

Institution: 10007140 Birmingham City University

Unit of assessment: 3 - Allied Health Professions, Dentistry, Nursing and Pharmacy

Section 1. Unit context and structure, research and impact strategy

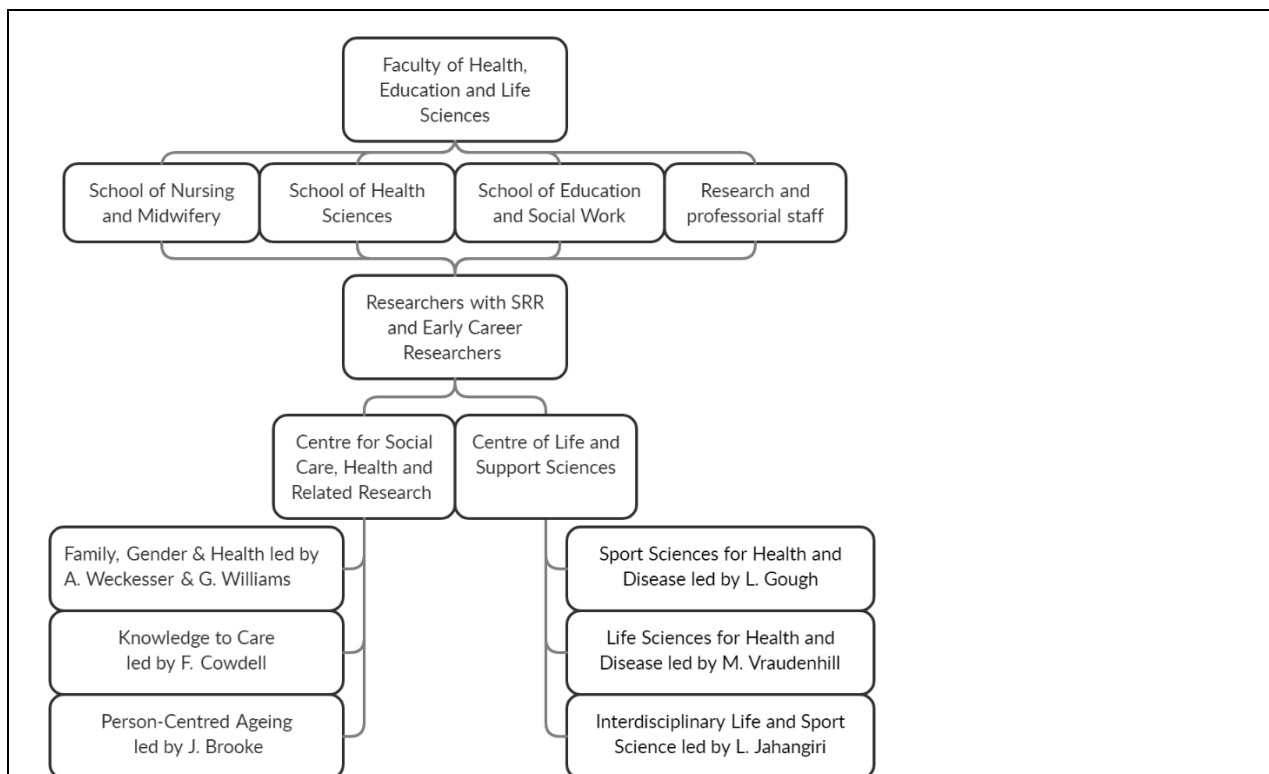
Context

Health research sits in the Faculty of Health, Education and Life Sciences (HELS), formed in 2014 to create a new community of practitioner educators. HELS, which occupies Birmingham City University's (BCU) City South campus, has invested over **£41million** in campus development since 2014 towards a mission to be an outstanding provider of practitioner education for Birmingham and the region. Building a research engaged community of health and social care practitioners (staff and students) is at the heart of the Faculty's mission and health and social care research has played a central role in transforming the culture and values of the Faculty and its work in challenging and reducing health inequalities and securing safe, high quality health and social care for the region. The Faculty provides strategic oversight for research through the Associate Dean for Research (ADR) and has invested in a '**grow our own**' research strategy. **Over £5million of investment** in research priorities since 2014 has resulted in significant overall gains for the Faculty with a **66% increase in researcher capacity, 77% increase in research income** and **230% growth in doctoral awards**. New teaching and research facilities have supported strategic expansion of the disciplinary make-up of the Faculty with a new suite of programmes in Life Sciences and Sport and Exercise Science being added to the existing health and education portfolio in 2016. This has created a rich inter-disciplinary environment for Health researchers providing first-rate biomedical, physiological, and nutrition science laboratory facilities as well as a new, dedicated technical support team

Organisation of research in UoA 3

BCU made a first-time submission to UoA3 in 2014 returning 12.10 FTE Category A staff. Since 2014 our 'grow our own' strategy for Health research (circa **£900,000 in salaries**) has resulted in a **36% expansion of staff with Significant Research Responsibility (SRR)** in UOA 3 in 2020 (16.5 FTE Category A). This is particularly notable given a substantial number of retirements over the REF period with only 1.65 FTE of the 2014 group retained. This submission evidences the successes of our mission to build a new, inter-disciplinary community of health researchers through investment in people, post-graduate researchers (PGRs) and partnerships whilst simultaneously ensuring sustainability through increasing external income and securing the regional national and international reach of our work.

HELS comprises three schools and two research centres that feed into UoA3:



Health research is led by the Centre for Social Care, Health and Related Research (CSCHaRR), launched in 2009 and led by **Brooke** since 2019 after the retirement of the previous director. The core CSCHARR team comprises three professors, (**Cowdell, McAcree, Brooke**) appointed since 2014 to build a new senior group to support capacity building and development, a Reader (**Dyson** appointed October 2020), two Senior Research Fellows (**Weckesser, Cook**), one Research Fellow (**Williams**), and four Research Assistants (**Hughes, Aston, Bradbury, Biernat**).

The significant evolution of our health research community since 2014 has necessitated re-alignment of CSCHARR's research clusters and the development of a complementary 'sister' centre in 2019, the Centre for Life and Exercise Sciences (CLaSS) which has grown out of CSCHARR's '*Science for Health*' cluster. CLaSS is led by **Tsaprouni**, supported by a newly created permanent research assistant post (**Lewis**). The two centres have six constituent research clusters that drive income generation and research and researcher development as well as providing specialist support for our Postgraduate Research (PGR) students and an intellectual underpinning for our taught programmes. Each cluster is led by an internationally recognised senior researcher supported by post-doctoral researchers, research assistants and PGRs and brings together researchers with SRR alongside Emergent Researchers (ERs – see section 2 for definition) from across the Faculty's academic staff.

CSCHaRR-[Family, Gender and Health Cluster](#)

This cluster is led by **Williams** and **Weckesser**, and includes 4 Emergent Researchers and 9 doctoral students. The cluster's research objectives are understanding the needs of families and role of family in illness prevention and health promotion. Current research projects are related to period poverty (**Williams**), use of period tracking apps and chronic health conditions (**Williams**), STI testing kit use (**Weckesser, Williams, and Hughes**), delivery of sexual health services (**Weckesser, Hughes, and Aston**), maternity services evaluation (**Weckesser & Hughes**), and endometriosis (**Weckesser**). Doctoral projects are concerned with teenagers' experiences of endometriosis (**Randhawa**), sexual assault support services (**Shiboleth**), and sexting (**Anastassiou**). This cluster works closely with the Elizabeth Bryan Multiple Births Centre which

focuses on the impact of multiple births on families. (**McGrath-Scott**) and parenting during the first five years (**Maguire, Turville**).

CSCHaRR-[Knowledge to Care Cluster](#)

This cluster is led by **Cowdell** and supports 2 doctoral students. This cluster is particularly focussed on building capacity amongst our practitioner educator groups and draws 15 Emergent Researchers from our wider academic staff. The cluster's research objectives are to develop theory and practice of evidence-informed healthcare using strategic integration of co-creation, knowledge mobilisation, patient and public involvement and engagement, implementation science and impact. Current research projects are related to atopic eczema knowledge mobilisation (**Cowdell**) and Social Prescribing (**Dyson**).

CSCHaRR-[Person-Centred Aging Cluster](#)

This emerging cluster is led by Professor Brooke and has four SRR and Emergent Researcher members and a doctoral student (**Gerritsen**). The cluster's research aims are to conduct translational research that supports and improves care for older people, particularly the importance of dignity and respect and supporting service users' personal perspectives, values, beliefs and preferences. Current research projects are related to technological innovations and older people's dignity (**Cowdell**), pressure ulcers (**Cowdell and Dyson**), frailty interventions (**Cowdell**), post-discharge care for older people (**Dyson**), and dementia care in prison settings (**Brooke**).

CLaSS-[Life Sciences for Health and Disease](#)

This cluster is led by **Vraudenhill**, has 15 SRR and Emergent Researcher members, and supports two doctoral students (**Afonja** and **Mason-Smith**) and one MRes student (**Rageh**). The cluster's research objectives are to understand the mechanisms behind major global diseases and health challenges. The current research projects are related to respiratory infections in people with Cystic Fibrosis (**Barnett**), Disease prognosis in Chronic Obstructive Pulmonary Disease (**Tsaprouni** and **Afonja**), antimicrobial potential of liquorice root (**Goldberg**), genomic analysis of multi-drug resistance (**Haq**), the role of calcium signalling in autophagy (Isola), transcriptional regulation in adrenergic neuroblastoma (**Jahangiri**), protective function of Angiopoietin-1 (**Tahir**).

CLaSS-[Interdisciplinary Life and Sport Science](#)

This cluster, led by **Jahangiri**, focuses on improving health through collaborative research in the fields of Life, Sport, and Exercise sciences. The cluster has eight SRR and Emergent Researchers and two PGRs (**Abdullah** and **McAuley**) and one MRes student (**Cavanagh**) currently undertaking research projects. Research includes investigating the pathogenesis of neuroblastoma (**Jahangiri** and **Hurst**), 'The Football Gene Project' (**McAuley, Hughes, Kelly, and Tsaprouni**), and 'The establishment of temporal transcriptional signatures and induction of autophagy during neuroblastoma differentiation induction by epigenetic regulators" (**Ishola, Cavanagh** and **Jahangiri**).

CLaSS-[Sport Sciences for Health and Disease](#)

This cluster led by **Gough** has 4 core members with SRR, supports 15 Emergent Researchers and 7 PGRs, 5 of whom are funded by partnerships with sports club partners including Worcester Warriors RFC, Warwickshire Cricket Club, Wolverhampton Wanderers Football Club and Birmingham Swimming. Project activity focuses on Athlete development and Youth Sport (**Kelly**), nutrition and supplementation (**Gough, Cole**) Injury and Rehabilitation (**Herbert**) and the role of genetics in bone mineral density in athletes (**Herbert**). This new grouping was granted a 'small unit exemption' from submission to UoA24 for REF 2021.

Research objectives 2014-2021**1. Increase funding, to support growth and sustainability**

External income has increased by over 76% since REF2014 with total income awarded over the period £1,895,000. The value of the current health research portfolio is £807,000. This growth has been matched by diversification of funding streams to include the NIHR, NHS trust partners, charities such as the Health Foundation, and industrial collaborations through Innovate UK. This has been achieved by both expanding our expert base through strategic investment in new appointments and developing the skills of all our staff (e.g. **Cook** was fully funded to undertake an MSc in Medical Statistics) to extend capability in key areas. The award of two Health Foundation grants that make use of our new capability with advanced statistical techniques illustrate the success of this approach. Our strategy has been complemented and underpinned by a more systematic approach to opportunity and horizon scanning undertaken by a dedicated central team of Research Development Support Officers (RDSOs) from a central Research and Innovation Gateway (see 5a and Section 2).

2. Responsiveness to national and international health care challenges

The significant development and realignment of our research structures described above underscores our recognition that research groupings should not be static but alert to the changing needs of the health and social care communities we serve. Our rapid response to the challenge of COVID-19 with the launch of projects exploring the effects of social isolation older people (**Brook**), the experiences of care home staff and health care professionals (**Brooke**) and the impact of the pandemic on Period Poverty (**Williams**, funded by the ESRC rapid response fund) exemplify this dynamic relationship.

International reach and the responsiveness of our work to global health care challenges, particularly in low and middle income countries, has been a particular strength over the REF period. This has been achieved through targeted investment in the development of key partnerships sustained through funding and patronage from governments and national health services to support highly focussed activity that addresses local development goals. Good examples of this are: Vietnam (development of nursing workforce), Ukraine (older adult care), Zambia (critical care nursing), and continued collaborations with Slovenia (Faculty of Health Care Jesenice), Philippines (University of Silliman), New Zealand (University of Auckland) exploring both evidence to practice and student nurses' cultural perceptions of dementia. Development of an international cadre of leaders for older person's care across Europe is funded by the European INNOVATEDIGNITY-ITN project.

3. Maximising the impact of our work

The capacity of our work to deliver benefit to the communities we serve was recognised as a key strength in REF 2014 and a commitment to research that 'makes a difference' continues to inform both our approach and investment decision-making.

Our research in Health continues to be purposefully 'close to practice' and most often undertaken collaboratively with practice partners in the health and social care and third sectors e.g. Craftspace (**McAree**), Endometriosis UK (**Weckesser**), Plan International UK (**Weckesser**, **Williams** and **Hewett**), and HMP Dartmoor (**Brooke**). As such pathways to impact and service-user benefit are integral and priority dimensions of research design. This focus is strengthened by co-ordinated support for Patient and Public Involvement and Engagement (PPIE). All researchers work in collaboration with the Faculty's *Forum for Accessing Community Experience*, which provides expertise and networking opportunities with service users and Experts by Experience. CSCHaRR's 'impact fund' supports researchers to resource PPIE at all stages of their research (£250 per project) and for dissemination and promotion of research outcomes outside academia (£500 per project).

In 2016 we invested **£162,000** in creating four permanent research assistant posts (**Hughes, Aston, Bradbury and Williams**) to build additional capacity for supporting systematic approaches to impact. Our research assistants work alongside a newly appointed team of University Impact Officers (see REF 5A) to support partnership development, design pathways to impact, lead on the development and coordination of impact work and support development of impact case studies. A programme of workshops supported ongoing development of this work between 2017 and 2019, with external experts providing additional guidance and support. For example, in March 2019, Dr **Djerasimovic**, an impact case study researcher from the University of Exeter, led a workshop for all researchers, research coordinators, Faculty REF impact case study leads and Faculty research media officers.

CSChaRR hosts an annual Health Conference to facilitate knowledge exchange between academics, students, external partners and organisations, which also provides opportunities for networking within and across research clusters and developing impact in practice-focused settings. The 14th Annual Health Conference was held on the 2nd July 2019 at STEAMhouse, a BCU centre, which facilitates collaboration between researchers in the arts, science, technology, engineering, and maths.

The success of our impact strategy is evidenced by our impact case studies. For example, the work of colleagues from the *Family, Gender, and Health* cluster led to prominent changes in practice. Research outputs were cited in NICE Guidelines [NG72] and Birmingham's Women's Hospital reported adjusting their practice in managing medication for pregnant women with epilepsy as a direct result of our research findings. This research has been supported by the development of the Elizabeth Bryan Multiple Births Centre which was established at BCU in 2018 in collaboration with the Multiple Births Foundation. The Centre, a national leader in a niche field also provides research-informed education and supports the development of national standards for the care of multiple births and their families.

4. Fund, nurture and expand doctoral and post-doctoral research

Increasing growth in PGR enrolments to secure the research pipeline has been a key strategic priority. This has been enabled by building new supervisory capacity through recruitment of experienced senior academic staff and substantial Faculty investment in PGR studentships. **Total investment in funding UoA3 PGRs has increased by 505%, from £96,253 in 2014 to £582,606 in 2020.** In addition, HELS has pioneered a Graduate Research Teaching Assistant (GRTA) role (see section 2), which provides a fully funded PhD alongside a 0.2 Assistant Lecturer contract. Two GRTAs are recruited to the health research field each year. As a consequence our postgraduate community has both grown and flourished with **PGR enrolments increasing from 33 in 2014 to 57 in 2020 and 23 students completing doctorates in Health compared with 10 in 2014.**

UoA3 research objectives and strategic aims 2020 to 2025

Our ambition for the next 5 years is to continue to strengthen CSChaRR's position as an international centre of excellence for 'close to practice' research that shapes regional, national and international healthcare policy, guidelines and practice. We will achieve this by:

1. Continuing to grow researcher capacity and capability

We will continue to grow practitioner-researcher capability through development of staff at all career stages, from supporting staff to undertake doctoral study to developing Band 1-3 researchers (see section 2) into the next generation of research leaders. **We will increase the number of colleagues with significant responsibility for research by at least 100%.** We will invest in diversification of our community to ensure that representation of BAME researchers better reflects the make-up of our Undergraduate and regional communities. We

will achieve this through a pipeline review, pro-active approaches to recruitment and strategic use of our fully-funded Graduate Research and Teaching Assistant scheme (see section 2).

2. Diversification of our PGR community

We will introduce a Professional Doctorate in Health (DHealth) in September 2021 that will diversify our PGR offer by providing a part-time practice-orientated route into doctoral study that will be attractive to clinicians. This will be responsive to the recommendations of the Broken Pipeline report on barriers to access to PhD study for Black applicants (Leading Routes 2019) recognising a broader range of practical attributes and experiences as entry requirements and opening up opportunities for entrants with non-traditional higher education profiles. **We will grow PGR enrolments (PT and FT) to UoA3 by 85% and increase awards by 50%.**

3. Investing in sustainable 'close to practice' research with global reach

We will continue to be responsive to global healthcare challenges and grow our knowledge and expertise through ongoing investment in collaboration with our existing networks of regional, national and international clinical partners. We will prioritise research that has real-life application to clinical practice in both health and social care settings and focus on our contribution to healthcare standards and guidelines both in the UK and internationally. We will optimise impact by ensuring that our work underpins our undergraduate practitioner education offer. We will focus particularly on building new partnerships to support our work in the fields of Dementia, Critical Care Nursing and Respiratory Care and in consolidating and extending the impact of our work on health and social care workforce and practice development in low and middle income countries.

4. Building multi-disciplinary collaborations

Global healthcare challenges can only be adequately addressed through inter- and multi-disciplinary collaboration to influence both regional, national, and international policy, guidelines, and practice. Our aim is to develop inter- and multi-disciplinary research within and across BCU Faculties, as well as strategic alliances with regional, national, and international partners. Our aim includes the continuation and development of our work with NHS colleagues across NHS Trusts, Her Majesty's Prison Service, care homes, and County Councils, with the support of further grants from prestigious institutions, such as the Health Foundation and National Institute for Health Research.

Section 2. People

Overview

Recruitment and staff development strategies in UoA3 and the Faculty are focused on creating a diverse and inclusive work environment and 'growing our own' research community. In support of this ambition we have worked hard to create a sustainable workforce through a focus on talent retention, internal promotions, and continuing professional development. This has involved:

- Appointing experienced senior staff to provide leadership and mentoring to support capacity and capability building
- An intensive focus on providing development opportunities for both existing and newly appointed academics;
- Supporting registered healthcare professionals to enter academia and develop hybrid identities as internationally recognised clinical academic researchers;

- Recruiting a new generation of hybrid practitioner-researchers through our GRTA scheme
- Ensuring that academics at all stages of an academic research career are encouraged to articulate their research aspirations and fully supported to achieve their full potential.

Recruitment

Since REF2014, significant investment (approx. **£900,000**) has been committed to the appointment and retention of researchers contributing to UoA3 activity. Since REF2014 ten new appointments have been made to UoA3. A Professor of Nursing and Health Research (**Cowdell**), Professor of Midwifery and Maternal Health (**McAree**) and two Readers in Life/Health Sciences (**Lee** and **Tsaprouni**) provide leadership and mentoring for research capacity and capability building. Junior level strategic appointments within CSCHaRR and CLaSS have included permanent roles for three Research Assistants (**Hughes, Aston, Bradbury**), Research Fellow (**Williams**), Senior Research Fellow (**Weckesser**) and a Senior Research Fellow and specialist statistician (**Cook**). Transferring junior staff on fixed term contracts onto permanent contracts has created stability and predictability, built a stronger team ethos and strengthened the research pipeline.

The faculty has also pioneered a new Graduate Research Teaching Assistant (GRTA) scheme, launched in 2014, to recruit and nurture a new generation of academic staff. GRTAs are appointed on a 4-year contract comprising a paid 0.25FTE Assistant Lecturer role in a relevant school and 0.75FTE PhD study attracting a fee waiver and stipend (at UKRI recommended value). GRTAs are fully supported to complete a PG Cert in Teaching and Learning and to gain Advance HE Associate Fellow Status. HELS has invested **£1,658,424** in the scheme and 4 GRTAs are recruited to the health group each academic year. The scheme provides a sustainable and supported pathway for staff retention with GRTAs becoming permanent members of teaching and research staff for example **Maguire** took up a full-time senior lecturer role in the School of Nursing in 2018 and **Biernat** joined CSCHaRR as a full-time Research Assistant in May 2020.

Leadership

CSCHaRR and CLaSS are led by Centre Directors (**Brooke** and **Tsaprouni**) working with Cluster leads and a network of School Research Directors and Research Co-ordinators reaching into each of the faculty's departments to secure a dynamic, responsive research infrastructure. This ensures that centres are able to nurture and support a large group of healthcare professionals entering higher education as a 'second career' who have a wealth of clinical expertise but have limited research experience and may be yet to achieve a doctoral level qualification. This conduit between our research and practice teams also ensures that research remains responsive to contemporary clinical issues and highly focused on achieving improved patient outcomes.

Promotion

Annual appraisal and Personal Research Review (see below) are used proactively to support and structure career development for researchers. BCU has an annual promotions and conferment round for which researchers are mentored by the ADR and Professorial team. Since 2014 **Harvey** was promoted to Professor, **Jenkins** and **Jones** to Reader and **Weckesser** to Senior Research Fellow and **Williams** to Research Fellow. This continuous stream of promotions, 100% of whom were women, evidences our commitment to growing and supporting the career progression of researchers.

Support and development for researchers at all stages of careers

The BCU research career framework recognises **two distinctive groups** of academic staff who are developing their research careers: 1) **emerging researchers**, those at the early stages of establishing a research career who may be undertaking doctoral work or building a

post-doctoral profile but who do not have significant responsibility for research; 2) **established, independent researchers** who have significant responsibilities in relation to research. Researchers in the latter group can apply for three research bands (Bands 1-3) annually. HELS provides a comprehensive and tailored support for staff in each phase of the career framework.

Staff in Group 1 are supported to undertake a doctorate through a generous package of fee payment and 0.1FTE workload remission. This is additional to 22 days of scholarship time allocated to all staff. On completion of their doctorate, the 0.1FTE allocation continues for an additional year to secure time for post-doctoral publishing and networking. In any year, the faculty supports doctoral fee payment for between 80-100 staff. Since REF 2014 this support package has enabled 13 of the Faculty's health educators to achieve a doctorate with an additional 44 working towards completion of a PhD or Professional Doctorate in Education.

In addition to 0.1 FTE workload remission, staff in the post-doctoral phase are supported by a structured network, convened by **Devaney** and **Kendall**, that meets monthly to provide targeted support on grant capture, writing for publication and profile building to enable progression to Band 1 status. These initiatives are complemented by a peer-to-peer mentoring scheme supported by senior researchers. To date, 21 researchers are mentors/mentees. 30% are PGRs in the middle of their study; 25% are PGRs towards the end of their study; 25% are post-doctoral researchers; 10% are Band 1; and 10% are Band 3.

Staff in Group 2 have significant responsibility for research and allocated research allowances of 25%, 35% and 50% of workload according to research band (Bands 1-3). Bandings are reviewed annually as part of the Personal Research Review (PRR) exercise, enabling academics to build flexible career trajectories. PRR follows BCU's code of practice and involves self-reflection, target-setting and a self-assessment of banding against published criteria. Completed PRRs are peer-reviewed by a member of the professorial team who makes a recommendation to support or amend self-assessment of bandings. Recommendations are moderated by a cross faculty, interdisciplinary panel. The PRR process feeds into annual appraisal discussions. This has been important for securing recognition and support for researchers who have practice-facing line managers with less experience of research. The embedding of the PRR process over the REF period has been supported by annual training workshops from the ADR for Heads of Department and their line manager teams. **Group 2 researchers play an active role in the co-ordination and support of clusters and mentoring of Group 1 and post-doc researchers.**

An annual pilot **project and sabbatical funding** call provides opportunities for staff to apply for longer periods of research leave or funding to undertake pilot projects as a springboard to larger, externally funded projects (seed funding). An annual budget of £25,000 is allocated to pilot projects (with up to £5,000 awarded for each project) and £10,000 for sabbaticals. Projects must align with research cluster priorities and the application process is a competitive one. All staff are invited to apply for both initiatives. Since 2014, over 35 pilot projects and 13 sabbaticals have been awarded across the Faculty, with a high percentage (80%) of female awardees. This has supported awardees to achieve a range of research outcomes, including writing up doctoral theses (e.g. **Edwards**). It has been a requirement for project proposing teams to include less experienced researchers and external partners to build confidence, experience and research networks. **Weckesser, Williams** and **Vreugdenhill** were awarded pilot funding in 2019 and **Aston** and **Craddock** in 2020, Williams' pilot project formed the basis for a successful submission to ESRC.

HELS recognises that academic writing is a social practice that requires dedicated, protected time. All staff are entitled to attend writing retreats. Since REF2014, three writing retreats have been offered every year (Oct/January/July), with an average of 30-35 staff and PGRs attending each retreat. The retreats are held off-campus at the Woodbrooke Quaker Centre facilitated by

a writing mentor and the ADR. Faculty writing retreats have been complemented by specialist retreats to support specific development needs of the new UoA 3 research community. A tailored CSCHaRR writing retreat was introduced in 2019. This took place at The Forest of Arden Hotel, on 15- 16th August and promoted the importance of writing for impact and dissemination. The retreat was attended by 18 members of staff from across the School of Nursing and Midwifery, Life Sciences and members of CSCHaRR. This was a collegiate event, with lunch and dinner to engage in networking and getting to know new colleagues. Feedback from the event was positive:

“A great opportunity to concentrate and have dedicated time to work my paper up ready for submission. I had my doubts that we could all be productive working together in one room, but the experience really supported me and I enjoyed the peer support during lunch and over dinner.”

Class and CSHaRR are each allocated an annual budget of **£20,000** to support researchers at all career stages to share their work at local, national and international conferences, Professors and Readers have access to an additional fund of **£10,000** each year to support development.

Developing researchers as doctoral supervisors has been a key tenet of the faculty's 'grow our own' strategy and **the number of doctoral supervisors in HELS has expanded from 48 in 2013/2014 to 103 in 2020**. Staff development and training in doctoral research supervision are provided through a combination of externally accredited and unaccredited doctoral supervision programmes and support sessions. In 2015 HELS led development of a University-wide bespoke SEDA-accredited programme, *Communities of Practice around Research Supervision* qualification for doctoral supervisors. It is the first, and currently only, accredited supervisor training programme in the UK and has a specific focus on the pedagogical dimensions of supervision. By December 2020, **40 out of 58 of health specialist supervisors had completed the programme, with 18 having gone on to gain full accreditation** and an additional 12 currently enrolled on the programme. In 2020, the programme was successfully revalidated by SEDA for a further 5 years. All staff involved in supervising dissertations at level 7 are also required to undertake SEDA accredited training, which helps to embed a serious, systematic culture around research supervision. In addition, the DRC offers a supervisor development programme for all doctoral supervisors, organised and delivered by an internationally renowned expert, Professor Jerry Wellington. Furthermore, the DRC academic team provide an ongoing series of workshops and training on key doctoral topics: research degree regulations, supervisor briefings, the doctoral examination (viva), viva chair training and supporting the wellbeing and mental health of PGRs. In January 2021 the Faculty's **excellence in doctoral supervision was recognised internationally** with the award of a **£65,000 grant from the British Council to develop an international 'Digital Doctoral Training Hub'** as part of the UK-China-BRI (China/Vietnam/Indonesia) Education partnership Initiative.

Postgraduate Research Students

Expanding the size and shape of the PGR community has been fundamental to developing and enriching the research culture in health. Our postgraduate community has both grown and flourished with **PGR enrolments increasing from 33 in 2014 to 57 in 2020 and 23 students completing doctorates in Health compared with 10 in 2014 (230% increase)**. Students complete within the timeframe allowed by their award and the team is particularly proud that part-time students who are usually juggling study with full time clinical employment taken on average just 72 months to progress from enrolment to award. These figures are clear testament to the ongoing commitments described above to increasing and enhancing the quality of our doctoral supervision along with support for PGRs described below.

Recruitment of PGRs

Recruitment to PGR programmes in Health is overseen and quality assured by **Thomson** as part of a three strong Doctoral Research College (DRC) academic team of PGR Directors representing the faculty's constituent academic disciplines and supported by two full-time DRC officers who are part of a large central University team. The DRC has developed a **rigorous and comprehensive framework for the recruitment of doctoral students**. This starts with doctoral open days, the offer of informal meetings with prospective candidates prior to application, face to face/online interviews and detailed feedback on all applications. More recently, the GRTA scheme has been mobilised proactively to diversify the research community in response to recommendations of the 'Broken Pipeline' report; this work includes the introduction of pre-application workshops and greater emphasis on 'equivalent' experience and qualifications. The majority of PGRs are funded through the GRTA scheme or employers but a growing number of full-time students are funded by external bodies with five funded by collaborative partners, 1 by the Heather van der Lely Foundation trust and 1 by the Commonwealth Scholarship Scheme.

PGR Training

The DRC team work with CSCHaRR and CLaSS to oversee an annual programme of training opportunities that complements the formal structures of the PGR life-cycle and is responsive to needs identified through annual monitoring and the annual PRES survey, and ensures a secure grounding in research governance and integrity.

All PGRs complete a milestone tracker in their first month of enrolment that maps a pathway to completion within the timeframe allowed by their award. The Post-graduate Certificate in Research Practice ensures that they are equipped with a sound understanding of epistemological and ontological concepts, together with methodological research skills and ethical and GDPR responsibilities.

Skills development and the monitoring of progress are closely supported and strategically managed through the DRC and Faculty Research Degrees and Environment Committee (FRDEC). The Faculty has adopted the principles of the Vitae research development framework to support the maturation of its research community, and this is embedded within Annual Progress Reviews (APR). APRs offer a three-stage process for PGRs, involving student self-reflection and assessment, supervisor comments and independent review by a third party who acts as 'critical friend' offering support and guidance to the student and supervisory team. A progression recommendation made to FRDEC helps to provide an overview of student progress but also highlights any students identified as 'at risk' so that additional support protocols can be put in place if necessary. APRs identify individual skills planning and training needs. PGRs are set realistic but ambitious targets for dissemination and impact of their work. Like staff, they are encouraged to attend writing retreats to ensure dedicated time for this activity. PGRs disseminate their work through internal and external research events seminars and the annual CSCHaRR and CLaSS conferences. PGRs can apply to a £10,000 development fund to support dissemination externally. By the third year of full-time study or sixth of part-time study, PGRs are expected and funded to present their work to both national and international audiences. This expectation is discussed and tracked through evidence included in the APR. This financial support allowed our students to present at important academic conferences including those organised by UKRI Mental Health Nursing Networks (**Barríos, 2017**), International Sociological Association (**Sallaway-Costello, 2018**), British Sociological Association (**Klimczak, 2019**), and The British Psychological Society (**Safi, 2019**). PGRs affiliated to CLaSS have access to a further £10,000 annual fund to support purchase of non-standard consumables.

A complementary programme of support is coordinated through the Faculty's 'Doc Skills Hub'. This includes weekly/fortnightly methodology seminars and formal scholarship and the less formal, subsidised breakfast and lunch club, thesis mentoring sessions and pop-up skills sessions. PGRs are also invited to attend the annual cycle of writing retreats (see above). Each year the new intake of GRTAs work with the Centre Directors to curate and organise the annual conference.

Promotion of equality and diversity

BCU's commitment to Equality, Diversity, and Inclusion (EDI) is reflected in the Core Values Framework of *Excellence, People Focused, Partnership Working, Fairness and Integrity*. These values underpin all processes within the University and provide a framework of principles that all employees strive to uphold. EDI is promoted and achieved through the implementation of robust guidance, policies, and university-wide priorities that ensure dignity and equal opportunities for all students and staff. As a result, we attract a diverse staff profile and 27% of staff at the Schools of Nursing, Midwifery, and Life Sciences are from Black, Asian, and Minority Ethnicities. In addition, the central EDI team and faculty-level champions facilitate the implementation of EDI-focused initiatives and provide learning opportunities related to (for example) Black History Month and Disability History Month. The commitment to EDI is further reflected by the cultivation of student and staff networks such as the LGBTQ+ network which provides a safe space to discuss and act on any relevant issues. A support structure is in place for staff and students with Specific Learning Difficulties and, in 2013, the faculty of Health was the first UK university to receive the Dyslexia Friendly accreditation by the British Dyslexic Association.

BCU remains committed to implementing strategies to eliminate gender bias and develop an inclusive culture that values all staff, through these processes the institution received an Athena SWAN Bronze Award in May 2017. The School of Nursing and Midwifery gained a Bronze Award in April 2020. Female researchers at all stages of career have the opportunity to participate in the Programme for Women Achieving Excellence in Research (PoWER) developed and launched in the Faculty in October 2017. This programme, now University wide, aims to empower women to reach their full potential in academia. PoWER uses established behaviour change theory to identify and overcome barriers to progression. Participants attend meetings and events over the course of a year, and are offered coaching and ongoing support, with the expectation of completing a minimum of two research outputs.

Evidence of the promotion, leadership visibility (HELs' ADR and CSCHaRR and CLaSS Directors are all women), awards of internal funding and sabbaticals to women researchers and an **increase in the number of women submitted to REF in UoA, from 7 (46.6%) in 2014 to 12 (70.6%)**, testify to the impact of these key initiatives.

All staff directly involved in REF decision making attended Equality, Diversity, and Inclusion (EDI) training provided by AdvanceHE. The Unit took a collective and collaborative approach to building the submission involving all academics with SRR and RAs in the self-assessment and moderation of output stages of the process to optimise learning, secure succession planning and emphasise our commitment to an open, collegiate and transparent research environment.

Section 3. Income, infrastructure and facilities

Income

New investment from both the University and Faculty investment has been used effectively to build a diverse project portfolio and the team have been successful in increasing research income by 76% generating in developing and obtaining numerous prestigious grants which

resulted in the generation of **£1,896,000** of external funding. The largest proportion of our income has been derived from projects sponsored by the UK Government and NHS (**£668,693**) and EU-based charities (**£174,666**). A substantial proportion of income was generated through grants from UK-based charities (**£324,952**) competitive and non-competitive funding. Examples of the most recent awards include:

- Family, Gender and Health cluster obtained **£260,000** from the Health Foundation in 2019 to explore the contributory factors underpinning nurse retention in healthcare in England and its impact on patient safety (NuRS project, **Jones** in collaboration with **Cook**). This cluster was also awarded **£10,763** from the Umbrella Sexual Health in 2019 to conduct a qualitative study of home sampling kits for sexually transmitted infections (**Weckesser**);
- Knowledge to Care cluster obtained **£261,237** from the NIHR in 2016 to investigate knowledge mobilisation in eczema. **Cowdell** was also a co-investigator on a **€303,172** (Marie Skłodowska-Curie Innovation Training Networks in 2019) INNOVATEDIGNITY project that aims to develop a shared research and training agenda to educate the next generation of interdisciplinary health care researchers and care leaders across Europe.

A full-time Research Development and Support Officer (RDSO) supports the notification of funding opportunities, development of bids, tracking of live projects against milestones, developing a portfolio of current publications, and supporting event management. The RDSO is an integral member of the health research team attending monthly research centre meetings, bid pipeline meetings, planning and research strategy development days, FRC meetings as well as ongoing project review meetings for all 'live' health projects. The quality of bid submissions is supported through an internal peer-review process. For less experienced researchers, the RDSO and professorial team provide dedicated support from the 'develop a bid' stage through to the point of submission.

The supportive structures have enabled junior researchers to successfully obtain 'first time' funding and build the confidence, experience and capability to support the step up to Principal Investigator roles. For example, **Williams** was a co-lead on a **£8,000** project funded by a charity Plan International UK and obtained **£650** from Clue to evaluate inclusivity in 'femtech', and obtained **£42,421** as a Principal Investigator from the Economic and Social Research Council to investigate the impact of Covid-19 on menstrual health and period poverty.

Our dedication to sustaining this growth and attracting further funding is illustrated by the substantial grants that were in final stages of development and approval at the date of REF2021 submission. These are predicted to generate over £1 million of income and include prestigious funding bodies such as the Health Foundation and the National Institute for Health Research.

Infrastructure and facilities

Health research has benefited from substantial University-level **investment in research governance since 2014 (see REF 5a). This has secured a significantly transformed, comprehensive policy and infrastructure framework** that is well supported by a centralised team of dedicated research excellence (RX) and research gateway (RIG) officers who oversee all aspects of the research governance and project support life-cycle. HELS FRC, chaired by **Kendall** (ADR), brings together RX/RIG officers, the University's insurance, EDI and Finance officers, Research Centre leads, academic leads for ethics, research integrity and Athena Swan to ensure that research governance at UoA level is systematic, compliant and informed by best practice. In turn, each Research Centre supports a network of Research Co-ordinators, reaching into every department within faculty to ensure the principles and practices of good governance are cascaded and embedded, along with providing a point of contact for training,

support and dialogue. HELS has developed an inter-disciplinary research governance Moodle site and online-training materials and resources to support staff and students to achieve best practice.

HELS Academic Ethics Committee (FAEC) has oversight of all Education and Health related research for the University, and all levels of student and staff research follow a common approval process supported by the University's online portal and team of ethics officers. HELS appoints a Chair and Deputy Chairs (x3) for a three-year term with 0.25FTE and 0.2FTE respectively invested in each of these roles to reflect the significance and value of the work and the expected contribution to providing staff development and training. The FAEC Chair's group is recruited to represent the constituent disciplines of the Faculty. Chairs are supported by a network of Departmental Ethics Champions who provide a conduit between FAEC and the needs and challenges of departments. This supports strong dialogue, a collective, developmental approach to ethical practice and ensures that FAEC is responsive to the needs of a highly diverse, interdisciplinary research community.

Securing an open research environment has been central to our commitment to ensuring that research is co-produced with, and impactful for, collaborating partners, particularly practice based and international partners who do not have easy access to a research library. CSCHaRR and CLaSS are committed to a green open access policy for all research outputs and related activity. BCU's Open Access (OA) Repository acts as the main location for staff to deposit research outputs, though this is complemented by dedicated project web-spaces that share the tools and processes of our work with a wider practitioner community on an OA basis. Health researchers work closely with BCU's OA Officer and library team who provide ongoing training and support alongside a dedicated UoA moderator and OA champion (**Cowdell**).

The DRC and RIG and RX research support teams are co-located with CSCHaRR and CLaSS researchers in a dedicated building, establishing a recognisable and distinctive physical presence. The building houses office space, a research seminar room and top floor studio that supports PGRs working with arts-based practices. This is complemented by a purpose built, recently refurbished DRC Hub. The DRC hub offers a vibrant, exclusive space for PGRs that provides dedicated desks, computer and photocopier access and kitchen access. The space is co-managed by PGR course representatives and FRDEC. HELS funds a weekly fruit delivery to the hub.

HELS invested £70,000 between 2018 and 2019 in equipment to support fieldwork, data collection and analysis for use by staff and PGR researchers. This includes audio and video recording equipment and a bank of 35 long-loan laptops. All equipment is GDPR compliant, and usage is managed through the faculty's GDPR standard operating procedures and protocols, which is overseen by the dedicated Research Integrity officer.

All researchers and doctoral students have access to specialist research equipment, appropriate IT hardware and software, and laboratory facilities. There are two dedicated librarians who support our researchers and PGRs. The library support includes individual and group tutorials on request, workshops delivered on topics such as copyright for researchers, induction and ongoing support of PGRs, and advice for uploading research publications onto the repository. A wide range of print and electronic literature can be accessed through the Inter Library Loan service which borrows from institutions such as the British Library and other Universities.

Section 4. Collaboration and contribution to the research base, economy and society

Overview

The research environment and support processes discussed above encourage staff members to produce research outputs that have contemporary relevance and contribute to expanding knowledge and improving practice. As the 'University for Birmingham' and in line with the Universities' Core Values Framework we strive to work collaboratively and to ensure that our research has tangible benefits for the society, this is evidenced by examples below.

Contribution to the research base

The Centre's commitment to contributing to the knowledge base is evidenced by outputs including 313 journal publications, 12 book chapters, 3 books, and 2 specialist issues of journals.

Ten of our members have positions on the editorial boards of prominent journals such as *the Emergency Nurse* (**Bryant**), *Journal of Cancers* (**Jahangiri**), *BMC Nursing* and *British Journal of Dermatology* (**Cowdell**) and the *Journal of Clinical Nursing* (**Brooke**). Professor **Ross** is an editor for the *National Institute for Health Research Journal Library*.

Furthermore, core and associate members (**Weckesser, Brooke, Cowdell, Walsh, Jenkins, Hogan, Leaver, Rabiee-Khan** and **Hurst**) actively support the peer review process of relevant journals such as *the British Journal of Community Nursing*, *Nursing Older People*, *BMJ Open*, *Cochrane Dementia and Cognitive Improvement Group*, *Journal of Public Health*, *European Journal of Public Health Nutrition*, and *Sex Education*.

Our staff influence the direction of national and international research by disseminating their findings at regional, national, and international conferences. Of particular importance are opening and keynote presentations including **Brooke's** invited opening speeches at the Annual Nursing Conference (Kosovo, 2017) and International Nursing Conferences (Slovenia, 2017, 2018, 2019), **Jenkins'** invited keynote at the Nursing Care Congress (Japan, 2018), and **Cowdell's** invited keynote presentation at the Sustainable Caring for Health and Wellbeing Conference (Finland, 2019).

Further contributions to the research base occur through collaborative work with external academic institutions and participation in academic networks. Collaborations are sustained through visiting roles and partnerships at other UK universities such as Canterbury University, University of Birmingham, Coventry University, and University College London. Our collaborations also extend beyond the UK with partnerships in Australia (**Brooke**), China, Netherlands (**Vreugdenhill**), Italy, Greece (**Hurst**), Uzbekistan, Tajikistan, Saudi Arabia, Poland, Belgium (**Rabiee-Khan**) and Sweden (**McAree**). Through these collaborations researchers have conducted and explored endogenous retrovirus research (**Hurst**) and the impact of COVID-19 on university staff and students (**Rabiee-Khan**). Lastly, collaborations has occurred through the Erasmus scheme on projects exploring safeguarding for family mental health (**Clark**), and endogenous retrovirus workshops (**Hurst**).

Staff contribute to research networks, bodies, and councils through voluntary positions. **Ross** is vice-president of the British Association for Sexual Health and HIV. **Brooke** is a director of the International Dementia and Culture Collaborative, an expert member of the National Research Ethics Service for Health Research Authority. **Jenkins** is a resource reviewer for the World Health Organisation. **Cowdell** was a Chair Elect of the European Academy of Caring Sciences for 2019 and is a UKDCTN Executive Committee Member and Trustee. **McAree** is an advisory board member for UKRI COVID-19 task force on maternity care. Staff members participate in the following NIHR groups: Health Technology Assessment Funding Committee

and Dissemination Centre Panel of Expert Commentators (**Ross**), Research for Patient Benefit (**Weckesser** and **Brooke**), CRN Specialty Cluster C Dermatology (**Cowdell**), Evaluation, Trials and Studies Coordinating Centre (**Clark**).

Contributions to economy and society

Our members are recognised experts in their fields and actively influence the direction of health care locally, nationally, and globally. This is achieved through fellowships and positions in medical councils and professional bodies such as the Royal Colleges of Nursing, Winston Churchill Trust (**Cannaby** and **Brooke**) and Midwifery (**McAree**), British Association of Dermatologists, Society for Academics in Primary Care (**Cowdell**), and Public Health England WHO Collaborating Centre for Public Health Nursing and Midwifery (**Clark**).

Our colleagues directly contribute to health care delivery, **McAree**, **Ross**, and **Cannaby** through clinical roles at local NHS trusts (as a lead midwife, consultant physician, and chief nursing officer respectively). These roles facilitate impact on practice in internationally reputed health services and the application of current healthcare to teaching and research at BCU.

Additionally, our staff use their research- and industry-derived knowledge to support the development of health and social care policy. For example, **Clark** was invited to present evidence to an All-Party Parliamentary Conference (2019) on Witchcraft-related Child Abuse linked to Faith and Belief and **Williams** contributes to the research stream of the Period Poverty Taskforce (Government Office for Equalities). The work of *Family, Gender and Health* cluster on menstrual health and endometriosis awareness informed the first NICE guidelines for the diagnosis and management of endometriosis. Research activities for the BME Mental Health Project: Being Understood, Being Respected (funded by the Department of Health) and dissemination of findings from among service users, carers, frontline organisations, and policy makers resulted in substantial changes in mental health care provision for BME populations in Birmingham (**Rabiee-Khan**).

Our staff shape and influence national and international conversation through public events, media presence, and development of user-oriented literature. Examples of this include the development of social media content to raise awareness of sexually transmitted diseases (**Ross**) and menstruation awareness (**Williams**), a series of reports on period poverty (**Williams**, **Weckesser**, **Randhawa**), multiple public events by The VQ collective on women's sex (**Weckesser**), a series of fact sheets on maternity care (**McAree**), and contribution to blogs on careers in STEM (**Jahangiri**) and care for prisoners with dementia (**Brooke**).

An example of our wider community activities is PGR participation in the Brilliant Club, a charity that allows outstanding pupils, who may not be thinking of going to university, to learn about university life and research. To date, PGRs participated as tutors and delivered short courses about their research to the pupils. Through this engagement we motivate young people from underrepresented backgrounds to consider pursuing a degree and facilitate their progression to highly selective universities.