evidence of the impact of their activities. This created some challenges for the evaluation that we cover in Section 5.

The programme-level evaluation focussed on identifying the outcomes from the overall programme and did not attempt to evaluate the individual projects. However, the programme-level evaluation was dependent to a large extent on the evaluation activities undertaken within the projects and therefore drew on information and data gathered by the projects. This dependency required the evaluation team members to build strong constructive relationships with nominated key contacts in the 17 projects through regular structured telephone interviews, three network meetings and ad hoc communications. These personal relationships were instrumental in engaging projects with the evaluation activity, and the project leads were generous with their time and their information.

The evaluation took a phased approach built around the three network meetings that were scheduled by the OfS and RE. The activities within these three network meetings were jointly developed between the evaluation team and the OfS and RE and were used to: engage the projects with the programme evaluation; define common evaluation indicators; collect evidence to assess the success of the programme; and identify emerging good practice. Progress calls with individual projects were timed to coincide with forthcoming network meetings or as follow-up calls after meetings to ensure continuity.

At the start of the evaluation, the project proposals were used to map individual project activities against the different elements of the Universities UK 2017 Stepchange[21] Framework for Mental Health so as to understand the scope of their projects, their approach and expected outcomes. Although the Framework has since been superseded by the 2020 Mentally Healthy Universities Framework, it provided a useful means to categorise the type of approaches and activities being developed through the institutional projects and collectively across the overall programme. This mapping was used as a working document for calls with individual projects and updated throughout the evaluation process.

1.6 Impact and Evaluation Framework

At the first network meeting in July 2018 a ‘world café’ approach was used to encourage projects to identify the expected outcomes from their projects and how they will evaluate their progress and achievements. They were asked to consider the potential outcomes from their projects for PGRs, institutions and the wider HE sector. These discussions were used to inform the development of draft qualitative and quantitative indicators to evaluate the impact of the overall programme in collaboration with RE and OfS, with feedback from the Advisory Group.

The development of the indicators was based on the Vitae Impact and Evaluation Framework (IEF)[22], which takes a systematic approach to evaluation through considering inputs, throughputs, outputs and subsequent levels of outcomes/impact (Figure 2). The IEF was developed with the sector to encourage more systematic evaluation of researcher development programmes and activities and is also an effective approach for any people-based interventions or ‘services’. Although there are other evaluation frameworks and approaches, the IEF provided sufficient structure and flexibility to accommodate projects’ own evaluation approaches. The IEF levels are explained in Appendix 4.

[21] www.universitiesuk.ac.uk/Stepchange
[22] https://www.vitae.ac.uk/impact-and-evaluation/evaluation-tools-and-resources/quick-guide-to-the-impact-framework

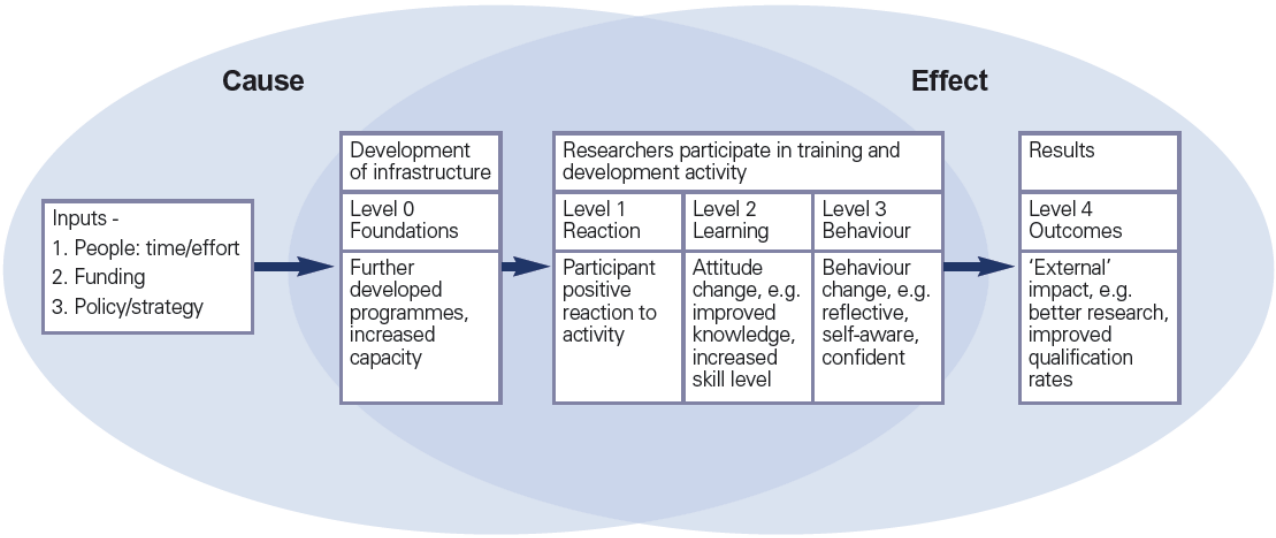

Figure 2 Impact and Evaluation Framework impact levels

1.7 Theory of Change model

In the second network meeting in March 2019 the projects were introduced to the Theory of Change model[23]. This is a framework that maps out the connections between project activities or interventions and how these lead to the desired goals or impacts. Ordinarily, the process works backwards from the desired goals and focusses on the conditions or 'outcomes' that need to be in place to achieve these goals. This then provides the basis for identifying the activities or interventions that will lead to these outcomes. This process provides direct causal connections between activities and achievement of long-term goals. Figure 3 provides an example of a Theory of Change framework for mental health and wellbeing.

For the projects (who had already identified their activities in their proposals) it provided an opportunity to reflect on how their proposed interventions would contribute to their anticipated goals and what outcomes they would need to measure in order to demonstrate the causality of their activities. When used in this way it can lead to better evaluation if mechanisms are then set in place that go beyond the identification of programme outputs to measure critical outcomes that demonstrate progress towards the achievement of the ultimate goals.

The reflection required within the Theory of Change model can lead to better planning as it provides a clear understanding of how specific interventions will lead to desired change. The exercise using the Theory of Change framework was well received by all the projects, with several projects noting that it would have been a useful exercise to do when initially developing their proposals. At least one project subsequently changed the balance of their project activities as a result of completing the Theory of Change, focussing on those activities that would make a greater contribution to achieving their project goals.

An additional interactive activity at the second network meeting involved mapping the evaluation indicators developed from the IEF to the projects' Theory of Change frameworks. This process enabled projects to identify the most relevant evaluation indicators for their projects. The outcomes from these two activities were consolidated to refine the set of key evaluation indicators to inform the programme evaluation. The final evaluation indicators are given in Appendix 4.

[23] www.theoryofchange.org/what-is-theory-of-change/

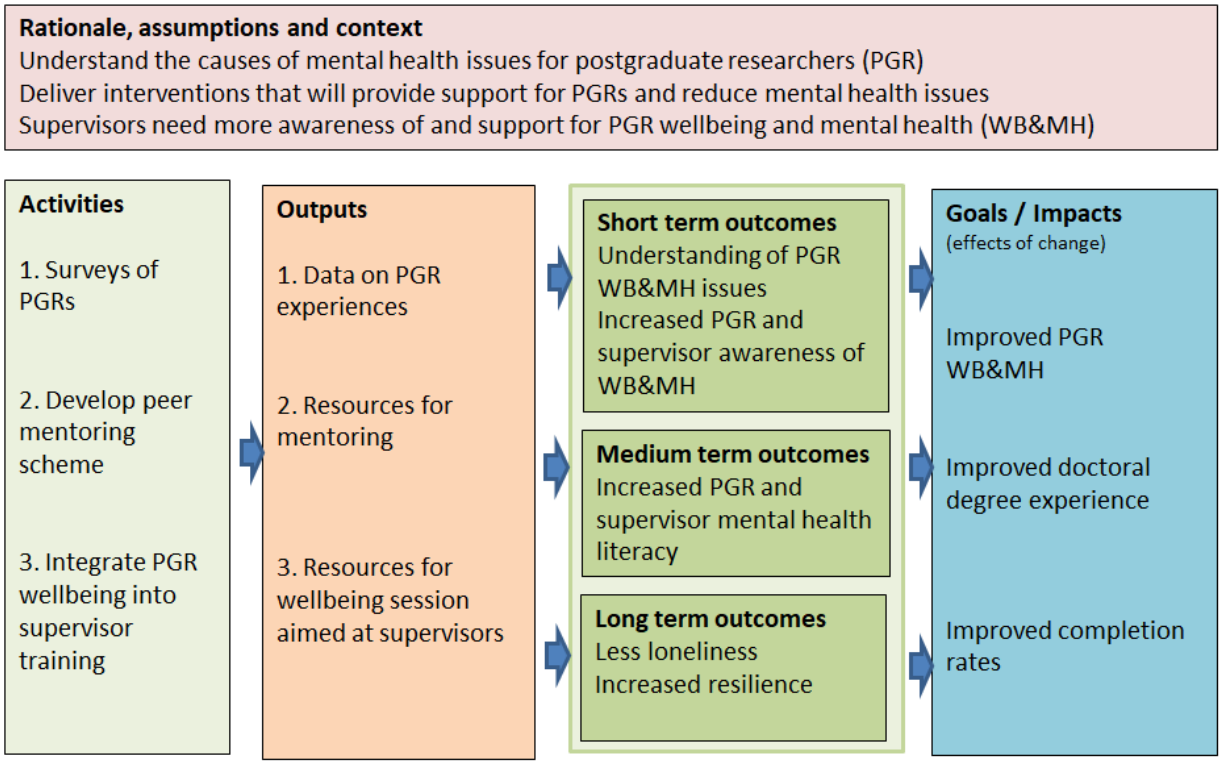

Figure 3 Example of a Theory of Change framework for mental health and wellbeing

1.8 Final evaluation reporting

At the third network meeting in November 2019, Vitae provided projects with a final evaluation reporting template. The projects were asked to provide information on the numbers and types of individuals who participated in the project, e.g. number of PGRs, supervisors, professional staff and institutional senior managers. They also reported the types of activity that these different groups had participated in, for example: co-production activities or as members of the project team; focus groups, training and mentoring activities; or surveys, communication and dissemination activities.

Projects were also asked to provide evidence and data on the impact of their activities on PGRs, supervisors and other staff against the key evaluation indicators at Levels 1–3. Given the relatively short timescale for the programme, we anticipated that there would be little data on the longer-term evaluation indicators at Level 4, i.e. relating to changes in behaviours that had led to, say, reductions in mental health and wellbeing issues or a reduction in suspensions.

As part of their final reporting, projects were invited to provide ‘case studies’ of good practice from their projects using a standard template, which included their institutional context, their activities, any challenges they faced, and key impacts and outcomes. These case studies can be seen in Appendix 3.

2 Programme activity

The activities within the projects were wide-ranging and diverse. The varying scale and scope of the 17 projects to some extent reflect the levels of funding they received; from small-scale individual interventions, e.g. Bournemouth University, to projects with national reach, e.g. the Universities of Derby, Liverpool and Sussex. Table 2.1 provides an overview of the activities undertaken by the projects.

All the projects focussed to some extent on prevention and early intervention activities, reflecting the HEFCE guidance given in the funding call, rather than direct mental health support. However, counselling services staff were actively involved in 11 of the projects. Across the projects they aimed to: identify levels of wellbeing and mental health within the postgraduate community; improve mental health literacy among staff and PGRs; develop effective interventions; and, in three cases, contribute to institutions' mental health and wellbeing strategies. Three universities' projects assessed whether their existing institutional provision was appropriate or could be adapted for PGRs. The University of Manchester, for example, tested five existing institutional mindfulness apps for their suitability for PGRs and the University of West of England adapted the existing SAM App for Anxiety[24] for use by PGRs.

Five projects focussed on improving signposting to existing support and wellbeing services, and to promote their new initiatives. Nine projects undertook research activities focussed on PGRs, supervisors and other university staff supporting PGRs. For example, the University of Sussex and University of Liverpool ran UK surveys about the mental health of PGRs and the pastoral support provided by technicians to PGRs, respectively[25]. Several projects collected data using established mental health survey instruments. For example, the University of Westminster and the University of Bradford both used the Warwick-Edinburgh Mental Well-being Scales (WEMWBS)[26], and two projects undertook literature reviews to understand the existing evidence base and inform their interventions.

Training activities were undertaken by 14 of the projects; nine of these focussed on raising supervisors' awareness of PGR mental health and mental health literacy more generally. These ranged from one-off events aiming to raise awareness in this area, to the creation of specific supervisor resources, formalised online modules and face to face courses. Ten of the projects ran training courses for PGRs or other staff members (non-supervisors), which included providing or adapting established programmes and practices such as Mental Health First Aid[27], Look After Your Mate[28] and training provided by The Charlie Waller Memorial Trust[29]. Durham University has created an online open-educational resource on the supervisory relationship for use by both PGRs and supervisors[30].

Postgraduate researcher peer-led activities formed the basis of more than half the projects. At both the University of Oxford and University of Plymouth[31] PGRs were recruited and trained to be peer ambassadors and supporters, with the aim of encouraging open discussions about wellbeing and the stressors of PGR study. Students' unions and graduate schools were also included in the organisation

[24] Android: https://play.google.com/store/apps/details?id=uk.co.mindgardentech.sam
Apple https://apps.apple.com/us/app/sam-self-help-app-for-the-mind/id1502571257
Mindgarden (institutional subscriptions) https://www.mindgarden-tech.co.uk/#what-we-do
[25] www.technicians.org.uk/technician-commitment/resources/technicians-student-well-being
[26] https://warwick.ac.uk/fac/sci/med/research/platform/wemwbs/
[27] https://mhfaengland.org/
[28] www.studentminds.org.uk/lookafteryourmate.html
[29] www.cwmt.org.uk/college-university-training
[30] www.dur.ac.uk/counselling.service/catalystproject/
[31] www.plymouth.ac.uk/student-life/your-studies/research-degrees/toolkit

of less formal social and community activities, responding to concerns about isolation and loneliness among PGR populations.

Table 2.1 Summary of activities

Output type	Project
Training courses	Manchester, UCL, UEA, Liverpool, Oxford, Plymouth, Durham, QMUL, Newcastle, Sussex
Surveys	Bradford, Sussex, Liverpool, Manchester, Portsmouth, Westminster, Bournemouth, Warwick, Derby
Communities/peer networks	Manchester, UCL, UEA, Bradford, Liverpool, Oxford, Newcastle, Plymouth, Portsmouth
Other (e.g. support group, personal wellbeing audit, gap analysis, coaching)	UEA, Sussex, Newcastle, Westminster, Bournemouth, QMUL, Portsmouth, UCL, Manchester
Supervisors' training	Portsmouth, UEA, Sussex, Newcastle, Westminster, Durham, QMUL, Bradford, Bournemouth
Mental health literacy	Liverpool, Newcastle, Bournemouth, Portsmouth, QMUL, Sussex
Transitions/inductions	Bradford, Liverpool, Bournemouth, Durham, Sussex, Portsmouth
Wellbeing activities	UEA, Sussex, Liverpool, Warwick, QMUL, Westminster
Research report/literature review	Newcastle, Oxford, Sussex, Liverpool, Derby, Manchester
Focus groups/interviews	Bournemouth, Durham, Plymouth, Newcastle, Oxford
Signposting	Manchester, Liverpool, Oxford, Westminster, Bradford
Focus groups/interviews	Bournemouth, Durham, Plymouth, Newcastle
Online resources/apps	Manchester, Derby, UWE
PGR mental health strategy	UEA, Liverpool, Portsmouth

Four of the projects were formally involved in developing their university-wide mental health strategy. For example, the University of Portsmouth's project oversaw the creation of a PGR-specific Wellbeing Strategy and Implementation plan. Other projects chose to focus on specific aspects of the PGR journey, such as the University of Westminster's academic writing retreats 'Wellbeing While Writing'[32]. Six projects enhanced or introduced new induction events and resources specifically emphasising the importance of mental health and wellbeing for incoming PGRs. The University of Manchester's project was the only project that worked with the NHS to strengthening referral and care pathways for PGRs between the University and the NHS by building awareness of the PGR experience within the Greater Manchester Student Mental Health Hub[33].

Appendix 2 provides a list of the resources that have been developed for sector use.

[32] www.westminster.ac.uk/research/graduate-school/wellbeing-when-writing-resources
[33] www.gmmh.nhs.uk/news/greater-manchester-universities-student-mental-health-service-3107/

3 Programme reach and impact

The 17 projects within the Catalyst Fund programme varied in terms of their scale and scope, which led to differing levels of engagement within an institution and more widely across the UK for each project. As part of the evaluation process, we explored the numbers of PGRs, supervisors and other staff who were involved across the programme overall, what types of activity they engaged with and what evidence the projects had gathered on the impact of these interactions mapped to the programme evaluation indicators.

3.1 Project reach

All projects provided data on the numbers of PGRs and different staff groups who participated in various activities within their specific projects (Table 3.1). The types of engagement of PGRs ranged from a relatively light touch as recipients of communication campaigns (5554) or responding to the various surveys run by nine of the projects (4085), through to being actively involved in co-production within 11 projects (171). Other activities included participation in workshops (757), in focus groups (343) and as part of induction processes (394). It is not possible to calculate the overall reach of the programme, as individual projects recorded numbers of participants in particular activities but not whether these were unique individuals. It is likely that there was multiple counting as individuals may have participated in more than one activity. Apart from gender breakdown, projects did not systematically collect data on other protected characteristics.

Table 3.1 Engagement* of PGR, supervisors and senior leaders in project activities

Activity	Postgraduate researchers	Supervisors	Senior leaders
Co-production, including PGR project team membership	171		
Project team		36	17
Advisory groups	33	50	89
Networks	113		
Focus groups	343	91	1
One-to-one interviews	113		
Workshops	757	129	2
Induction	394		
Supervisor training		414	
Mentoring activities	52		
Video interviews	16		
Survey responses	4085		
Other activity (e.g. communication campaigns)	5554	4964	79

* Numbers are not additive.

The nine projects that included activities targeted at supervisors reported that 414 had participated in supervisor training, with 129 participating in workshops and 91 through focus groups. It is less likely that there is double-counting within these numbers as most projects had only one activity directly with supervisors. Eighty-six supervisors were (also) actively involved in the implementation of 12 projects or as members of advisory groups. A wide range of professional staff were involved in the projects from student support and counselling services, student union staff and graduate school staff, the majority involved in delivering the project activities. All project teams declared good senior

management support (VC, PVC, faculty heads) for their projects, with all projects reporting active engagement in advisory groups, project teams and/or promoting the project within their institutions. Seven hundred and thirty-five technicians from 49 institutions and 200 other professional staff responded to the University of Liverpool's two UK-wide surveys. The full breakdown of engagement of different groups by activity is given in Appendix 5.

3.2 Programme impact

In their proposals to the (then) HEFCE, projects were asked to identify the key inputs, outputs and short- and medium-term outcomes for their projects. In reviewing the expected outputs and outcomes we found wide variation in what was identified as a proposed project outcome. All of the projects identified relatively clear outputs from the programme, such as training resources, mentoring programmes, wellbeing apps and academic papers (although many of these were stated as project outcomes). However, only around a third of proposals included (potential) outcomes from their projects, such as improved mental health literacy, increased awareness of mental health triggers, knowledge of support services, increased resilience or improved research degree experience and completion rates.

This confusion between outputs and outcomes is common and can have consequences for how effectively evaluation is embedded within a project. It is challenging to set up effective evaluation mechanisms to measure outcomes, particularly at higher 'impact' levels, and demonstrate causality; whereas it is more straightforward to evaluate immediate reactions to activities and outputs. The evaluation exercises in the network meetings using the Theory of Change framework and the subsequent collaborative development of overarching evaluation indicators using the IEF (Appendix 4) proved to be useful activities in developing projects' understanding of different outcome levels. All the projects were encouraged to use the overarching evaluation indicators most appropriate for their projects.

In their final evaluation reporting, projects were asked to report against a selection of the overarching evaluation indicators the extent to which they had evidence of the impact of their project activities. These indicators were those most commonly identified by projects in the progress calls as most relevant to their individual projects and covered three of the four IEF levels (Levels 1–3; usefulness, learning and behaviour changes). A summary of projects' responses is reported in Appendix 5. However, due to the different evaluation approaches across projects and different activities it was not possible to consolidate this evaluation data across the programme or to make comparative judgements between project activities. Instead we were reliant on individual projects' reports of the effectiveness of their activities and any associated evidence they supplied.

The robustness of projects' evaluation approaches varied to some extent on the scope of the project, but also reflected how much consideration had gone into the evaluation process when developing their proposals and project plans. For example, the University of East Anglia integrated an evaluation methodology into each work strand of their COURAGE project from the outset as one of their programme objectives was the comparative analysis of different activities so they would be able to recommend which activities the institution should pursue in the future. Some of the projects acknowledged at the first network meeting that they had not considered evaluation to any great extent in developing their proposals and therefore had not allocated much resource to do this. Following their introduction to the Theory of Change at the network meeting, the University of Manchester subsequently used the process to restate their project aims, identify how each of their seven work strands would contribute to achieving these and how they would evaluate this.

All projects undertook some type of evaluation of participants' immediate reactions to activities through post-activity processes, such as feedback forms or surveys. A few projects included pre- and post-evaluation of specific activities. This level of evaluation captures participants' immediate

reactions to activities and is invaluable for formative evaluation; however, it does not provide evidence of sustainable outcomes in the medium to long term, which requires longer-term evaluation.

Most projects expressed confidence in the usefulness of their various activities in raising participants' awareness of mental health and wellbeing, increasing their awareness of institutional support and their likelihood to seek help for any issues (Appendix 5), with some projects providing statistics or qualitative data gathered through interviews or focus groups to support this assertion. Around two-thirds of projects provided some supporting evidence that PGRs were more aware of how to improve their mental health and wellbeing, and where to go to get support, with four projects saying it was too early to say. There was much less evidence of PGRs being more likely to seek help and support for their mental health and wellbeing. Two-fifths of projects reported that they believed their PGRs were more likely to seek help and support, with similar proportions reporting it was too early to say. Similar numbers of projects reported that PGRs felt their institution was more supportive of their mental health and wellbeing as a result of their project interventions.

Of the nine projects that implemented specific interventions for supervisors, eight reported that supervisors were more knowledgeable about how to signpost PGRs to appropriate support services, with the majority of projects reporting their supervisors were now more confident and more likely to discuss mental health and wellbeing with their PGRs.

Face to face training workshops and signposting of information were most commonly identified as being useful. Without being able to directly compare results from different projects, it was not possible to identify which activities were more effective at doing this than others. Views were more mixed about the value of separate wellbeing activities and the use of wellbeing apps. While the majority of projects found that the immediate feedback from participants reported these activities as useful, the University of Warwick's research showed limited medium-term impact of wellbeing activities when measured over an academic term against a baseline measure. While these activities are generally reported as enjoyable, more evidence is needed on whether they tackle underlying causes of poor wellbeing. Some of the ambivalence about separate wellbeing activities recognised that participants self-select for these activities and they may not attract those individuals most in need of improving their wellbeing. It was noted at the network meetings that there can be stigma attached to attending wellbeing activities, as the general academic perception is that wellbeing activities are a distraction from research-related endeavour. There was general agreement that embedding wellbeing activities within existing researcher development provision was the most effective route to reach a wide range of PGRs and counter any academic scepticism.

Generally, it is considered good practice to identify a baseline measure against which the effectiveness of an activity can be measured. Those projects that had included some type of baseline measurement were able to express more confidence in the evidence of the impact of their activities, being able to measure 'distance travelled'. Seven projects incorporated longitudinal evaluation into their project plans, with three (the Universities of Liverpool, Oxford and Westminster) conducting wellbeing surveys at the start and end of their projects and the Universities of Manchester and Sussex running baseline surveys. The University of Warwick ran online surveys at the beginning and end of each academic term to assess the longer-term effect of wellbeing activities, while UCL surveyed participants six months after each intervention. Some of these projects are in the process of having these results published in peer-reviewed papers.

Project evaluation reports were submitted in January 2020 at the end of the funding period. At this stage projects were still finalising their outputs and there is no planned collection of longer-term impacts of interventions in improving wellbeing. For projects that delivered activities that ran over a period of time, such as peer networks and coaching programmes, or embedded in existing doctoral degree processes, such as induction processes, around half reported that they had been useful interventions, while the balance reported that it was too early to say whether these were useful or not.

Those projects that developed wellbeing apps have yet to evaluate their effectiveness. For example, the University of Derby's The Wellbeing Thesis launched right at the end of their project, while the SAM app developed by University of the West of England was still in testing. Seven projects reported that they hope to set up mechanisms within their institutions to measure the more long-term impact of their activities in improving the mental health and wellbeing of their PGRs.

3.3 Ongoing measurement of PGR wellbeing and mental health

In the final evaluation reporting, projects were asked to describe any ongoing systems that will be put in place for the ongoing measurement of PGR mental health and wellbeing within their institution. Nine projects provided information on how they were going to achieve this in various ways. All of these processes provide useful ways in which institutions can get better data on and insight into the mental and wellbeing of their PGRs.

Seven projects reported that they will include or continue to monitor the optional Office of National Statistics (ONS) wellbeing questions in PRES, with the University of Manchester hoping to develop and include a bespoke module within PRES exploring the factors that impact on wellbeing. Five projects will continue to survey PGRs using standard wellbeing and mental health measures, such as the WEMWBS, the Mental Health Self-Care Agency Scale [34] and Inventory of Attitudes Toward Seeking Mental Health Services[35].

In terms of building on existing procedures, four projects have integrated processes to monitor wellbeing into their annual progress reporting or annual (re-)registration, with the University of Bradford now including WEMWBS in these procedures for their PGRs. Four projects mentioned ongoing monitoring of PGR engagement with counselling services and other wellbeing and mental health services, while four projects will measure reductions in interruptions in study or mitigating circumstances claims due to mental health issues.

Following on from their project, the University of Sussex had anticipated using a PGR version of the 'Enlitened' app[36], a continuous improvement app provided by The Student Room for student engagement and wellbeing that was already being used by their undergraduate students. The intent was to use the app to anonymously monitor the PGR population on a continuous basis in terms of their mental health and wellbeing. However, The Student Room have recently withdrawn the app.

[34] https://pubmed.ncbi.nlm.nih.gov/9193117/
[35] https://pubmed.ncbi.nlm.nih.gov/29355346/
[36] https://www.enlitened.org/

4 Key themes

Within this section we explore the key themes that have emerged from the programme overall and highlight areas of practice that appear to work well and that institutions may wish to consider implementing within their own context. We have mapped these themes against the four domains of Stepchange: Mentally Healthy Universities (Learn, Support, Live and Work) and the five enablers (Leadership, Co-production, Inclusivity, Information, and Research and innovation). As the 17 projects predominantly focussed on prevention and early intervention activities, not all aspects of the framework are covered to the same extent. We have also made judgements as to where specific themes best fit. We hope this provides institutions with useful insights into aspects that need to be considered in supporting the mental health and wellbeing of PGRs, particularly when implementing the Mentally Healthy Universities framework.

Stepchange Mentally Healthy Universities – Domains

DOMAIN LEARN

The Learn domain focusses on the design, structure and provision of learning and creating safe and supportive learning environments. The role of supervisors and other academic staff in supporting PGRs is included in the Work domain.

Key themes

- *Postgraduate researchers need to feel integrated in their academic communities, have access to peer support networks and feel positively encouraged by supervisors and institutions to consider their wellbeing practices as part of the academic culture*
- *Postgraduate researchers will benefit from being encouraged to maintain healthy working practices and look after their wellbeing from the start of their research degree.*

4.1 Integration into the academic culture

In terms of supporting the mental health and wellbeing of PGRs, several projects identified the local academic culture at department or group level as key to creating a positive working environment. They reported that PGRs can feel stranded between students and staff, feeling that they do not fit into either community. Not feeling embedded within the academic community, a sense of isolation and loneliness were all identified as impacting on PGRs' mental health and wellbeing.

In the University of Derby's survey, PGRs reported that, whilst they felt broadly supported by supervisors, they did not receive the same support from their department and faculty. The University of Warwick study suggested that PGRs tend to consider themselves more as staff than students; a view not necessarily reflected by their institution, which added to their feelings of isolation and loneliness.

The University of Sussex identified that a key outcome from their project was a greater understanding of institutional dynamics and more interaction between staff from different parts of the university with different backgrounds (such as between professional services and academics) and the importance of this in developing a positive institution culture. This led to greater awareness of alternative perspectives. They reported that this interaction has had numerous intangible benefits but also direct impact, for example their UKRI Industrial Strategy Challenge Fund project emerged directly from the strong interactions and working relationships between academics and professional services forged by the Catalyst project. Improving interactions between often disparate parts of universities has enormous benefits in terms of understanding and productivity.