

<b>Institution:</b> University of Worcester
<b>Unit of Assessment:</b> 4 Psychology, Psychiatry and Neuroscience
<p><b>1. Unit context and structure, research and impact strategy</b></p> <p><b>1.1 Context and Structure</b></p> <p>This submission brings together staff from the School of Psychology (Davis, Farrell, Farrelly, T Jones, Mahoney, Morgan, Muse, Taylor, Walklet) and staff from the Department of Health &amp; Wellbeing in the School of Allied Health &amp; Community (Gordon-Smith, L Jones, Perry).</p> <p>The School of Psychology consists of 21 academic and research staff (of whom 15 are Category A eligible) and 2 technicians. It is organised into two Departments: <i>Organisational Psychology, Team Dynamics and Interpersonal Relationships</i> and <i>Violence Prevention, Trauma &amp; Criminology</i>. Staff from the <i>Department of Organisational Psychology, Team Dynamics and Interpersonal Relationships</i> are primarily represented in this submission, with only one member of the <i>Department of Violence Prevention, Trauma &amp; Criminology</i> included here; other staff from this latter department are submitted to UoA20 Social Policy and Social Work.</p> <p>The <i>Department of Health &amp; Wellbeing</i> in the School of Allied Health &amp; Community has a primary research focus on mental health; its Mood Disorders Research Group forms the other part of this submission, although reference will also be made to other current and former staff in this Department (in particular, Professor Jo Smith) who have played a key role in this department's research and impact.</p> <p>It is worth noting, that up until the University's academic restructure (described in REF5a 1.1), the two component elements of this submission would have been part of a single overarching Institute of Health &amp; Society. These "historical" links have been maintained through, for example, staff from the Mood Disorders Research Group, supervising UG and PGT dissertations in Psychology and joint supervision at doctoral level.</p> <p>The research within the submitting Unit spans social and developmental psychology, biological, cognitive and clinical psychology, health psychology, positive psychology, evolutionary psychology, mood disorders and early intervention in psychosis.</p> <p>Four Research Groups are represented in this submission that have grown and developed over the assessment period. They initially emerged out of a series of events held in 2015 focused on four "Areas of Distinction" identified in the University's Research Strategy (REF5a 2.1). These events were opportunities for researchers from within and across disciplines to get together and identify potential synergies and develop collaborations across these areas.</p> <p>Four research groupings were identified in the Unit from this process: one focused on severe mental illness; one on resilience; one on violence prevention; and one on the psychological impact of long-term health conditions.</p> <p>These groupings have evolved over the period to become four Research Groups:</p> <ul style="list-style-type: none"> <li>• Mood Disorders – this group focuses on investigations of bipolar disorder and other related affective and psychotic illnesses, such as schizoaffective disorder and postpartum psychosis. Its broad aims are to investigate genetic and other factors that may contribute to the causes of these illnesses and to increase understanding of these factors, enabling developments to be made in the prevention and treatment of these disorders.</li> <li>• Character Strengths, Wellbeing and Prosociality – this group focuses on interdisciplinary research around character traits, dispositions and competencies that confer intrapersonal and/or interpersonal benefits such as wellbeing, academic success, successful mating behaviours and prosociality. Resilience is only one of a number of strengths being examined in relation to beneficial psychosocial outcomes. This theme has retained cross-</li> </ul>

field input from clinical, occupational and positive psychology with the further inclusion of evolutionary, developmental and social psychology fields.

- Violence and Trauma Prevention - the research conducted within this group is applied in nature and examines the prevention of all forms of violence, abuse and trauma spanning the victim, bystander and perpetrator spheres. The initial focus on domestic/sexual violence has been extended to incorporate in particular EMDR (Eye-Movement Desensitisation and Reprocessing) and ACEs (Adverse Childhood Experiences).
- Living Well Across the Lifespan – this group is located in the School of Allied Health & Community but is cross-School and indeed cross-College and interdisciplinary in nature, drawing together staff from allied health, sport and exercise science, and health psychology to focus on interventions to support wellbeing from childhood to old age.

Staff in the submitting Unit are also engaged with other Research Groups and research areas across the University. Staff in Psychology are members of the People and Work Research Group led from the Business School and of the School of Education's Social Psychology of Education Research Group, whilst there are longstanding research links with the School of Sport & Exercise Science reflected in publications and in joint supervision.

Overarching leadership of research in Psychology falls to the Head of the School of Psychology. He works closely with the College Director of Research & Knowledge Exchange (who sits on the School Senior Leadership Teams for all Schools in the College) to drive forward the Research and Knowledge Exchange agenda. The School of Psychology has an RKE Forum which brings together Head of School, College Director, Heads of Department and Research Group leads to discuss strategy and identify operational priorities for research. Strategic and operational objectives are disseminated to staff through regular School Research Away Days.

Research Group leads and PhD Course Leaders from the Unit sit on the College-level RKE Committee, chaired by the College Director. This provides opportunity for the Unit to inform and influence college-level strategic and operational developments.

## **1.2 Research and Impact Strategy**

### *Unit's strategic research objectives during the assessment period*

In its REF 2014 submission, the submitting Unit identified the following strategic objectives: to enhance the quality of its research outputs; to develop its ECRs; to grow its PGR community; to increase external research income; to promote impactful research; and to increase the visibility of its research through enhanced public engagement.

These objectives echo those of the University's 2014-2019 Research Strategy (see REF5a 2.1). As with the University strategy (REF5a 2.2), the Unit has been largely successful in meeting its objectives. This will be elaborated in the sections below, but we particularly note the following:

- Staff in the Unit have published in journals such as: American Journal of Medical Genetics: Part B Neuropsychiatric Genetics, Behavioural and Brain Sciences, British Journal of Psychology, Clinical Psychology & Psychotherapy, Current Psychology, Evolutionary Psychological Science, Frontiers in Psychology, JAMA Psychiatry, Journal of Affective Disorders, Nature Genetics, Nature Neuroscience, Personality and Individual Differences.
- Four staff were identified as ECRs in the REF2014 submission (two of whom – Davis and Walklet – are returned here and two of whom have left – Solowiej and Wilkinson). A further three staff returned here were appointed as ECRs over the assessment period (Muse, Perry, Taylor). These staff have received significant support: three staff have received support for doctoral study (Perry, Taylor, Walklet) and have now completed; two were granted periods of research leave (Muse and Solowiej); and two were awarded a University-funded PhD Studentship (Davis, Solowiej).
- The Unit has seen eight doctoral students complete over the assessment period (compared to three in the REF 2014 period) and has 21 current students, six of whom have submitted their thesis at the time of writing.

*Impact Strategy*

Research in the Unit ranges from basic research to research with the potential to transform e.g. clinical practices, treatments, policy to applied research seeking to address specific real-world problems. Our approach to impact reflects this range.

Our applied research is normally commissioned by or developed in partnership with key stakeholders and research users (NHS Trusts, CCGs, charities, etc). The Unit has facilitated applied research by:

- Nurturing close relationships with regional NHS Trusts and other health bodies such that we are a preferred partner for commissions or for joint bids.
- Supporting staff to work *pro bono* on applied projects recognising the societal benefits that arise from this research.
- Match-funding PhD studentships with a focus, in the first instance, on developing policy and practice in the co-funding organisation but with wider potential impacts. Two studentships have been match funded in the assessment period: one with NHS Shropshire focused on the role of midwives in perinatal mental health; and the other with James Wentworth Stanley Memorial Trust focused on suicide prevention strategies in Higher Education Institutions.

The Unit has adopted a number of approaches to enabling the impact of its research:

- Using a “dual publication” strategy, i.e. presenting research in practitioner focused journals as well as academic journals
- Presenting regularly at practitioner conferences
- Engaging strategically with Health Partnership Groups, Boards and Networks and Strategic Research and Development Committees/Working Groups in regional NHS Trusts
- Working closely with user groups who help disseminate research findings more widely in society
- Developing and promoting active user networks
- Supporting staff to engage with businesses in the health technology sector.
- Promoting research with the wider public through mechanisms such as “Psychologist in the Pub” and “Pint of Science”

The selected Impact Case Studies show many of these approaches in action:

- *ICS1 - Enhancing self-care among adults with severe allergy*: the initial research was undertaken in partnership with a NHS Trust on a *pro bono* basis; the findings were disseminated in academic and practitioner journals, and at practitioner conferences; the research and impact was advanced by working with an industry partner in the healthcare sector.
- *ICS2 - Enhancing health provision and informing lifestyle choices for young people experiencing first episode psychosis*: the impact was underpinned by an applied research project developed in partnership with a regional NHS Trust; findings from the project were widely disseminated to practitioner audiences.

*Interdisciplinary Research*

The University’s College Structure was developed as an enabler of interdisciplinary research (REF5a 2.5). College Directors of RKE are tasked with identifying and developing interdisciplinary opportunities across Schools in a College but also between Colleges where appropriate.

This is manifested in the submitting Unit through the development of an overarching Interpersonal Relationships and Wellbeing Interdisciplinary Research Group which draws together the “Character Strengths, Wellbeing and Prosociality” and “Violence and Trauma Prevention” research groups with two research groups in the Business School (“Customer Interactions” and “People and Work”). The group explores from an interdisciplinary perspective how individual, social and environmental factors influence relationships and wellbeing within different contexts, such as in workplaces, schools and online spaces. It seeks to understand how

interpersonal relationships contribute to mental health (construed as both trauma/mental ill-health, and as wellbeing) and how they shape individual and team behaviours in consumer and organizational settings. In doing so, it explores both the 'dark' and 'light' side of relationships and human behaviour more broadly.

#### *Open Research*

The University is committed to developing and maintaining an Open Research environment. It fundamentally recognises the value of open access publication to the HE sector, to the public, to the University and its researchers but most vitally to the integrity and value of the research. This is evidenced by its resourcing of this important area (dedicated Open Access Advocacy and Support Officer; Open Access Funding) and its policy development (on Open Access and Open Data) (REF5a 2.6). This commitment is further reflected in its new Research & KE Strategy which identifies developing its Open Research environment as one of 5 underpinning principles of the strategy (REF5a 2.3.4).

The Unit echoes this commitment. It has worked closely with the Open Access Advocacy and Support Officer to raise awareness of the Open Access agenda, for example, through running dedicated training events as part of School Away Days. This has fed through into a very small number of outputs (just seven) authored in the Unit over the assessment period being non-compliant.

Staff in the Unit (Davis, Jones, Mahoney, Perry) have also received funding for APCs through the Open Access Fund (£8,307), publishing in journals such as *BMC Psychiatry* and *Frontiers in Psychology*.

The Unit will look to review and revise its approach to Open Access and Open Data in 2021 in light of national and international developments, in particular Plan S.

#### *Research Integrity*

At University level, the University's Research Integrity & Governance Committee has oversight of policies and procedures to support research integrity and its Chair is the University's Research Integrity Champion. The champion is expected to embed a culture of integrity across University through developing training and support for staff but also raising its profile.

At College level, Research Ethics Panels are responsible for review of all staff and research student projects to ensure they are conducted according to appropriate ethical, legal and professional frameworks, obligations and standards. Panel Chairs and Vice Chairs are experienced researchers whilst panel reviewers are drawn from across the College; lay reviewers are also recruited to the panel. Training is provided to all reviewers before they engage in the role. There is an annual audit of reviews to ensure the Panels are fulfilling their role. All staff submitted in the Unit are reviewers, whilst Gordon-Smith is a Research Ethics Panel Chair. This ensures there is a strong culture of research integrity in the Unit.

#### *Future Strategic Aims*

The University's new RKE Strategy 2020-25 was approved in summer 2020 (REF5a 2.3). The expectation is that Schools' strategic objectives will flow from the University strategy but will also reflect disciplinary priorities, with Schools required to develop a strategy implementation plan. Inevitably, the Covid-19 pandemic has impacted on the development of this plan and aims set out here are consequently preliminary.

The Unit will continue to focus on applied research *and* basic research which has the potential to improve quality of life through enhanced wellbeing, through developing greater understanding of factors which impact on mental health and through informing treatments and developing interventions. As such, it aligns itself primarily with the "Health and Wellbeing" Challenge set out in the University strategy.

The Unit will develop a clear approach to RKE income generation which will be driven by the research groups, recognising this is a clear area for development. Indeed, groups will be set targets for bidding and/or income as appropriate. A core part of this approach will be the development of key strategic partnerships, an increased focus on collaboration, and an enhanced offer around consultancy and CPD.

The Unit will increase further its PGR numbers, by using its research groups as a mechanism to attract students, by developing new doctoral programmes, and by attracting further match-funding for PhD studentships.

The Unit will seek to develop its researchers at all career stages: it will continue to actively supports ECRs but will also support mid-career researchers to progress to professor. It will offer a disciplinary-level programme of development which complements the University's researcher development. Where appropriate, the Unit will seek to recruit senior researchers to ensure it has effective research leadership.

## 2. People

### 2.1 Staffing strategy and staff development

#### *Recruitment*

In line with the University's overarching strategy (REF5a 3.1.1-3), the Unit's approach to recruiting staff to standard academic contracts is focused on meeting current needs of UG and PGT programmes in the School, enabling curriculum development and addressing RKE objectives at school level, in particular seeking to recruit staff whose research feeds into existing strengths and areas identified for development. There has been an increased emphasis on aligning these imperatives, i.e. ensuring that there is a clear synergy between teaching and research.

Recruitment to research only posts in the period has been driven primarily by the desire to grow new areas of strength aligned with institutional and Unit-level objectives. A further element of the strategy has focused on maintaining and developing research leadership within the Unit.

In recruiting to standard academic contracts, the Unit has increasingly used open-ended/permanent contracts not fixed term. This has also been the case for the research staff posts outlined below. No Category A eligible staff on the census date were on open-ended/permanent contracts.

Nine of the thirteen staff returned in this submission were recruited in the assessment period (although one of these, T Jones, was a former staff member returned in REF 2014 who subsequently returned as Head of School of Psychology in 2018).

Two senior researchers returned to this Unit in REF 2014 left the University early in the assessment period (Peel, Upton). They were replaced with two professorial appointments, Professors Liz Gilchrist and Erica Bowen, in 2015 and 2016, whose research focus was on violence prevention (both are returned to UoA20). Bowen acted as research lead for Psychology before being appointed to the role of Director of Research & KE in the College of Business, Psychology & Sport in 2018.

The Unit made key senior appointments in the area of severe mental illness:

- In 2014 Jo Smith was a Visiting Professor of Early Intervention in Psychosis on secondment from Worcestershire Health and Care Trust where she was EIP lead; before being appointed to be Professor of EIP in 2015. She retired in October 2019 and is now Professor Emeritus.
- In 2015, the Unit appointed Professor Lisa Jones to head up a new Mood Disorders Research Group, subsequently recruiting a research team to support this work; the senior researchers in this team are returned here (Gordon-Smith, Perry, Knott).

The Unit has also made a number of Honorary professorial appointments to supports its research and enhance its leadership:

- Professor Ad De Jongh, Professor of Clinical Psychology at the University of Amsterdam and expert in EMDR (2017-present).
- Professor Ian Jones, Professor of Psychiatry and Honorary Consultant Perinatal Psychiatrist at Cardiff University, Director of the National Centre for Mental Health (2016-present).

#### *Progression and succession planning*

In addition, to recruiting research leaders, the Unit has been effective in developing leadership through promotion to Principal Lecturer based on research performance (Farrelly, Mahoney) and through appointing staff at Senior Lecturer level to Research Group leadership roles (Davis, Morgan).

Table 1 shows the balance between contract levels in the Unit for both Category A Eligible and Submitted staff (see REF5a 3.1.6 for institutional comparison). This suggests that the Unit is well-placed to continue to deliver its RKE strategy through the continued development of its researchers at SL and PL. However, that it is recognised that there is opportunity to extend its professorial leadership either through promotion or through appointment.

	% Category A Eligible	% Category A Submitted
Lecturer/Research Fellow (K0)	17	17
Senior Lecturer/Senior Research Fellow (J0)	44	42
Principal Lecturer/Principal Research Fellow/Head of School (I0)	33	33
Professor (F1)	6	8

*Table 1: Proportion of staff by contract level*

#### *Staff Development*

As noted above, the Unit has supported its staff to develop as researchers. At appraisal, staff with SRR are asked to present a 3-year research plan (as set out in the REF2021 Code of Practice) which as well as articulating plans for project development, dissemination and funding applications, also identifies training needs.

These training needs can often be met through the University's Researcher Development Programme which is designed to support staff at all career stages (REF5a 3.2.4). Workshops are delivered by senior researchers (including staff in the Unit) and professional staff at the University but the programmes also draws on external presenters and utilises resources offered through Vitae and other professional development organisations. Staff in the Unit have consistently engaged with the University's Research Leadership Programme, its Research Supervisor Development Programme, Bid Development training and Impact and Engagement training.

However, staff are also supported to access external training where the University programme does not meet needs, particularly specialist methods or data analysis training. The Unit has further developed School-level training where it has in-house expertise (e.g. research and social media, power calculations). Since 2019, this has been delivered through monthly Research Cafés run by Research Groups.

Staff can also access the University's Research Mentoring Programme (REF5a 3.2.5). Five staff in the Unit have accessed the scheme. They can do so at any point from appointment onwards and at any career stage. This programme has also offered an opportunity for Mentors to develop

their skills, with all mentors receiving dedicated training for the role. Three staff in the Unit are mentors in the programme, supporting staff across the institution.

As described above, ECRs have received active support for their development, reflecting the Unit's overall approach. It can be added that all ECRs are embedded in Research Groups.

The University was granted the HR Excellence in Research award in 2016 and is a signatory to the new Researcher Development Concordat. Staff in the School of Psychology have sat on the University's Concordat Implementation Group from when it was set up early in the assessment period and have thus informed the development of the institutional action plan, whilst also feeding back on its development into the School.

Staff have opportunity to present their work in progress at College-level seminar series which provide a supportive, cross-disciplinary audience to test out new ideas and approaches. £10k per annum is provided for staff to attend and present at national and international conferences, both academic and, where appropriate, practitioner-focused.

Staff in the Unit can access the University's research leave programme (see REF5a 3.2.3). Three staff in the Unit were awarded leave in the assessment period (Mahoney, Muse, Anderson). This has enabled them to develop, publish and extend the impact of their research. Notably, Mahoney used her leave period to develop the work articulated in ICS1.

## **2.2 Research students**

The Unit has expanded its PGR community over the assessment period. There were 21 current research students located in the School of Psychology and the Mood Disorders Research Group at the end of the assessment period compared to 15 at the end of the REF 2014 assessment period).

8 students supervised in the Unit completed over the period (5.5 FTE), compared to 3 (2.5 FTE) in the previous REF period. A number of these were co-supervised by staff in other Units, primarily UoA3 (school health-eating interventions; increasing knowledge and understanding of infant nutrition in rural Nigeria), but also UoA14 (benefits of care-farms), UoA17 (psychopathy in business) and UoA24 (factors influencing female participation in cycling), reflecting the cross- and inter-disciplinary nature of these doctoral projects. A further 6 students had been awarded PhD subject to minor amends at this point.

Recruitment to doctoral programmes is overseen by School-level PhD Course Leaders who work closely with the central Research School (REF5a 3.3.2-3). To increase its PGR numbers, the Unit has taken a three-pronged approach:

- It has increased its supervisory capacity. All 11 submitted staff are on the University's Register of Approved Supervisors.
- It has been successful in winning University-funded PhD studentships (4 over the assessment period) and sourcing match-funding from NHS and charitable organisations to fund two further PhDs.
- It has focused on growing numbers within its Research Groups, particularly Mood Disorders. At the time of writing, Mood Disorders is home to 6 students.

PhD Course Leaders also play a core role in oversight of research student progress. They sit on the University's Research Degree Board and are responsible for annual monitoring of student progress within the School.

Schools work closely with the Research School to ensure that research students are embedded within both the subject and wider research culture:

- Research students are attached as affiliate members to one or more Research Groups.
- They are encouraged to attend and to present at College-level research seminars.
- A school-level Research Student representative sits on the College RKE Committee.

The Research School is also responsible for research student life, i.e. for the wider development and wellbeing of research students. It provides a dedicated work and social space for students. The Research School team, co-located in the student space, provides advice and guidance for students on their programmes and, working closely with other student-facing departments such as the Disability & Dyslexia Service, the student mental health team, careers service, also offers pastoral and wider support. The Research School has developed comprehensive support and guidance for students and supervisors on mental health.

In addition, to having access to the student space in the Research School, students in Psychology have a dedicated shared office space in the School, whilst students attached to Mood Disorders are co-located with the Research Team.

Research students in the Unit are required to engage with the central Research Student Development Programme (REF5a 3.3.4). The programme has been mapped against Vitae's Researcher Development Framework. The programme offers a suite of modules, short courses and workshops, delivered face-to-face or online, some of which are compulsory for all doctoral students, focused on the following core areas: planning and managing research; academic writing; research methods; data analysis; research integrity and ethics; dissemination, engagement and impact; careers and employability. The University also supports students to engage with external training where this is specialist and not available through the University's programmes. Students are also able to access training offered through the GuildHE Research network. This programme is currently led by a staff member in the Unit (Taylor) but other staff also contribute significantly to the programme. As part of the programme, students may also engage with Level-7 subject specific methods modules.

Beyond the programme, the Research School offers additional development opportunities. Research Students have opportunities to teach, particularly those on a PhD studentship and can access modules and workshops to develop their skills in this area, with the opportunity to gain associate or full fellowship of the Higher Education Academy. The University offers research student-specific dissemination opportunities including an annual "Images of Research" exhibition and student-led PGR Conference. Further, the University provides funding opportunities for students to attend and speak at external conferences and events and separate funds to support students to develop inter- and cross-disciplinary networks, seminar series, conferences and events. The University is also a member of the Brilliant Club, a charity focused on improving access to University, which provides opportunities for doctoral students to go into schools and deliver tutorials in their area of expertise. The Research School also provides more ad hoc opportunities: for example, in 2019 the lead for the development programme worked with a student team to deliver a University programme for Pint of Science.

All supervisors are required to complete the University's Research Supervisor Development Programme (REF5a 3.3.8-9). The programme has been in place for some 20 years but was rethought and relaunched in 2018/19. The programme offers a wide range of support for supervisors at various career stages on themes such as: introduction to supervision, supervisory styles, regulations and processes, supervising international students, PGR mental health and wellbeing, supporting student progress. New supervisors must complete the whole programme but more experienced supervisors must also engage with core elements and all supervisors are required to engage in regular refresher training (every 3 years). The programme is complemented by supervisor lunches that bring together supervisors to discuss key topics and challenges in supervision. The quality of supervision in this Unit is reflected in the recent Student Choice Award for Excellence in Doctoral Supervision (2018-2019) which was awarded to Davis and Mahoney.

### **2.3 Equality and Diversity**

The University has a fundamental commitment to equality and diversity (REF5a 3.4). It seeks to consider and apply equality and diversity principles in all that it does. Its policies and processes are designed to disadvantage no-one and are subject to ongoing equality impact assessment to ensure this is the case.



The Unit's approach flows from this with the Head of School ensuring that the University's principles and policies are fully enacted. Line managers are sure staff are aware of and are supported to engage with, for example, the University's flexible working policy, its parental leave policies, its policies which support carers (such as its Critical Illness Policy) and its staff wellbeing initiatives (see REF5a 3.1.8)

Several staff in the Unit have benefitted from the University's flexible working policy with a move to part-time or compressed hours. There is no evidence that this has impacted on research productivity, access to funding or progression. It is notable that both at institutional (REF5a Table 2) and Unit level, part time staff are as well-represented in the Category A submitted as eligible category.

Staff in the Unit have taken parental leave in the assessment period. They have received active support to transition back to work after the leave period, through "keeping-in-touch" days, phased return, and mentoring. It is ensured that where a staff member takes parental leave this does not impact on research leadership or supervisory roles. The School has a fair and flexible approach to working, particularly during the current lockdown period in recognition of the challenges of home schooling.

During the pandemic, staff in the Unit have run staff wellbeing sessions for the School and the wider university, developing an 8-week package of support working with HR.

Staff in the Unit are committed to equality and diversity. Staff in the School were members of the University's Athena SWAN self-assessment team; the University received its institutional Bronze Award in April 2018 and is committed to making departmental applications in the next 2 years. Staff are also engaged with various staff networks focused on protected characteristics and with the LGBTQ+ Allies scheme.

In preparing this narrative, it was recognised that there are opportunities to enhance practice at Unit-level. There has been no equality impact assessment of local funding processes (e.g. support for conference attendance) and, whilst there is no suggestion that any group is disadvantaged, this is a clear area for development.

### **3. Income, infrastructure and facilities**

#### **3.1 Income**

The Unit has sought to increase its external funding over the assessment period from its REF 2014 levels (see 1.2.1). Research Groups are expected to develop their own strategies for RKE income generation. They have been supported in this by the central Research Office and, since the academic restructure, by a College Director of RKE and RKE Facilitator. The Director's role is to provide leadership and guidance for Research Groups in developing their strategy, whilst the Facilitator works with Research Group leads to develop a bespoke funding opportunities service for members. Staff have also accessed training, general and bespoke, on bid development.

The Unit has had moderate success in winning external funding over the assessment period, just under £400K. It should be recognised, however, that staff in the School of Psychology's Violence and Trauma Prevention Research Group make up most of the University's UoA20 submission, generating the majority of the £900K returned there. The ambition to increase external funding set out in the REF 2014 submission (which included all returnable staff in Psychology) has thus been met.

The Unit has won funding from a variety of sources: major funders such as NIHR, Wellcome Trust, and the Stanley Medical Research Institute, as well as a number of charities (UK and EU) and NHS bodies.

Examples of major funded projects are:

- [True Colours](#) (2015-ongoing): this project part funded by the Wellcome Trust and the Stanley Medical Research Institute is a collaboration between the Mood Disorders Research Group (Gordon-Smith, Jones, Perry) at Worcester and colleagues at Cardiff and Oxford universities. Utilising a clinical monitoring system developed by the Oxford team, the project monitors the mood of 1200 individuals with bipolar disorder and other factors known to play a role in their condition including sleep and activity levels and tracks this over time. The project is providing vital data for the researchers on what factors may affect mood but also acts as a tool for users to understand and reflect on their own mood.
- [IMPART](#) (2016-18): funded by NIHR, Jo Smith was a co-investigator on this collaborative project led by Lancaster (with other collaborators from Bangor, Liverpool, UCL, and UCLAN) to develop an online supported self-management toolkit for relatives of people with psychosis or bipolar experiences.
- [Eye movement desensitisation and reprocessing for symptoms of post-traumatic stress disorder in adults with intellectual disabilities \(Trauma-AID\)](#): funded by NIHR HTA, Farrell is a co-investigator on this collaborative project led by Birmingham Community Healthcare NHS Foundation Trust (with other collaborators from Birmingham, Cardiff, Swansea and Warwick).
- SHAPE (Supporting Health and Physical Exercise for young people with psychosis): funded by the Health Foundation, Jo Smith was lead investigator on this project in collaboration with Worcestershire Health and Care NHS Trust to develop, implement and evaluate a coordinated, multi-professional, health and wellbeing programme for young people with psychosis and bipolar disorder.

### 3.2 Infrastructure

The University has significantly expanded its institutional infrastructure for supporting research and impact over the assessment period, establishing a RKE Directorate consisting of a Research Office, Research School and College RKE infrastructure (REF5a 4.1). It has also expanded support for researchers offered by Library Services.

Its RKE Directorate provides wide-ranging support and guidance for researchers around identifying funding (including access to funding databases, such as *Research Professional*), bid development, KE and impact generation (including use of *Vertigo Ventures Impact Tracker*), project delivery (including contract negotiation, liaison with partners, financial and other reporting) and research governance (including data management, data sharing, protecting and exploiting IP).

The University has established robust Pre- and Post-Award processes for externally funded projects (approved in 2018/19 and subject to evaluation and review in 2020/21). These processes scaffold the Research Office support systems set out above and ensure good governance for bids and for projects.

It has been recognised that the processes need to incorporate Equality Impact Assessments at various stages of both pre- and post-award. In lieu of this broader development, the University has adopted the BBSRC EIA guidance and template for reviewing research bids. It has also been agreed to undertake a review of bidding over a 5-year period from an equality perspective and this will be completed in 2021. The review will inform the development of support mechanisms for bidding.

The University also provides access for researchers to a current research information system (PURE), a publication repository ([WRAP](#) – Worcester Research and Publications), major citation databases (Scopus and Web of Science), and subject-specific databases such as PsycARTICLES, PsycINFO, PTSDpubs.

The University offers a range of research support schemes designed to support researchers at all career stages and, variously, to pump prime projects, develop international collaborations, advance existing areas of work (REF5a 4.1.6).

Staff in the Unit have been successful in gaining funding from these schemes:

- PhD studentships: as noted above, staff have been awarded four fully-funded full time PhD studentships (Davis, L Jones, Morgan, Scott) and match-funding for two further full time PhD studentships (L Jones, Smith). The funding has been used strategically to support the work of the Mood Disorders and Character Strengths, Wellbeing and Prosociality and to support the development of a project on student suicide.
- Vacation Research Assistantships (VRAs): staff in the Unit have been awarded 11 VRAs over the period. These have been used to undertake systematic or critical literature reviews to underpin longer term projects (e.g. technology and suicide prevention among young males; neuropsychological correlates of Emotional Intelligence; Bipolar Disorder, psychosocial functioning and the role of autistic and schizotypal traits), to collect new data (e.g. a UK survey of therapist perceptions of barriers to the implementation of evidence-based practice in Cognitive Behavioural Therapies) and to analyse existing data sets (e.g. public response to a soap opera portrayal of postpartum psychosis: a pilot study of comments on social media).

Funding is also offered at School and College-level (formerly Institute-level). This has taken three forms: funding to support skills developments, such as training around psychometric scales; seed-corn funding to support the early development of new projects; and output facilitation funding to support staff to publish. It is notable that this funding was used to support both the development of the research (Walklet) and some of the publications (Mahoney) which underpin ICS1, demonstrating the effectiveness of this small-scale funding.

### **3.3 Facilities**

Staff and research students in the Unit have access to an extensive range of facilities. Monitoring laboratories are available for observational studies, equipped with one-way mirrors and audio and video recordings, and smaller test cubicles are available for studies of individual participants in controlled environments. Bookable research space includes a human performance laboratory equipped with computerised testing equipment.

Equipment available includes eye-tracking and galvanic skin response (GSR) technology. This includes mobile eye-trackers in the form of lightweight glasses with remote, wireless collection of eye data with real-time gaze position, and wearable GSR biosensors to measure emotional arousal, attention, temperature and activity. Further mobile equipment includes a portable Electroencephalogram (EEG) monitoring and recording unit with a dedicated laptop for data analysis, as well as a stock of activity monitors for research which can record both physical and sleep activity.

Staff and research students can also access Wearable AtivPALS, video capture, editing, and analysis facilities including Tracksys and Transana software packages for transcription and analysis of video footage, and video cameras and dictaphones. Data analysis and experiment building software includes SPSS, Stata, Formic, NVivo, AMOS (Versions 24-27), GPower, and OpenSesame.

The Unit has re-established and improved its psychological test library which includes free-to-use, public domain and restricted (licensed) psychometric tests. A number of staff hold occupational testing qualifications and are able to support the use of different types of psychometric test use. This library is managed by a psychology technician with occupational testing in ability and personality qualifications.

Staff in Mood Disorders are trained to use the Schedules for Clinical Assessment in Neuropsychiatry (SCAN) research tool and are all phlebotomy trained. Biological research samples from the Group are curated and genotyped by the National Centre for Mental Health (NCMH) Tissue Bank at Cardiff University. As an NIHR portfolio study, they receive support with patient recruitment via NHS research teams. During the REF period, they have received support with recruitment within 20 NHS Trusts/Health Boards throughout the UK.

There are currently two technicians in Psychology who support the use of all spaces and equipment listed above, including providing tutorials and advice on technology and software. One of the technicians further supports the Psychology Research Participation Scheme (or 'Sona Systems Research Management System'). This system allows staff and research students within the School to screen and recruit participants for a wide range of study formats including lab-based experiments and online surveys.

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

##### **4.1 Collaboration**

Staff in the Unit have engaged in collaborative research with other HEIs, both nationally and internationally, and non-HEIs, including NHS trusts.

National collaborations include: Bristol Medical School (Mahoney), University of Birmingham (Gordon-Smith; Jones; Morgan; Perry), Cardiff University (Gordon-Smith; Jones; Perry), University of Leicester (Davis, Morgan), University of Manchester (Davis), University of Northampton (Morgan), Northumbria University (Farrelly), University of Oxford (Gordon-Smith; Jones; Muse; Perry; Walklet), University of Stirling (Muse), University of Sunderland (Farrelly), and University of Wolverhampton (Farrelly).

International collaborations include: Hospital Universitario de Ceuta (Gordon-Smith; Jones; Perry) University of Bologna (Davis), University of Cologne (Farrelly), University of Málaga (Davis), University of Melbourne (Morgan), Miami University (Morgan), University of Neuchâtel (Davis), University of Padua ((Gordon-Smith; Jones; Perry), University of Potsdam (Muse).

Collaborations with non-academic organisations include: Action on Postpartum Psychosis, Bipolar UK, Bristol Centre for Surgical Research, Oxford Cognitive Therapy Centre, Worcester Acute Hospitals NHS Trust, Worcestershire Health and Care NHS Trust, North Bristol NHS Trust, Royal Liverpool and Broadgreen University Hospitals Trust, Nottingham University Hospital NHS Trust.

##### **4.2 Contribution to the research base**

Staff have held the following positions in learned societies and relevant professional bodies: Fellow of the British Association for Behavioural & Cognitive Psychotherapies (Smith).

Staff in the Unit have delivered keynote and invited presentations at: Crossing Borders: Multidisciplinary LGBT Research Conference, De Montfort 2015 (Peel); International Institute for Mental Health Leadership Zero Suicide Summit, Atlanta 2015 (Smith); BABCP Annual Conference, Belfast 2016 (Muse); EMDR Israel National Conference 2018; EMDR Norway Annual Conference, 2019; EMDR International Association Conference 2019; EMDR Belgium Annual Conference 2019 (Farrell); 8th Biennial Conference of the International Society for Affective Disorders, Amsterdam, 2016; Royal College of Psychiatrists International Congress, Birmingham, 2015; 20th Annual Conference of the International Society for Bipolar Disorders, Mexico 2018; 22nd Annual Conference of the International Society for Bipolar Disorders, Chicago 2020 (Jones); South Staffordshire and Shropshire NHS Foundation Trust: Motherhood and Mental Health Seminar Series, Stafford, 2015 (Perry).

Staff have been on the organising committee for national and international conferences: EMDR Europe, Poland 2019 (Farrell); International Conference on Gratitude, Erfurt, Germany 2019; Character Strengths and Wellbeing symposium, Worcester 2019 (Morgan).

Staff sit on external research committees and steering and advisory groups: EMDR Europe, EMDR UK & Ireland, Trauma Aid Europe (Farrell); Domestic Abuse Statistics Steering Group, Office for National Statistics, 2015-2016 (T Jones); Psychiatric Genetics Consortium, Genetics-ECT Consortium (Gordon-Smith, L Jones);

Staff have acted as peer reviewers for the following UK research funders: Cancer Research UK, DoH, ESRC, MRC, NIHR, Wellcome Trust; and international funders such as Icelandic Research Foundation, Swiss National Science Foundation.

All submitted staff have acted as reviewers for journals including: American Journal of Psychiatry, American Journal of Psychotherapy, Archives of Suicide Research, Behaviour Research and Therapy, Behavioural and Cognitive Psychotherapy, Biology Letters, Bipolar Disorders, British Journal of Health Psychology, British Journal of Psychiatry, British Journal of Psychology, Clinical Psychology and Psychotherapy, Cognitive Behavioural Therapist, Comprehensive Psychiatry, Counselling Psychology Quarterly, European Psychiatry, Evolution and Human Behavior, Evolutionary Psychological Science, Evolutionary Psychology, International Journal of Psychology, Journal of Affective Disorders, Journal of Behavior Therapy and Experimental Psychiatry, Journal of Health Psychology, Journal of Personality, Journal of Psychosomatic Research, Mindfulness, Personality and Individual Differences, PLOS One, Progress in Neuropsychopharmacology & Biological Psychiatry, Psychiatry Research, Psychological Reports, Psychology, Health and Medicine, Psychotherapy and Psychosomatics,, Schizophrenia Bulletin, Social Science Research.

They have held editorial roles for the following journals/publishers: Current Psychology (Farrelly); International Journal of School and Educational Psychology (Davis); Frontiers in Psychiatry: Mood and Anxiety Disorders (L Jones, Gordon-Smith); Journal of EMDR Practice and Research (Farrell); Psychology of Sexualities Review (Mahoney).

#### **4.3 Contribution to economy and society**

Staff in the Unit are continuing to make significant contributions to economy and society beyond that described in the Unit's ICS. Three areas are highlighted here which demonstrate how researchers engage with users and affect impact.

The Mood Disorders Research Group are part of the wider *Bipolar Disorder Research Network* (BDRN). Co-founded by L Jones and Gordon-Smith with Professor Ian Jones (Cardiff), it is the world's largest network of individuals with bipolar, or related mood, disorders (over 7,500). As well as participating in research projects, members of the network also receive an annual newsletter which provides study updates, wider relevant news stories, reflections from individuals with bipolar and other mood disorders. The network has established research champions whose role it is to publicise BDRN's research and improve public awareness of bipolar disorder; these champions have written for Bipolar UK, given public lectures and media interviews. The network also provides support and guidance and has been particularly active in the period of the Covid-19 pandemic.

The Network has two current areas of focus:

- True Colours (see 3.1 above): the mood monitoring system has been adapted to collect data during the pandemic. The network has been collecting longitudinal weekly mood ratings on over 1000 people with mood disorders from before and during the pandemic, which they are analysing for changes in relation to the pandemic compared to the same time period in previous years. This is a unique real-time dataset allowing them to explore the impact of the pandemic on people who have mood disorders. They have also introduced pandemic-specific weekly monitoring questions: for example, Covid-related media consumption, changes to routine healthcare, difficulty accessing medication, which will allow them to examine the relationship between these very specific factors and mental health (including suicidal thinking) in people who have mood disorders.
- Bipolar disorder, pregnancy and childbirth: the network is focused on the factors that make women with bipolar disorder more or less likely to experience episodes of illness in relation to childbirth. In developing a storyline about post-partum psychosis in an individual with Bipolar Disorder, the producers of BBC's *Eastenders* sought advice and guidance from BDRN, a storyline which significantly raised the profile of this devastating condition amongst the general public.

Another area of impact has been around student suicide. Professor Jo Smith established the Suicide Safer Project Group in 2013 which sought to provide the best possible support for students across the University, and to, in turn, create a route through which we could share the findings of the project and support the development of similar provision elsewhere. The project brought together academic and support staff at the University; local FE college staff; representatives from Worcestershire County Council Public Health, Worcestershire Health and Care NHS Trust; and third sector organisations such as Worcester Community First, Samaritans and PAPYRUS. The founding aim was that the project should work to build a 'Suicide safer' University and, in a phased plan, a 'Suicide safer' city and county, through collaboration with WCC Public Health and other regional stakeholders.

The project has been orientated around four key work strands: campaigning and awareness raising about mental health and student suicide; education and training on mental health and suicide for staff and students; developing and promoting a range of new resources; developing and contributing to research in the area.

The overall success of the project group is reflected in its work being identified as a best practice example in several sector publications and toolkits, including the NUS *Mental Health and Suicide Prevention Guide* (May 2016); Public Health England *Suicide Prevention national guidance* (November 2016); Student Minds *Student living: collaborating to support mental health in university accommodation* (April 2017); Universities UK *Step Change Framework* (September 2017); Institute for Public Policy Research *Not By Degrees: Improving student mental health in the UK's universities* (September 2017); Universities UK and PAPYRUS *Suicide Safer Universities Toolkit* (September 2018).

The research in this instance has grown out of the wider work before feeding back in. The University with support from the James Wentworth Memorial Trust funded two PhD studentships in 2016/17, one on the current picture regarding suicide prevention and response strategies within the UK HE sector, the other on postvention support needs and roles for staff in HE following a student suicide. Both studies are now nearing completion but have already fed into work by Universities UK and a 2018 report by ONS on student suicide.

Farrell's research on EMDR has had a significant impact on practice in this area but has also been utilised in humanitarian projects. He is currently President of the EMDR UK & Ireland Board, President of Trauma Aid Europe, Co-Vice President of EMDR Europe Board and Chair of the EMDR Europe Practice Committee. He is involved in a number of Humanitarian Trauma Capacity Building programmes in Pakistan, Turkey, India, Cambodia, Myanmar, Thailand, Indonesia, Lebanon, Poland, Palestine and Iraq.

Staff in the Unit have regularly organised public engagement activities, such as: Images of Research (2014-2019), Psychologist in the Pub (2016), Pint of Science (2018), World Kindness Day (2020). They have also presented their research at events at the Hive, a joint University and Community library, a key location for public engagement, and at external events such as the Hay Festival (L Jones, Smith, 2016) and Rotary International (Farrell, Melbourne, 2020).