting in November 2024, the Wolfson Research Institute will welcome its new Executive Director, Charlotte Clarke, who has recently been appointed as Durham University's first Associate Pro-Vice-Chancellor of Health. Charlotte brings a wealth of experience, having served as the Executive Dean of our Faculty of Social Sciences and Health since 2019. Over the past several years, she has been a driving force behind the Health@Durham strategy and has dedicated her career to tackling health inequalities and stigma. Her impactful research has shaped international health and social care policy, especially in the field of dementia. In her new role, Charlotte will collaborate with partners across our region and beyond to elevate Durham's world-class health research and education even further. We look forward to continuing our roles as Co-Directors of the Wolfson in support of Charlotte and the Health@Durham strategy.

Meet the Team

Our mission is to encourage and support high calibre interdisciplinary research to understand and address human health challenges.

We do this through our Challenge Academies. Each has been carefully built to address local and global unmet need in health-related issues. Closely aligned with the Sustainable Development Goals, these Academies have the interdisciplinary approach unique to Durham University built in. In this way, each Academy can address major problems in health and wellbeing, but also be responsive to new challenges as they arise.



Professor Barbara Bechter
Executive Director
barbara.bechter@durham.ac.uk

Barbara is Executive Director of the Wolfson Research Institute for Health and Wellbeing and Professor in Human Resource Management at Durham University Business School (DUBS). She is a social scientist, she developed and led multidisciplinary projects and managed international project teams. With her international and interdisciplinary research, she contributes to policy debates around new forms of employment and their regulation. She is especially interested in the link between employment and health. Her research extends beyond the workplace by investigating interventions and support provided by social partner organisations at organisational, national and transnational level to improve the health and safety of workers.



Mrs Suzanne Boyd
Institute Manager
wolfson@durham.ac.uk

Suzanne is responsible for the day to day running of the WRIHW, dealing with matters pertaining

to HR, finance, committee support/management, project support and Fellowship support. She is also responsible for the Institute website, fortnightly newsletter and social media accounts.



Professor Brian Castellani
Executive Director
brian.castellani@durham.ac.uk

Brian is the Executive Director of the Wolfson Research Institute for Health and Wellbeing and Director of the Research Methods Centre and at Durham University, UK. He is also Adjunct Professor of

Psychiatry (Northeastern Ohio Medical University, USA), Editor of the Routledge Complexity in Social Science series, CO-I for the Centre for the Evaluation of Complexity Across the Nexus, and a Fellow of the UK National Academy of Social Sciences. Brian also runs InSPIRE, a UK policy and research consortium for mitigating the impact places have on air quality, dementia and brain health across the life course. Brian is trained as a public health sociologist, clinical psychologist, and methodologist and takes a transdisciplinary approach to his work. His methodological focus is primarily on computational modelling and mixed-methods. He and his colleagues have spent the past ten years developing a new case-based, data mining approach to modelling complex social systems and social complexity, called COMPLEX-IT, which they have used to help researchers, policy evaluators, and public sector organisations address a variety of complex public health issues.



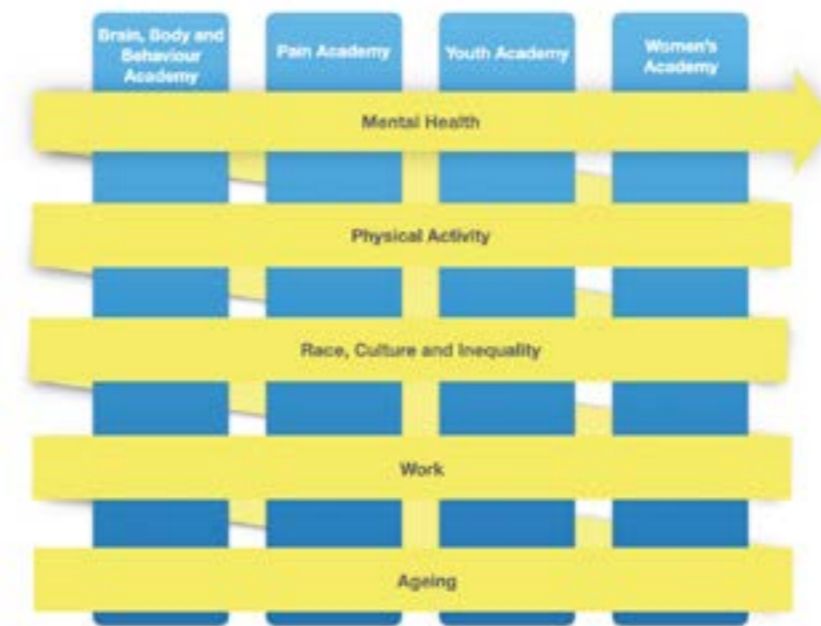
Dr Jonathan Wistow
ECR Director
jonathan.wistow@durham.ac.uk

Jonathan is ECR Director at the Wolfson Research Institute for Health and Wellbeing at Durham University, UK and an Associate

Professor in the Department of Sociology. He has a background in political science and local government studies and has now moved into the fields of health inequalities, complexity, climate change adaptation, and air pollution and brain health.

Most recently he has written a Policy Press book on 'Social Policy, Political Economy and the Social Contract' and co-authored (with Dr Luke Telford, University of York) a Palgrave Pivot book on 'Levelling Up the UK Economy'. Across these areas he is interested in the role of policy relative to the wider socio-economic contexts and systems it seeks to influence. In his spare time he tries to play electric guitar and work on his model railway.

Challenge Academies



Each Challenge Academy has been carefully built to address local and global unmet need in health-related issues.

Closely aligned with the Sustainable Development Goals, these Academies have the interdisciplinary approach unique to Durham University built in. In this way, each Academy can address major problems in health and wellbeing, but also be responsive to new challenges as they arise.

By addressing issues of race, mental health, physical activity etc. in each of our Academies, we can ensure a holistic approach, increasing our depth of understanding leading to impact for all.

Our Academies are comprised of projects that use an interdisciplinary approach, to investigate issues from multiple angles. Within the Challenge Academy Matrix, we can ensure a further level of enquiry meaning that health and wellbeing is understood from many facets of influence (e.g. the reciprocal influence of mental health in pain).

For more information on our academies and current projects can be found later in this report, as well as on our website.

Our Fellowship and Postgraduate Associate Scheme

The Institute's Fellows come from a diverse range of disciplinary and professional backgrounds across Durham University and organisations with which we collaborate.

Fellowship is open to all academic and research staff of the University who subscribe to the Institute's aims and undertake and publish research using an Institute affiliation. The purpose of Fellowship is to create a research community that subscribes to the Institute's aims and has the opportunity to share in its activities, resources, support and collective reputation.

The Institute also offers Postgraduate students the opportunity to become Postgraduate Associates (PGA) of the Wolfson Research Institute for Health and Wellbeing.

The Institute's Postgraduate Associates scheme is open to all Postgraduates, from any department within the University, who subscribe to the aims of the Institute and undertake to acknowledge the Institute when presenting or publishing their work.

If you would like to apply to become a Fellow or a Postgraduate Associate please visit durham.ac.uk/research/institutes-andcentres/wolfson/about-us/people



Our ECR Community

As the Wolfson Research Institute for Health and Wellbeing (WRIHW) our ECR community mirrors the interdisciplinary commitment of the WRIHW, with PhD students in anthropology illuminating a brighter side to Ayahuasca tourism in South America, peers in bioscience ironing out some truths about dementia, and a wide variety in-between. Improving health and wellbeing is not restricted to a particular academic discipline, and neither are we.

The main goals of the ECR committee are to increase the sense of community between ECRs within the WRIHW, to increase the visibility of ECRs within the WRIHW, and to wider audiences, and also to offer ECRs within the WRIHW opportunities to develop their research, CVs, understanding of what a career in research can look like and what their skills can bring to the world beyond.



Action Learning Sets

The WRIHW organise Action Learning Sets that focus on developing external engagement experience, networking, and peer support among a small cohort of early career researchers (ECRs) working in the broad area of health and wellbeing. We recruit across all faculties and departments and will be taking applications for the next Action Learning Set in 2023.

An Early Career Researcher wrote;

“For me the ALS highlighted the importance of self-reflection, and how taking the time to reflect on our experiences and skills in a deliberate and candid way can unlock so much potential. I feel like I’ve learned a valuable skill that I plan to continue using in my research career going forward.”

Through being involved, participants form a facilitated supportive peer group in which they have had the opportunity to connect with others from different academic disciplines to share ideas and develop plans for engaging with relevant stakeholder groups or individuals.

The Action Learning Sets include more experienced academic colleagues and relevant professional support staff, who offer mentorship and practical guidance on developing connections and initiating and engaging in research related conversation with external partners. Involvement in the action learning set has offered participants the opportunity to act as advocates for the Health@Durham strategy and raise the profile of Durham’s broad base of health-related research to external audiences.

Doctoral Training Programme

The Wolfson Research Institute for Health and Wellbeing has been delighted to enter year three of the WRIHW’s Doctoral Training Programme (DTP), an initiative focused on supporting and developing doctoral students from all four faculties of Durham University working in the broad area of health-related research.

Our DTP consists of a series of events and activities, including but not limited to Interdisciplinary Health and Wellbeing Research Workshops, a Mentoring Scheme, Training Need Analyses, Career Planning and Employability Development, and Research Conferences. We now have three cohorts of DTP students, who work on a wide array of health-related research, from women’s reproductive health and contraceptive use, to trauma, community gardening and wellbeing, and harmful sexual behaviour displayed by children and young people.

Through being involved our series of events and activities, our DTP students have not only received additional support and development opportunities beyond their departments but also connected with other students and researchers from different academic disciplines working in health-related research. The programme will offer mentorship and practical guidance on the possibility of interdisciplinary research on health and their pathways to implementation that is of prime importance to the career ahead.

Our Professors in Practice

Professors in Practice recognises the expertise and experiences of senior business professionals across a wide variety of disciplines and sectors. By enabling such individuals to share their skills directly with researchers and the academic community, they can bring their practical insights, experience and distinction to our Fellows, ECRs, Postgraduate associates and Challenge Academies, enabling them to engage directly with public policy and business practice through their research.

Professor Nicola Wilson WRIHW Professor in Practice in association with the Psychology Department

Nicola’s early career began as a CBT therapist in adult mental health psychological services, with an initial 15 years’ experience of service design and strategic leadership of mental health and wellbeing services within the NHS and higher education sectors and programme leadership of undergraduate and postgraduate study pathways in mental health and wider applications of CBT. After leaving the University sector - from 2012 until 2015 - Nicola went on to lead a team of health professionals hosted within the NHS to build engagement, knowledge exchange and research collaboration between the North of England and regions across Europe, brokering European health and life-sciences project partnerships, building consortia, facilitating valuable knowledge exchange opportunities and creating informal, trans-European networks of clinical and research excellence.

Until the end of 2021, Nic was Deputy Chief Executive at the Northern Health Science Alliance (NHSA).



Alan Foster MBE WRIHW Professor in Practice in association with the Department of Mathematical Sciences

Integrated Care System Executive Lead, North East and North Cumbria Integrated Care System

Alan is an accountant by profession and has worked in local health authorities and NHS trusts since 1986, becoming Chief Executive of North Tees and Hartlepool NHS Foundation Trust for 10 years from 2007. He has held various health related Chairs including that of the critical care network across Durham and Teesside. He has much experience in the development in patient services and the integration of hospital and community services. More recently, Alan has been involved in the implementation of new IT systems and electronic patient records which has led to his passion for the Integrated Care system which went live in March 2019. We look forward to organizing events with Alan in the near future to allow many of you to interact with Alan and his wealth of experience.



Blythe Crawford CBE WRIHW Professor in Practice in association with the Department of Psychology

Station Commander, RAF Leeming and Commandant, Air & Space Warfare Centre

Comdt Crawford has long and distinguished career in the RAF but has also commanded in all ranks across Joint and Coalition forces in a number of campaigns and arenas. As an experienced Officer with a demonstrated history of working in the Defense & Space industry he has strong professional skills in Crisis Management, Intelligence Analysis, Military Aviation, Intelligence, and Airworthiness. Comdt Crawford is an innovator of health and safety provision for his personnel and their families on bases under his remit and is working with WRIHW to establish and evidence the value of these interventions



Honorary titles within the Wolfson Research Institute for Health and Wellbeing are conferred upon persons of appropriate distinction, other than members of staff, who have an on-going association with the University in the area of research. They are leaders in their field, and below is a list of our current Honorary Professors.

Professor Andrew Owens

Professor Andrew Owens is a consultant cardiac surgeon and Director of Innovation at South Tees Hospitals NHS Foundation Trust, where he has also held the position of Director of R&D and Clinical Director for Cardiothoracic Surgery. He sits on the Executive of the Clinical Research Network North East and North Cumbria and is an elected trustee of the Society for Cardiothoracic Surgery in Great Britain and Ireland.

His clinical interests include surgery of the aorta, aortic valve and minimal access cardiothoracic surgery, including transcatheter aortic valve implantation (TAVI); he is also a TAVI proctor (USA and Europe) for Edwards Lifesciences. He is currently an investigator in an NIHR funded trial of minimally invasive cardiac surgery. He is a Fellow of the Royal Colleges of Surgeons of England and in Ireland, has held fellowships from the National Heart Foundation of Australia and Society of Cardiothoracic Surgeons of Great Britain and Ireland, was winner of the McCormack Medal in cardiothoracic surgery and awarded a Hunterian Professorship by the Royal College of Surgeons of England.



Professor Paula Whitty

Professor (Dr) Paula Whitty is the Director of the North East Quality Observatory Service (NEQOS) as well as the Implementation Lead for the North East and North Cumbria's Applied Research Collaborative (ARC NENC) and Joint Director of Research, Innovation and Clinical Effectiveness at Cumbria, Northumberland, Tyne and Wear NHS Foundation Trust.

Previous posts include the national Lead for the 'Better Metrics' project and the Clinical Effectiveness Lead at the Healthcare Commission. Originally trained as a consultant in Public Health, Paula continues to be an accredited Public Health Physician and has a Doctorate in patient-reported outcome measurement.

Paula's current research interests are in 'implementation research' and she has previously collaborated with Professor David Hunter in Durham University's Centre for Public Policy and Health on the evaluation of the 'North East Transformation System'. Paula is an Honorary Professor of Practice at Newcastle University.



Professor Sam Eldabe

Professor Eldabe is an NHS consultant based at South Tees NHS Foundation Trust with 18 years' experience. He is a consultant in anaesthesia and pain medicine at the James Cook University Hospital and clinical professor of anaesthesia and pain medicine at Exeter University.

His interests include the role of medical devices in improving patient care. A background in anaesthesia has given Sam a broad exposure to all classes of medical technologies from simple Class I devices to the more complex Class IIB. Work as a chronic pain treatment specialist has afforded Sam experience in research with various class III active implantable devices. He has published more than 60 articles on the subjects of pain relief and cost-effectiveness of various pain procedures.



Professor Emily Oliver

Professor Emily Oliver is a Chartered Psychologist and Associate Fellow of the British Psychological Society, a Senior Fellow of the Higher Education Academy, and a Fellow of Fuse, the Centre for Translational Research in Public Health. Her research takes the form of two inter-related strands. First, motivation, in particular how this is sustained and strengthened during crises. This includes understanding how and why people cope differently, with a focus on mental health outcomes.

The second strand focuses on translating these ideas to design equitable interventions and policies to support health and wellbeing. Here, the role of physical activity is centred, alongside consideration of how activity-based interventions can engage individuals or groups who may be excluded from standard approaches or services.



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Dr Karen Hind



Discipline: Bone and body composition - Mechanical loading and endocrine influences on bone strength - DXA imaging methods Athlete Health - Concussion and sub-concussion - Bone and body comp - RED-S - Female Athlete Triad - Retired athlete health

Over 15 years experience in bone, body composition and medical imaging research. Leading and managing academic, clinical and industry research to successful completion, scientific writing, extensive peer reviewed publication record, developing teams, networks and partnerships, managing budgets, and leadership of committees and research groups.

Dr Doug King



Experience: Registered Comprehensive Nurse with 25 yrs experience in medical, surgical, orthopaedics, mental health, Emergency and now Clinical Nurse Specialist in Emergency Medicine. Retired serviceman from the Royal New Zealand Navy (1977-1987) and Royal New Zealand Nursing Corps (1995-2000). Awarded NZOSM, NZGSM(IO) and NZDSM(R) Medals. Recipient of Te Amorangi National Māori Academy Excellence Award, PhD New Investigator Award – AUT University and PhD Faculty of Health and Environmental Sciences Award for translation of thesis to publication.

Research Overview: Focus on researching injuries in sports by investigating injury mechanisms at the amateur level of participation to identify possible injury reduction strategies, sports-related concussion assessment and management through to rehabilitation focusing on transferability of the research to non-sporting environments focusing on intimate partner violence and non-accidental injury.

Dr Frances Cole



Frances Cole is a recently retired GP passionate about quality primary care and community management of persistent pain since in 1996. She gained a postgraduate diploma in CBT therapy in 1993-4 via Newcastle CBT centre & University of Durham and focused on delivering biopsychosocial approaches to persistent pain management.

In 1996 she and colleagues set up the first primary care based pain management programmes in Bradford, UK taking only referrals from GPs! Patient outcomes were crucial to see whether CBT based pain management programme approaches made a difference. The outcomes found people with pain had significantly less anxiety, depression, improved physical health and, most of all, their confidence to cope with their lives despite the pain had doubled.

Since then Frances has worked in pain rehabilitation services across Yorkshire and with collaboration with patients and clinicians both in primary and specialist care in the UK, created numerous pain management resources. She has co-created numerous books and other resources; for example Overcoming Chronic Pain – CBT self-help book, recommended by Reading Well Agency 2013 and 2017 and An introduction to Living Well with Pain, 2017. She commissioned Bob Lewin, Professor of Cardiac Rehabilitation, York University, to create The Pain Management Plan and collaborated with Pain Management programme services around the UK on its evaluation in NHS services use.

Our Honorary Fellows cont.

Balbir Singh



Balbir Singh is the Artistic Director and CEO of Balbir Singh Dance Company, founded in 2005. Prior to that he ran Diversity Dance Company. He trained at the Northern School of Contemporary Dance, Leeds, graduating in 1995.

Balbir conceived the ground-breaking Unmasking Pain project, exploring creative approaches to pain management through dance and other art forms. This is a partnership between BSDC, Durham University, Leeds Beckett University, Live Well With Pain and is produced by Space 2 in Leeds. Unmasking Pain was the 2023 winner of the FUSE award for Innovation in Communication.

Previous career highlights include selection for Arts Council England's Links scheme partnering NPOs with the Royal Opera House; iMove 2012 Cultural Olympiad Commission performance of Synchronised at Ponds Forge swimming pool and presenting work at festivals around the world including in Bilbao, Canada, Edinburgh, Germany, India and UAE.

Dr Daniel Glassbrook

Discipline: Biomechanics – Concussion - Sports Science – Wearable Technology



Daniel is an experienced sport scientist with previous positions in Premiership Rugby in the UK, and the National Rugby League in Australia.

With a research foundation in biomechanics, Daniel's research has focused on the use of wearable technology such as GPS and inertial measurement units to quantify and understand the running demands of professional rugby league match-play, so that this information could better inform practitioners and high-performance staff when making decisions around player load. More recently, Daniel's research has focused on the assessment, recording and management of brain health post-concussion, and general neurocognitive performance in athletes from a range of sports. This area of research has potential for generating large research impact due to ongoing societal concerns about athlete sub-concussive and mild traumatic brain injury head impacts, and the need to identify strategies to improve player welfare.

Ms Louise Trewern



Louise Trewern has lived with pain since childhood. After years of strange illnesses and infections, inconclusive tests and persistent pain, Louise was diagnosed with Fibromyalgia and Osteoarthritis. She was prescribed opioid medication for back pain, which increased over a 13 year period to dangerously high levels, along with a cocktail of other drugs such as antidepressants and benzodiazepines. With support from her local pain service Louise reduced and eventually came off her opioids and learned to self-manage her pain in other ways. She considers that this process literally 'saved her life.'

Louise today is the Lead Lived Experience Trainer at Live Well With Pain & a very passionate patient-advocate, Immediate Past Vice Chairwoman of The British Pain Society's Patient Voice Committee. She is on Executive Committee of The Physiotherapy Pain Association and Chair of the Get Involved – Evolving Through Patient Experience Committee at Torbay Hospital Pain Service, as well as numerous other projects including supporting and advising Live Well with Pain.

Ms Julie Ward



Julie was a Labour MEP for NW England from July 2014 to January 2020. She was vice chair of the culture and education committee and a member of the committees for women's rights and gender equality, regional development, and economic and monetary affairs. She co-founded a parliamentary intergroup on child rights and was co-president of the anti-racism and diversity intergroup. She served on the delegation for relations with Bosnia Herzegovina and Kosovo and was a member of the EU-African, Caribbean and Pacific joint parliamentary assembly. Julie is a strong advocate and supporter of our WRIHW Durham Arts-4-Health community Hub and our Unmasking Pain projects. (<https://yorkshirebylines.co.uk/news/health/living-well-with-pain/>).

Our Honorary Fellows cont.

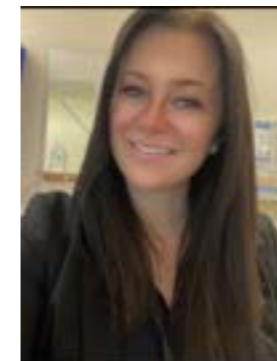
Prof. Dr Thorsten Fögen



Thorsten Fögen has degrees in Classics (Ancient Greek & Latin) and General Linguistics. He specialises in Latin literature and culture from the late Republic (first century B.C.) until the early/middle Empire (first and second centuries A.D.), but he has also published on late antiquity and on Greek literature. Among other areas, his focus is on ancient technical texts, the history of science and scholarship, epistolography, epigram, satire, animals in antiquity, the history of linguistic ideas, literary criticism and rhetoric.

His published works include a book on Roman authors' attitudes towards the Latin language, including the stereotype of the 'poverty' of Latin ('Patrii sermonis egestas': Einstellungen lateinischer Autoren zu ihrer Muttersprache, Munich & Leipzig 2000: Saur), as thematised in particular by Lucretius, Cicero, Quintilian, Aulus Gellius and late antique authors. He also wrote a comprehensive study on Roman technical writing, with a focus on Vitruvius, Columella, Pliny the Elder and Frontinus (Wissen, Kommunikation und Selbstdarstellung. Zur Struktur und Charakteristik römischer Fachtexte der frühen Kaiserzeit, Munich 2009: C. H. Beck).

Dr Laura Hissey



Dr Laura Hissey DHealthPsy, MSc, BSc. is a HCPC Registered Practitioner Psychologist who specialises in Pain Management, with over 15 years' experience of working in specialist multidisciplinary pain teams in both primary and secondary care NHS pain services. She is the Lead Trainer for Live Well With Pain where she is responsible for leading the national roll out of The Ten Footsteps Training Programme to Health Care Professionals working in Pain Management.

She is the Psychology Lead for Pain Services at University Hospitals Birmingham NHS Foundation Trust in the West Midlands. She provides clinical leadership for the psychology service within the department and works collaboratively with multidisciplinary and managerial colleagues to achieve effective, evidence based psychological service provision for people with long-term pain. Within her clinical practice, she provides highly specialist psychological assessment and interventions to support people to better understand and effectively self-manage a wide range of long-term pain conditions. Laura's research interests include understanding pain beliefs and adjustment to chronic pain; as well as understanding the role of psychosocial factors in pain; and promoting the long-term maintenance of behaviour change.

Dr Jordan Mullard



Jordan is an interdisciplinary social scientist specialising in the qualitative study of intersectionality, race, marginality and health inequality. Her recent research as part of an NIHR funded project housed at Leeds University looks at long covid (LC) among marginalised communities and the impacts and barriers to quality of life and access to support. Her doctoral work examined identity-making and social mobility among Dalits in the Thar Desert of India during a period of environmental and economic crisis. She has recently completed a three-year ethnographic study (whilst holding academic positions in both the anthropology and sociology departments at Durham University) of emergent antiracism during the covid-19 pandemic and the Black Lives Matter movement in the North East. Intellectually Jordan is interested in theorising the impact of 'crises' be them social, environmental or health and unpacking the interrelations between inequality, culture and identity to explore newly emerging patterns of social transformation. Passionate about action in the world, Jordan also has an extensive community development, policy and consultancy background. She has recently co-founded an emerging organisation that links anti-racism work, community organising, and Black-led cultural and heritage organisations together in the North East. She is interested in exploring social prescribing and the role of nature, arts and cultural heritage community groups for creating wider belonging and reducing health inequities. Jordan is currently taking a position as Senior Research Associate in Newcastle University's Population Health Sciences Institute where she will broker and lead research for the NIHR Applied Research Collaboration (ARC), Newcastle University and the Health Determinants Research Collaboration in Gateshead Local Authority.

We don't often think about how what we do and how we behave is contingent on what is going on in our brain and how that is affected by what is happening in our body.

In fact, it is a tri-ciprocal relationship all wrapped up in the environment in which we find ourselves. We cannot understand health and wellbeing without including all three in our enquiries and understanding their effect on each other. See examples below how damage to the brain affects our behaviour (stroke) how what we do with our bodies affects our brain and behaviour (concussion) and how the environment our bodies are in can affect our brain and behaviour (delirium).



Enlighten Intensive care

Delivering life changing experiences, our work is designed to positively transform healthcare spaces for all (<https://laurajohnston.com/>)

Patients: Experiencing nature and the outdoors is a recognised way to treat physical and mental health without the use of drugs. Our aim is to change the view from a hospital bed by improving both external and internal spaces with an evidence-based approach to design.

Visitors: Visiting a loved one in hospital can be immensely stressful. By transforming healthcare environments, we strive to reduce anxiety and create a more positive visitor experience.

Staff: NHS staff have experienced increased levels of stress and are now having to work in the post-covid healthcare landscape. Well-designed break-out areas, outdoor spaces, or just peaceful places to go to, can help to protect the general wellbeing of NHS staff members.

What patients have said...

"I think the sculptures are very important, they're beautiful. It's art from a different perspective. I personally think the sculptures do help."

"I thought it was so peaceful and beautiful, away from the clinical environment, it was so lovely."

"It's important that everyone can access it, especially in bed. I wouldn't have thought that being wired up with oxygen that it would be possible to spend time there, but it was. It's there for people in beds, those who can walk, maybe those in wheelchairs."

"Flowers were in raised beds so you can smell them, that's important, but it wasn't overpowering."

"It was nice to feel the fresh air, feel normality and see the beautiful plants that were in the garden."

"It brought a bit of colour back to my face as well [being outside] and made me think, there is life still going on."

"I class that [going to the garden] as the turning point in my improvement, and my moving on. It was the next day they moved me from intensive care down onto one of the other wards, to start getting rehabilitated."

"It gave me hope and determination that I can do this, I can move"

We are currently preparing publication manuscripts for submission, a report and film for promoting policy change in ICU design both in UK and in India.



Project Cross Cuts
Mental Health Academy, Ageing Academy and Race, Culture and Inequality Academy

Unmasking and Enlightening Dementia

Our South Shields: Thanks for the Memories

This Historic England funded project is dedicated to bringing to life the overlooked history of local South Asian and other ethnic minority groups from South Shields affected by dementia. South Shields boasts a substantial South Asian community, with many first-generation residents, especially of Bangladeshi descent, who settled in the area during the 1950s. The town has also been home to a Yemini community from the early 20th century. Working collaboratively with local people, Balbir Singh Dance Company (Arts Council England - National Portfolio Organisation) and Wolfson Research Institute for Health and Wellbeing at Durham University Prof Paul Chazot), Beamish Museum's purpose built 1950s style Health & Wellbeing space (Michelle Kindleysides), which is a copy of original Aged Miner's Homes in South Shields, will provide an inclusive and enriching space to explore themes around family, work, leisure, ageing and health. Together this dynamic cultural partnership will explore and celebrate South Shields' diverse cultural heritage and support the wellbeing of people affected by dementia.



Project Cross Cuts
Mental Health Academy, Ageing Academy and Race, Culture and Inequality Academy

Rugby Sport Health and Concussion Biomarkers

Post concussion syndrome (PCS) dual drug Trial has commenced: The Northern Accelerator funding ensured the adoption and approval of the trial by Newcastle NHS Foundation Trust, and MHRA ethics approval for the trial. The PCS trial is currently ongoing and recruiting. The funding also has created impact and international interest in the approach and trial. Currently in advanced discussions with academic and clinical colleagues in NZ, Australia and India, we hope to run a number of large funded multi-centre PCS trials. A new PCS diagnosis tool developed by our NZ colleagues is currently under review here in the NE.

The health and well-being of retired rugby union and league players, particularly regarding the long-term effects of concussions, are of major concern. Concussion has been identified as a major risk factor for neurodegenerative diseases, such as Alzheimer's and Amyotrophic Lateral Sclerosis (ALS), in athletes engaged in contact sports. This study aimed to assess differences in specific biomarkers between UK-based retired rugby players (UK Rugby Health Study) with a history of concussion, and a non-contact sports group, focusing on biomarkers associated with Alzheimer's and ALS. Serum biomarkers (t-tau, RBP-4, SAA, Nf-L, retinol) and serum-derived exosomes (beta-amyloid, p-tau181, p-tau217, p-tau231) were analyzed. These biomarkers should be explored further for the prediction of future neurodegenerative outcomes including ALS and CTE, (both tauopathies), in those with a history of concussion. The study has been completed and is under review for publication.

Project Cross Cuts
Mental Health Academy, Youth Academy and Physical Activity Academy



Enlightening covid brain fog PBMT1070 clinical validation

Several people continue to experience persistent cognitive issues even after recovering from the initial phase of COVID-19, including with what we know as brain fog, a cognitive difficulty that have left researchers searching for solutions. Recent work has proposed that blood clots may also underlie COVID-induced brain fog in the later stages of COVID-19 infection, so-called Long COVID, a condition thought to affect 3.1% of the population. The Blood Clot Connection was examined blood tests from 1,837 COVID-19 hospital patients to look for potential biomarkers linked to potential cognitive problems. What they discovered was vital: patients who later developed cognitive problems, including brain fog, had high levels of two proteins at the time of COVID-19 infection. These two proteins, fibrinogen and D-dimer are essential in blood clotting.

These findings support the hypothesis that blood clots could be a causative factor behind post-COVID cognitive problems. Implications and Potential Solutions: There has been a worldwide effort to prevent venous thromboembolism (VTE) in COVID-19 patients (during hospitalization and after discharge), as well as to determine the best management of patients with both COVID-19 and VTE diagnoses, as a result of the growing body of evidence suggesting that COVID-19 may predispose thrombotic disease. The necessity for non-drug treatments for patients with COVID-19-induced thrombosis is highlighted by the possibility that some of the COVID-19 therapies under development may have different drug-drug interactions with popular antithrombotic drugs.

In a recent review and a talk during the first lockdown (1), a proposed change in platelet aggregation—a process where blood platelets stick together to form a clot. This suggests that photobiomodulation using 1070nm light may have the potential to lower platelet aggregation, reducing the risk of fatal thrombosis. Importantly, in other work, neither the combination therapy nor the delivery of photobiomodulation therapy (PBMT) had a discernible effect on the rise in haemorrhage incidence brought on by tPA (tissue plasminogen activator). This means that photobiomodulation didn't make bleeding more likely, making it a safe option either by itself or with another treatment called tPA, which is a medication used in medical settings, often in emergency situations like stroke, to break down blood clots with the aim to restore blood flow to the affected part of the body. According to this study, devices utilizing the mentioned wavelength (1070nm) have shown potential benefits and safety for individuals experiencing platelet aggregation. An independent clinical study in 2023 reported that PBMT1070 offered positive effects on brain fog (defined by ERPs) and cognitive deficits, in people who experienced Long COVID's brain fog, possibly attributed to the 1070nm wavelength's suggested thrombolytic effects (2). The revelation that blood clots may be a driving force behind brain fog in Long COVID patients represents a significant breakthrough in our understanding of this perplexing condition. These findings offer hope for those experiencing cognitive issues, bringing us one step closer to effective treatments and solutions.



Project Cross Cuts
Mental Health Academy and Ageing Academy



InSPIRE: Innovating UK clean air policies to prevent cognitive disorders across the lifespan, particularly for vulnerable urban populations

Air pollution is the largest environmental risk to public health in the UK with over 9 out of 10 people living in areas which exceed World Health Organisation (WHO) Global Air Quality Guidelines. The most vulnerable to poor air quality include children, the elderly, and those with pre-existing medical conditions. The greatest health burden of air pollution is experienced in the most socio-economically deprived parts of densely populated urban areas with those most susceptible typically experiencing the highest exposure levels, thereby widening existing health and social inequities.

Epidemiological studies have shown that long-term exposure to air pollution (over years or lifetimes) reduces life expectancy, mainly due to cardiovascular and respiratory diseases and lung cancer. More recent evidence suggests an association with adverse cognitive and brain health outcomes, including early-life cognitive and neurodevelopmental impairment and later-life increased risk of cognitive decline and dementia.

The UK Clean Air, Net Zero and Levelling-Up Strategy ambitions provide a unique public health policy context for central and local government to deliver place-based interventions that have co-benefits for air quality, climate change and brain health. At the city level, urban design is a key intervention measure, as it influences where air pollution is produced, how it disperses, how people are exposed and what can be done to mitigate or protect against its impact. Urban design also has a key role in delivering nature-based solutions to address air pollution, climate change and meet net zero targets. These design strategies need, however, to be matched by scientific evidence and appropriate guidelines, including the development of bespoke policy strategies to optimise their impact and mitigate any unintended consequences.

Project Cross Cuts
Race, Culture and Inequality Academy, Mental Health Academy and Ageing Academy

InSPIRE, led by Professor Brian Castellani, Sociology Department, was developed in 2020 from a £41k UKPRP consortium development grant. Since then, we have received two ESRC IAA grants in 2021-2022 (RI200189 = £6.5k, RI200191 = £15k) and are presently widening our remit to address multiple forms of environmental exposure (called the exposome) that intersect with air pollution, from temperature change and water quality to noise pollution and the stress of urban living. Our remit is based on the very real and immediate need for a knowledge hub/network that brings together research, practice, and policy guidance to co-produce solutions, tools, translational materials, and to develop innovative research into the historical links between air quality and brain health in the UK.

Here are some of the projects we are engaged in presently:

- An academic publication setting the policy agenda in this area.
- A policy brief to share with central government and public and third-sector organisations.
- Research on the role urban planning in the UK has on air quality and brain health across the life course, including dementia post diagnosis.
- A one hour 'healthy air and happy brains' lesson plan for schools.
- Several stakeholder workshops.

Centre for Global Infectious Disease

Microbial pathogens are major threats to global human health and food security. For example, Neglected Tropical Diseases (NTDs: 20 diseases, 19 of which are caused by bacteria, viruses, fungi, protozoa and helminths) affect a staggering 2.7 billion people.

This problem is exacerbated by the rise of drug resistance and a lack of investment in antimicrobial discovery, issues recently highlighted by the World Health Organisation in a report predicting the dawn of a post-antibiotic era. Drawing on expertise at Durham and partner organisations across the biological, chemical and physical sciences we seek to synergize research foci to develop collaborative efforts for the identification and inhibition of novel antimicrobial targets, ultimately leading towards the development of new therapies and preventative strategies.

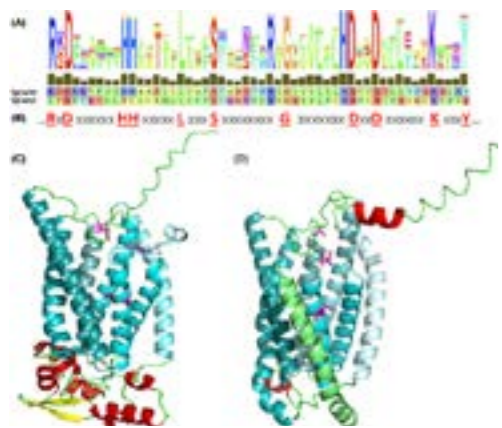
In 2023 we continued to work in a trans-national fashion to combat some of the globe's most pressing health problems.

Innovate UK Smart grant (2023-2025) £475,588; 10070618.

Work by a PhD student at Durham University in partnership with LightOx Ltd, has identified a novel compound that, when activated by light, generates cytotoxic reactive oxygen species (ROS) that effectively destroy bacteria. Preliminary studies have demonstrated that the LightOx78 molecule has potent antibacterial activity against pathogenic microbes, including drug resistant forms such as methicillin-resistant *Staphylococcus aureus* (MRSA). In this Innovate UK grant, LightOx and Durham University will partner to develop this novel, lightactivated antibacterial technology into prototype medical device products (by incorporation into a gel matrix or directly into dressings) for the elimination of infectious microbes that colonise chronic skin wounds. Experiments will be performed at Durham to validate antibacterial efficacy against major bacterial pathogens responsible for wound infections. If successfully validated, an effective prototype light-activated medical device will be marketed for wound treatments, with the potential to cut in half the number of interventions needed to heal an infected wound.

Project Cross Cuts
Race, Culture and Inequality
Academy

Toxoplasma ceramide synthases: Gene duplication, functional divergence and roles in parasite fitness.



Toxoplasma gondii is an obligate, intracellular apicomplexan protozoan parasite of both humans and animals that can cause fetal damage and abortion and severe disease in the immunosuppressed. Sphingolipids have indispensable functions as signalling molecules and are essential and ubiquitous components of eukaryotic membranes that are both synthesized and scavenged by the Apicomplexa. Ceramide is the precursor for all sphingolipids, and *Toxoplasma* encode two ceramide synthases - TgCerS1 and TgCerS2.

Here, Koutsogiannis, Pohl and Denny characterise TgCerS2 as catalytically inactive but key for parasite pathogenicity. Furthermore, they show that this 'pseudo' enzyme is only found in *Toxoplasma* and other Apicomplexa. As such it may represent an attractive drug target.

Outreach Activity

1. Funded by UKRI, Durham and COMSTECH, in February 2023 Profs Steel, Pohl and Denny, with global colleagues, delivered a workshop in Kenya. This enabled early career scientists from across Africa to be introduced to approaches to drug discovery and diagnostic development for leishmaniasis. Due to high demand and positive feedback, a second workshop in this field is planned for Addis Ababa, Ethiopia in 2024.
2. In September 2023 Dr Sharples spoke to GCSE and A level students at Yarm School on the impact of bacterial pathogens and our research efforts to tackle the problem.
3. With support from the Durham Seedcorn Fund, in November and December 2023 Profs Pohl and Denny engaged in research and education activities in Karachi and Islamabad, Pakistan. Furthermore, Durham researcher Dr Zisis Koutsogiannis performed diagnostic validation work at ICCBS, Karachi during this time.

Unruly Microbes: Epidemics, Infections, and Ecologies of Change in Historical Perspective

The COVID-19 pandemic has exposed the extent to which human-microbial interactions are mediated by ecological change widely construed, from urban and rural land use change driven by global commerce patterns to shifts in internal microbial populations within bodies. While scholars have developed many frames through which to think about the embeddedness of disease in ecological change historically and in the present, these stories remain on the margins of more traditional biomedical studies and are often siloed into different disciplinary homes.

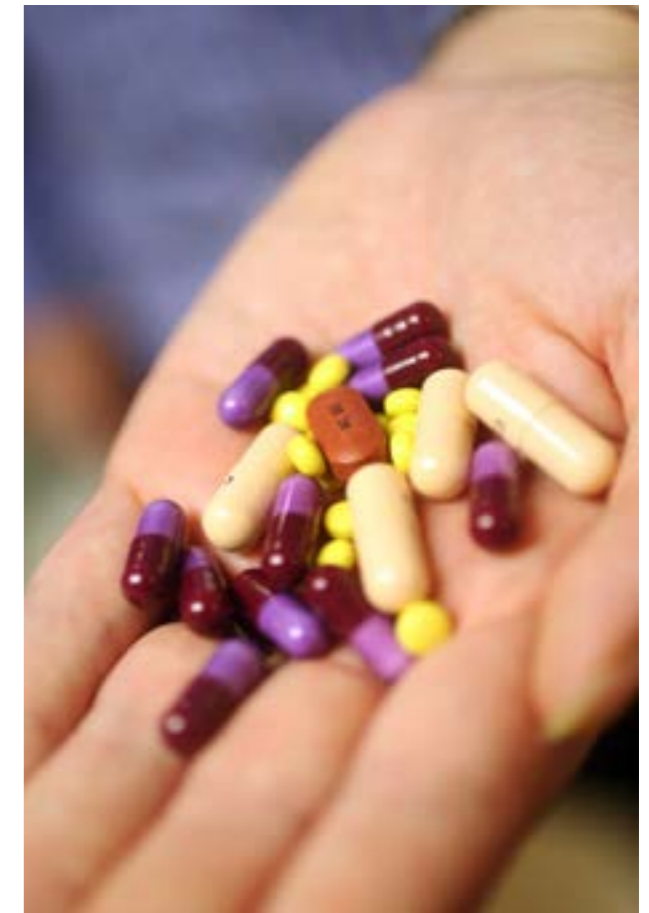
A goal of the CHMD for the last year was to draw on internal expertise to consider the range of approaches to historical epidemics, examine the methodologies and scope, and importantly, to generate a discussion among scholars working on these themes in a collaborative, interdisciplinary environment. Major activities engaging this topic included holding a bi-weekly reading group and hosting a thematically-relevant conference.

On June 22-23rd, the Centre for the History of Medicine and Disease welcomed 24 scholars from six different countries to participate in a conference on the topic of epidemics, infections, and ecologies of change in historical perspective. The aim of the conference was to bring together scholars of different disciplinary backgrounds to think through the relationship of epidemics to human-driven environmental change across time and space, and how the microbes implicated in these epidemics pose a distinct challenge to our existing triumphalist narratives of epidemiological transition and disease eradication (Bellamy Foster et al., 2021).

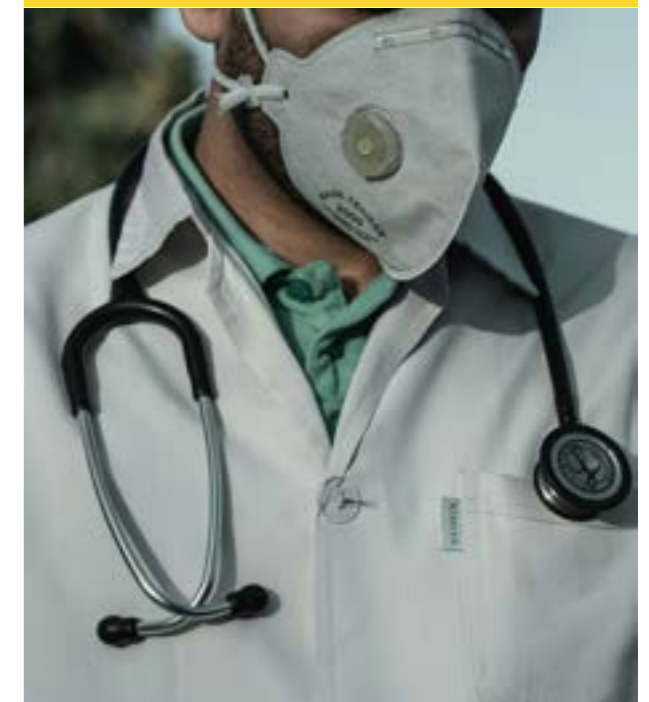
The conference brought together anthropologists, philosophers, epidemiologists, and historians to discuss a diverse but interconnected set of themes, including urban ecologies of epidemics; microbial challenges to governance; epizootics and more-than-human medicine; past and present responses to malaria and Ebola; narratives and concepts in health and ecology; and methodological approaches to interdisciplinary disease research. The keynote speaker, Tamara Giles-Vernick, of the Institut Pasteur, Paris, connected these wide-ranging themes through a discussion of the value of historical approaches to outbreak and epidemic investigation and breaking out of disciplinary silos, with reference to her own recent research tracing the genetic history of the primate virome. The group is currently assembling a proposal for a special issue on the key themes discussed in the conference. The CHMD's History and Philosophy of Medicine reading group is currently discussing drafts and themes, and will hold a workshop on the special issue on 7 June, 2024.

We would also like to offer special thanks to Professor Holger Maehle, who concluded his term as Director of the Centre for the History of Medicine and Disease at the end of last year, for his 23 years of diligent work promoting, supporting, and generating research in the History of Medicine at Durham.

Project Cross Cuts
Mental Health Academy, Ageing Academy, Race, Culture and Inequality Academy, Work Academy and Brain, Body and Behaviour Academy



Established in April 2001, the Centre for the History of Medicine and Disease (CHMD) is a University-approved Research Centre that provides a focus for cutting-edge, interdisciplinary research and postgraduate education in the histories of medicine, health, disease, medical ethics and science.



Durham Centre for Ethics and Law in the Life Sciences was established in 2011 and supports excellence in academic research, innovative teaching and public dialogue on the ethical, social and regulatory issues raised by the life sciences. This area is defined broadly to include issues relating to health, the environment and biotechnology. We seek to promote the exchange of ideas and the production of high-quality scholarship within and beyond the University. Our expertise spans a wide range of academic disciplines, including (but not restricted to) anthropology, biology, law, philosophy, sociology and theology.

Renewable Energy Law and Health

Some members of Durham CELLS examine law's role in maintaining or restoring supportive environmental conditions for the health of humans and other species in their research. Dr Olivia Woolley, the lead CELLS researcher in related areas, specialises in her research on law relating to ecological sustainability and to clean energy transitions. She was an invited speaker at conferences on these topics during 2023 at the Diplomatic Academy of Vietnam, the College of Europe, the University of Pisa, and Durham's Energy Institute. She is also the author of *Renewable Energy Law*, the first volume purposefully written on this topic for use as a textbook, which was published by Hart Legal Publishing in April 2023. The book draws on Dr Woolley's 10 years' experience of teaching on and research concerning uses of law to advance the global growth of renewable energy production. It will enable scholars and students, whatever their prior acquaintance with the topic, to access this vital field for addressing global environmental challenges and enhancing sustainability.



Project Cross Cuts

Mental Health Academy, Ageing Academy, Physical Activity Academy, Women's Academy and Youth Academy



Law at the Frontiers of Biomedicine

A new book was published in January by Professor Shaun Pattinson, co-Director of Durham CELLS (Centre for Ethics and Law in the Life Sciences). This book, entitled *Law at the Frontiers of Biomedicine*, was the product of a Leverhulme Major Research Fellowship. It presents an innovative legal theory and applies it to future developments in biomedicine. The book's legal theory reconceptualises the role of legal officials in terms of moral principle and contextual constraints ('contextual legal idealism'). It is applied by asking how a political leader or appeal court judge could address technological developments in biomedicine for which the current law of England and Wales would seem to be ill-equipped to respond.

A review published in *Medical Law International* declares: 'I would advise all biomedical lawyers to put this book at the top of their reading list'. A review published in the *Journal of Law and Medicine* concludes: 'An innovative, well researched and challenging analysis of novel issues in bioethics. It is interestingly constructed and engagingly written. It can be recommended to readers of the *Journal* as a thought-provoking and worthwhile call to analyse new technologies in new ways.'

Project Cross Cuts

Mental Health Academy, Women's Academy, Youth Academy and Ageing Academy



The Durham Centre for Imaging brings together cognitive neuroscientists engaged in neuroimaging research. The centre serves as a collaborative hub for interdisciplinary brain research between academic staff at Durham University and clinicians in the NHS. The centre is currently led by Dr. Anna Matejko (Strategic Director), Dr. Liam Norman (Co-Director of Operations), and Dr. Haem Lee Masson (Co-Director of Research). In 2024, the centre will inaugurate a new fNIRS lab at the Department of Psychology to study the pediatric brain.

In 2023, the centre also completed several innovative projects that focused on human social perception and spatial navigation. You can read more about some of the exciting research conducted at the Durham Centre for Imaging below.

Opening the fNIRS lab

Functional Near-Infrared Spectroscopy (fNIRS) is a brain imaging technique that measures brain activity in a non-invasive way. It detects near-infrared light that reaches the brain tissue and provides information about the changes in blood flow and oxygenation that occur when specific brain areas become active, much like fMRI. One of the advantages of fNIRS is its portability and flexibility, which makes it possible to conduct experiments in more natural settings. While an MRI requires participants to lie still on a table, fNIRS can be used during social interactions and movement. fNIRS is ideal for certain applications, particularly in scenarios where cost, mobility, and participant comfort are important considerations. This is particularly useful for studying infants who are constantly on the move. We will soon open our fNIRS lab to investigate the neural underpinnings of development, including attention, tiredness, language and numerical processing. These new projects are led by our PhD students Ms. Jost and Ms. D'Avino, and supervised by DCI members, Dr. Forbes and Dr. Matejko.



Project Cross Cuts

Race, Culture and Inequality Academy and Work Academy

How does the human brain interpret certain types of touch, such as a hug, as pleasant?

Most of us can quickly and accurately interpret the meaning of interpersonal touch, such as a hug being pleasant and a slap being unpleasant. This process involves social perception (making accurate interpretations of social cues) and somatosensory simulation (mapping the bodily experiences of others onto oneself). A new study led by Dr Lee Masson has identified the unique contribution of social perceptual and somatosensory networks in touch emotion recognition and characterized information flow across the brain as people view social touch scenes. EEG results revealed that the brain detects the social-emotional significance of observed touch very quickly - in less than 200 milliseconds after the touch occurs. With EEG-fMRI fusion methods, she found that the social-emotional meaning of observed touch is computed via a social perceptual pathway directly from the visual cortex, with only later involvement of somatosensory simulation. Her work suggests that this rapid processing through the social perceptual route may play a pivotal role in the quick and effective usage of interpersonal touch in social interaction. This study entitled "Rapid Processing of Observed Touch through Social Perceptual Brain Regions: An EEG-fMRI Fusion Study" is published in the Journal of Neuroscience in 2023.



How we move around our environment

Contrary to what has previously been thought, Professor Anthony McGregor and colleagues have recently found evidence that activity in the brain is determined by the type of learning being required to solve a problem rather than the type of information being learned (dynamic or static movement plans for example). A new project will help to understand what two different parts of our memory for movement systems (the hippocampus and the putamen) do when we have to find our way around or when we remember our way around. This work is important for what we know about learning but also how these abilities degrade over age.

Brain regions involved in processing third-person communicative interactions

The interpretation of social interactions between people is important in many daily situations. The coordination of the relative body movements between them may provide visual cues that observers use without attention to discriminate such social interactions from the actions of people acting independently of each other. Previous studies highlighted brain regions involved in the visual processing of interacting versus independently acting people, including posterior superior temporal sulcus, and areas of lateral occipitotemporal and parietal cortices. Unlike these previous studies, DCI focused on the incidental visual processing of social interactions; that is, the processing of the body movements outside the observers' focus of attention. In the current study, DCI used functional imaging to measure brain activation while participants were presented with point-light dyads portraying communicative interactions or individual actions. However, their task was to discriminate the brightness of two crosses also on the screen. To investigate brain regions that may process the spatial and temporal relationships between the point-light displays, DCI either reversed the facing direction of one agent or spatially scrambled the local motion of the points. Incidental processing of communicative interactions elicited activation in right anterior superior temporal sulcus only when the two agents were facing each other. Controlling for differences in local motion by subtracting brain activation to scrambled versions of the point-light displays revealed significant activation in parietal cortex for communicative interactions, as well as left amygdala and brain stem/cerebellum. The results complement previous studies and suggest that additional brain regions may be recruited to incidentally process the spatial and temporal contingencies that distinguish people acting together from people acting individually. This study, entitled "Incidental visual processing of spatiotemporal cues in communicative interactions: An fMRI investigation", is published in the journal "Imaging Neuroscience" in December 2023.

Project Cross Cuts

Youth Academy, Ageing Academy and Physical Activity Academy

Namaste Care- understanding the magic

Wolfson Research Institute for Health and Wellbeing doctoral student, Nicola Kendall, is exploring ways to evaluate a sensory intervention used to support people living with advanced dementia called Namaste Care. Giving people living with dementia a voice, Namaste Care is a sensory approach used to structure how we can spend time with someone in the later stages of dementia. It is a simple, person-centred intervention, which aims to improve the person's wellbeing and quality of life.

Nicola Kendall's PhD is looking at ways we can evaluate the effectiveness of Namaste Care, given that the person with dementia very often cannot express how they feel about it.

In January 2023, Nic engaged with the public as part of an Alzheimer's Research UK event held at the Life Centre, Newcastle. Given that a central theme of Namaste Care is helping people to continue to express their unique identity, Nic asked people to tell her who they were. This enabled some interesting conversations about what is important to people.

The Namaste Care study itself has progressed this year in a variety of ways. Three NHS Trusts are testing an observational measure that was co-developed from detailed consultation which took place last year. This measure is currently performing at 91% inter-rater reliability, with testing ongoing. Ethics approval for the collection of biological, physiological, and behavioural data has moved the study on to the recruitment of people living with dementia, a control group of healthy individuals and also measuring the caregiver's reactions. Initial data collected is looking significant. Once the results are collected and analysed, Nic will be inviting participants to a PPI event in the Spring of 2024 to share and discuss the results. Most importantly, she wants to give the participants the opportunity to send a message to policy and decision makers about Namaste Care.

Alongside the PhD research, Nic supports the work of Namaste Care International. She has written a training programme which is being delivered internationally to increase access to Namaste Care training and development for health and social care staff, families and volunteers.



Echolocators use "visual" brain areas in spatial navigation

Research over the past decade has revealed complex brain networks that allow humans to visually navigate through the world. But are those circuits specifically equipped to encode visual stimuli, or could they aid in navigation using any sensory modality? Liam Norman and Lore Thaler set out to answer that question in a brain-imaging study of a unique population of people: blind expert echolocators (EEs), who make clicking noises with their mouth and derive information about their surroundings from the returning sounds. The researchers used functional magnetic resonance imaging (fMRI) to focus on the occipital place area (OPA), which has previously been shown to guide navigation by providing boundary information. The brain imaging data show that expert echolocators (EEs) had unique responses to echo sounds compared to either sighted or blind participants that did not have experience with echolocation, and that EEs used the OPA for spatial navigation processing with echolocation. The work supports other recent research suggesting that the brain is not organized in a rigid way based on sensory modality, but rather may be more flexibly organized to perform a given task using multiple modalities. This study entitled "The occipital place area is recruited for echo-acoustically guided navigation in blind human echolocators" is published in the Journal of Neuroscience in 2023.

Project Cross Cuts

Mental Health Academy and Ageing Academy

The Centre for Research into Violence and Abuse (CRiVA) is dedicated to improving knowledge about interpersonal violence and abuse, and professional and societal responses to it.

2023 was a busy year for CRiVA since we recognised our 10th anniversary by holding a special event (with around 60 people in attendance, including Karen O'Brien our Vice-Chancellor and Warden) to showcase the breadth of the Centre's work over the last 10 years. We were joined by the Domestic Abuse Commissioner for England and Wales, Nicole Jacobs, who was particularly impressed by the poster presentations from the CRiVA Postgraduate Researchers.

Over the ten years, we have together published over 200 books and research papers, awarded over 40 PhDs, had over 15 awards relating to research impact, and reached over 1 million readers through our short pieces in *The Conversation*.



Poster Award

CRiVA PGR Janelle Rabe received the Best Poster Award at the European Conference on Domestic Violence in Reykjavik, Iceland. She was awarded it for designing a poster that had an original layout while also being readable and informative on a highly original topic. Her project is titled "Step up, Speak out! Co-producing knowledge with young people on addressing sexual violence through collaborative participatory approaches". It focuses on young people, aged 13-18 years old, involving them in addressing sexual violence through a series of participatory workshops, where they learn about the issue of sexual violence together with their peers in a safe, non-judgemental space.

The Believed Project

Dr Kate O'Brien and Dr Hannah King launched the final report for the 'Believed Project' titled 'Supporting Women in Prison who have Experienced Sexual Violence and Abuse'.

The Believed Project was established as a pilot in response to high numbers of women disclosing past sexual violence and HMP Low Newton and was underpinned by a specialist and intensive 20-week counselling service, a 12-week groupwork programme, and staff training in responding to disclosures.

This was a joint project with the Rape and Sexual Abuse Counselling Centre Darlington and County Durham and HM Prison and Probation Service.

Project Cross Cuts
Mental Health Academy

Overarching principles and practice guidelines for commissioning and delivering interventions for perpetrators of domestic abuse

CRiVA Director Professor Nicole Westmarland worked with other members of CRiVA and external organisations to produce the 'Overarching principles and practice guidelines for commissioning and delivering interventions for perpetrators of domestic abuse'. This was a piece of work commissioned by the Home Office to guide the future development of safe and effective interventions with people who perpetrate violence and abuse.

Through their analysis, CRiVA highlight three key peer support perspectives in healthcare reflecting particular theoretical perspectives, goals, and understandings of what is 'good health', we call these: biomedical (disease control/management), relational (intersubjective mutual support) and socio-political (advocacy, campaigning & social context).

Additionally, they identify three broad models for delivering peer support: service-led, community-based and social media. Models from other long-term conditions suggest that peer support for long COVID can and should go beyond biomedical goals and harness the power of relational support and collective advocacy. This may be particularly important when seeking to reduce health inequalities and improve access for a potentially hidden cohort of sufferers.

Novel machine learning models designed to predict organ failure in chemotherapy patients

Dr Noura Al Moubayad, Wolfson Fellow and Head of Applied Machine Learning and AI at Evergreen Life, centered on the development of a clinical testing and deployment pipeline for novel machine learning models designed to predict organ failure in chemotherapy patients. This work not only holds the potential to significantly improve the quality of life for patients undergoing chemotherapy but also streamlines the utilization of blood tests, a critical aspect of cancer care. Leveraging data from cancer patients across three prominent UK cancer care sites, with a primary focus on breast, colorectal, and Diffuse Large B-Cell Lymphoma cancers, our AI tool integrates electronic health records and blood test results from previous chemotherapy cycles. By predicting the likelihood of organ dysfunction in subsequent cycles, it empowers healthcare providers to personalize patient care, adjusting the frequency of blood tests based on individual risk profiles. This project, funded under the Biomedical Catalyst grant in collaboration with esteemed partners including UCL, UCL hospitals, and Evergreen Life Ltd., marks a significant advancement in precision medicine and patient-centered care.



Addressing the challenges faced by acute secondary care hospitals during periods of heightened demand

Dr Al Moubayad secured the NIHR Winter Pressure grant, addressing the challenges faced by acute secondary care hospitals during periods of heightened demand. With hospitals experiencing unprecedented pressures, exacerbated by high rates of avoidable hospitalizations and readmissions, our team embarked on developing explainable artificial intelligence models to optimize acute illness pathways. By leveraging early-stage information available upon a patient's arrival in the Emergency Department, our models identify opportunities for improvements in place of care, discharge safety, and follow-up planning. These insights not only enable clinicians to proactively recognize and manage risks but also facilitate optimal patient flow, alleviating strain on hospital resources. The findings from this project have been instrumentalized, being presented in the recommendation report presented by HDRUK and NIHR to the Department of Health and Social Care, signalling a step forward in shaping more efficient and effective healthcare delivery systems. The project is in collaboration with Northern Care Alliance NHS Foundation Trust.

The Virtual Physiotherapist

Professor Monekosso is Co-creating with patients and clinicians a device to support a patient undertaking physical therapy at home. Studies indicate that better outcomes are achieved with more frequent and higher intensity physiotherapy. Prof. Monekosso is co-creating with patients and clinicians a device to support a patient undertake physical therapy in the form of repetitive task training at home.

The device can be used standalone or supervised remotely by a clinician. When used in remote mode by clinician, it provides an effective way of managing patients in the community with a decision support dashboard for the clinician. The device has a camera to track limb and joint, assess quality of motion comparing to a reference and calculates a score. Based on the assessment a recommender can adapt the exercise or suggest a new exercise. Motivation to continue physical therapy at home alone is often a barrier for many patients. We address the issue of motivation with personalised feedback and elements of interactive and augmented reality tailored to individual patient. Thus, device enables more frequent 'AI-assisted' physical therapy, tailored to the individual, thereby improving outcomes and quality of life.

Another important feature of the device is the detection of compensatory movement when, for example, during repetitive training, a patient might compensate when fatigued by involving trunk and shoulder motion to complete the movement, impeding the recovery of function.

Further development work aims at improving usability and detecting compensation without the use of wearables. Following on, a study will be conducted to evaluate the clinical relevance and acceptability of the device in the context of the NHS.

Long-term pain from whatever reasons affects over 14 million people throughout the UK. Reliance on medication, including opioids, is the mainstay of management and is proving harmful to health for many.

Live Well with Pain

Supported self-management is an approach to chronic pain that involves shared decision making, co-production of treatment, and equipping patients with the skills to manage their pain outside of clinical consultations. Many front-line staff who might be expected to introduce and deliver self-management support for persistent pain lack the confidence and skills to do so. This is consistent with a known lack of education about pain across disciplinary boundaries in primary and community-based care.

In order to meet treatment priorities for persistent pain, there is an urgent need to upskill the workforce, by providing access to good quality training. The WRIHW LWWP 10-Footsteps training programme meets this urgent need. The LWWP team secured a HEE Innovation fund in 2023. The overall aim of the project is to equip health and social care staff at a foundational level with the knowledge and skill to understand and explain the nature of persistent pain and to introduce and support targeted self-management strategies based on individualised, person-centred care planning.

Our very own Durham University WRIHW Pain Academic Fellow, Louise Trewern, chronic pain patient advocate, is a co-author of a BMJ article “Chronic pain: supported self-management” and has provided key input from a patient perspective. Through her role, expert patient representatives from the Patient Voice and the Footsteps Festival Expert Patient Team provided feedback on the article content, highlighting, in particular, the importance of language in the consultation and the role of education early on.

Our AHSN-award winning PCI-accredited NICE recommended LWWP 10-footsteps training programme fits the bill perfectly and is rapidly being rolled out all over the UK. Louise is key part of the delivery team for this training programme, as our first Livers expert Trainer (LET).



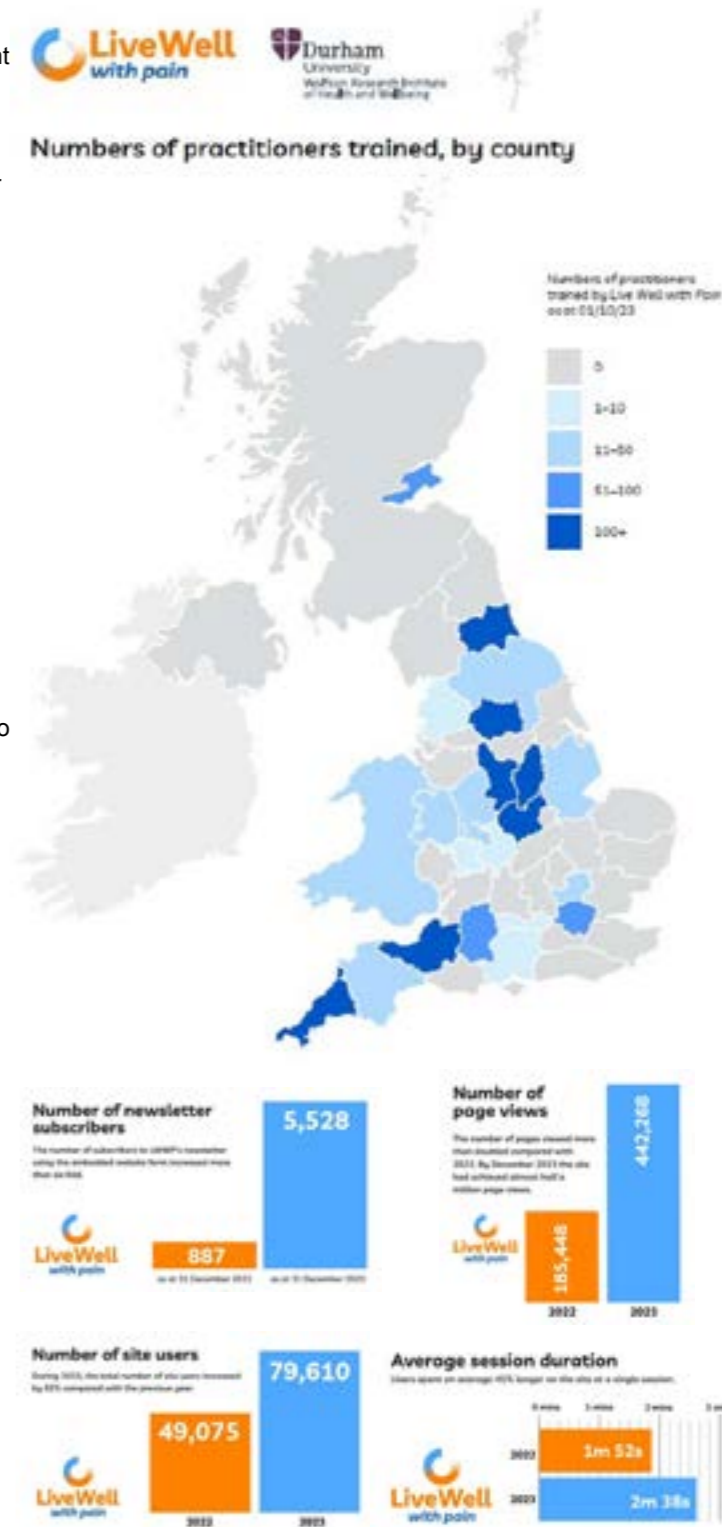
Project Cross Cuts
Mental Health Academy, Ageing Academy, Race, Culture and Inequality Academy, Work Academy and Brain, Body and Behaviour Academy

At Live Well with Pain, we know that living with persistent pain can impact on every aspect of your life, even to the point where it feels like it has become your life. Self-management looks at all these parts of your life and offers ways to make changes so you can get more out of your life. It's about discovering new ways to deal with the effects of pain on your life, learning new skills, and 'taking back control.' As anyone living with pain knows, pain doesn't only have a physical impact. It affects your mood, it disrupts sleep patterns and daily activities. It impacts on your family and friendships and your ability to work. In other words pain affects every aspect of your life.

While it may be true that persistent pain can't be cured, there are many other parts of your life where changes can be made. As someone living with pain has put it: "self-management is about shrinking the part of your life that is about pain, and growing the other parts of your life, so that pain no longer dominates." Learning to self-manage your pain takes time. It will mean learning new skills. So it's often better to get help and support. GPs, physiotherapists, pharmacists and a whole range of other practitioners can guide you. This gives them a range of tools and techniques to support people like you to become a confident self-manager of your pain.

Live Well with Pain's resources offer tried, tested, and effective ways to develop your confidence to self-manage your pain. And everything is completely free to use, whether you are a person living with persistent pain, a carer, or a health care professional supporting people to develop their self-management skills. The recently updated LWWP website is the most accessed site in the UK for knowledge and support into self-managing persistent Pain. It is promoted by NICE and the wonderful LWWP pain Team delivers a PCI-accredited AHSN-award winning Training programme. The LWWP 10-Footsteps Training programme is rolling out all over the UK, and has trained >500 persons living with persistent pain, carers, and a wide range of health care professional to date.

Many congratulations to all the Live Well With Pain team (LWWP) and thank you for all your hard work, input and dedication to LWWP and being part of the Ten Footsteps pain self-management Team Training Programme, which has been official accredited by the PCI for the second consecutive year. Our Live Well With Pain 10 Footsteps self management training programme has topped the list of resources and training on the Health Innovations Website, and was presented at the Best practice show in Birmingham. A number of the LWWP and UP teams have been elected Honorary Fellows of the WRIHW, namely Louise Trewern, Dr Laura Hissey, Balbir Singh and Dr Frances Cole. There will be more to follow. Balbir Singh Dance company are now Artists in Residence in Hatfield college, DU.



The Pain Academy cont.

Unmasking Pain

2023 Fuse Health Award winner for Innovative and Creative Communications, Unmasking Pain (UP)

People struggle to tell their story of living with pain and when they do it is articulated in a way that may not be understood, heard or taken seriously. UP is an artist-led project that explored creative approaches to tell stories of life with pain. The project was led by a dance theatre company that specialises in storytelling and emotional experiences for players and audiences. The project involved artists and people living with ongoing pain co-creating activities and environments to curiously explore “oneself”, through imagination and creative expression. The project revealed the power of art to make-sense of oneself with or without pain, and how art facilitates expression of complex inner experience and personal stories. People described Unmasking Pain as “explorative joy despite pain”, and “a new set of rules” that contrasts with those experienced during clinical encounters. Art has the potential to improve clinical encounters and promote health and well-being, and whether artist-led activities are an intervention, therapy, or something else. Pain rehabilitation specialists from the project described Unmasking Pain as “freeing-up thinking”, allowing conceptual thought beyond the biopsychosocial model of pain. Art has the potential to shift people living with pain from “I can’t do, I am not willing to do it” to “Perhaps I can, I’ll give it a go, I enjoyed”.



The Pain Challenge Academy is currently preparing and revising multiple manuscripts for publication, including the original development of the GOTT 10-footsteps programme in Darlington, the quantitative evaluation of the UP programme, the evaluation of the feasibility of delivering a supported self-management and exercise groups, based on the ten footsteps, for adults living with persistent pain based in the multi-ethnic St Georges NHS Foundation Trust, in South London, a digital SystemsOne based delivery system for 10-Footsteps programme, in Derby NHS Trust, funded by East Midlands AHSN, and initiation of a large evaluation of delivery of the 10-Footsteps Training in the whole of the Birmingham NHS Foundation West Midlands Trust, focused on patients. The Pain Challenge academy is also developing the “Creative 10-Footsteps”, based on the UP programme, with a series of taster sessions planned in the spring, and an application to the ARC.

Project Cross Cuts

Mental Health Academy, Work Academy, Physical Activity Academy, Brain, Body and Behaviour Adademy, Ageing Academy and Race, Culture and Inequality Academy

The Power of Lemon Balm

The power of a plant, lemon balm, many people in the UK will find in their garden, has been recently reported by Professor Paul Chazot (Pain Academy Lead) and long-term colleague in Nigeria, Dr Ben Chindo, to have potential rational use in managing both epilepsy and chronic pain. Based on Prof Chazot’s recommendations, lemon balm essential oil and massage has been used for the last 20 years, in helping people in local hospices in County Durham and Teesside, to manage their severe agitation and chronic pain.



The Youth Academy

The future of our children is influenced by multiple factors both within and outside of our control, but over quite a long timespan of (at least) 18 years and our enquiries in this academy challenge the prevailing view that our experiences as youths end as we reach adulthood.

Led by Professor Helen Ball (Anthropology Department), and Professor Nicole Westmarland (Sociology Department) the Youth Academy understands what happens in our youth has ramifications for the rest of our lives in terms of physical and mental health, education, economic and social status. Therefore, our understanding of youth health and wellbeing is critical to the health of our world now and in the future.



The Durham Infancy & Sleep Centre (formerly the Parent-Infant Sleep Lab) is a research centre of the Department of Anthropology. It is the home for a group of researchers examining various aspects of infant and child sleep and parenting behaviour since 1995. Our work with more than 5,000 parents and babies during the last 20+ years has substantially increased parents’ understanding of babies’ sleep, how best to care for babies during the night, and how best to keep them safe when asleep.

Pictured left: The DISC team

Durham Infancy and Sleep Centre Outreach

In January 2023 DISC took part in the ESRC IAA Showcase at the Radisson Blu, Durham. This event was a celebration of past projects and their impact, and DISC were pleased to invite colleagues from Central London Community Healthcare Trust to talk about how our online training in infant sleep has transformed their practice. Throughout the year DISC has also enjoyed hosting local trainee health professionals in their Sleep Lab, sharing what anthropological perspectives can bring to the field of infant sleep, and signposting them to resources and support created by DISC and other evidence-based sources.

The DISC team have attended and given talks at several conferences online and in-person this year including the Maternal and Infant Nutrition and Nurture (MAINN), and Swedish Breastfeeding Association (Uppsala) conferences in April, EISL (European Institute for Breastfeeding & Lactation, Munich) in June, the World Association of Infant Mental Health Conference (Dublin) in July, the Association of Lactation Consultants of Ireland conference (Port Laois) and the Society for Social & Behavioural Medicine conference (Newcastle) in September, the International Society for the Study and Prevention of Perinatal and Infant Death (ISPID) conference (Florence) in October, and the UNICEF UK Baby Friendly conference (Harrogate) in November. DISC Director, Professor Helen Ball, was invited to be part of the panel for the launch of the Lancet Series on Breastfeeding in February, and has given invited talks throughout the year to groups such as the National Infant Feeding Network, TUSLA (the Child and Family Agency in Ireland), the Cambridge Society for Human Behaviour, and the International ‘Sleeposium’ Conference.

On 7th November DISC hosted an online event aimed at UK parents of babies as part of the ESRC Festival of Social Science. ‘Ask An Expert: Baby Sleep’ has been viewed by more than 650 people who voted for their top questions about infant sleep, answered live by our panel of experts.

DISC’s biggest ongoing project throughout 2023 has been the ‘Eyes on the Baby’ approach to training the multi-agency workforce in SUDI prevention. Sudden Unexpected Death in Infancy (SUDI) encompasses the deaths of infants, usually during sleep, who were considered healthy 24 hours before their demise. In England, SUDI now clusters in the most vulnerable families for whom the universal provision of infant sleep safety guidance appears to be ineffective. DISC’s response to the call for a multi-agency approach to SUDI prevention, involving all services that interact with vulnerable families, has been a training and implementation package which we named ‘Eyes on the Baby’. DISC’s pilot study in County Durham culminated in a conference and report launch

on 9th June, opened by the Vice-Chancellor Karen O’Brien, and attended by stakeholders from Durham County Council. DISC also had a visit from local MP Paul Howell who was unable to attend on the day but keen to find out how he could get involved. The results of phase one of this project were published in a scoping review in BMJ Public Health, with further papers under review. At the conference and in the report, we described how the commitment of the multi-agency workforce to SUDI prevention increased over time, particularly among staff for whom this was a new focus, and set out clear recommendations based on findings and experience. In the second half of this year, DISC have been rolling out Eyes on the Baby training in Northumberland, in collaboration with the council and family hubs in the area, and Northumbria Healthcare NHS Foundation Trust. Initial analysis indicates that around 600 staff in the region have successfully completed the training.

Babies in the womb can taste the flavour of their mother's food

Research conducted by the Fetal and Neonatal lab suggests that human fetuses can detect food flavors from their mother's diet and some things may not be to their taste. Fetuses ranging from 32-36 weeks were exposed to either carrot or kale flavors while their facial reactions were recorded using four-dimensional (4D) ultrasound video. This study is the first to measure frame-by-frame facial movements in response to maternal diet. Fetuses exposed to carrot flavor showed "laughter-face" patterns more frequently, while those exposed to kale flavor showed more "cry-face" patterns. This discriminating behaviour shows in this instance that there is a clear preference for carrot.

This paper got a lot of Press and inclusion on TV and Radio programmes all over the world including BBC4 Morning interview and TV show QI. Further, this paper was in the top 5% of all research outputs scored by Altmetric, one of the highest-scoring outputs from this source (#1 of 4,287), had a High Attention Score compared to outputs of the same age (99th percentile) and a High Attention Score compared to outputs of the same age and source (98th percentile)

The researchers say their findings might also help with information given to mothers about the importance of taste and healthy diets during pregnancy. They have now begun a follow-up study with the same babies post-birth to see if the influence of flavours they experienced

Ustun, B. Reissland, N., Covey, J., Schaal, B. & Blissett, J. (2022). Flavour Sensing in Utero and Emerging Discriminative Behaviours in the Human Fetus. Psychological Science
<https://doi.org/10.1177/09567976221105460>

The Effects of Lockdown during the COVID-19 Pandemic on Fetal Movement Profiles

The current study investigated the direct impact of the COVID-19 lockdown on fetal movements, addressing a critical research gap. While previous research has predominantly examined the effects of lockdown on maternal health and postnatal outcomes, little attention has been paid to the direct consequences on fetal well-being as indicated by their movement profile. We conducted

analysis of movement profiles in 20 healthy fetuses during the COVID-19 pandemic lockdown (third national UK lockdown period between January and March 2021) and compared them with 20 healthy fetuses from pre-covid pregnancies, all at 32 weeks gestation. We controlled for maternal stress, depression, and anxiety.

Results: Pregnant mothers during pre-covid compared with those during the COVID-19 lockdown reported similar levels of stress ($p = 0.47$), depression ($p = 0.15$), and anxiety ($p = 0.07$). Their fetuses, however, differed in their movement profiles with mouth movement frequencies significantly higher during COVID-19 lockdown (COVID-19 lockdown: mean of 5.909) compared to pre-Covid pregnancies (mean of 3.308; $p = 0.029$). Furthermore, controlling for maternal anxiety a regression analysis indicated that frequency of fetal mouth movements ($p = 0.017$), upper face movements ($p = 0.008$), and touch movements ($p = 0.031$) were all significantly higher in fetuses observed during lockdown compared to fetuses before the Covid period.

Conclusion: Fetuses show an effect of lockdown independent of maternal anxiety, stress, or depression. These findings contribute to our understanding of fetal development during extraordinary circumstances, raising questions about the potential effects of having to stay indoors during lockdowns.



Project Cross Cuts
 Women's Academy and Mental Health Academy

Child of the North

Durham University is involved in the Northern Health Science Alliance (NHSA) Child of the North research partnership. It aims to act as a new focal point for the harnessing of research evidence to achieve transformative impact for children living in the North and beyond. It will also seek to add value to the nationally and internationally significant initiatives and collaborations in this area that already exist within the region.

Co-production with children, practitioners and policy makers will be a core element of Child of the North. This will build on existing N8 strengths in engaging children and young people in participatory science, co-design and co-creation of research, and crowd-sourcing data collection. Please contact the Durham Institutional Champion, Charmele Ayadurai for more information on this partnership.



Project Cross Cuts
 Mental Health Academy, Physical Activity Academy, Brain, Body and Behaviour Academy, Women's Academy, Ageing Academy and Race, Culture and Inequality Academy

Child of the North: Next Steps Workshop

The first Child of the North: Next Steps Workshop took place in Leeds on 4th May 2023. Six Durham Child of the North (DCoTN) delegates represented the university and participated in the discussion to set the direction for the next five years for the Child of the North.

Building Research to Respond to the Cost of Living Crisis- Impacts on Children and Families in the North East.

A workshop on Building Research to Respond to the Cost of Living Crisis- Impacts on Children and Families in the North East was hosted by the Newcastle University Centre for Research Excellence (NUCoRE) for Children and Youth in Newcastle on 24th January. A team of university researchers and regional organisations who work with and advocated for children and families came together to form research projects for bids. Two DCoTN researchers are currently working on Cost of Living and Child Care funded project worth £4 000. The project is currently in the stage of data collection.

School Absences: Task and Finish Group

Practitioners and policy makers following the covid-19 lockdown period, requested Child of the North colleagues across the N8 to form a 'task and finish' group on the topic of school absences. Schools are reporting that many children are missing from school (estimates are that 3000 children are absent). The close relationship between school absence and poor outcomes across education, social mobility and health makes this an extremely worrying phenomenon. The Department of Education further confirms that this is a problem playing out across the UK so it is an issue of national significance. Seven DCoTN delegates from cross disciplines were formed to bring in a wide range of academic expertise to address the multi-faceted challenge. The final publications will generate societal impact to support colleagues within schools, local authorities, policing services etc.

Addressing Education and health Inequity: Perspectives from the North of England

This important report found that children in the North have poorer educational attainment, more likely to be absent because of physical and mental health problems than children in the South of England schools because educational funding for the North of England has lagged the rest of the UK over the past decade. North- South inequalities have further accelerated through the cost-of-living crisis and Covid-19 pandemic.

- Children in the most affluent schools in the country had bigger real-terms increases in funding from the National Funding Formula between 2017 and 2022 (8–9%) than those in the most deprived ones (5%).
- Schools in London received an average of £6, 610 per pupil compared to £6,225, £5,956 and £5,938 in the North East, North West, and Yorkshire & The Humber, respectively. On average, pupils in London received 9.7% more funding than those in the North. Students in London achieve a third of a grade higher, on average, than students in the North.
- There are record numbers of school absences across the North of England. In the 2022/23 autumn term, school absence rates were greater in the North East (7.9%) and Yorkshire & The Humber (7.7%), compared to Outer London (7.0%) and Inner London (7.2%).
- Children are more likely to be persistently absent (missing more than 10% of school) in the North East (25.6%) and Yorkshire & The Humber (24.5%) compared to Outer London (23.1%) and Inner London (23.8%).

North East MP Roundtable Meeting: CoTN

The Department of Finance arranged an interactive discussion with MPs Kevan Jones and Mary Kelly Foy to explain and further discuss on plans to get more involved within the communities. A pitch from the Child of North Institutional Champion focused on:

The creation of CoTN

A group of 40 researchers from N8 Research Partnership Universities (Durham, Lancaster, Leeds, Liverpool, Manchester, Newcastle, Sheffield and York) came together to form an alliance to build high quality research evidence and policy engagement that will improve the lives of children living in the North of England in a post-pandemic age.

Sharing Key statistics

- Children in the North have a 27% chance of living in poverty compared to 20% in the rest of England.
- They have a 58% chance of living in a local authority with above average levels of low-income families, compared to 19% in the rest of England.
- Children in the North are significantly more likely to be in care than those in the rest of England. Of the local authorities with more than 100 children per 10,000 in care, 21 of 26 are in the North.
- Prior to the pandemic, the North saw much larger cuts to spending on Sure Start children's centres. On average, spending was cut by £412 per eligible child in the North, compared to only £283 in the rest of England.
- More than one in five children in the North are from an ethnic minority. These children are more likely to live in a deprived area than children from an ethnic minority in the rest of England.

The report can be found here: <https://www.thenhsa.co.uk/app/uploads/2022/01/Child-of-the-North-Report-FINAL-1.pdf>

Highlighting the importance of CoTN

Children in the North are more likely to live in poor families and will have suffered larger cuts in public services than elsewhere. These inequalities contribute to the North-South productivity gap, and we need to see place-based-child focused policies that address these inequalities.

DCoTN

As the poorest child in England lives in the North East, Durham University is looking to work with universities (Newcastle, Northumbria and Teesside) as well as our industry partners such as (schools, hospitals, magistrate courts etc) in the Northeast to not only conduct impact research that will benefit the children but also the community and North East as a whole. DCoTN will also reach out to communities through outreach projects such as STEM talks for children, Personal Finance for Women, skill workshops for women and men as well as showcasing the talents of children in the North East amongst other activities to help the community the child is living in.

Project Cross Cuts

Mental Health Academy, Physical Activity Academy, Brain, Body and Behaviour Academy, Women's Academy, Ageing Academy and Race, Culture and Inequality Academy

School of Education Early Years Evaluation Projects

The evaluation team from School of Education Durham University have been funded on two new evaluation projects in early years.

The Early Years Conversation Project (EYCP) efficacy trial (2022-2026; £486K) will evaluate the impact of EYCP, an early years language professional development programme in 112 early years settings across Greater London areas between 2023 and 2025. Developed and delivered by Sheringham Nursery School and Children's Centre, the EYCP programme aims to develop staff interactions with children to improve the language skills of 2-3 year-olds, using the ShREC approach (Share attention, Respond, Expand and Conversation) and interactive book reading. The evaluation is led by Dr Xiaofei Qi (PI) and Vic Menzies (Co-PI), with Prof Nadia Siddiqui (Co-I), Dr Nashwa Ismail (Co-I until September 2023) and Dr Rachel Oughton (Co-I from Mathematics Department).

The Talk With Tales for Children (TWITCH) pilot evaluation (2022 – 2025; £157k) will evaluate the pilot delivery of the TWITCH programme across 25 early years settings in South and West Yorkshire. The TWITCH programme provides professional development (PD) to early years practitioners on how to use story time as a daily opportunity for complex language interactions between children and adults. It aims to improve practitioner confidence and practice and to support 3-4 year-old children's language development. TWITCH was developed by a team at Sheffield Hallam University and is delivered through this team and through the Bradford Early Years Stronger Practice Hub. The evaluation is led by Vic Menzies (PI) with Dr Helen Cramman (Co-I), Dr Johnny Daniel (Co-I), Dr Xiaofei Qi (Co-I) as the Durham team and Dr Kelly Burgoyne (Co-I) at the University of Manchester.



From the concept of the glass ceiling to the #MeToo movement, the role of women in our world is slowly being recognised. And yet gaps still exist. From the exclusion of women in early clinical trials (due to the variability introduced by cyclical hormones) to policies aimed for inclusion and recognition that are not fit for purpose, there is still much work to be done to ensure the health and wellbeing of women everywhere.

Shame in Women's Reproductive Health

The awareness of being seen and judged pervades so much of women's experience but comes into acute focus in the context of reproductive health. Women's bodies in this context become a locus of shame whether relating to sexual activity or lack of it, being pregnant or not achieving pregnancy, and the perception of the 'appropriateness' of sexual activity as we age. In a talk given in April 2022, Professor Jane Macnaughton draws upon experience as a clinician working in cervical screening and as an academic interested in the menopause to examine shame in this context. The talk explored the origins of shame in both contexts exploring how societal views about women and sexual activity make women turn in upon themselves in negative ways with often devastating consequences. It also examined the misogyny that surrounds the clinical approach to women's health, drawing particular examples from historical work on the menopause. Feminist condemnation of this misogyny and its consequences has had positive results but also negative outcomes for women who feel uncomfortable accessing clinical services.

This paper forms the groundwork for research Jane hopes to pursue in the Institute of Medical Humanities in the next two years on the how the entangled cultures of feminism, medicine and women's health activism.

Project Cross Cuts

Mental Health Academy, Brain, Body and Behaviour Academy and Ageing Academy



Reimagining Menopause

Professor Jane Macnaughton, with funding support from the Institute of Medical Humanities, is currently working with a team led by Professor Shani Orgad at the LSE on the Project called 'Reimagining Menopause' which seeks to investigate the origins and culture of the current menopause moment and to work with those groups who may be excluded from it, such as women in lower socio-economic groups, trans women and ethnically diverse women. The project will be submitted for Wellcome Discovery Award funding likely in July 2024.



We recognise that mental and physical health are contingent upon each other. Long-term illness has severe and lasting mental ramifications both for the patient and those around them. Equally, poor mental health affects our physical wellbeing making life even more difficult.

It is also clear that keeping our mental health in balance is important across every aspect of our lives. That is why we represent our work which seeks to understand how and where we live influences how we feel, act and react as cutting across each of our Challenge Academies. This can be in relation to how loneliness is experienced by stroke survivors and how this affects their interaction with rehab (Brain, body and behaviour academy) to mental health issues in our Youth Academy (CRIVA). However, mental health is also interrelated with our other cross-cuts such as Race, Culture and Inequality and Work for example.

Solitude Research

Durham University Solitude Lab™ explores the role of solitude in daily life and modern societies, whether it be a life choice, a spontaneous desire, or a momentary experience. The lab are currently working on a 3-year research program funded by UKRI to look at the role of solitude as opportunity for rest. Specifically, the lab focused on those who are going through life transitions, first-time mothers and retirees, because we believe that those transitions present new opportunities as well as challenges for people to embrace solitude for their well-being.

The lab are currently running two projects, the New Mum Project and the After Retirement Project. For the New Mum Project, interviews with 22 first-time mothers during the first 3 years of their child's development were carried out. Themes of loneliness and boredom, struggles around finding personal time, guilt to take time for oneself, and the role of support from family members and friends were explored. Like that proverb "it takes a village to raise a child", we discovered that the "village" is not only important for healthy child development but also for the mother's well-being as well. The lab are currently running a follow-up study to understand mothers' daily routines and their variation in well-being throughout the week. For this second study, a play area was set up for mothers to interact with their child in Rowan House,

because we are also interested in how mother-child interactions may also contribute to mothers' daily experiences. Through this data, the Solitude Lab want capture both the psychological and social world of a new mother. The future aim is to develop a sensible intervention to advocate and enable mothers, especially first-time mothers, to build in the time for themselves during childcare.

The lab researchers are equally excited about the progress we have made with the After Retirement Project. We have finished interviewing around 20 participants and are currently in the process of transcribing and coding those interviews. For retirees, the themes are going to be different from what we generated with new mothers; for example, we frequently hear the phrase "keeping busy" in our conversations with many of the older adults that have participated in our project. For this reason, we are also currently collecting quantitative data on retirees' daily routines and trying to understand how activities that older adults engage in may correlate with their well-being. To reach older adults, we have travelled to community centres and Cree's groups around Durham County, from the women's groups in Chester-Le-Street to the men's group at Beamish Museum.

The aim of trying to bring the research to people rather than having them come to us motivated an outreach event we organized throughout October and November of 2023, "Older Adults Supporting Science", as part of the ESRC Festival of Social Science funded by the Institute of Advanced Study at Durham University. We collaborated with colleagues from Biology and Computer Sciences, as well as Durham County Council Public Health team and Age UK Durham to set up tables inside the Shakespeare Hall on North Rd. While participating in this event, our attendees can learn about services and groups for older adults, get free blood pressure check, enjoy refreshments and games, and talk to researchers about projects that the attendees may choose to engage with. All the attendees that came to our event have retired, with positive spirit, and many of them have told us they had a great time.



Project Cross Cuts
Brain, Body and Behaviour Academy

Migrants' mental health: A cognitive anthropological approach

Despite the existence of significant literature on the mental health care challenges for immigrants, particularly refugees and asylum seekers, less attention has been paid to the treatment approach. Hence, this research by Dr Mohaddeseh Ziyachi looks at the topic from a fundamental perspective and discusses that refugees and asylum-seekers as culturally different clients with various pre- and post-migration traumatic experiences might need different therapeutic approaches. It advocates for adopting a cognitive anthropological approach in psychotherapy. Cognitive anthropology as a subfield of anthropology that studies underlying components of one's expectations and assumptions would offer a beneficial approach to mental health care.

This study analysed migrants' experiences with mental health care in the UK. This is qualitative research with an ethnographic approach employing semi-structured interviews as the data collection method. The purposeful (or purposive) sampling strategy was used to recruit participants regarding three criteria including (1) adult immigrants, refugees, and asylum seekers who have had any experience with mental health care services, psychological therapy, or counselling in the UK in the last three years; (2) individuals who are based in north-east England and Northern Ireland but originally from Middle Eastern and African countries; (3) individuals who are able to speak English, Farsi, or Arabic (due to the skills and facilities of the researcher). 25 interviews with refugees and asylum-seekers who had used at least six sessions of talking therapy provided by the NHS or other charity organisations during the last three years were conducted, transcribed, anonymised and analysed.

Participants of this study evaluated their experiences with mental health care differently, varying from very satisfied with the services to absolutely unhappy. Nevertheless, interviews indicate that in many cases clients' underlying assumptions about therapy and their expectations of therapists differ from the dominant approach of psychotherapy. Reflecting on participants' experiences with mental health care, this research provides examples of cognitive anthropological engagement with a term's meaning and the client's perception of an experience, identifying appropriate treatment regarding the client's worldview and needs, and the client's underlying schemas of therapy and therapist. This research suggests that a cognitive anthropological approach would contribute to building therapeutic alliances and providing culturally relevant and appropriate treatments for migrant clients.



Clean Air and Happy Brain: Lesson plans for primary schools and secondary schools. InSPIRE, Durham University.

Authored by Mohaddeseh Ziyachi & Brian Castellani (2023).

Summary: These lesson plans, created for primary school or secondary school children, consists of two one-hour lessons. These lessons aim to introduce pupils to air pollution, its causes, and its effects on health, with a specific emphasis on brain health. Each lesson includes five sections and lasts 1 hour. Activities are designed based on an ethnographic approach that encourages students to observe, talk with others, make comparisons, and consider their personal experiences.

Mitigating the impact of air pollution on brain health and dementia: Policy and practice brief. InSPIRE, Durham University.

Authored by Ziyachi, Castellani, Heckels, Clarke, Fullerton, Barbrook-Johnson, Bicket (2023).

Emerging research suggests exposure to high levels of air pollution at critical points in the life course is detrimental to brain health, including cognitive decline and dementia. Social determinants such as socio-economic deprivation, environmental factors, and heightened health and social inequalities also play a significant role and make the problem more complicated. While policy and practice strategies have been proposed to address air pollution's impact on public health more generally, their benefits for brain health, including dementia, remain undeveloped.

This policy brief suggests necessary advances across policy and practice to mitigate air pollution and its impact on brain health and dementia.



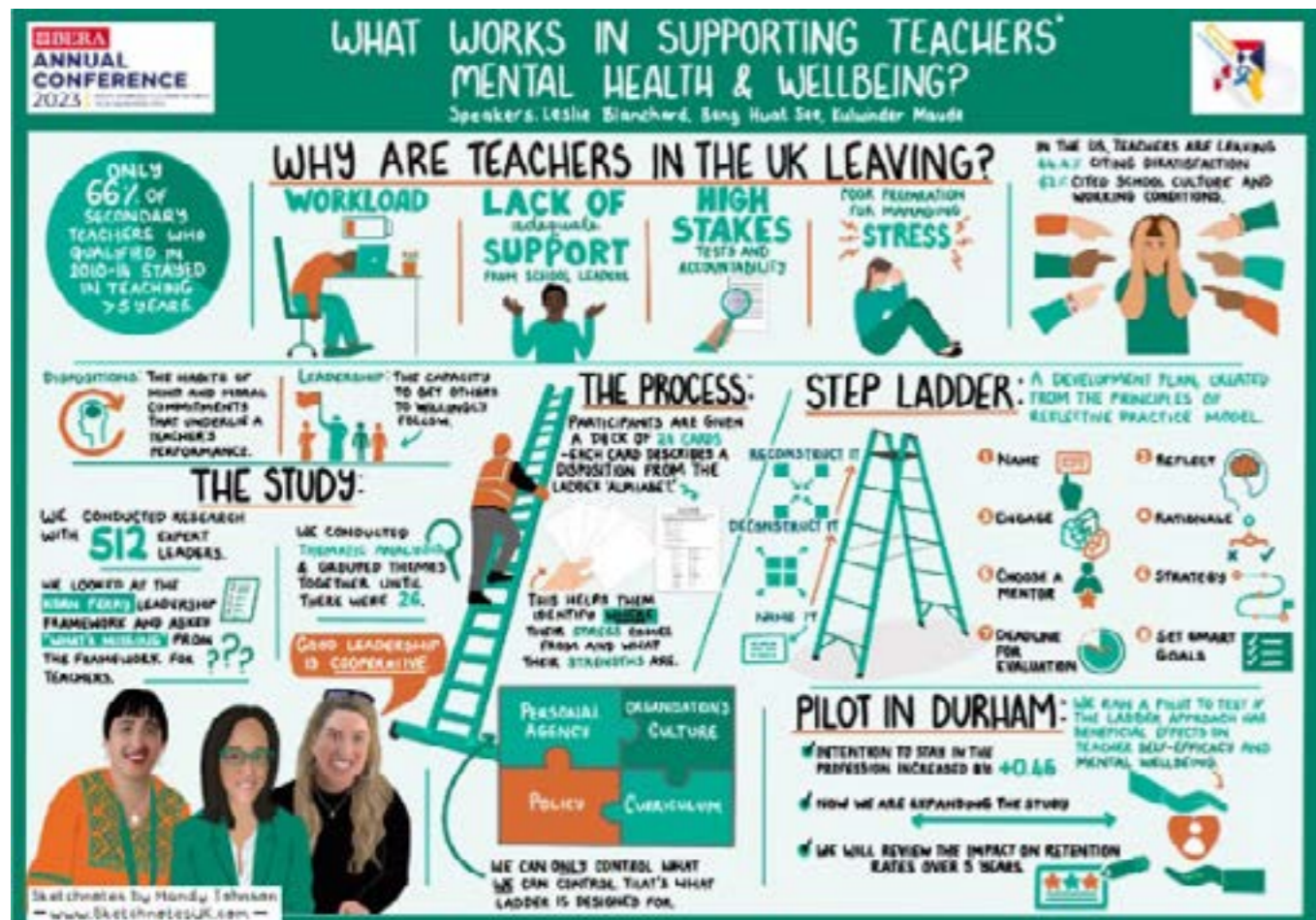
Leadership Alphabet of Disposition Development Engagement and Reflection (LADDER) intervention – upscaling of the project

Following a successful pilot study last year, Beng Huat See and Kulwinder Maude (WRIHW Fellows) along with their team at the Durham University Evidence Centre for Education have been working in partnership with the Louisiana State University Leadership Development Unit to scale up the research aimed at bringing about educational change in supporting the mental health and wellbeing of our teacher trainees. The LADDER (Leadership Alphabet of Disposition Development Engagement and Reflection) approach is a comprehensive model of assessment and coaching support, which uses the principles of reflective practice and cognitive behavioural approach to guide the conversation between the coach and the teacher. This year, the team has been busy with the following:

1. Kulwinder Maude was the recipient of Durham University Global Engagement Grant which facilitated offering the intervention to all teacher trainees at the School of Education (undergraduate and post graduate teacher training courses) at both primary and secondary levels along with funding a research seminar offered to all School of Education academics (Initial Teacher Training) as a part of their continuous professional development.
2. The team also presented the results of a systematic review that was undertaken as a part of the larger study at the
 - a. The Sixth Annual Early Career Researcher Conference at the Wolfson Research Institute for Health and Wellbeing (July 2023)
 - b. British Educational Research Association in September 2023 and.
 - c. The Festival of Education (Wellington College, Berkshire, Greater London) in July 2023.

For the systematic review, the Durham University Evidence Centre for Education investigated studies linked with promising strategies to improve teacher wellbeing, job satisfaction and status of the teaching profession. Out of some 70,00 studies, 77 studies fitted the criteria. Majority of the studies focussed on two types - psychological interventions linked with positive psychology and coping stress interventions like mindfulness, meditation and yoga, etc. Unfortunately, the results of such interventions have been largely inconclusive. Most studies used either self-reporting methodologies or it was difficult to compare as there was a vast difference between various methodologies used for collecting data. Also, none of the studies in the review addressed the internal dispositions of teachers that would enhance their resilience and coping strategies which would support them in dealing with the demands of teaching. This is where LADDER differs from what is already being offered which gives us further momentum to keep expanding the data set for our research.

Furthermore, our research study was also selected as part of a special piece of work that BERA (2023) had commissioned from Sketchnotes UK.



Loneliness and Intersectionality

In 2023, Dr Keming Yang's research focused on intersectionality and loneliness. First, he completed and published his monograph *Analysing Intersectionality: A toolbox of methods* (Sage Publications), in which he explained and illustrated how existing research methods could help intersectionality to become not only a theoretical approach but a rigorous empirical social science. He then connected this methodological study to his substantive research interest in loneliness, proposing a new 'progressive' and 'conditional' approach to identifying and studying intersectional attributes of the lonely people. These pieces of work will help researchers study intersectional inequalities and injustice in health and beyond. Dr Yang has also completed one foundation chapter for the forthcoming *Cambridge Handbook of Loneliness*, 'A sociological approach to loneliness', in which he outlines a conceptual and theoretical framework for understanding and studying loneliness and social isolation from a sociological perspective. He is also contributing another chapter on 'Loneliness by marital status: A nuanced approach', collaborating with the Dutch Professor Pearl Dykstra. These publications firmly establish the sociological perspective as distinctive and complementary to psychological, neurological, and other perspectives to understanding loneliness.



Procrastination

Prof Sirois visited Prof Feng's Lab at Southwest University in Chongqing, China to give a talk and explore research collaborations on the behavioural neuroscience of procrastination and self-compassion. A return visit is planned for November 2024. Travel was supported by a Global Engagement grant.

Prof Sirois was awarded a Research Impact Fund (RIF) grant to support the project "Developing a toolkit to promote a compassionate approach to understanding and addressing procrastination". The interactive toolkit will help students who struggle with procrastination, including those with ADHD, to manage their mood and their procrastination.

Prof Sirois' research on procrastination and self-compassion was featured in multiple media outlets and podcasts including the Guardian, the Ali Abdaal podcast, BBC Radio Scotland, Euronews, and FM4 Radio / Austrian Radio in Vienna.

Project Cross Cuts
 Race, Culture and Inequality Academy



The interdisciplinary Physical Activity theme welcomes membership from all areas of the University where there is an interest in physical activity. We are aligned to the Fuse (<http://www.fuse.ac.uk/>) physical activity special interest group which comprises members from all five north east Universities. The remit of the SIG is broad, but ultimately focused on understanding not only the wide-ranging determinants of physical activity, but how best to support engagement, generating and evaluating evidence for policy and practice. The SIG has multi- and inter-disciplinary expertise to address a range of complex questions from a variety of paradigm perspectives. By working together with our public health, public sector, and community partners (present and future) we strive to advance knowledge and understanding of physical activity in terms of what works, for whom, and in what circumstances, and ultimately to create impact through policy change.



Evaluating coastal rural communities' active and sustainable travel (COAST)

National and local sustainable travel policies aim to address both climate change and health through promoting active travel on foot or by bike. These policies also promote the use of public transport, which is often combined with walking or cycling, and is less polluting than car travel. Some of these policies, however, do not consider the challenges of living in rural areas and provide little guidance or evidence about how to promote sustainable and active travel for people living in villages and small towns. In rural areas, schools, shops and other services may be too far away to reach by cycling or walking, and public transport may be limited. Promoting active travel as a solution can make inequalities worse if not everyone can benefit. Other solutions, such as on-demand bus services, electric cars and e-bike schemes, may also have unexpected negative impacts.

Local authorities in the South West and North East of England are putting in place schemes to improve access to walking, cycling and public transport for rural residents. Researchers on this project will work with these local authorities and communities to evaluate these travel schemes. They will look at what is working for residents what makes these policies easier or more difficult to put in place.

Project Cross Cuts

Mental Health Academy, Youth Academy, Brain, Body and Behaviour Adademy, Ageing Academy and Race, Culture and Inequality Academy



Supporting safe and inclusive physical activity spaces for LGBTQ+ young people.

We already know that young people, in particular LGBTQ+ young people, find it hard to be physically active in their local area. The Physical Activity SIG's earlier research has already demonstrated that young people know where they could be active (for example outdoors in open spaces, or at their local leisure centre if one existed, or at school/college). The problem was that they had often felt bullied, harassed, or that physical activity spaces did not feel inclusive for them. For some young people, because of these negative experiences, they would now be very unlikely to feel safe taking part in any kind of activity at all, including sport, exercise, or even going for a walk on their own. However, the young people also told us that they felt more confident to be active with each other, or when a trusted adult helped organise activities for them.

This research project will consider how lesbian, gay, bisexual, transgender, Queer and/or Questioning, and others (LGBTQ+) young people have experienced physical activity in their local areas.

We will work with LGBTQ+ youth groups in England (~13–21 years based on our previous research with youth groups), to better understand what is needed and who is needed to make different types of physical activity feel safer and more inclusive. We will also work with 'trusted adults' (e.g., teachers, local physical activity practitioners and policymakers, youth leaders) who can help these young people to be active and feel safe.

The youth groups will be based in more deprived areas in England because we know that physical activity is even harder to achieve for LGBTQ+ young people living in these communities.

We cannot address any of our challenges without framing our enquiries around race and culture. We must identify inequalities where they are found in each of our academies and find ways to mitigate them in a way that is fit for purpose. What works for one population strata will not work for all. In order to improve the health and wellbeing of all in our region, country and across the world, we need to resist the urge to help some of the people some of the time through inclusion and diversity. Only then can we truly help all of the people, all of the time.

Wider determinants of Health and Wellbeing

A new 'Policy to Research' project focusing on enhancing research capacity and capability around the wider determinants of health and well-being, started in January 2023. This innovative collaboration between Durham County Council (DCC) and Durham University (DU), was initiated through the Policy and Engagement Team in DU and has been funded by the National Institute for Health and Care Research and Durham County Council. Key objectives for the project include: understanding barriers, enablers and levers to using research evidence; strengthening academic links between DCC and DU; developing a training offer for DCC staff; and the development of collaborative funding bids between the two organisations. Both Wolfson Research Institute for Health and Well-being (WRIHW) and Durham Research Methods Centre (DRMC) have been involved in establishing the project and will provide wider networks to engage staff at Durham University in the collaboration. Dr Jonathan Wistow (Co-Director in WRIHW and Associate Professor in the Department of Sociology) is the academic lead on the project and Dr Evgenia Stepanova is working as the researcher on the project and is based in the Department of Sociology in DU and in the Public Health team in DCC. The project aims to enable better understanding of what works to improve programmes, interventions and health outcomes for the local population.



International Workshop on 'Advancing Lay Counselling Research', December 2023, Kathmandu, Nepal

Lay counselling involves training community members to provide talk-based therapeutic support in their own neighbourhoods, and it is increasingly recognized as a key strategy for addressing global shortages of trained mental health professionals. This year Liana Chase (Anthropology of Health) was awarded £8075 from the Grant Seedcorn Fund to develop the project 'Taking the Therapist out of Talk Therapy: A Collaborative Ethnography of Lay Counselling in India, Nepal, and the UK'. This included funds for holding an international workshop bringing together ethnographers and practitioners working on lay counselling across five countries. The aims of the workshop were to 1) map existing knowledge on lay counselling; 2) identify questions and priorities for future research; and 3) build a network of collaborators working in this area with a view toward developing joint funding bids. The workshop was hosted by the Transcultural Psychosocial Organization-Nepal, a world leading research organization with decades of experience in lay counselling.

Writing Global Health Ethnography: Craft, Ethics, Impact

This two-day workshop was co-organized by Dr Marlee Tichenor and Dr Liana Chase with support from Durham's Global Engagement Fund and Dartmouth College. The workshop was facilitated by two world-leading scholars in the anthropology of global health, Vincanne Adams (UCSF/Berkely) and Sienna Craig (Dartmouth College). Thirteen early and mid-career anthropologists working on global health attended the workshop. All shared pieces of 'flash ethnography' for group feedback and participated in a series of writing exercises. The workshop ended with a session on publishing facilitated by Professor Adams, who is currently editor of a leading book series in the anthropology of global health.

The Work Academy

The focus of the Work Academy is on how work can influence an individual's well-being and brings together academics from different disciplines and health professionals to develop strategies that employers can use to improve employees' health and wellbeing.

On average, we spend more than half of our lives working or engaging in work-related activities. The time we spend at the workplace, the tasks we perform, the work environment, and social relationships with colleagues and friends at work, all affect our health and wellbeing. For many employees, the job they perform is a great source of joy and fulfillment, for others, work means working long hours under stressful conditions, lacking income security, and inability to balance work and non-work commitments. When people experience a lot of stress over a long period of time this can lead to a feeling of physical, mental, and emotional exhaustion, this was especially the case for occupations classified as key workers during the Covid-19 pandemic.

The Work Academy emphasises disease prevention and health promotion and, aims to tackle health and wellbeing at the intersections of personal characteristics and working conditions, and space that can individuals, family members, and communities.

Hidden Precarities

Monthly research conversations since November 2021 focus on 'Hidden Precarities.' How poly-crisis transforms vulnerability and resilience in the North East. These research conversations are coordinated and led by Dr Barbara Bechter and include Professor Nadin Beckmann, School of Education, DU; Dr Francis McKay, (until June 2023 Oxford University) Gateshead Research Portfolio Lead Health Determinants Research Collaboration Gateshead Council; Research Associate Population Health Sciences Institute Newcastle University. In 2023, the stakeholder network has been expanded to facilitate participatory research. Valuable stakeholder insight gained in 2023 will inform research designs, methods, and frameworks in direct collaboration with those affected by the poly-crisis.

Network contributions in DCC: Glen Wilson (Consultant in Public Health), Michael Fleming (DCC Index of Need), Kirsty Wilkinson (Public Health Strategic Manager- lived experience), Joy Evans (Public Health Strategic Manager). The network of experts in vulnerability, resilience, and wellbeing at DU, local authority, and VCSE sectors in the North East contributed to the knowledge exchange and provided insight into data and opportunities for co-production. This input will be used in 2024 to map how North East workers experience vulnerability and to develop a feasibility study.

Health Governance and Reporting Group

Ongoing research conversations focus on the governance and safety of the care hospitals provide. The 'health governance and reporting group,' established in November 2022, aims to improve staff and patient safety by focusing on healthcare system governance. Healthcare governance is about setting strategic direction, ensuring accountability, and coordinating the actions of different actors within the health sector. Health governance is essential for achieving strategic health goals and improving health outcomes. Reviews by the Care Quality Commission (CQC) ensure that NHS providers have a practical governance framework and that risks and regulatory requirements are understood and managed. An interdisciplinary research team comprising researchers from management (Dr. Barbara Bechter), accounting (Professor Amir Michael), law (Dr. Adefolake Adeyeye), and psychology (Dr. Arezou Ghiassaleh) explore various factors influencing health and safety reporting compliance. They use system thinking, an approach that looks at behaviours, functions, and processes as parts of a wider system to identify the cause of the problem and for problem-solving. The aim is to define cause-and-effect relationships that can reveal insights into how inspection ratings result from organisational policies and practices. In 2024, the team will work with the County Durham & Darlington Foundation Trust (CDDFT) to review existing governance practices and develop efficient reporting systems in cooperation with the Trust.

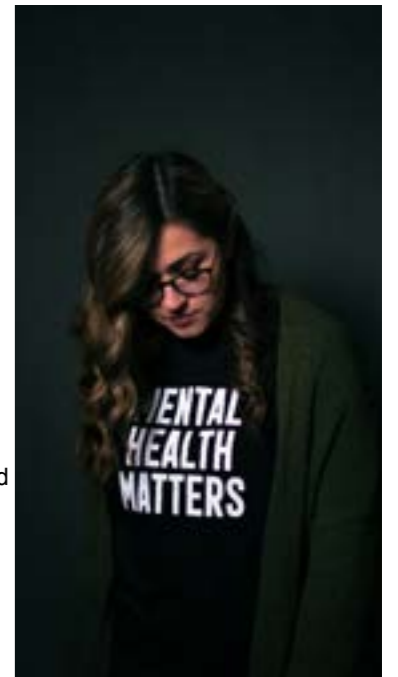


Project Cross Cuts
Mental Health Academy, Youth Academy, Women's Academy, Brain, Body and Behaviour Academy, Ageing Academy and Race, Culture and Inequality Academy

Wellbeing and mental health interest group (since March 2023)

In the WRIHW Newsletter (108), March 2023, the creation of an interest group with an interdisciplinary, inclusive concept of wellbeing and mental health was announced. Definitions of wellbeing and mental health include positive emotions and positive functioning. They tend to focus on ideal norms or happiness and living a satisfying life, implying they are important to good mental health. How could a more inclusive concept of wellbeing that does account for culturally, ethnically, gender, or racially distinct groups and people of different ages look like? How do these factors drive wellbeing and affect mental health inequalities? To discuss these questions, the interest group was set up by Barbara Bechter to facilitate an open exchange of ideas and knowledge that will lead to interdisciplinary collaboration and translational research grant applications.

On 13 September 2023, a Networking and Knowledge Exchange Workshop at DUBS, organised by Barbara Bechter for the WRIHW, brought together wellbeing and mental health experts from Durham County Council (DCC), researchers at Durham University (DU), and Public Health Advanced Practitioners (DCC & DU) who exchanged their experiences with wellbeing and mental health challenges post-COVID-19, and hybrid work settings in their organizations. Elise Waller & Faye Guy (DCC) gave presentations at his event. Elise is the Senior Workforce Development Officer HR & Employee Services Resources & Public Health Practitioner - workplace health & wellbeing. Faye recently joined DCC as a Public Health Practitioner, focusing on workplace health and wellbeing for DCC's Better Health at Work Award. Claire Hunter (Head of Organisation Development Business Partnering. Claire, Head of OD Business Partnering at Durham University). Professor Fuschia Sirois (Department of Psychology). Sanne Selbrik (Swinburne University of Technology, Melbourne, Australia; Durham University Business School) introduced the concept of Communities of Practice (CoP) and how CoP can play a role in future knowledge exchange and translation processes. The aim of the workshop was to exchange knowledge and expertise on wellbeing measures and practices used by different organizations to manage the wellbeing of different populations and to engage academics by sharing their insight to explore research and knowledge exchange opportunities. Matthew Walker (Public Health Advanced Practitioner at Durham University & DCC) and scholars from the School of Education and Psychology who are members of the 'Wellbeing and Mental Health Interest Group' expressed their interest in continuing the exchange and building a Community of Practice.



Project Cross Cuts

Race, Culture and Inequality Academy, Brain, Body and Behaviour Academy and Ageing Academy

Health Risk Outlooks by Social Partners – HEROS (2021-2023).

A multi-level analysis of health and safety policy interventions by social partners to identify effective ways to ensure better protection of employees at work. This international, interdisciplinary project investigates the role of national and European social partners for health and safety (H&S) in the hospital and social care sectors in Germany, Italy, Lithuania, Poland, Sweden, and the United Kingdom.

The provision and governance of health and safety (H&S) at work involve multiple actors at multiple levels. At the EU level, the Framework Directive on Safety and Health at Work (Directive 89/391 EEC) guarantees minimum health and safety requirements for employees in Europe while member states are allowed to maintain or establish more stringent measures. With this project, researchers in five European countries wanted to understand how social partners (trade unions and employer organisations) at national and European levels contribute to H&S in the hospital and social services sectors (focusing on care services for older people). These sectors are characterised by similar health risks for their workers, as emerged during the pandemic, but also by markedly different organisations and providers, in terms of size, public, private, for/not for profit, religious nature, as well as different industrial relations systems and structures of employee representation for H&S. The interdisciplinary, international team shares the view that patients and care service users are safe when workers are safe. They, therefore, explored the effectiveness and coordination, if any, of policy H&S interventions between European, national, and organisational levels in the two sectors and the role of social partners in different national systems of collective bargaining and workplace mechanisms of H&S. The findings of this research show that effective interventions by actors at different levels ensure better quality ('fit for purpose') and wider coverage (type of care workers and employment status) of good H&S protection for health and care workers.

This project received funding from the European Commission, DG Employment, Social Affairs and Inclusion. Call for proposals: Improving expertise in the field of industrial relations (Project VS/2021/0234).

The Ageing Academy

Ageing healthily is a universal goal but not always achieved. By considering ageing in each of our academies we can identify and effects ways in which people can be healthier for longer across their life course.

Of course, ageing begins from the day we are born and has different profiles across gender, brain health, race, culture, work, activity etc. That is why this truly interrelational cross-cut provides such a fruitful window on how to inform what keeps us well (salutogenesis) in the face of the threat of ill health (pathogenesis).



Throughout this year, Noura Al-Moubayed has been working on two impactful projects aimed at enhancing patient care and optimizing healthcare processes.

The first endeavor centered on the development of a clinical testing and deployment pipeline for novel machine learning models designed to predict organ failure in chemotherapy patients. This work not only holds the potential to significantly improve the quality of life for patients undergoing chemotherapy but also streamlines the utilization of blood tests, a critical aspect of cancer care. Leveraging data from cancer patients across three prominent UK cancer care sites, with a primary focus on breast, colorectal, and Diffuse Large B-Cell Lymphoma cancers, our AI tool integrates electronic health records and blood test results from previous chemotherapy cycles. By predicting the likelihood of organ dysfunction in subsequent cycles, it empowers healthcare providers to personalize patient care, adjusting the frequency of blood tests based on individual risk profiles. This project, funded under the Biomedical Catalyst grant in collaboration with esteemed partners including UCL, UCL hospitals, and Evergreen Life Ltd., marks a significant advancement in precision medicine and patient-centered care.

Another noteworthy accomplishment this year was securing the NIHR Winter Pressure grant, underscoring our commitment to addressing the challenges faced by acute secondary care hospitals during periods of heightened demand. With hospitals experiencing unprecedented pressures, exacerbated by high rates of avoidable hospitalizations and readmissions, our team embarked on developing explainable artificial intelligence models to optimize acute illness pathways. By leveraging early-stage information available upon a patient's arrival in the Emergency Department, our models identify opportunities for improvements in place of care, discharge safety, and follow-up planning. These insights not only enable clinicians to proactively recognize and manage risks but also facilitate optimal patient flow, alleviating strain on hospital resources. The findings from this project have been instrumentalized, being presented in the recommendation report presented by HDRUK and NIHR to the Department of Health and Social Care, signalling a step forward in shaping more efficient and effective healthcare delivery systems. The project is in collaboration with Northern Care Alliance NHS Foundation Trust.



Project Cross Cuts

Mental Health Academy, Pain Academy, Women's Academy, Work Academy, Physical Activity Academy, Brain, Body and Behaviour Adademy and Race, Culture and Inequality Academy

Participatory Research

Participatory Research Innovation and Learning Lab

This project, led by the Centre for Social Justice and Community Action, aims to enhance learning about participatory research (PR), share experiences, pursue innovative ideas and practices and consider how university systems and procedures might need to change to facilitate PR. A report has been produced outlining the process of the workshops and identifying areas of good practice and recommendations for improved institutional systems at Durham University to support participatory research. A toolkit has also been produced offering guidance about specific innovative methods and approaches developed by participants in the Lab.



Project Cross Cuts

Women's Academy, Youth Academy, Brain, Body and Behaviour Academy, Pain Academy, Work Academy, Mental Health Academy and Race, Culture and Inequality Academy



Ethics in Community-Based Participatory Research

The Centre for Social Justice and Community Action has a particular interest in the ethical issues that arise in research that is community-based and participatory. Ethics relates to doing good and harm; how people are treated; and who benefits from research. In CBPR there may be particular questions about how to share power and resources, and create mutual respect. CSJCA's work on ethics includes a guide to ethical principles and practice, case examples, films, articles and a range of other resources for use by researchers and students based in communities and universities, and anyone interested in planning or evaluating CBPR.



Health, Environment and Architecture: Discourses from the Past, Challenges for the Present, Perspectives for the Future

Everybody's life and health are affected by environmental factors. Housing conditions, workplace, architecture, design and landscape constitute important individual and interdependent elements in that regard. To this we must add environmental factors such as global warming, extreme weather events and pollution, which have repercussions for the ways in which we think about architecture and housing.

This guest lecture series running in 2023 and early 2024 approached the relationship between health, environment and architecture from various different angles:

An emphasis on historical, philosophical and aesthetic perspectives will lead to an informed understanding of exemplary discourses that have taken place in the past and inspired current debates on the topic. The basis will be the detailed analysis of the rich tradition of architectural writing, starting from Graeco-Roman antiquity (with an emphasis on Vitruvius' *De architectura* and Frontinus' *De aquaeductu urbis Romae*), but also covering later periods such as the Renaissance (e.g. Leon Battista Alberti's *De re aedificatoria*). Equally important is the corpus of medical texts, as represented by the *Corpus Hippocraticum* and later treatises, which devote a great deal of attention to the impact of the environment and housing on the health and wellbeing of patients. Aesthetic and creative aspects, explored by disciplines such as art and design, also play a vital role in shaping quality of life. Furthermore, philosophical discourse from different traditions sheds light on concepts of space, in particular the often fluid boundaries between the public and private, and their relationship with architectural, environmental and health-related issues.



A focus on socio-political and medical perspectives will incorporate disciplines such as modern sociology, public health, political science and medicine to complement the perspectives outlined above and approach the nexus between health, environment and architecture – at local, national and international levels. In a globalised world, decisions taken at different scales have repercussions for larger groups of people and for wider geographical areas. Recent phenomena such as pandemics, the scarcity of material resources and energy crises have had an influence on how ideas on architecture, housing and landscaping are now conceptualised.

The project will also embed and iterate its more theoretical approaches within practical and technical perspectives, in particular when it comes to aspects of participation in society; this includes how architecture facilitates social interactions between individuals and groups. We are interested in developing the co-production of knowledge about how local planners, policymakers, politicians, entrepreneurs and other decision-makers come together in governance systems to take responsibility for the integration of theoretical, scientifically underpinned considerations into practice and how they do this on different levels. One area that is of particular relevance in this regard is the aspect of disability and accessibility.

The combination of these approaches provides a ground-breaking and innovative venture. The Wolfson Research Institute for Health and Wellbeing (WRIHW) at Durham (<https://www.durham.ac.uk/research/institutes-and-centres/wolfson/>) will provide a framework for the interdisciplinary dialogue that is envisaged.

Main organisers:

Thorsten Fögen, WRIHW Honorary Fellow
Jonathan Wistow, WRIHW Co-Director (Department of Sociology)

Invitation to Award Winning Unmasking Pain Event

1st March 2023

Unmasking Pain is a partnership project led by Balbir Singh Dance Company and produced by Space2, working with Durham University, Leeds Beckett University and Live Well With Pain. It offers a voice for people living with pain, through creative collaborations with artists and pain specialists. The event showcases stories of living with pain. It includes dance and music from Balbir Singh Dance Company, an exhibition co-created with artists and pain livers on the project and talks from Balbir Singh and Professor Paul Chazot of Durham University's Pain Academy. There will also be an opportunity to meet some of the artists and participants involved in the project.

Unmasking Pain is supported using public funding by the National Lottery through Arts Council England



Research Conversation - Global Health Partnerships

17th April 2023

Two calls, one relating to Applied Global Health Research and one relating to Applied Global Health Partnerships open on the 24th May with outlines submitted by 25th July. Both will fund projects up to £2m and £1m respectively over 5 years and wishes to furnish multidisciplinary research and partnerships with low to middle income countries, driven by that country's needs.



Research Conversation - The Mind Body Connection

2nd May 2023

The Early Career Researcher (ECR) Committee at the Wolfson Research Institute for Health and Wellbeing (WRIHW) is hosting a research conversation on 'The Mind Body Connection' in collaboration with the 'Brain, Body and Behaviour' Challenge Academy. The conversation is an opportunity for ECRs and non-ECRs to come together to discuss research interests and plans around health and wellbeing that connects mental and physical health. The research conversation will be divided into four parts consisting of 2-5 minute 'pitches' with plenty of time set aside for conversation



Therapy for Neurodegenerative Disease and Community Partnerships

8th June 2023

In this talk, Paul Chazot will showcase his work in drug and light therapy for neurodegenerative disease, which could provide options for the treatment of Alzheimer's Disease, Parkinson's Disease and Motor Neurone Disease. You might have read about his infrared light therapy helmet in the news. Paul will also touch on other areas of his research including a trial to treat post-concussion syndrome, which is of particular relevance to the military and the sports world, and promising research into drug and non-drug chronic pain management, the latter which is already saving NHS resources and improving quality of life for many.



Eyes on the Baby: Multi-agency SUDI Prevention in County Durham

9th June 2023

'Eyes on the Baby' is part of the County Durham SUDI Prevention Project, co-produced with Durham Infancy & Sleep Centre, Durham County Council and Durham Safeguarding Children Partnership, funded by the National Institute for Health and Care Research (NIHR) Applied Research Collaboration (ARC) North East and North Cumbria. Most SUDIs (Sudden Unexpected Death in Infancy) occur in families living in impoverished circumstances with multiple risks or vulnerabilities, and County Durham ranks 7th in the UK for children living in impoverished circumstances. 1000 local authority staff and staff of partner services have received SUDI prevention training as part of this multi-agency working approach. This event will showcase the results of the project and include the voices of staff who have taken part.



Health inequalities and the social contract: A bad 'deal' in and for society

19th June 2023

The longstanding work of Professor Sir Michael Marmot and colleagues (amongst others) has drawn considerable attention to health inequalities, highlighting how these reveal important characteristics about the nature of society. In this respect they also reflect the type of social contract that exists between citizens and the state, i.e., the basis on which we surrender our individual sovereignty and participate in society. In this lecture health inequalities in England will be used to explore and question the 'deal' (both implicit and explicit) that exists between individuals' and society.



Unruly Microbes – Epidemics, Infections, and Ecologies of Change in Historical Perspective

22nd and 23rd June 2023

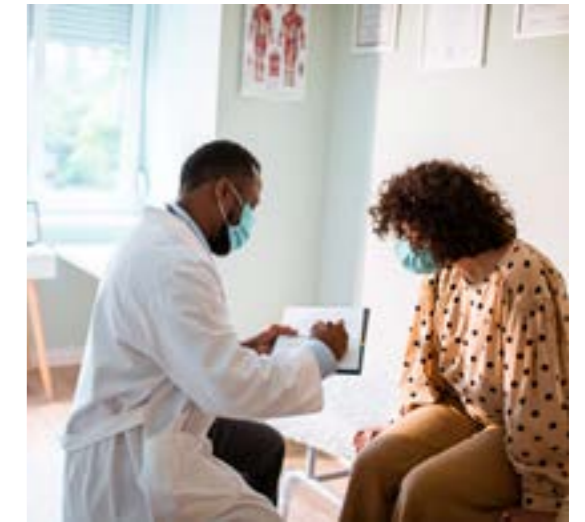
From spillover diseases to re-emerging infections to rising rates of antimicrobial resistance, stories of unruly microbes have proliferated daily conversation in recent years. These serious and continuing threats to human and nonhuman health fly in the face of triumphalist narratives of epidemiological transition and global disease eradication (Bellamy Foster et al., 2021). The COVID-19 pandemic has exposed the extent to which these human-microbial interactions are mediated by ecological change widely construed, from urban and rural land use change driven by global commerce patterns to shifts in internal microbial populations within bodies.



Maximising patient benefit from triage policies for scarce critical care resource allocation during periods of intense pressure: an empirically informed systems modelling and simulation study

28th June 2023

The Covid-19 Pandemic created "extraordinary and sustained" pressures and in some cases demands for rationing critical resource including intensive care (ICU) beds, medical equipment and health professionals. Advanced systems modelling and simulation approaches can help.



Healthy Places, Healthy Brains and the Exposome

28th June 2023

Adverse environmental exposures during the life course, in particular air pollution, are crucial to brain health, including cognitive function, mental health and dementia. Given this pathways to disease link to development, a new field of study has emerged called the exposome. The exposome is a complex configuration of all the exposures a community and its individuals experience in a lifetime and how the multifaceted chemistry of the systems in which people live meet with the complexities of the human brain and public health – particularly in terms of health and social inequalities.



Live well with Pain – Beyond Biomedicine

30th June 2023

Long-term pain from whatever reasons affects over 14 million people throughout the UK. Reliance on medication, including opioids, is the mainstay of management and is proving harmful to health for many. The overall aim of the GOTT 10-footsteps to live well with pain self-management project is to equip healthcare staff and other practitioners such as social prescribers who work to support people with persistent pain at a foundational level with fundamental knowledge and skills.



Alone, Me-time, and Solitude: What do we know and how do we make it better?

5th July 2023

Solitude – time that we do not interact with other people – can feel very differently depending on who you ask. For some people, it offers a space for calmness and relaxation. For others it can be boring, lonely, or even depressing. This lecture describes the research that explains why solitude feels the way that it does, will share some of the experiences our team has learned from living-alone adults around Durham County, and finally, will discuss how we can cultivate more of its restful benefits.



Our Events in 2023 cont.

From the Clap to the Finger! Rhetorical Genres, Audience and Critical Care Nurses During COVID-19

6th July 2023

The tendency of rhetorical studies is towards analysis of speaker and/or message. Here we undertake a message/audience Aristotelian genre-based analysis of Clap for Carers (CfC) the UK COVID-19 public tribute. Through a longitudinal study with 54 Critical Care Nurses (CCN) we analyse their reception and response to this unique praise-oriented tribute. Reception included appreciative positive emotional responses but also disillusionment and unease with CfC's duration and authenticity.

“From wonderkid to Billy Elliott to a world class academic” - The importance of narrative in understanding and researching the adolescent mental health.

13th July 2023

This award-winning presentation starts as a narrative of a young footballer growing up in the late 1980's-early 1990's, in the North East of England. It outlines the highs and lows of a footballer that didn't quite 'make it', with reflection on how the effects of isolation, rejection and failure contributed to, and escalated to almost two decades of undiagnosed mental illness.

Confronting the Complex Etiology of Alzheimer's Disease

28th July 2023

Alzheimer's disease is a complex neurological disorder and the most common form of dementia. Currently, there are no fully approved diagnosis and treatment for Alzheimer's disease. The production, accumulation, and aggregation of proteins in the human brain are considered major hallmarks of the disease. Reactive oxygen species (ROS) are significant sources of biomolecular and mitochondrial damage, leading to oxidative stress in neuronal cells. Oxidative stress, mitochondrial dysfunction, neuroinflammation, and microglia all contribute significantly to the pathogenesis of the disease.

Building out the rat: Urban improvement and ecologies of the Bombay plague epidemic, 1896–1920

11th October 2023

At the turn of the twentieth century, the city of Bombay was in the midst of an ongoing epidemic of *Yersinia pestis* that killed thousands annually. examine the role of slum clearance and urban beautification projects undertaken by the Bombay Improvement Trust between 1898 and its dissolution in 1925 in the spread of plague across the city of Bombay. Building on the work of Kidambi (2001), Hazareesingh (2001), and other scholars of urban improvement, I will argue that these urban beautification projects were conducted in tension with and often contradictory to the work being undertaken by the Plague Research Committee into plague-proof housing.



Architecture for mental healthcare: Twentieth-century transitions

25th October 2023

Although mental health features prominently in contemporary discourse about human health and wellbeing, there are still critical gaps in historical accounts of twentieth-century psychiatry, related disciplines that led to the adoption of the broader concept of “mental healthcare”, as well as the spaces and places that supported these. Within this context, this research examines the design of specialist buildings for mental healthcare in England in the post-World War II period, including the critical transition to de-institutionalisation, as well as connections to earlier and later periods of the twentieth century.



Buildings as an inner balm? Aesthetics and resilience

8th November 2023

Buildings shelter from rain, wind, heat and cold, provide sufficient space, and meet other requirements to serve their purpose. Whether a building achieves this can often be quantified and measured, and thus determined objectively. But what about its beauty and charm? Firstly, it is commonly argued that beauty, like other aesthetic characteristics, is simply a matter of subjective preference. Accordingly, a demand for architectural 'beauty' is to be avoided because it eludes objective comprehension. Secondly, aesthetic qualities are often dismissed as non-functional and viewed as a costly indulgence. (Possibly shopping malls, restaurants, hotels or amusement parks are exceptions for which creating a specific aesthetic ambiance appears functional in attracting customers.)



Enlighten Critical care from the outside: one year on

9th November 2023

Celebration of the ICU garden as a 'transformative' space for Health and Wellbeing of inpatients, carers and staff. The psychological and emotional benefits of time spent in gardens are well evidenced with resulting improvements in mood, social functioning, emotional and physical well-being. Through consultation with staff and the wider critical care community, artist/designer and researcher, Dr Laura Johnston, created a garden for critical care at James Cook University Hospital, Middlesbrough.



Unmasking pain: The Colours of Light for Health and Wellbeing

15th November 2023

This event will explain and utilise the power of the festival of Diwali for health and wellbeing, a key aspect of self-managing persistent pain. This continues the Fuse Health award winning programme, Unmasking pain, from last year's highly successful programme ESRC Festival event.



Sanitation for all? Cities and the right to citylife

22nd November 2023

In the wake of the COVID-19 pandemic, the relationship between the health of the city and good sanitation has never been more important. Sanitation is one of modern urban life's most neglected issues. This lecture makes the case for sanitation for all, arguing for a renewed, equitable investment in sanitation as a foundation of urban social life. Adopting Henri Lefebvre's concept of 'the right to the city', it uses the notion of 'citylife' to reframe the discourse on sanitation from a narrowly defined policy discussion to a question of the democratic right to public life.



Early Career Researcher (ECR) research proposal 'pitch to peers' session

11th and 12th December 2023

Are you an ECR looking for constructive feedback on a research idea or proposal for funding (e.g., an internship or PhD proposal, a fellowship application, internal or external grant funding) that is related to health and wellbeing (broadly construed)? In these sessions the WRIHW ECR Committee will work as a multi-disciplinary panel to provide verbal feedback on your research proposal and help you to strengthen your ideas and plans.





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for Health and Wellbeing

Inspiring the extraordinary

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