Durham University
Wolfson Research Institute for Health and Wellbeing

Inspiring the extraordinary

Ninth Annual ECR Conference

19th June 2026
Mountjoy Centre

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Early Career Researchers

At the Wolfson Research Institute for Health and Wellbeing (WRIHW) we include a focus on the importance of nurturing its early career researcher (ECR) community. 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
- To offer ECRs within the WRIHW opportunities to develop their research, CV and understanding of what a career in research can look like

If you are interested in joining our ECR committee or an ECR Member please contact Andrea Lambell or Amir Atapour-Abagouei.

ECR Committee Members

Harriet Broadfoot	Education
Sophie Lovell-Kennedy	Anthropology
Amir Atapour Abarghouei	WRI Co-Director, Computer Science
Andrea Lambell	Anthropology
Leanne Trick	Psychology
Charmele Ayadurai	Business School
Georgina Robinson	Theology and Religion
Johanna Thren	Anthropology
Julie Brown	Institute for Medical Humanities
August Zheng	Psychology

The Early Career Researcher Conference

This conference aims to showcase the wide range of Health and Wellbeing research at Durham University and promote interdisciplinary work amongst Early Career Researchers.

The conference will feature an introduction by Professor Charlotte Clarke, Executive Director of the Wolfson Research Instutute for Health and Wellbeing and Associate PVC (Health), as well as special presentations from the Unbound Opportunities workshop grant awardees.

There will be presentations and posters by fellow ECRs. There will be time for questions and conversation, networking and collaboration.
Prizes will be given for the best poster and best talk.

Thank you and please enjoy!

The ECR Committee

Session 1: Talks

Chaired by Andrea Lambell

The Role of Hope in Supporting Mental Health After Imprisonment

David Adlington-Rivers

The transition from prison to community is often marked by profound psychological vulnerability. Many people leaving custody experience anxiety, depression, trauma, social exclusion, and uncertainty about who they are and whether a meaningful future is possible. While post-release systems frequently focus on risk management, compliance, and practical resettlement, far less attention has been given to the psychological resources that enable individuals to sustain wellbeing, rebuild identity, and imagine a future beyond imprisonment.

This research explores hope as a critical yet underexamined component of post-release mental health and adjustment. Drawing on hope theory, it conceptualises hope not as passive optimism, but as an active psychological process involving agency, motivation, emotional resilience, and the capacity to envision pathways forward despite adversity. The study examines how people recently released from prison understand, experience, lose, and sustain hope within the realities of stigma, structural disadvantage, and social uncertainty.

Aligned with the interdisciplinary aims of the Wolfson Research Institute for Health and Wellbeing and the Mental Health Academy, the research adopts a psychologically informed qualitative approach centred on lived experience and meaning-making. It investigates how hope interacts with mental health, identity reconstruction, self-efficacy, and belonging, while also examining the relational and institutional conditions that shape hope after release, including supervision practices, support services, and community environments.

Conceptually, the research positions hope as both a protective factor for mental wellbeing and a mechanism through which individuals negotiate recovery, purpose, and future-oriented thinking after imprisonment. In doing so, it shifts attention from deficit-based understandings of justice-involved populations toward the psychological and social conditions that make recovery and reintegration possible.
The findings have implications for the development of psychologically informed, hope-enhancing approaches within probation, mental health, and third-sector services. More broadly, the study contributes to interdisciplinary conversations about mental health inequality, recovery, and human flourishing among justice-involved populations, arguing that successful reintegration depends not only on managing risk, but on sustaining the possibility of a future.

Supporting Both Parents & Host Families in Their Approach to Food Provision to Ensure Male Academy Footballers Are Meeting Their Energy Demands

Holly Brown

A common theme in recent literature identifies that adolescent academy footballers are under-fuelled on days with greater energy demands. This is often attributed to factors such as inadequate nutritional knowledge, with interventions rarely resulting in meaningful behaviour change. This research aims to support caregiver food provision to ensure elite academy footballers are meeting their energy demands, whilst giving additional thought to how elite football clubs both advertise and select host families to support youth footballers.

Thirty-two semi-structured interviews with players (n=13), caregivers (n=12), and club safeguarding staff (n=8) were conducted during the 2024/25 season to examine the dietary habits and social practices of players and their caregivers. Data were analysed using reflexive thematic analysis to determine whether the social practices and dietary habits described limit optimal intake for player health and performance. Findings demonstrate that players' food choices are often determined by the structural dynamics of the identified eating spaces. Players described predominantly eating in club-regulated spaces with limited autonomy, as others largely determine what is consumed.

Furthermore, the routine monitoring of players appears to inhibit these athletes from disconnecting from football, whilst the reinforcement of food moralisation by both club staff and caregivers evidently generates confusion, moral pressure, and, at times, resistance. Concerningly, some players consequently described engaging in disordered eating behaviours, such as restrictive eating. Overall, this research highlights that the dietary habits of adolescent footballers are difficult to understand and likely cannot be changed without considering the independent social networks that influence their everyday eating practices.

Modality-Aware Medical Image Retrieval within Knowledge Graph-Based Question Answering

Mohammed Alshammari

Medical images can be difficult to understand because they come in different forms, such as X-rays, CT scans, and MRI scans. Each modality captures different information about the body, so the system first needs to identify the image modality before selecting the most suitable pathway for disease retrieval. In this work, we develop a system that identifies the image modality and then uses the most suitable retrieval pathway to identify the most likely disease.

Once a possible disease is identified, the system does not stop there. It also allows users to ask questions about the condition, such as its symptoms, diagnosis, or treatment. The answers are connected to a trusted medical knowledge graph, which means the information comes from organised and reliable medical sources rather than unsupported text.

The main contribution of this work is that it brings together image-based disease identification and clear medical explanation in one system. Instead of only giving a disease name, the system helps users understand the result through clear and structured information. By identifying the image modality first and then linking the result to trusted knowledge, the system aims to make medical image retrieval more accurate, understandable, and trustworthy for users from different backgrounds.

Embodied Distress and Explosive and Controlling Impulses: Children's Body Mapping, Polyvagal Theory, and Early Indicators of Child-to-Parent Violence

Nikki Rutter

This presentation examines children's body mapping as a participatory, arts based method for understanding the embodied emotional experiences of pre adolescent children who enact harm towards parents through what is conceptualised as explosive and harmful impulses (EHIs).

Drawing on weekly arts based workshops with 21 children aged 6–11, analysed within a Glaserian Grounded Theory and informed by polyvagal theory, within the presentation I will demonstrate how EHIs emerge as embodied survival responses rather than intentional or instrumental violence. Body maps function as methodological artefacts that render visible children's autonomic states, emotional dysregulation, and relational distress, challenging dominant behavioural framings in social work and child protection. Children with traumatic backgrounds (victims of domestic abuse; care experienced young people), had particular physiological responses on their body maps which reflected their harmful behaviours.

Within this presentation, I argue for early, relationally focused, trauma and neurodiversity informed responses that foreground safety, co regulation, and embodiment.

The dialectics of mattering in scaling organisations – implications for personal and societal wellbeing.

Jacqueline Wade

Mattering, our subjective sense of feeling valued and significant, is under threat, at work, home and community. Increased levels of isolation, marginalisation, and radicalisation, coupled with an existential AI threat, raise fundamental societal questions about who might matter going forward. Studies suggest that the psychosocial construct of mattering is associated with a range of positive outcomes, acting as a buffer during periods of crisis and disruption, whilst also enhancing wellbeing, creativity, and productivity. However, mattering acts as a double-edged sword. When experienced in excess or imbalance, it contributes to narcissism, grandiosity, and burnout, with deficits being linked to loneliness, depression, and diminished wellbeing.

This paper shares the findings of early-stage exploratory research into how the construct is interpreted and enacted by leaders (n=20) in the specific context of a highly volatile, scaling organisation. A single case study methodology was deployed, purposively sampling a private-equity, tech-service company with 200+ employees. The adoption of mattering as an explicit, legitimised company value allowed a deeper inquiry into the construct without needing to explain or educate on the construct.

Adopting Reflexive Thematic Analysis, the following key themes emerged as unique insights: (i) mattering as an explicit call to action; (ii) mattering as dynamic and in flux; (iii) mattering as an ethico-moral dilemma. Mattering was revealed as a dialectical construct with significant potential to both drive growth and enhance wellbeing, whilst also highlighting a potential shadow side, whereby ego-driven and performative tendencies risk undermining human connection and, ultimately, organisational sustainability. As ventures scale, new actors enter the field and hierarchies emerge, potentially distancing the founders(s) and reshaping perceptions of who feels seen, heard, and valued.

This study offers both theoretical and practical contributions. It extends the conceptual understanding of mattering by examining it within the novel context of scaling organisations and provides qualitative insights into leaders' lived experiences of enacting a mattering culture in flux. The findings offer practical implications for researchers and practitioners interested in fostering organisational growth in ways that sustain wellbeing and preserve the common good.

Session 2: Flash Talks

Chaired by
Sophie Lovell-Kennedy

Enhancing construction workers' health and safety: mechanisms for implementing Construction 4.0 technologies in construction organizations

Qian Zhang

The construction industry is notorious for high risks and accident rates, prompting professionals to adopt emerging technologies for improved construction workers' health and safety (CWHS). Despite the recognized benefits, the practical implementation of these technologies in safety management within the Construction 4.0 era remains nascent. This study aims to investigate the mechanisms influencing the implementation of Construction 4.0 technologies (C4.0TeIm) to enhance CWHS in construction organizations.

Drawing upon integrated institutional theory, the contingency resource-based view of firms and the theory of planned behavior, this study developed and tested an integrated C4.0TeIm-CWHS framework. The framework captures the interactions among key factors driving C4.0TeIm to enhance CWHS within construction organizations. Data were collected via a questionnaire survey among 91 construction organizations and analyzed using partial least squares structural equation modeling to test the hypothesized relationships.

The results reveal that: (1) key C4.0TeIm areas are integrative and centralized around four areas, such as artificial intelligence and 3D printing, Internet of Things and extended reality; and (2) external coercive and normative forces, internal resource and capability, business strategy, technology competency and management (BST), organizational culture and use intention (UI) of C4.0 technologies, collectively influence C4.0TeIm-CWHS. The findings confirm the pivotal roles of BST and UI as mediators fostering positive organizational behaviors related to C4.0TeIm-CWHS.

Practically, it offers actionable insights for policymakers to optimize technology integration in construction firms, promoting industrial advancement while enhancing workforce well-being.

The novel C4.0TeIm-CWHS framework contributes to the theoretical discourses on safety management within the C4.0 paradigm by offering insights into internal strategic deployment and compliance challenges in construction organizations.

Mapping transition to university for students with long-term physical health conditions

Melody Bishop

University students represent a large, increasing population whose needs are under-acknowledged and insufficiently understood. For young people pursuing higher education, emerging adulthood (Arnett 2004) - the period between adolescence and young adulthood - involves transition towards a host of newfound personal, academic, and social responsibilities. During transition to university, students with long-term physical conditions (LTCs), such as chronic fatigue syndrome, diabetes and epilepsy, face challenges across several areas of student life. This, I argue, is due to the complexity of having a LTC whilst also occupying a liminal (Turner, 1967) position between adolescence and adulthood, and between “home” and “university”.

In this session, I visually present a map of findings from my near-complete PhD, an interview and diary-based qualitative longitudinal research project exploring the experiences of 19 students with LTCs throughout their first year at an “elite” collegiate university. I succinctly showcase exemplar samples of participants’ experiences across the year and across different thematic areas (developing independence; navigating healthcare; learning to learn; seeking support; and finding a new sense of “home”). Through this exploration, I highlight opportunities to better support these students on both an institutional and healthcare/education policy level, considering and critiquing ableist structures found in and beyond UK higher education.

‘Oh, by the way, I’m diabetic’: Resisting and Experiencing Type 1 Diabetes Stigma in Higher Education Through Openness, Technology, and Boundary Work.

Joshua Roberts

This research explores the experience of higher education students with Type 1 diabetes (T1D) in encountering and resisting stigma. Drawing upon interviews conducted with 7 participants, this research reflects the way they constructed and discussed the meanings and experiences of stigmatisation of their illness. Using inductive and axial coding four themes were developed: information management, technology, transition trajectories, and boundary work.

People with Type 1 Diabetes experience structural stigma and seek to resist stigma in diverse ways making use of technology, social support from friends and parents, and engaging in self-care in social settings. Technology is a way of resisting stigma through engaging in discreet self-care, concealing their Type 1 Diabetes identity, or alternatively passively disclosing their diabetes. People with Type 1 Diabetes use the disclosure of their illness to dispel the myth that they are suffering. They also seek to construct boundaries between those with type 1 diabetes and those who do not along moral and experiential-biomedical lines. Being open and educating people is an important value for students with Type 1 Diabetes. Structural stigma continues to be felt when support is in-flexible and the needs of people with Type 1 Diabetes go unrecognised and unaccommodated.

Educating people about diabetes as well as flexible and understanding support systems at university will help reduce stigma which will improve quality of life, and physical and mental health outcomes. Therefore, the stigmatisation of people with Type 1 Diabetes is an important topic of research which will lead to better understanding and support

Phytotoxic effects of wastewater derived pharmaceuticals on chia (Salvia hispanica): impacts of ibuprofen and paracetamol on early plant development.

Yasmin Acelya Richards

Non-steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen and paracetamol are increasingly detected as environmental contaminants in agricultural soils at concentrations ranging from µg/kg to mg/kg, originating from human waste via wastewater irrigation and sewage sludge amendment (Schmidt et al., 2015). Ibuprofen has been reported at concentrations up to 8.4 mg/kg in biosolid-amended soils, while paracetamol reaches similar levels in contaminated systems (Wijaya et al., 2020). However, research on the effects of contaminated soils on terrestrial plants remains limited compared to aquatic organisms. Recent studies demonstrate that NSAIDs can impair crop development by disrupting auxin transport and endomembrane system function (Tan et al., 2020).

The aim of this study was to evaluate the effects of pharmaceutical contamination on early plant development. This study evaluated the effects of ibuprofen and paracetamol on the germination, growth, and physiology of chia (Salvia hispanica). Chia seeds were planted in soil and watered after germination with ibuprofen or paracetamol at concentrations of 0.10, 0.25, and 0.50 g/dm³. Plants were grown under controlled LED lighting for approximately 1–2 weeks. Plant height, leaf development, and chlorophyll content were measured and compared to controls.

Both NSAIDs significantly reduced plant height, leaf number and chlorophyll content compared with controls, with the strongest effects observed at 0.50 g/dm³. Reductions in plant height, leaf development, and chlorophyll content were observed compared with control plants, with stronger effects occurring at higher concentrations. The results demonstrate that pharmaceutical contamination can impair plant growth in wastewater-exposed soils, with potential implications for agricultural food production.

ScribbleGAN: Learning Optimised Sparse Annotations for Weakly Supervised 3D Medical Image Segmentation.

Maha Alsayyari

Training AI models to identify anatomical structures in medical scans like MRI requires doctors to carefully label every pixel in thousands of images — a process that can take many hours. A popular shortcut is to use scribbles: rough pen strokes drawn through structures of interest. Scribbles take seconds rather than minutes to create, yet provide enough information for AI models to learn from.

But what if the scribbles themselves could be made smarter? Today, scribbles are either drawn by hand or placed using simple geometric rules, with no consideration of where they will actually be most useful.

We introduce ScribbleGAN, a framework that learns to generate optimised scribble annotations automatically. Rather than placing scribbles arbitrarily, ScribbleGAN learns where sparse labels are most valuable — concentrating on regions where the AI model is most uncertain — while staying within a fixed annotation budget. The scribbles are not designed by hand; they are learned.

Evaluated on two cardiac MRI datasets (ACDC and MSCMR), ScribbleGAN achieves higher segmentation accuracy than existing scribble-based approaches while using fewer labelled voxels. Our results demonstrate that annotation quality matters as much as annotation quantity — and that both can be optimised automatically.

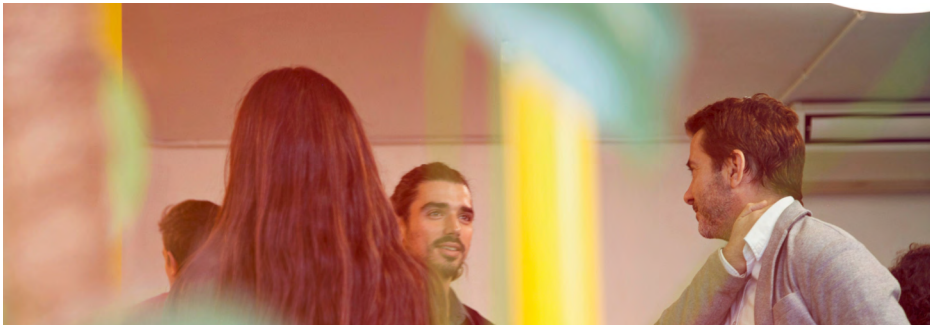
Session 3: Research Innovation Services Introduction

Session 4: Poster Session

Please dont forget to vote!

This year you will choose the winner of best poster.

Voting slips are in your conference pack.



Reimagining Governance for a Flourishing Research Culture

Andrea Lambell

Inclusive participation in decision-making is increasingly recognised as central to research staff wellbeing, shaping experiences of belonging, agency, and trust within academic institutions. However, persistent structural challenges – such as siloed working, ‘us and them’ cultures, and limited opportunities for meaningful input – can undermine these outcomes and contribute to disengagement and reduced workplace wellbeing.

This project, funded through the Wellcome Trust Institutional Funding for Research Culture (IFRC), explores how more inclusive governance practices at Durham University could enhance both decision quality and the wellbeing of research staff. Through ethnographic inquiry and the introduction of innovative Shadow Committees, the project examines how widening participation in governance can foster greater understanding, connectedness, and confidence in institutional processes.
We are developing an accompanying toolkit which translates these insights into practical, adaptable strategies for embedding inclusion across governance contexts.

It will provide structured guidance on inclusive recruitment, accessible meeting design, and mechanisms that enable genuine participation and skill development. By recognising diverse forms of expertise, the toolkit will support environments in which staff can contribute meaningfully to decision-making processes.

Visual search foraging in Parkinson's Disease

Bobbi Chidley

Evidence for visual search deficits in Parkinson's disease (PD) remains inconsistent, in part because traditional single-target tasks do not capture the complexity of naturalistic multi-target search.

Accordingly, this study used a foraging task to test whether PD-related search issues arise from eye-movement difficulties or changes in decision-making. PD patients, older adults, and young adults searched through "patches" of 75 object images to find four target types hidden among distractors. Each target had a point value and a specific frequency. Participants could leave a patch at any time to start a new one, aiming to reach a total point goal.

Results showed that PD participants used a suboptimal strategy; they left more targets behind and moved to new patches more often than healthy older adults to reach the goal. While target value and prevalence influenced selection order and foraging rates across all groups, these factors did not interact with PD diagnosis. Basic oculomotor metrics (saccade amplitude, fixation count) did not differ between groups, although both older groups showed longer fixation durations than young adults.

These findings suggest that, in naturalistic multi-target search, PD is associated with an altered "exit" strategy and less efficient exploitation of available targets, rather than oculomotor impairment.

Transcriptional profiling of memory engrams in Drosophila

Colin Wong

How do animals make long-lasting memories?

Fruit flies have enabled significant leaps in our understanding of this question. When fruit flies learn to associate a neutral odour with a sugar reward, a process called consolidation enables flies to remember this association over a day later.

Memory consolidation requires protein synthesis. However, which proteins are being made and how they help consolidate long-term memories remains largely unexplored. Long-term memories are stored in small subsets of neurons known as engrams. Using CRISPR, we are developing new genetic tools that rely on the expression of activity-regulated genes, that will enable the labelling and manipulation of olfactory engrams in the fly brain.

These tools allow us to not only address the role of engram neurons during different phases of memory, but also allow us to profile the transcriptome of isolated engram neurons. Identifying the gene regulation and gene expression events that occur during memory formation, consolidation and maintenance will highlight the molecular and cellular pathways that sustain long-term neuronal plasticity. I will present our latest data.

A review of virtual physical activity counselling programmes: design and delivery for translation in African settings

Hillary Banjo

Physical activity (PA) counselling can be an effective strategy to reduce inactivity among diverse populations. With the rapid expansion of telehealth, PA counselling is increasingly delivered through virtual modalities, offering useful benefits where access to in-person services may be limited, such as in Sub-Saharan Africa (SSA).

This scoping review explored key characteristics, integration pathways, delivery platforms, and theoretical underpinnings of virtual PA counselling programmes.

The review was conducted in accordance with the Joanna Briggs Institute methodology and reported following the PRISMA-ScR checklist. The SPIDER framework was used to inform inclusion criteria. Primary studies of any design, publication date and language that reported on the characteristics of virtual PA counselling interventions were eligible. Systematic searches were conducted in five electronic databases and five regional (African) journal platforms in April 2025. Data relevant to delivery platforms, integration pathways, and theoretical underpinnings of virtual PA counselling programmes were extracted.

In total, 1,066 records were screened, 39 studies were included. Most studies were conducted in high-income countries (n=38), primarily involving clinical populations (n=30) and inactive adults (n=9), with the majority (n=25) published after 2020. Virtual PA counselling was commonly integrated into healthcare pathways via clinician referral (n=9), although several studies recruited participants through social media and physical advertisements (n=9). Telephone-based counselling was the most frequently used delivery platform (n=12), followed by Zoom (n=4). The most common theoretical frameworks and models used included the Social Cognitive Theory (n=7), the Self-Determination Theory (n=5), and the Transtheoretical Model of Behaviour Change (n=3).

Conclusions: These findings offer new insights into our understanding of how virtual PA counselling might promote prevention and long-term behaviour modification beyond conventional face-to-face models and serve as a scalable extension of healthcare systems. Knowledge translation of this evidence base to SSA settings, which face a different set of challenges, offers a pragmatic and timely solution where access to in-person services may be limited.

Examining the Bidirectional Relationship Between Dysmenorrhea and Depression: The Mediating Roles of Repetitive Thinking and Pain Catastrophising

Sati Omarov and Asha Wilson

Dysmenorrhea is highly prevalent and has been associated with increased depressive symptoms; however, the psychological mechanisms underlying this relationship remain poorly understood. The present study examined the associations between dysmenorrhea severity and depressive symptoms and investigated whether repetitive thinking, a transdiagnostic process characterized by persistent negative cognition, and pain catastrophizing, a cognitive-affective response to pain involving exaggerated negative appraisal of pain, functioned as mediators.

A cross-sectional, correlational design was employed, with dysmenorrhea severity, depressive symptoms, repetitive thinking, and pain catastrophizing assessed using standardized self-report questionnaires. Two mediation models were tested to examine whether repetitive thinking and pain catastrophizing represent cognitive mechanisms underlying the relationship between dysmenorrhea severity and depressive symptoms in opposing directions.

Results indicated that dysmenorrhea severity was positively associated with depressive symptoms, and that this relationship was mediated by repetitive thinking. In contrast, depressive symptoms did not directly predict dysmenorrhea severity; however, pain catastrophizing emerged as a significant predictor of dysmenorrhea, suggesting that maladaptive cognitive appraisal processes may play an important role in the relationship between depressive symptoms and dysmenorrhea severity. These findings suggest that distinct cognitive processes may differentially contribute to the relationship between menstrual pain and depressive symptoms. Repetitive thinking appears more strongly linked to depressive symptoms, whereas pain catastrophizing may be more directly implicated in pain severity.

The findings highlight the importance of cognitive vulnerability processes in understanding psychological influences on dysmenorrhea and predictors of depressive symptoms and suggest that targeting maladaptive cognitive processes may represent a promising avenue for intervention.

The Relationship Between Academic Burnout and Depressive Symptoms, and The Moderating Role of Self-Compassion: A Cross-Sectional Online Study Among UK University Students

Wirayut Wongsa

Burnout, a state of chronic exhaustion resulting from prolonged academic stress, has been identified as a growing concern among university students, with evidence suggesting it is linked to the development of depressive symptoms. However, not all students who experienced burnout developed depressive symptoms. Individual differences in self-compassion have been evidenced to play a role in this development. Self-compassion, defined as being kind and understanding towards oneself, has been independently associated with reduced burnout and depressive symptoms.

This study investigated the association between academic burnout and depression and whether self-compassion moderated this relationship. Using a cross-sectional survey design, a convenience sample of 151 UK university students (mean age = 19.6 years, 85% female) completed standardised self-report questionnaire measures of burnout, depression, and self-compassion online. Correlational analyses confirmed a significant moderate positive association between overall burnout scores and severity of depressive symptoms. However, moderation analyses revealed that while overall self-compassion also had a significant negative association with depressive symptoms, it was not a significant moderator of the relationship between burnout and depression. Exploratory analyses examining the individual dimensions of self-compassion revealed that self-judgement was a significant moderator, such that among those with lower levels of self-judgement the relationship between burnout and depressive symptoms was weaker. This suggests that students who respond to the sequelae of academic pressures with less self-criticism may be buffered against progression from burnout to depression.

These findings have implications for strategies to support student mental health; indicating the importance of identifying students exhibiting signs of burnout to enable earlier intervention before symptoms escalate into mental health difficulties such as depression. Furthermore, the findings suggest that promoting less self-critical ways of relating to oneself could help to mitigate the detrimental psychological impact of academic burnout. Future research should confirm these findings utilising representative samples and longitudinal designs to clarify the directionality of the observed relationships.

Cross-syndrome comparisons of the online experiences of children and young people

Grace McCabe

Previous work demonstrates that young people with Williams syndrome experience more social vulnerability online than their neurotypical peers; despite having more restricted access to risky online activities. This study explores how the online experiences of young people with Williams syndrome and other neurodevelopmental conditions vary, considering the roles of digital ableism, social-behavioural differences, mental health, intellectual disability, and parental independence in the creation of online social vulnerability.

The study uses a bespoke questionnaire, asking parents of young people aged 9-25 years (with Williams syndrome, Down syndrome, ADHD and autism) about their children's online behaviours and experiences, and the rules their young people had for using the internet. Results show a divide in the experiences of young people which is largely linked to the ways that they use online spaces, and thematic maps highlight the importance of both online and offline factors in the creation of social vulnerabilities, with links between ideas being supported by qualitative free-response data, and quantitative analyses. This study serves to provide more information about the causes and experiences of online social vulnerability for children and young people with Williams syndrome and other neurodevelopmental conditions to identify targets for future intervention efforts.

The Impact of Micronutrient Supplementation on Dietary Intake: A systematic Review of Indirect Evidence Derived from Randomised Placebo-Controlled Human Trials.

Wahebah Alanazi

Food preferences and eating behaviours are influenced by underlying regulatory mechanisms related to nutritional needs. Micronutrients have been indicated to influence food choice and dietary intake through behavioural mechanisms; this hypothesis has not been directly tested in human supplementation trials. No published human supplementation trials were designed to test whether micronutrient intake is behaviourally regulated.

This PROSPERO-registered systematic review aimed to indirectly investigate whether micronutrient supplementation reduced dietary intake of the same micronutrient, using a secondary analysis of existing randomized placebo-controlled human trials (RCTs) that were designed to assess other outcomes than dietary behaviour. Literature searches were conducted in six online databases, PubMed, Scopus, Cochrane Library, CINAHL, MEDLINE, and SPORTDiscus via EBSCOhost. Eligible trials included intervention with vitamin C, magnesium, zinc, iodine, or selenium, and a corresponding placebo. Other inclusion criteria were supplementation in adult populations and reporting of dietary intake of the same micronutrient after or during supplementation in both intervention and placebo groups. Twenty-eight trials were included, comprising a total of 2373 participants: 14 with zinc, 7 with magnesium, 3 with selenium and 4 for vitamin C. The median trial duration was 12 weeks, ranging from 2 to 30 weeks.

Due to substantial heterogeneity across trials, no meta-analysis was conducted; instead, findings were synthesised narratively with descriptive quantitative analysis. Across studies, none of the micronutrients showed a clear trend towards or against the hypothesised decrease in intake. Therefore, there is no clear evidence that short-term supplementation with these micronutrients influences habitual dietary intake.

Future research should use alternative designs, including long-term intervention studies involving changes in dietary patterns or investigations in physiological states (e.g., pregnancy), as well as more direct behavioural measures (e.g., food preference measures and behavioural tasks).

The mediating roles of pain catastrophising and repetitive thought on the relationship between depression and dysmenorrhea.

Asha Wilson

Depression and dysmenorrhea (i.e. menstrual pain) are common and negatively impact daily function and quality of life. Those who experience depression are more likely to experience dysmenorrhea, and those who experience dysmenorrhea are more likely to suffer from depression. However, the mechanisms underlying this bidirectional relationship are not well understood. The present study examined the roles of repetitive thinking and pain catastrophizing (cognitive processes characterised by persistent and negative styles of thought) in explaining the association between depression and dysmenorrhea.

A cross-sectional, online survey study was used to collect data from a convenience sample of 115 participants aged 18 years or over who experience menstrual cycles. Standardised self-report questionnaire assessments were used to measure current depressive symptoms, severity of dysmenorrhea, pain catastrophising and repetitive thought. Using a regression-based statistical approach two separate mediation models were tested to examine (i) predictors of dysmenorrhea, and (ii) predictors of depression among people with dysmenorrhea. Approximately 44% of participants included in the study met criteria for moderate depression, and 68% met threshold for clinically significant dysmenorrhea. Overall, there was a weak positive correlation between depression and dysmenorrhea. In the first mediation model, contrary to our hypothesis, depressive symptoms did not predict severity of dysmenorrhea, although results did approach significance (p=.051). However, higher levels of pain catastrophising were a significant predictor of dysmenorrhea as expected. A second mediation model, in the subset of participants who met clinical threshold for dysmenorrhea, found that both dysmenorrhea and repetitive thought predicted depression, and that repetitive thought fully mediated the relationship between dysmenorrhea and depression.

These findings suggest that distinct cognitive processes may differentially contribute to menstrual pain and depressive symptoms. Repetitive thinking appears to be strongly linked to depressive symptoms and may represent a mechanism that explains the increased prevalence of depressive symptoms among people with dysmenorrhea, whereas pain catastrophizing may be more directly implicated in menstrual pain severity. These findings highlight the importance of psychological influences on dysmenorrhea and depressive symptoms, and suggest that targeting maladaptive cognitive processes may represent a promising avenue for integrated interventions that could improve women's health.

Development of the Malaysian Cultural and Creative Art (MYCAT) Module in studying the Relationship Between Creativity and Mental Health Among Undergraduate Students in Malaysia and the United Kingdom.

Fazlina Binti Harun Narasid

Mental health issues particularly depression, anxiety, and stress (DAS) are increasingly prevalent among university students worldwide and represent a growing public health concern. This problem has also been reported among tertiary students in Malaysia and the United Kingdom. At the same time, creativity is recognized as an essential 21st-century skill that supports innovation, adaptability, and problem-solving, and may also enhance psychological well-being. However, limited research has examined the relationship between mental health specifically depression, anxiety and stress with creativity, particularly divergent and convergent thinking, across cultures. Furthermore, no study has explored an integrated Malaysian cultural and creativity-based intervention module to reduce the symptoms of mental health condition.

This study aims to investigate the relationship between creativity and mental health among undergraduate university students in Malaysia and the UK and to develop a culturally relevant creative intervention module. A total of 385 students aged 18–26 will participate, and the study will be conducted in three phases. In Study 1, the relationship between creativity and mental health will be examined online, with creativity assessed using the Alternative Uses Task (AUT) and Remote Associates Test (RAT), and mental health measured with the Depression Anxiety Stress Scales-21 (DASS-21). Study 2 involves developing the Malaysian Cultural and Creative Art Therapy (MyCAT) module based on Study 1 findings, which will then be implemented with selected students over several weeks. In Study 3, pre- and post-test assessments will evaluate the module's effectiveness. The study is expected to reveal significant relationships between creativity and mental health and demonstrate that culturally relevant creative activities can enhance creativity and reduce symptoms of depression, anxiety, and stress. Findings may provide valuable insights for educators, policymakers, and mental health practitioners on using MyCAT to support creativity and improve student mental health across Malaysia and the United Kingdom.

Premenstrual Dysphoric Disorder as an Independent Predictor of Non-Suicidal Self-Injury: Examining Cognitive Risk Pathways

Rowan Sutton

Medical images can be difficult to understand because they come in different forms, such as X-rays, CT scans, and MRI scans. Each modality captures different information about the body, so the system first needs to identify the image modality before selecting the most suitable pathway for disease retrieval. In this work, we develop a system that identifies the image modality and then uses the most suitable retrieval pathway to identify the most likely disease.

Once a possible disease is identified, the system does not stop there. It also allows users to ask questions about the condition, such as its symptoms, diagnosis, or treatment. The answers are connected to a trusted medical knowledge graph, which means the information comes from organised and reliable medical sources rather than unsupported text.

The main contribution of this work is that it brings together image-based disease identification and clear medical explanation in one system. Instead of only giving a disease name, the system helps users understand the result through clear and structured information. By identifying the image modality first and then linking the result to trusted knowledge, the system aims to make medical image retrieval more accurate, understandable, and trustworthy for users from different backgrounds.

How do cultural context, parenting, and urbanicity shape adults' evaluations of imitation and innovation (China vs. the UK)?

Linying Pei

Humans learn from others through imitation, but sometimes people copy unnecessary actions (over-imitation) instead of finding their own solutions (innovation). Both play a crucial role in cultural learning and knowledge transmission.

Imitation supports stable, efficient learning, and innovation drives adaptation and cultural change. Cultural context shapes both: interdependent societies tend to favour conformity, while independent ones emphasise originality. Urban and rural settings add another layer, with urban environments often encouraging novelty and rural ones valuing tradition. This may be because urban environments typically provide greater exposure to diverse ideas and opportunities for innovation, whereas rural contexts may prioritise social cohesion and the maintenance of established practices.

Research has focused almost entirely on children's behaviour, with relatively little attention to how adults evaluate such behaviour. However, emerging work has begun to examine these evaluations. For example, Clegg, Wen, and Legare (2017) demonstrated that adults' judgements of children's conformity and non-conformity vary across cultural contexts, reflecting different expectations about appropriate learning strategies. This suggests that adult evaluations may serve as important social signals that guide children's learning and behaviour. Despite this, the existing evidence remains limited, particularly regarding how adults evaluate over-imitation and innovation, and how these evaluations are shaped by cultural orientation, parenting style, and urban versus rural experiences. Or whether they predict children's actual learning strategies. Cross-cultural comparisons, particularly between China and the UK, are limited.

Therefore, this project asks how do adults evaluate children's imitation and innovation across cultures? We examine whether interdependence and independence cultural context (UK vs. China), parenting style, and urban and rural background shape these judgements and whether those judgements then influence how children learn strategies.
Why do this research?
As adult evaluations are powerful social signals, praise for copying tells children that conformity is valued; encouragement of originality gives children confidence to explore.

The interplay between intestinal barrier dysfunction and nutrients uptake

Alejandra Acevedo Marcelin

Intestinal barrier disruption occurs when the structural integrity of the gut is compromised. In this state, tight junctions loosen and permeability increases, allowing the translocation of microorganisms and luminal antigens across the epithelium. The inflammation triggered by this pathological condition has been associated with autoimmune, chronic, and metabolic diseases.

Although intestinal barrier dysfunction has a multifactorial etiology, one of the most widely studied contributors is diet quality. There is substantial evidence that diets high in fat and sugar alter gut microbiota composition and impair intestinal structure, promoting barrier breakdown. However, the alterations in nutrients uptake when intestinal barrier disruption occurs, and how these changes affect gut microbiota, have not yet been explored. This study aims to explore the impact of intestinal barrier dysfunction on the nutritional environment in the gut. Intestinal leakage was induced in transgenic Drosophila by knocking down the snakeskin (Ssk) gene. Ssk is a septate junction protein that regulates intestinal homeostasis. Depletion of Ssk leads to a rapid onset of intestinal barrier dysfunction and early mortality. Smurf assay was used to identify flies with a leakygut, and daily counts of Smurf and dead flies were used to select timepoints for RNA sequencing in flies´midguts and faecal collection for metabolomics analysis. Significant gene expression differences were observed between control and non-Smurf flies and between non-Smurf and Smurf flies.

We will use the data of this set of genes to compare to the results obtained from the metabolomics analysis. We will assess which nutrients change in response to snakeskin knockdown and whether these changes are dependent on the microbiota. The next step is imitating these changes by adding or removing nutrients or molecules from the diet and evaluate the impact that have in the gut microbiota (e.g. which microbial population are increased or decreased), feeding (e.g. changes in food intake or food choice), intestinal structure (e.g. gut diameter, stem cell proliferation) and life span.

Chronotype, sleep quality and age in declarative memory consolidation

Nazla Nuradhari

Current research has investigated the association of sleep quality and age with memory consolidation; however, fewer studies have considered chronotype alongside these variables over an extended period. Chronotype refers to an individual's circadian preference for the timing of daily activities. This study investigated whether chronotype influences declarative memory consolidation over a two-week period, alongside age and sleep quality. The association between sex and recall performance was also examined.

Declarative memory was assessed using 30-minute and 14-day recall delays on the Selective Reminding Task and Episodic Video Task. Sleep quality was measured using the Pittsburgh Sleep Quality Index,and chronotype was assessed using the Morningness–Eveningness Questionnaire. Participants also completed a sleep diary throughout the study. Analysis indicated that there was no significant association between sleep quality and age; however, 'morningness' was positively associated with both variables. Memory consolidation was not directly influenced by chronotype; however, it was negatively associated with increasing age and poorer sleep quality, particularly sleep efficiency and sleep latency. No significant sex differences in recall performance were observed. Overall, our findings suggest that, although there is no direct influence of chronotype on declarative memory consolidation, it may exert an indirect effect through the shared relationship between sleep quality and age.

Furthermore, as sleep efficiency and sleep latency were found to be significant predictors, future research may benefit from examining them as potential contributors for memory consolidation.

The Bayesian paradigm and colour blindness

Oliver Rothnie

The Bayesian statistical paradigm is a conception of statistics that complements the idea of the scientific method rather well: the core idea of the paradigm is an initial hypothesis being modified when evidence is collected. This refined hypothesis can then be changed repeatedly for all subsequent evidence collections.
Crucial to the Bayesian paradigm is the concept of the prior and posterior beliefs and it is important to consider how these ideas are to be interpreted – both conceptually and mathematically – when thinking about probabilistic models. The third key element of a Bayesian analysis is data: the importance of which – like the prior belief – can be adjusted by the modeller.

Colour blindness, or more formally colour vision deficiency, is, in most cases, a genetic condition, affecting genetic males differently to genetic females. This is because in order to be colour blind, both X chromosomes of a person must carry a specific gene. Consequently, around 1 in 12 men are colour blind, as opposed to 1 in 200 women. By making simplifying assumptions – such as around the genetic facts of colour blindness, and the proportions of males and females that are colour blind – and using results from probability theory, a rather basic model can be created that can generate a probability of a selected female being a selected male's biological mother given they are both colour blind. This can be used to create a – rather inefficient – maternity test.

Basic psychological needs as mechanisms of resilient well-being across contexts: Evidence from mixed-method studies with polar expeditioners

Paul Burgum

Resilience is a dynamic socioecological process shaped by individual, relational, and environmental factors. These factors influence adaptive outcomes, including how people sustain well-being and avoid ill-being across diverse contexts. A challenge for this approach is the large number of potential influences. To address this, resilience was examined alongside Basic Psychological Needs Theory, which aligns with socioecological perspectives while offering parsimony. Polar expeditions offer a context in which challenges emerge across individual, relational, and environmental factors, providing a useful test case, yet have rarely been examined through BPNT.

Study 1 used a cross-sectional design with 95 expeditioners. Multiple mediation analysis tested whether autonomy, competence, and relatedness explained links between socioecological resilience resources. Predictors included resilience, coping flexibility, social support, and nature connection. Autonomy was the primary mechanism supporting well-being, fully mediating the link with resilience and partially mediating links with nature connection and community support. Relatedness was the strongest mediator of ill-being, fully explaining effects of social support. Nature connection showed weaker direct links with ill-being but indirect effects through autonomy and relatedness. Competence did not mediate any relationships, and coping flexibility predicted well-being independently of needs.

Study 2 employed a daily diary design with twelve expeditioners during Antarctic and Arctic missions. Daily need satisfaction predicted both outcomes, with stronger effects on well-being. Nature relatedness and coping flexibility predicted daily well-being but not ill-being.

Study 3 used thematic analysis of interviews with twenty-two expeditioners. Participants described multi-level challenges and how social relationships and the natural environment were perceived as stressors and supports. They also reported concerns about competence, especially relative to peers.

Basic needs accounted for substantial variance across studies, identifying need satisfaction and the absence of need-thwarting as central resilience processes. BPNT provides a coherent mechanism for understanding resilience in extreme settings and offers a theoretically grounded framework that may translate across contexts. This positions BPNT as a foundation for developing resilient well-being strategies in high-risk environments and informs ongoing work examining how these mechanisms operate in other populations and settings.

A foundation-aware U-NET for high precision choroid segmentation in optical coherence tomography images

Roya Arian

Accurate segmentation of the choroid in optical coherence tomography (OCT) is essential for quantifying imaging biomarkers associated with retinal and systemic diseases, including diabetic retinopathy and inflammatory disorders. However, manual annotation is time-consuming and prone to inter-observer variability, while existing automated approaches often struggle with low contrast at the choroid–sclera interface and limited generalisation across imaging devices and disease conditions. Although recent retinal foundation models provide transferable feature representations, they remain sub-optimal for boundary-sensitive segmentation tasks when used without task-specific adaptation.

In this study, we propose RFA-U-Net, a foundation-model-aware attention U-Net for accurate and robust choroid segmentation in OCT images. The proposed architecture employs RETFound, a self-supervised retinal foundation model trained on 1.6 million retinal images, as the encoder to extract device-agnostic feature representations and capture generalisable retinal structure across diverse imaging devices and acquisition settings. A task-specific decoder incorporating attention gates and refined skip connections is then used to enable precise reconstruction of choroidal boundaries. This integrated design enhances boundary localisation while preserving essential contextual anatomical information, supporting reliable and clinically meaningful segmentation. RFA-U-Net was trained and evaluated on an internal multi-disease OCT dataset with expert-annotated choroid masks and externally validated on an independent diabetic retinopathy dataset acquired using a different OCT device. Performance was assessed using the Dice coefficient, Jaccard index, and upper and lower boundary errors, and compared against pretrained CNN–U-Net baselines and recent state-of-the-art choroid segmentation methods.

On the internal test set, RFA-U-Net achieved a Dice score of 95.04% and a Jaccard index of 90.59%, with low boundary errors for both the upper and lower choroidal boundaries. Importantly, the model maintained strong generalisation on external validation data, demonstrating robustness to domain shift, device variation, and disease-related structural changes.
These results demonstrate that integrating retinal foundation models with attention-guided, task-specific decoding enables accurate, generalisable, and computationally efficient choroid segmentation. RFA-U-Net highlights the potential of foundation-model-driven architectures for scalable OCT analysis in both clinical and community-based retinal assessment.

Session 5:
Keynote Presentation

Sustaining a flourishing research culture for researchers: expectations, norms and opportunities

Andrew Moss
Research Culture Manager

Session 6: Talks

Chaired by August Zheng

Robust Ratio Estimation for Poisson Count Data: Application to γ -H2AX Foci Analysis

Sehar Saleem

The estimation of parameters in count data is fundamental to health physics and molecular biology, particularly in the quantification of DNA damage via γ -H2AX foci counts. While Maximum Likelihood Estimation (MLE) is a standard approach, its performance is often compromised by data contamination commonly observed in experimental biological datasets, leading to bias and Mean Square Error (MSE) inflation.

This study proposes and evaluates a robust alternative estimation method to estimate Poisson parameter based on its probability mass function, developing and utilizing Single-ratio and Double-ratio estimators, which only use information in a local neighbourhood of the mode enabling consistent estimation in the presence of data contamination. The Single ratio estimator uses the right-hand frequency ratio. To mitigate asymmetry and bias inherent in the single-ratio approach, a Double-ratio estimator is introduced incorporating both left-hand and right-hand frequency ratios relative to the mode, stabilized by a frequentist shrinkage constant.

Using a Monte Carlo simulation, the performance of these estimators is evaluated against the MLE for various contamination scenarios including zero inflation and outliers. Favourable performance of the ratio estimators in relation to the MLE is observed in situations of large sample sizes and moderately large Poisson parameter. In the presence of 10% outlier contamination, the ratio estimators achieve the highest efficiency ratio, constructively neutralizing the bias inherent the parametric approach. Under zero-inflation, the DR estimator conserves superior asymptotic efficiency, by effectively evading the excess zeros.

When applying this framework to γ -H2AX foci counts in irradiated cells, we find that excess zero counts (such as arising from partial exposures) are effectively ignored, yielding an unbiased estimate of the mean foci count per cell. Our findings suggest that robust ratio estimators offer a resilient computational tool for assessing radiation-induced cellular damage, ensuring high-fidelity parameter estimation even in contaminated health-related datasets.

Photobiomodulation 1070 nm in normal ageing and neurodegenerative diseases

Julio Eduardo Zarazua-Jimenez

Neurodegenerative diseases (NDDs) represent a major public health issue around the world in which risk reduction measures and disease-modifying therapies constitute key roles for its management. Cellular senescence is defined as a cell growth arrest state. As we age, the amount of senescent cells increases, and contributes to age-related diseases, such as Alzheimer and Parkinson disease. Additionally, NDDs have a wide variety of clinical symptoms which progressively compromise the quality life of the patient. Photobiomodulation therapy (PBMt) may be a suitable option to manage senescence and the clinical manifestations of NDDs. PBMt at 1070nm increases ATP, and ROS, which can lead to an activation of transcription factors and enhance a stable microenvironment for cell survival called photopreconditioning. These modulations in the cell, occur in addition to a decrease in oxidative stress, and inflammation, and increased autophagy, which may be reflected in disease modification and symptom relief.

Herein, PBMt 1070nm displayed early evidence of oxidative stress-induced cellular senescence reversal through significant upregulation of Lamin B1 in microglia and glia cells, inhibition of p53 in microglia, and a decrease of p21 in glia.
PBMt showed a significant improvement in neurological (n=23) and peripheral symptoms (n=32) at 2 months. Furthermore, this therapy showed a stability or improvement in the progression of ALS patients (n=8) over a 3-month period. Additionally, in a test case, showed an improvement in ALS symptoms (ALSFRS-R), peripheral oxygen saturation and subjective improvements in ambulation, spasticity, swallowing, and general wellbeing at 3 years.

Moving Social Work: Co-producing Physical Activity, Wellbeing, and Social Work Practice innovation across interdisciplinary an interdisciplinary research project.

Kate Marks

Moving Social Work (MSW) is a large, interdisciplinary project that seeks to develop social work practice through training on physical activity, wellbeing, and intersectional, relational approaches to conversations. Co-produced with academics, social workers, and disabled people, MSW aims to equip social workers to integrate conversations about movement, physical activity, and holistic wellbeing into everyday practice, addressing persistent health inequalities. Central to this research is the knowledge from disabled people that social workers are uniquely positioned to support meaningful conversations as they are trusted in the community and have a wealth of local knowledge.

This collaborative presentation brings together four post-doctoral researchers working across MSW to offer a cohesive overview of the projects aims, evolution, key contributions, and future directions. First, the Training and Evaluation strand demonstrates how co-designed training workshops which have been delivered nationally and iteratively evaluated, have supported social workers to develop skills around physical activity promotion. The Champions and Wellbeing Strand then draws attention to the role of social workers in advocating for cultural change and supporting their own workforce wellbeing too. The Intersectionality strand further develops the co-produced nature of the project and ensures that MSW stays responsive to diverse identities and structural inequalities. Finally, Moving Conversations foregrounds the importance of centring disabled people's voices to have collaborative conversations that invite change.

Across these strands, shared themes include: the centrality of co-production in multidisciplinary research, the importance of practitioner and service user wellbeing through physical activity, and the potential for social workers to contribute to intersectional health agendas. We conclude by outlining the potential for impact and future directions of MSW.

Can Monsters Productively Resist the Sovereignty of the DSM? Analysis of Monster Metaphor in Body Dysmorphic Memoirs

Ilavenil Indhoomati Thangavel

Metaphor Studies have, in the past few decades, analysed how metaphors have their functionality in medical contexts but body dysmorphic disorder has conveniently evaded this critical research. This paper will address this disparity by focusing exclusively on the monster metaphor in two non-canonical, contemporary body dysmorphic memoirs namely Shattered Image: My Triumph over Body Dysmorphic Disorder (2013) by Brian Cuban and Body Dysmorphic Disorder: A Memoir (2007) by Stephen Westwood.

I argue that the monster metaphor destabilises the clinical, singular and symptomatic framework of the Diagnostic and Statistical Manual of Mental Disorders (DSM), a representation of the Western psychiatric imaginary. By situating the metaphor within the narrative frameworks of the literary texts, the memoirs resist the epistemic supremacy of the psychiatric language. However, in the contextualisation of the metaphor, the monster evolves as a pathological Other, that further narrows down the definitional scope of normativity. Central to this argument is the concept of what I term “body dysmorphic gaze” — the gaze adopted by individuals with body dysmorphia, that emphasises the ‘monstrous’ language that reductively connotes the body as an aesthetic body.

Situating the corpus within the broader scholarly engagements in metaphor studies and narrative medicine — including the works of Alan Bleakley and Rita Charon — this paper explores the teleological potential of the monster metaphor, projecting the meaning-centred values of metaphors, which often, in the context of body dysmorphic memoirs, generate disputable arguments including their reference to deformity and disability. This, I suggest, complicates the readings of metaphor scholars including Anita Wohlmann, who argues that metaphors inherently posses generative potential.

By attending closely to the mechanism of the monster metaphor in body dysmorphic memoirs, this paper contributes to the developing frameworks and reading practices of metaphors in illness memoirs. This literary study crosses the disciplinary boundaries of literary studies, monster studies, metaphor studies, and medical humanities and, therefore, will appeal to a wider audience.

Session 7: Flash Talks

Chaired by
Harriet Broadfoot

ost in the overlap: ADHD, Femininity and Intersectionality

Emma Gratte

Attention deficit hyperactivity disorder (ADHD) is one of the most prevalent neurobehavioral conditions globally, and has key implications for sociology in areas such as, identity, life course and social roles. ADHD is a diagnosis marked by significant gender biases (McDonnell, 2022). The work on women with ADHD is overwhelmingly concerned with the academic ethic and perfectionism (Winter et al., 2015), psychostimulant use (Leo and Cuttino, 2011), and self- stigma (Sedgwick-Müller et al. 2022). With little sociological inquiry into the narratives and biographies of women with ADHD, we lack understanding of how women make sense of their ADHD experiences.

This study addresses the notable gap in ADHD studies through an intersectional investigation into how ADHD experiences shape women's narratives of their femininity. Centring intra-group difference and including how neurodivergence as an identity shapes women's narratives of their femininity; furthers previous work that has conceptualised ADHD femininities as deviating from traditional gender norms, particularly in context of hyperactivity and impulsivity (Garcia, 2019).

This abstract offers a position piece, highlighting the key gaps and intersectional prospects within ADHD feminist studies, which my PhD study will provide key novel contribution. Themes include moving beyond stigma-based analyses to explore how gender identity is shaped by, and interacts with, other intersecting social identities. Moreover, offering theoretical novelty through interrogating white and masculine hegemonic framings of ADHD experiences, by employing intersectional standpoint theory. Furthermore, drawing on Collins' (1990) matrix of domination, participants are not equally positioned against the hegemonic feminine ideal, creating different experiences and ideas around femininity across the intersections.

Despite the limited work on ADHD femininities, this framework has allowed for multiplicity in analyses of femininity, including the intersections of race (Story, 2017), sexuality (Taylor, 2018), disability (Hunt et al.,2021) and class (Skeggs, 2002), which has guided the research design. Finally, extending the existing work that has focused on statistical disparities (Bergey et al., 2022), and responding to Bergey's (2024) call for intersectional, qualitative ADHD research.

Modified Metal Pyrithione Complexes as Anticancer and Bacterial Disease Treatments

Keira Westwood

Metal complexes exert their pharmacological effects through interactions with biological molecules within the cell. The primary targets of metallo-drugs are proteins and DNA; however, prior to cellular uptake, these agents must pass through the bloodstream, where they may interact with various ions and small molecules that can alter their composition and chemical reactivity. As cells are often exposed to heavy metals in the environment, the body has developed efficient defence mechanisms to mitigate toxic effects of metallo-drugs through sequestering and eliminating metal ions or by repairing the damage to critical biomolecules such as DNA. These processes present significant challenges for the development of metal-based therapeutics and require careful molecular design to achieve efficacy while minimising toxicity.

Copper pyrithione, [Cu(PT)2], complexes represent a promising class of copper-based therapeutics for the treatment of cancer and bacterial diseases, displaying greater therapeutic activity than commonly used agents such as the chemotherapeutic drug cisplatin. However, their clinical potential is limited by poor aqueous solubility and stability. To address this, derivatives of [Cu(PT)2] have been developed that display improved water solubility while retaining high therapeutic activity.

Recent studies have focused on pyrithione ligands functionalised with polyethylene glycol (PEG) chains and a range of substituents, including electron-donating, electron-withdrawing, and aromatic groups, which overall lead to changes in water solubility and therapeutic potency. Fluorescent analogues have shown these complexes to localise in the endoplasmic reticulum. This work describes the synthesis, physical properties, and therapeutic activity of hydroxy-substituted copper pyrithiones. Furthermore, we describe progress towards amine-substituted copper pyrithiones for peptide coupling and the development of alternative metal-pyrithione complexes is presented.

Rational Agency as Gatekeeping: Gendered Credibility, Colonial Reason, and Implications for Health & Wellbeing

Lenna Veronica Suminski

Philosophy and many applied ethics frameworks rely on a dominant picture of the human being as a rational, autonomous agent. While often presented as neutral, this ideal can function as a gatekeeping norm that shapes whose voices are heard as credible, whose experiences count as knowledge, and who is recognised as fit for moral and political standing. This project examines how "rational agency" is coded as a masculine philosophical style—associated with detachment, abstraction, and disembodied argument—while emotion, embodiment, and experiential forms of knowledge are frequently framed as "irrational," feminised, and epistemically inferior. I argue that these hierarchies do not remain confined to academic philosophy: they have significant implications for health and wellbeing contexts where credibility and autonomy are central, including clinical encounters, mental health discourse, and debates over consent and capacity. In such settings, credibility deficits and interpretive injustice can contribute to harms ranging from dismissed pain reports to the misrecognition of distress, as well as unequal uptake of patient testimony across gendered and racialised lines.

The project also traces how Enlightenment narratives of "civilised reason" intersect with colonial histories, reinforcing racialised hierarchies of who is assumed to be rational, self-governing, and therefore deserving of authority and protection. Methodologically, the research combines conceptual genealogy (mapping how the rational-agent figure operates across canonical philosophy) with feminist epistemology and decolonial critique to develop alternative frameworks that preserve philosophical rigour while widening what counts as rationality, knowledge, and agency.

Over the academic year, the project aimed to produce curriculum-ready resources designed to support interdisciplinary teaching and discussion: (1) a concise concept biography of Rational Agency, (2) a set of drop-in teaching packs (e.g., objectivity and situated knowledge; epistemic injustice and credibility; emotion as moral perception; embodiment and agency; rationality and "civilisation" in political legitimacy), (3) an examples/quote bank pairing canonical texts with critical interlocutors, (4) assessment templates that reward comparative and genealogical analysis, and (5) a short tutor facilitation guide for philosophically grounded discussion. These outputs aim to strengthen teaching and research conversations about health, wellbeing, credibility, and autonomy by making the hidden normative assumptions of "rational agency" explicit and contestable.

Measuring decline of neuronal function with age to develop new therapies for age-related disease

Chad Yanyatan

Age-associated declines in neuronal function motivate the search for interventions that preserve nervous system health. Dopaminergic signalling is particularly vulnerable during ageing, with human studies estimating approximately a 10% reduction per decade across adulthood. We use C. elegans to develop scalable behavioural readouts of age-related decline in cognition (ARC) and to support future drug screening.

Many C. elegans neuronal assays are informative but labour intensive and difficult to scale. We are therefore building an automated pipeline inspired by the basal slowing response. Using WormGazer™ imaging, we track locomotion and position non-invasively across multiple plates. On custom multi-lane plates with a defined OP50 lawn, we quantify food-seeking and food-localisation behaviours and test whether these metrics are age-dependent as well as dopamine-dependent.

To benchmark dopaminergic contributions, we compared wild-type with the dopamine-deficient cat-2 mutant. The mutants show a strong, reproducible preference for the lawn edge, yielding a robust readout. Dopamine hydrochloride supplementation attenuates this edge preference, supporting dopamine dependence. However, edge association could also arise from altered sensory processing, including defects in nutrient sensing or oxygen sensing, which we will evaluate experimentally. We are the first group to discover this unique dopamine-dependent behaviour in C. elegans. With the help of the automated system and the high throughput capabilities the platform, the novel lawn-edge parameter will help us test therapeutics, antibiotics and various other interventions that alter the dopaminergic system. Ongoing work will determine how lawn-edge preference and ARC measures change with age and will dissect underlying mechanisms to enable sensitive, automated screening.

Careers Development

The Wolfson ECR Network is here to support everyone at Durham who is keen to explore how they can develop themselves as health and wellbeing researchers. One way we do this is by signposting our members to the excellent career development resources available at Durham.

The Durham Centre for Academic Development (DCAD) offers a broad range of developmental opportunities, which can be browsed on its Sharepoint site

The Careers and Enterprise team has a comprehensive programme of support.

The careers service provides planning and progression support for careers within and beyond academia, offering guidance on CV writing, making effective applications, and interview preparation. Regular careers workshops and training sessions are held throughout the year, specifically designed for postgraduate and early-career researchers. Also, 60-minute one-to-one appointments for specific postgraduate careers support are available with PGR Careers Adviser Mark Corcoran.

The Venture Lab offers the EDAPT Agile Thinking Programme, a problem-solving method developed through research into the mental processes used by some of the world's top problem solvers. To learn more about this programme and all the other opportunities on offer through the Enterprise team, contact Postgraduate Enterprise Manager Paul Stafford.

The Coaching and Mentoring Network offers free one-to-one sessions to Durham University employees.

To make connections with fellow ECRs in our region, there's the British Academy Early Career Network North-East and Northern Ireland Cluster. Although it's primarily intended for individuals engaged in the humanities and social sciences, its inclusive approach is researcher-led and accessible to all researchers, regardless of their funding source or background.

Prosper

Prosper is a new online resource to help people across the UK to advance their post-doctoral careers.

Prosper can help you

- Figure out what you want from your career
- Create a personalised career action plan
- Learn about opportunities beyond academia
- Develop skills for your whole career, wherever it takes you

While it is designed for individuals who have completed their PhD and are now working as researchers on a fixed-term contract, this free resource is open to all.
You do not need to register to use the resource, but if you do, you gain access to some extra functions. To register, go to this page and select 'I'm a postdoc' if you fit into the definition. Otherwise, choose the category 'none of the above'.

The Durham Prosper programme will offer Spotlight sessions, open to all postdocs and ECRs, to enable them to achieve their career goals. Also, places are available on the Durham Prosper Cohort 2025-2026 - a bespoke nine-month programme tailored to the needs of a selected group of Postdoctoral Research Associates (or equivalent) currently employed at the university on research-only contracts.
Applications to join the Durham Prosper Cohort 2025-2026 are being accepted until noon on Friday July 25 and more information is available on the Prosper link above.

Get in touch

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