

Centre for Ageing Research
Summaries of Research Interests
- Updated April 2023-

Contents

Dr Faraz Ahmed, Lecturer in Health Inequalities, Division of Health Research

Faraz is currently a Lecturer in Health Inequalities at Lancaster University and Director of Studies (Taught Programmes) in the Division of Health Research. Following his Medical Research Council PhD studentship at the Institute of Public Health (University of Cambridge), he joined the Lancaster Dementia Research Team as a Senior Research Associate, working within the national Neighbourhoods and Dementia Programme.

Faraz is a Public Health researcher, with extensive experience in international health and working with minority ethnic communities in the UK. Prior to starting his research at the Institute of Public Health (University of Cambridge), he was working as a Research Fellow at the University of York. He has a strong interest in addressing inequalities in health. His previous experience includes public-private partnerships in increasing TB case detection among poor and disadvantaged groups, health systems evaluation, and developing and evaluating health promotion programmes for minority ethnic groups.

Research Overview/Interests

My research interests focus on patient experience, dementia, equity and health services research. During my education and research, I have worked on a number of mixed methods projects. In addition to receiving training in mixed methods research at the University of Cambridge during my PhD, I also received training in qualitative research methods short course from the University of Oxford. The qualitative research method course provided training in conducting qualitative research and various analytical techniques. In my doctoral study, I have specifically used thematic analysis for my qualitative data, and developed a number of mixed-effect regression models to analyse my quantitative data.

Recent Papers

- x Arnold, R., Ahmed, F., Clarke, A., Quinn, N., Beenstock, J. and Holland, P. (2023) Relationship between Parental Adverse Childhood Experiences and the Health, Wellbeing, and Development Outcomes of their Children: A Systematic Review. *Public Health* pp.S0033-3506(23)00113-0
- x Reeves, D., Holland, F., Morbey, H., Hann, M., Ahmed, F., Davies, L., Keady, J., Leroi, I., & Reilly, S. (2023). Retrospective study of more than 5 million emergency admissions to hospitals in England: Epidemiology and outcomes for people with dementia. *PLOS ONE*, e0281158.
- x Harding, A., Morbey, H., Ahmed, F., Opdebeeck, C., Elvish, R., Leroi, I., Williamson, P. R., Keady, J., & S.T. Reilly (2021). A Core Outcome Set for Nonpharmacological Community-Based Interventions for People Living With Dementia at Home: A Systematic Review of Outcome Measurements. *The Gerontologist*, 61(8), e435448. <https://doi.org/10.1093/geront/gnaa071>
- x Ahmed, F., Morbey, H., Harding, A., Reeves, D., Swarbrick, C., Davies, L., Hann, M., Holland, F., Elvish, R., Leroi, I., Burrow, S., Burns, A., Keady, J., and Reilly, S. (2020). Developing the evidence base for evaluating dementia training in NHS hospitals (DEMTRA). *Mixed* 89 (4-5A.89)3TJ -0 (,)2m.9 (,)10.9 (c30)2

Sarah Allinson, Senior Lecturer, Division of Biomedical and Life Sciences

Since joining Lancaster University, my research activities have been directed towards understanding the processes by which our cells protect themselves from DNA damage. Damage to the DNA in our cells occurs continuously throughout our lifetimes. However, if it remains unrepaired, this damage can cause the accumulation of mutations which are implicated in cancer and other aging

Peter J Diggle,

Dr Gavin Brookes, UKRI Future Leader Fellow, Linguistics and English Language

Gavin is a UKRI Future Leader Fellow working in the Department of Linguistics and English Language at Lancaster University. As a linguist, Gavin is interested in the ways in which language sources are used to represent illnesses and other health-related phenomena and our experiences and understandings of them. In 2021, Gavin was awarded a grant of approximately £1 million for his UKRI Future Leaders Fellowship project, titled 'Public Discourses of Dementia: Challenging Stigma and Promoting Research' ([Promising future leader receives £1 million to examine language about dementia at Lancaster University](#)). The four-year project, starting in January 2022, will examine how dementia, people with it, and their relatives and carers are represented in contemporary media, for example in the context of the press, public health campaigns, commercial stock images, and charity campaigns. Gavin's recent publications on dementia and ageing include:

- x Brookes, G., Putland, E. and Harvey, K. (2021). 'Multimodality: An analysis of dementia representation in charity campaigns'. In: G. Brookes and D. Hunt (Eds.), *Analysing Health Communication: Discourse Approaches*. Basingstoke: Palgrave Macmillan. In Press.
- x Harvey, K. and Brookes, G. (2019). Looking through dementia: what do commercial stock images tell us about aging and cognitive decline? *Qualitative Health Research*, 29(7), 10087-10107.
- x Lampropoulou, S., Koleva, M., Harvey, K., Brookes, G. (2019). Linguistic approaches. In: J. Billington (Ed.), *Reading and Mental Health*. Basingstoke: Palgrave Macmillan, pp. 262-271.
- x Brookes, G., Harvey, K., Chadborn, N. and Denning, T. (2018). "Our biggest killer": multimodal representations of dementia in the British press. *Social Semiotics*, 28(3), 371-395.

More broadly, Gavin's research has addressed topics such as dementia, mental health, chronic illness, and patient feedback on healthcare experiences. Gavin aims to adopt a corpus linguistic methodology which involves using specialist computer programs to analyse vast collections of textual data (i.e. typically millions and sometimes billions of words). Other recent publications include:

- x Brookes, G. and Baker, P. (2020). *Obesity in the News: Language and Representation in the Press*. Cambridge: Cambridge University Press.
- x Brookes, G. and Hunt, D. (2021). *Analysing Health Communication: Discourse Approaches*. Basingstoke: Palgrave Macmillan.
- x Hunt, D. and Brookes, G. (2020). *Corpus, Discourse and Mental Health*. London: Bloomsbury.

Dr Sue Broughton, Senior Lecturer, Division of Biomedical and Life Sciences

Investigating the Role of Diet and Insulin/Igf1 Signalling in Brain Ageing

Improvements in healthcare and lifestyle in many countries have resulted in increased health and life expectancy. The downside is that more people are now living long enough to experience the diseases and loss of physical and mental function that come with ageing. Therapeutic interventions that can improve health and function at older ages are thus much needed in our ageing society. A major breakthrough in research into the biology of ageing has been the discovery that it is possible to extend the normal lifespan of laboratory model organisms such as yeast, the fruit fly, the nematode worm and the mouse. Encouragingly these long animals appear to remain healthy for longer than normal animals. The regulation of lifespan in these very different kinds of organisms has been found to involve similar mechanisms, opening up the use of the much simpler and shorter

Danni Collingridge Moore, Research Fellow, Division of Health Research

Keywords Long term care, end of life care, care homes, COVID, Palliative care

I am a Research Fellow based in the Department of Health Research

Neil Dawson, Senior Lecturer, Division of Biomedical and Life Sciences

Fiona Eccles, Senior Lecturer on the Doctorate in Clinical

Dr Amy Gadoud, Senior Clinical Lecturer, Lancaster Medical School

Amy Gadoud is a Senior Lecturer in Palliative Medicine at Lancaster Medical School where she is NIHR Integrated Clinical Academic Training Lead. She also works with colleagues in the International Observatory on End of Life Care, Lancaster University. Her main research interest is ensuring equality in access to palliative care and she uses a range of research methods from analysing large datasets to qualitative studies. She has obtained research funding from a range of sources from major bodies e.g., NIHR and Academy of Medical Sciences as well as local charities e.g. North West Cancer Research. She works clinically as a Honorary Community Consultant in Palliative Medicine at Trinity Hospice and Blackpool Teaching Hospitals NHS Foundation Trust.

Dr Chris Gaffney, Senior Lecturer in Integrative Physiology, Lancaster Medical School

Research Profile

My research seeks to understand the basic physiology and metabolism (chemical reactions) that underpin disease, health, and athletic performance. My research is focused on the following areas:

Dr Andrew Harding, Lecturer in Health Inequalities, Faculty of Health and Medicine

Keywords: Ageing; mixed economy of welfare; access to care and support; information; dementia; housing; care/nursing homes; Core outcome sets; Qualitative; Realist methodology

Andrew's main research interest concerns how older people navigate, access and engage with health and social care provision, mostly in the context of mixed economies of welfare and in a policy context that positions people as consumers of services where increased levels of agency are required. He is also interested in exploring inequalities in this areas. Within this area, Andrew has made theoretical and empirical contributions to the literature on information giving, specialist housing, dementia, care and nursing homes. Andrew has expertise in realist methodology and is on the editorial board of BMC Geriatrics and PLOS One.

Key publications:

Harding, A.J.E(2021) Older people, information 5 >>-Tj -0.0-

Professor Carol Holland, Professor in Ageing, Division of Health
Research

Dr Hannah Jarvis, Lecturer in Sports and Exercise Science, Lancaster Medical School

Keywords: Biomechanics, Stroke, Rehabilitation, Amputees, Mixed Methods

My research aims to understand how a disease or injury affects our ability to walk, specifically biomechanics, gait and gait analysis, stroke, amputees, complex trauma and how we can develop better more informed rehabilitation programmes for people with these conditions.

Stroke:

Highlights of the research papers I have published include a publication in the leading research journal

Dr Jemma Kerns, Senior Lecturer, Lancaster Medical School

Keywords: Osteoporosis, osteoarthritis, diagnostics, laser based (Raman) spectroscopy

I am a senior lecturer and director of research at Lancaster Medical School. I joined Lancaster as a Lecturer in 2014, and have built, and leads, a research group on bone biology and spectroscopic diagnostic development. I have just completed an Academy of Medical Sciences Springboard Award on osteoarthritis, and have just started a project funded by EPSRC on osteoporosis.

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Professor Joanne Knight, Chair in Applied Data Science

Keywords: Routinely collected Data, Neurology, Data Science

I use routinely collected data to investigate a range of things such as epidemiology and health service provision of diseases common in the ageing population. I have also looked at routinely collected data for care home residents.

Recent papers relating to aging include:

- x Jackson et al 2022, 'Numbers and types of neurological emergencies in England and the influence of socioeconomic deprivation: a retrospective analysis of hospital episode statistics data', *BMJ Open*, vol. 12, no. 11, e061843.
- x Biggin et al 2021. Variation in waiting times by diagnostic category: an observational study of 1951 referrals to a neurology outpatient clinic. *BMJ Neurology Open*. *BMJ Neurology Open*. 3, 1, 8 p.
- x Johnson, O. et al. A modelling framework for developing early warning systems of COPD emergency admissions. 2021 *Spatial and Spatiotemporal Epidemiology* 36, 9 p.
- x Wall, J. et al. Latent onset epilepsy predicts stroke: Systematic review and meta-analysis. *Epilepsy and Behaviour*. Vol. 115, 107634, 01.02.2021
- x Biggin, F. et. al. Routinely collected patient data in neurology research: a systematic mapping review. In: *BMC Neurology* 2020. (20):431, 9 p.
- x Editorial: Kemp et. al. "COVID-19 exposes the urgent need for coding of patient neurology episodes." *BMJ Neurology Open*. 2020;2(2) DOI 10.1136/bmjnlo-2020-000080
- x Mirza SS, et. al. APOE ε4 is associated with incident dementia. *Neurology* 2019;93(19):e1807-1819. doi:10.1212/WNL.00000000000008377
- x Rhodes, C.J. et. al. Genetic determinants of risk in pulmonary arterial hypertension: international genome-wide association studies and meta-analysis. 1/03/2019 In: *Lancet Respiratory Medicine*. 7, 3, p. 227-238. 12 p.
- x APOE ε4 is associated with incident dementia. Saeed Mirza, Saira; Saeed, Usra; Knight, Jo; Ramirez, Joel; Stuss, Donald; Keith, Julia; Nestor, Sean M.; Yu, Di; Swardfager, Walter; Rogaeva, Ekaterina; Gostop, Peter St.; Black, Sandra E.; Masellis, Mario. *Neurology* 2019;93(19):e1807-1819. doi:10.1212/WNL.00000000000008377
- x Evangelou et al. "Genetic analysis of over one million people identifies 535 novel loci for blood pressure." *Nature Genetics* 2018 Oct;50(10):1412-1425. doi: 10.1038/s41588-020-0518-0. Epub 2018 Sep 17.

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Dr Robert Lauder, Senior Lecturer, Division of Biomedical Life Sciences / Lancaster Medical School

Understanding Osteoarthritis to develop better treatments

Introduction

Osteoarthritis is a common condition in old age, causing chronic pain and reducing people's quality of life. incidence is increasing, and it brings a wider socioeconomic burden through reduction in mobility and increased healthcare costs.

Two parts of the body integrally involved with the development of osteoarthritis are the meniscus and articular cartilage. The meniscus is the largest tissue of the knee joint, and is often referred to as the cartilage of the knee joint. All of our tissues undergo constant maintenance to remove older and poorly functioning molecules, and replace these with new. This means that the components of the meniscus contribute significantly to the composition of synovial fluid, which reduces friction between the articular cartilage of

Professor Ceu Mateus, Division of Health Research

Keywords Health economics, quality of life, costs, equity

Céu Mateus is a Professor in Health Economics in the Division of Health Research. She holds a PhD in Public Health-Health Economics from the National School of Public Health, University of Lisbon in Portugal, an MSc in European Social Policy Analysis from Bath University in the UK, and graduated in Economics from ISEG – Lisbon School of Economics and Management, Lisbon University in Portugal. She has over 25 years of experience in research and has developed her expertise around economic evaluation of health technologies

Hazel Morbey, PhD, Research Fellow, Division of Health Research

Professional practitioner background in mental health as a registered mental health nurse and qualified social worker, with experience of working in different health, social care and third sector settings. Contributed to a variety of ageing related studies as a qualitative researcher, largely focused on vulnerable, underserved groups of people and sensitive research areas, such as: elder abuse, older homelessness, older family carers, care home

Professor Chris Plack, Department of Psychology

Dr Yakubu Salifu, Lecturer, Division of Health Research

Keywords Palliative care, qualitative research, cancer, health inequality, care of older adults

Yakubu is currently a Lecturer in Palliative Care at Lancaster University, following his brief role as Research Associate at the University of Nottingham, where he completed his PhD wu

Professor Jane Simpson, Professor of the Psychology of Neurodegenerative Conditions, Division of Health Research

Introduction

My research relates to understanding psychological outcomes in people with adult-onset long-term health conditions, particularly neurodegenerative diseases. My research has mainly focused on people with Parkinson's disease, Huntington's disease (HD) and dementia. My interest in psychological outcomes includes the quantitative predictors of outcomes such as low mood and quality of life, qualitative research on the experience of general and specific aspects of particular conditions and the relevance of therapeutic approaches to improve well-being.

Professor Aneta Stefanovska, Professor of Biomedical Physics, Physics Department

Keywords Nonlinear dynamics, nonautonomous dynamics, coupled oscillators, ageing, cell energy metabolism, endothelium

I study ageing through how things function rather than through how they look, or what is their structure. I focus on autonomous, finite-time oscillatory dynamics. These are systems that have clock behaviour. When left alone these clocks can be very precise, but when there are two or more clocks then, due to interactions, they may

Dr Caroline Swarbrick, Senior Lecturer in Ageing, Division of
Health Research

Dr David Tod, Lecturer, Lancaster Medical School

Professor Ian Walker, Professor of Economics, Lancaster University Management School

Ian has been recently collaborated in work on several health related issues. His main field is education economics but has wider interest in human capital more generally as around health.

Asako Ohinata (MRC post doc, now at Leicester University) supervised with Bruce Hollingsworth in DHR) Asako investigated the supply of informal care that is, caregiving usually provided by a friend of family member. This something that is À Ç Ç Ç o À v š š} šZ μ Ç Ç v š Ç work compared caregiving in Scotland and England before and after the 2002 Scottish reform that introduced free formal personal care for the elderly.

Our first paper (Ohinata et al, "The impacts of universal elderly care on the supply of informal care and labour supply", Oxford Bulletin of Economics and Statistics, 2010) is available at <http://www.ifs.org.uk/publications/1000>

cohort of young people followed through secondary school and up to age 25. We found that missing out on a place in your most highly ranked secondary school has little effect on educational attainment - but it had important adverse effects on smoking participation and mental health at age 25. How big the effects were was affected by the nature of the way in which school choice had

Dr Jess Wang, Lecturer, Department of Psychology

Dr Qian Xiong, Lecturer in Ageing, Division of Health Research

Areas of Interest:

Migration and mortality, social determinants of health, ageing, life course, gender, perspective; (3) intervention studies for delaying frailty and promoting health

Nicholas Davison, EPSRC DTP-funded Doctoral student, Lancaster
Medical School

Aaron Warner, supervised by Dr Jasper Palmier-Claus, Prof Carol Holland, Prof Fiona Lobban and Dr Elizabeth Tyler

Project background

Older adults with bipolar disorder are a particularly vulnerable group, as they commonly experience increased physical health challenges alongside the chronic mental health difficulties associated with bipolar disorder. In addition, research suggests they are also at risk of accelerated cognitive decline in comparison to the general population.

Despite research indicating that older adults with bipolar disorder experience unique challenges and fluctuating care needs, NICE guidelines still suggest that this group should be offered the same treatments as younger groups with bipolar disorder. Consequently, the care that older adults with bipolar disorder receive may be ineffective and inadequate, resulting in poor outcomes and diminished quality of life for this group. Further research is required to improve our understanding of how to enhance care and support for older adults with bipolar disorder in later life.

Aims

This project aims to better understand the priorities and presenting needs of older adults with bipolar disorder to improve the care they receive.

Four studies will be completed:

1. Physical health comorbidities in older adults with bipolar disorder: A systematic review
2. What does it mean to age well with bipolar disorder: A qualitative study using photo elicitation
3. The changing care needs of older adults with bipolar disorder in later life: A narrative analysis
4. Predictors of quality of life in older adults with bipolar disorder: A cross-sectional study

Radek Wincza, Departmental student, Department of Psychology

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Supervised by Professor Trevor Crawford (Deputy Director of Lancaster University Centre for Ageing
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My research focuses mainly on understanding the imperfections of our visual perception and how it can differ from physical reality. To do so I am extensively researching visual illusions, a phenomenon that offers a unique window to understanding how our perception works. My previous projects have investigated how the perception of visual illusions is affected by development, genetics, mental health disorders, like schizophrenia or autism, and visual expertise. Lately, I became interested in the methodological differences in research on visual illusions as well as eye movements while observing visual illusions. My PhD project is a continuation of my previous research and explores visual disturbances in Parkinson's disorder, effects of visual illusions on action and perception, and the role of aging and expertise on how we perceive visual illusions.