'Are you ok?' Mental health and wellbeing of international doctoral students in the UK: an investigation of supervisors' understanding and existing support provision

University of Sheffield, University of Glasgow, Heriot-Watt University

are you ok?

Research project into the international student experience in the UK 2018-19

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'Are you ok?' Mental health and wellbeing of international doctoral students in the UK:
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Winner of the Paul Webley Award for Innovation in International Education 2019

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1.   Introduction

This research investigates how well supervisors understand the mental health and psychological wellbeing of international doctoral students, and what support supervisors can provide given the seemingly poor levels of psychological wellbeing experienced by this group. Based on the research team's recent engagements with HE stakeholders in supporting international doctoral students, a focus on the supervisor's role was strongly endorsed. This research explores this timely but less explored area through in-depth creative interviews with experienced doctoral supervisors from UK HE institutions.

2.   Research aim

This study aims to arrive at a greater understanding of what UK doctoral supervisors understand about the mental health/wellbeing of international doctoral students and what support is currently offered to both themselves and their students.

Other research has suggested that international postgraduate researchers (PGRs) newly coming to the UK for their doctoral degree were likely to be vulnerable due to a combination of reasons, including their ability to adjust to a new culture, their existing cultural mores, finance, visas, family circumstances and potentially less access to family and friend support.

To date, attention to the mental health and wellbeing of PGR students is focused on understanding the students' perspective and there is a lack of research looking at the perspectives of the PGR supervisors in supporting international PGRs. Therefore, this research aims to address the following research questions:

1. What is the level of understanding about mental health/wellbeing issues of international doctoral students amongst UK-based supervisors?

2. To what extent are UK-based supervisors equipped to respond appropriately to these mental health/wellbeing needs?

3. What additional support or resources would supervisors benefit from to be better able to support international doctoral students' needs?

3.   Motivations for research

Postgraduate researchers (PGRs) are significantly more at risk of having or developing common mental health conditions such as depression than the general population (Levecque et al., 2017). A large global survey of PGRs studying in 26 countries by Evans et al (2018) showed that graduate students are more than six times as likely to experience depression and anxiety compared to the general population. Whilst these data sets include international PGRs, they do not differentiate

the international PGRs subgroup and whether their mental health varies from those who are studying within their home country. With international students (non-UK-EU nationals and non-EU nationals) making up 49% of PGRs within the UK (HESA, 2018) and bringing significant economic income to UK universities (Universities UK, 2017), it is surprising that the international PGR voice is often missing from research or underrepresented, and that international PGRs' mental health and wellbeing has only recently begun to receive attention.

In the UK, a key document published by Vitae recognised that international PGRs' circumstances can add additional burdens, making them one of the most vulnerable subgroups of all PGRs (Metcalfe et al., 2018). International PGRs newly arriving in the UK for their doctoral degree are likely to be vulnerable due to a combination of reasons, including their ability to adjust to a new culture, their existing cultural mores, finance, visas, family circumstances and potentially less access to support from family and friends (Metcalfe et al., 2018 p26).

Similarly within the UK, a large-scale annual Postgraduate Research Experience Survey (PRES), with over 16,000 respondents in 2018 (29% non-EU and 8% other EU) (Neves, 2018), maps a year-on-year decline in all PhD student satisfaction; currently fewer than two out of three PGRs were satisfied with research culture and six out of 10 felt they were not achieving a healthy work-life balance. Previously unpublished findings from the PRES 2018 survey (Neves, 2018) highlighted that non-EU PGRs report significantly lower satisfaction in key areas such as opportunities to become involved in the wider research community and opportunities to talk to someone about day-to-day problems. These findings could be suggestive of higher levels of social isolation, increasingly believed to be a risk factor for poor mental health and wellbeing in young to middle-aged adults (Child & Lawton, 2017).

Issues commonly identified as affecting all PGRs' mental health and wellbeing include: work family interface, managing job demands and job control, the supervisor's leadership style, team decision-making, perception of a career outside academia, understanding the PhD process; academic literacy; imposter syndrome; finding a sense of community and addressing competing factors (Holliday, 2017; Odena & Burgess, 2017). These factors all have the potential to increase PGRs' risk of poorer mental health and wellbeing (Metcalfe et al., 2018). International doctoral students face an additional set of challenges which could impact on their mental health and wellbeing, such as navigating the supervisory relationship, studying in a second or foreign language, operating in a different academic

culture, practising 'a culture of silence', experiencing a dual sense of loneliness, enormous pressure to succeed, and physical distance from their most important social connections (Lee, 2017; Elliot, Baumfield, & Reid, 2016; Elliot, Baumfield, Reid, et al., 2016; Elliot, Reid, & Baumfield, 2016; Holliday, 2017; Odena & Burgess, 2017).

To date, attention to the mental health and wellbeing of PGR students has focused on understanding the students' perspective. But the Vitae report (Metcalfe et al., 2018) makes clear recommendations of the need to explore supervisors' perceptions of their role in supporting the mental health and wellbeing of postgraduate researchers, and to train, support and recognise supervisors' roles in identifying wellbeing issues among PGRs. It has been argued that not only are supervisors the international PGRs' first port of call, but they also play a crucial role throughout the doctoral journey, including supporting mental health and wellbeing (Metcalfe et al., 2018). There are also wider concerns within the academic research environment about poor mental health of academic and research staff (Guthrie et al., 2017).

Taken together, we propose that there is a strong and urgent case for further investigations into international PGRs' mental health and wellbeing and associated provision through their PGR supervisors – to seek their perspective, understand their overall readiness to provide support as well as pick up on current best evidence-based practice.

## 4.	Summary of research outcomes

To investigate how well supervisors understand the mental health and psychological wellbeing of international doctoral students, and what support supervisors can provide given the seemingly poor levels of psychological wellbeing experienced by this group (Metcalfe et al., 2018), we recruited PhD supervisors with experience of supervising at least two international PhD students from the same geographical region. 25 participants were recruited from a range of online social networks, of which 20 met the inclusion criteria. Interviews were conducted with 15 PhD supervisors, coming from seven different UK higher education institutions. Three of these supervisors' country of origin was outside the UK, while seven had experience of working and supervising students in countries outside the UK.

### 4.1	Mental health and wellbeing concerns among international students

A range of understanding and experience. Our study exemplifies the existing wide range of experience and understanding around mental health and wellbeing of international students, as evidenced from the British institutions represented in our research. In turn, this leads to a lack of uniform support offered to all PGRs – home and international alike.

Increased stress. The international PGR cohort tends to be more vulnerable to increased stress. This emanates from the multifaceted stress triggers because of the dearth of strong social networks when experiencing stressful circumstances in addition to doctoral-related stressors. In this connection, disclosure was a highlighted issue as it tends to exacerbate an international PGR's situation. There are occasions where issues only become known when there is already a crisis, where international PGRs are also disengaged from other students and from learnng.

Key stress points. While recognising the high stress commonly associated with undertaking doctoral education, particularly when undertaken in a foreign context, participating supervisors have identified specific key stress points during international PGRs' academic journeys. Stress tends to be high during the initial settling stage, during fieldwork as well as during the very intense writing up stage prior to submission that leads to the viva.
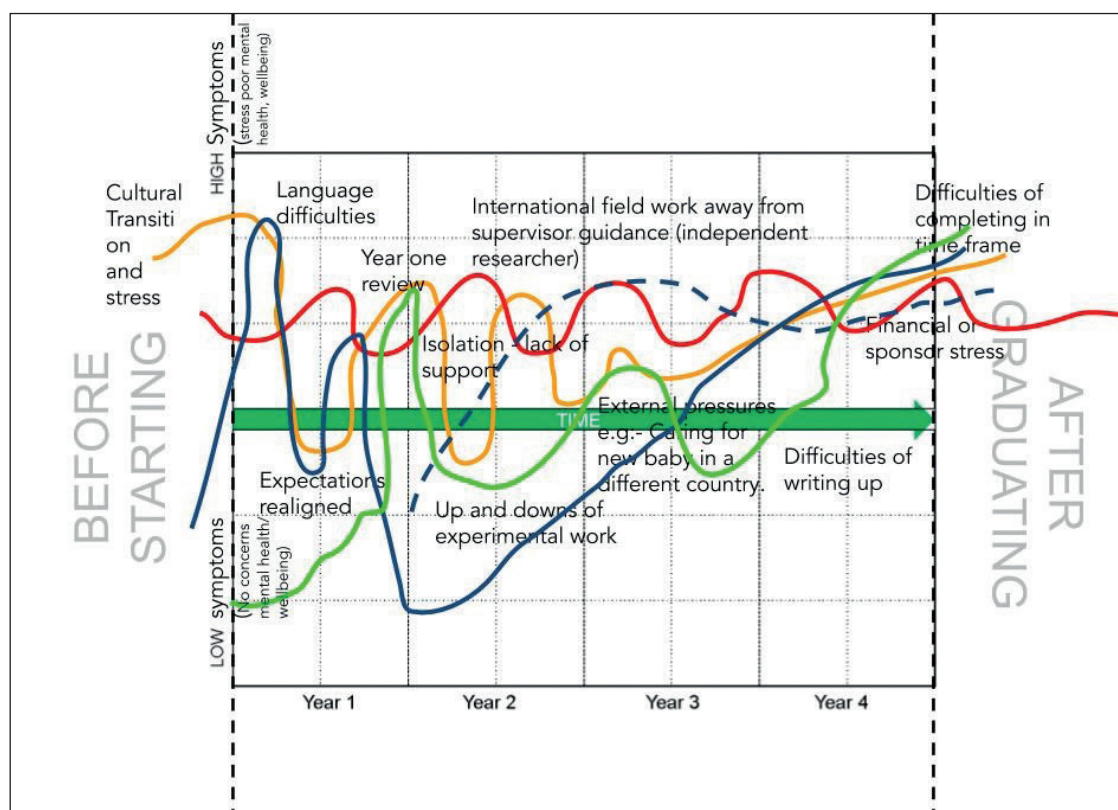
Protective factors. Equally, the inherent protective factors strongly demonstrated by a number of international students were highlighted. In particular, these protective factors, eg, strong work ethic, resilience and survival instinct or determination have been argued to help international PGRs overcome the stress of the doctoral journey.

Stress triggers. Our study findings not only confirm the presence of stress triggers that tend to affect this particular cohort e.g. isolation, loss of strong social networks, confusion due to differing academic cultures, but they also raise the crucial implications of accumulated stress triggers. This demands careful thought in order to avoid the last stress trigger that is likely to lead to a mental health issue.

### 4.2	Supervisors' own experience of mental health and wellbeing

Lack of training. There was a perceived lack of training and support provided to supervisors on mental health and wellbeing needs of international PhD students, and any support that was accessed came informally via peers, which they value greatly. Training is needed for supervisors in responding to psychological wellbeing needs of PGRs – home and international. This should include signposting existing university services. An important element of this is being clear on personal and professional

Figure 1   Stylised, anonymised version of an interviewee's timeline showing a typical international doctoral student's journey through the PhD

boundaries and responsibilities, and what a supervisor is and is not expected to do.

Supervisor's own mental health. It was noted that supervising PGRs (either international or home) with mental health problems has a huge impact on a supervisors' own psychological wellbeing.

5.   Research methodology

Due to the exploratory nature of this study, a qualitative research paradigm was employed. This study had two phases: in the first phase, key literature as well as public domain blogs were reviewed by two of the research teams to inform and sense check the research questions and interview schedule. In the second phase, we conducted in depth, semi-structured interviews with current PGR supervisors (15), conducted face-to-face (5), via telephone (1) or Skype/Zoom (9) between January and May 2019.

The second and main phase of this study entailed recruiting PhD supervisors with experience of supervising at least two international PhD students from a range of online social networks which directed potential participants to a website where they could sign up for the study (see Figure 1 for the project website). 25 were recruited and 20 met the inclusion criteria. We interviewed 15 PhD supervisors from seven different UK higher education institutions. 13 of the participants had supervised at least two PhD students from the

same region to completion. Two participants had supervised two PhD researchers from the same region but one of these was yet to complete. Three of these supervisors' country of origin was outside the UK. Seven participants had experience of working and supervising students in countries outside the UK. (For further details, see Appendix 1 (page 13) Participants demographic table and Appendix 2 (page 13) Participants' supervisory experience.)

Individual interviews were selected as a method of data generation to ensure privacy and a sense of safety. These interviews lasted between 30 and 70 minutes. During the interviews, a creative/narrative approach was used whereby interviewees were given a timeline (physically or online) to add visual representations (Reavey, 2011) of how 'home' and 'international' PGR's psychological and wellbeing may fluctuate during their PhD, from the supervisors' perspective. An example is shown in figure 1 below.

This technique aimed to not only map the PGRs, psychological journeys, but also to encourage the participants to reflect on their overall student journeys and yield richer and more meaningful data. In face-to-face interviews, this timeline was completed by supervisors themselves; in the Skype or Zoom interviews, it was completed by a member of the research team.

Interviews were audio-recorded and transcribed for analysis. The data was also uploaded into NVivo (qualitative data analysis software) for management and transparency purposes. This dataset was analysed by following the principles of thematic analysis (Braun and Clarke, 2006). Ethics approval for this project was granted by the School of Health Related Research (SCHARR) at the University of Sheffield. In order to protect the participants' identities, we have excluded identifying information.

Figure 2: Screenshot of project website used for recruiting participants

6.   Key research findings

6.1   A range of understanding and experience

Supervisors report a range of experience and understanding around mental health and wellbeing of international doctoral students, from very little to professional clinical experience:

> 'I think we are so lacking in support, knowledge and education as supervisors that we are not trained sufficiently to either deal with it, or to signpost them in the correct and right manner, and because I got involved with it and I'm happy to say this for interview, I completely felt out of my depth, cos I genuinely - from a cultural point of view - I didn't really know what to do, and then from a mental health point of view, I didn't know what to do' - P008

6.2   Increased stress

There was an overall agreement that doctoral supervisors would benefit from regular training/ updating on this. Many participants felt more able to talk about stress than mental health or wellbeing. There was a confusion around key concepts such as 'mental health' and 'mental wellbeing'.

There was a consensus that PhDs are 'stressful' for all students and that they should 'test' the person undertaking them:

> 'I still want to put my PhD students under a challenge, I still want to put them under some stress. I think it's actually that kind of

you know forged in stress that gets you through to the other side. And if it's not stress, you are not pushing hard enough. So it's not tough love but I think we should expect a degree of stress from the intellectual challenge' - P002

But international students may be more vulnerable to increased 'stress':

> 'I think the whole journey in itself for our international students is very stressful, and I think there is a multitude of reasons, and having to study a subject which is in their case is career-changing, erm so I think international students needs to be supported a lot better, I think some of the generic stuff about stresses of studying… will be for everybody, but I think … the fact that they are international students erm needs to be acknowledged a lot better' - P008

Some participants described the culture of academia as negative and one where many people supervising described themselves as experiencing poor mental wellbeing. Similarly many respondents discussed the normalisation of high stress and poor mental wellbeing as part of the culture for both academics and PGRs.

6.3   Disclosure

Issues around disclosure were commonly reported in association with international students, and hierarchical issues, gender perceptions and cultural differences were suggested as potential reasons for this:

> '[In] how many cultures are people up front about mental health problems? It's getting better in ours, I know… [the student] comes from a culture in which I think that would be difficult to disclose' - P001

> 'I'm a **-something year old white man. I may think that I'm approachable, but, that may not be how it looks from the perspective of a young, female Chinese student for instance' - P001

> 'They see the supervisor as this person that knows it all and you have to do exactly as they say, they are less willing to be critical in whatever and then it seems to me that they find it really hard to open up because this is not what they are used to in their country, you don't go to your lecturer and tell them 'I'm stressed because' so that is a little bit of a struggle' - P004

6.4   Key stress points

While acknowledging that 'the whole journey in itself for our international students is very stressful' (P008), supervisors also identified and highlighted the most stressful periods during international PGRs' overall doctoral journey.

> 'The beginning can also be very stressful, [yes] because of course they are coming to a new country' - P004

> 'The point at which they realise the reality, is the point at which the stress becomes much greater… and I think sometimes it can be really quite close to their viva; I mean it could be like that (yeah, going down), going really bad' - P003

6.5   Protective factors

Protective factors that were seen as 'unique' to international students include 'strong work ethic' and a tendency for students to be 'more mature', 'more resilient' and 'survivors':

> 'We are looking at the survivors. We are looking at the ones who have been really selected, both selected themselves and being selected by the institutional pathways to demonstrate... I think they are the ones that are quite purposeful and ambitious' - P002

6.6   Stress triggers

There is evidence to suggest that there are stress triggers which are unique to the international doctoral students' circumstances of being away from their main source of social support, and being immersed in a different academic culture. Stress triggers tend to accumulate, until they lead to a crisis or the appearance of a mental health issue.

> [International students] don't tend to come and say 'I'm stressed, I have a problem or whatever' … that is a problem in itself … then you see that there is no progress and … then they think they are failing and that just adds to the whole issue' - P004

6.7   Supervisors' own mental wellbeing

Many participants indicated that their own mental health and wellbeing was negatively impacted upon by their experiences of supervising PhD students who were experiencing poor mental health:

> 'I still don't know; this is ten years ago and I still don't [know] what the right decision, and it haunts me a little bit' - P001

> 'Being out of my depth, I should have passed it on, and been left alone erm for the experts to deal with it' - P008

> 'Your own level of resilience kind of struggling and not being supported by the university, it gets eaten away. I don't think the university particularly acknowledges that' - P009

> 'I'm feeling that, I'm feeling a bit of a failure that I haven't been able to help her more and erm so that's, that's my personality I guess, so erm or me it feels more self-imposed pressure I supposed to external erm yes' - P015

This was linked to pressure from organisations and departments on 'completion rates going on academics' records' and 'getting students to complete in the funded timeframe'.

> 'I've gone through my own crises and learnt how to manage myself, but and I think she [a student] caught me at a time when I was struggling a lot, and I didn't know where to turn to really, for support… can't think of an equivalent job where you'd have this intensity of connection with another human being, you know about which you are being judged and where there are you know, considerable pressures to perform at high level and so on, it's like you are locked into, it feels like a 5 year relationship with another person' - P012

Some supervisors reported mis-matched expectations from students:

> 'I've had some from very poor backgrounds. One was getting really worried about going home because, they've not finished, but basically it was my responsibility to save their family from poverty because he was sending some of his PhD stipend home, they didn't have electricity where he lived, somewhere I don't know, yeah, it was my sort of my thing to try and find him a job somewhere' - P009

Supervisors experienced pressure to take on larger numbers of students, particularly international students (with funding) due to departmental financial gains.

7.   Conclusions and ideas for further research

7.1   Conclusions

PhD supervisors need better training to be able to understand mental health and wellbeing issues as they arise in their work with international PGRs. This training should be co-designed by international PGRs themselves so that it is relevant to their needs. Whilst there may be internal or structural issues impacting on staff wellbeing, which should be addressed separately, the training should also recognise and address the impact of international PGR mental health and wellbeing on the mental health and wellbeing of supervisors.

Further research is needed to evaluate the impact of the supervisor training on both international PGR and supervisor mental health and wellbeing. Research is also needed to recognise, understand and evaluate the role of both international student support professionals and supervisor development professionals in supporting international PGR mental health and wellbeing.

7.2   Limitations

Limitations to the study include the relatively low number of participants. Despite best attempts, the number of participants recruited was lower than anticipated with only 15 interviews completed, although it did appear that data saturation was reached as observed from the richness of the data analysed. Amongst those who did participate, there was over-representation from one of the research team's institution, perhaps because people were more likely to respond to invitations from a Research Associate from their own university. There was a limited number of participants from new universities.

A more fundamental bias may come from the type of supervisors who were likely to respond to the invitation to participate – many of those those who signed up were wellbeing leads or had previously worked in similar roles where there was an inherent focus on the mental wellbeing of PhD students. Although this hypothesis was not tested, it is possible that people who were already more attuned to the PGR wellbeing were more likely to participate, so the sample should not be considered representative of all supervisors.

7.3 Dissemination

A variety of methods have been used to disseminate the findings of this research project, including the following conference presentations:

Blackmore, C., Elliot, D.L. , Ohlsen, S., Daley, R. and Guccione, K., 2019. *'Are you OK?' Mental Health and Wellbeing of International Doctoral Students in the UK: an Investigation of Supervisors' Understanding and Existing Support Provision.* UKCISA Annual Conference, Keele, UK, 03-05 Jul 2019. (Unpublished)

Elliot, D.L.,2019. *'International doctoral students and psychological wellbeing' Understanding and Existing Support Provision*. Norwegian Research Education Conference, Tonsberg, Norway, 05-06 Jun 2019. (Unpublished)

Blackmore, C., Ohlsen, S., Guccione, K., Elliot, D.L. and Daley, R., 2019. *'Are you OK?' Mental Health and Wellbeing of International Doctoral Students in the UK: an Investigation of Supervisors' Understanding and Existing Support Provision*. 1st International Conference on the Mental Health &

Wellbeing of Postgraduate Researchers, Brighton, UK, 16-17 May 2019. (Unpublished)

Daley, R. and Elliot, D.L., 2019. *Untangling the Evidence! How Well do we Understand the International PGR Student Experience in the UK?* Advance HE Surveys and Insights Conference 2019, Bristol, UK, 08 May 2019. (Unpublished)

The research team intends to publish at least three peer-reviewed journal articles from this research study.

The research team has had a preliminary conversation with the UKCGE concerning wider dissemination of this project's findings, through their specialist PGR education networks. There is potential for the published findings to be added to the Supervision Reading List, and for a workshop for supervisors to be hosted by UKCGE with participants drawing from UKCGE subscribers across the UK.

8.   How might the research inform enhancements to professional practice? How might it be applied?

We present this section in two parts: firstly, the rich suggestions for supervisor development which were generated in the research study by supervisors themselves. We then present recommendations drawn from our interpretative data analysis, combined with the team's experience of design and delivery of supervisor development programmes.

8.1   Recommendations for delivered learning and practice support for supervisors, requested by supervisors

Their focus is on building skills and awareness to reduce or prevent stressful situations related to the supervisory relationship with (international) PGRs.

- Participants requested delivered workshop-based learning that focused on how they can helpfully understand, anticipate and respond to the psychological wellbeing needs of PGRs (both home and international) in the context of the systems and support available at institutional level.
- PGR groups should be consulted in the design of development activities, and/or enabled to co-design supervisor development, to ensure relevance with their lived experiences of transitioning to PhD study in the UK.
- Workshop content to include: the signs and symptoms of mental health issues, monitoring and managing their own mental health, and setting role, behavioural and relationship boundaries with PGRs.

- Greater supervisor peer support and participation in peer networks needed, to provide opportunities to learn from colleagues with additional or complementary experiences to their own. It was also felt that reaching out at the point of need when a problem arises would be beneficial.

- Appointing a department level Mental Health Lead or Champion to raise awareness of the situational causes of poor mental health, and to drive and audit good practice.

8.2 Recommendations for the supervisor role, delivered learning and practice support for supervisors, derived through interpretation of the data

This set of recommendations focuses on international PGR supervision and also acknowledges the greater challenges to supervisors' own wellbeing within their wider academic practice. We note that although many of the stressors acting upon supervisors were not directly caused by their relationships with international PGRs, they did impact on those relationships. We feel this is important because operating within a background of stress depletes the emotional resources otherwise available to use to support struggling PGRs, and because we wanted to situate our recommendations for supervisors within their professional context.

- Academic staff are reporting chronic work-overload and several recent studies have demonstrated the impact of workload on academic staff mental health. The research team noted that a general drive to reduce academic staff workload, and a system of workload modelling that recognises the demands of the supervisor role, would afford supervisors more time to think, prepare and reflect.

- As an alternative to asking supervisors to attend optional supervisor development on top of core development in academic practice, it would add value to integrate supervisor development within the broader academic practice development provision (for example the Postgraduate Certificate in Learning & Teaching in Higher Education/Academic Practice) or associated Recognition of Prior Learning routes to professional recognition aligned to the UK Professional Standards Framework. In this way, supervision is positioned as a facet of teaching and learning from the outset and academics can be familiarised with the key challenges, with distinct and robust pedagogical underpinnings for good practice, and the work is contextualised as part of a core student engagement skillset that is developed early in the career.

- Within such frameworks described above, we should give supervisors choice over what development they each need and enable them to find the relevant experts, literatures and specialist development activities, or create development activities for and with them, based on need. This will involve working across key learning functions of the institution to locate and utilise expertise, for example with Libraries, Student Advice and Counselling Services, Disability Services, Internationalisation teams, and Equality Diversity and Inclusion colleagues.

- As well as learning and development activities which operate on a deficit model, universities should strive to recognise positive supervisor impact and exemplary practice. There are a range of award-bearing opportunities in most universities or Students' Unions (eg, Student Awards, Learning & Teaching Awards) that can be broadened to include supervisory recognition. Additionally, non-competitive and non-award-bearing initiatives could be devised that encourage clearly recognisable examples of impactful supervisor practice. This culture of recognition should be extended to recruitment, probation and promotion criteria for academic staff.

- The role of the PGR Tutor/Convenor/Director of Doctoral Studies can be broad, and in many institutions the duties attributed to the role are unclear, or only loosely defined, varying greatly between departments. Yet the support of the PGR tutor is a powerful way of resolving issues for both students and supervisors. Departments/schools should develop role descriptions that make the expectations and support provided by the PGR tutor explicit, and raise awareness of the proactive side of the role and how the tutor can influence cultures of supervision, setting the tone for good practice (Guccione, 2018).

- Design and promote peer support networks among supervisors that cultivate collaborative rather than competitive cultures. Enable supervisors to meet (face-to-face or digitally) to discuss the challenges they face in their supervision with other differently experienced supervisors. Supervisory peer-support can have significant impact as it is both accessible, and discipline-specific.

- Institutions should clearly identify an individual with the expertise to act as a tutor, advisor, coach, or mentor to supervisors. Supervisors experiencing challenges can approach a designated advisor in confidence, to explore how they might best react to their challenges, or to get information on other sources of support for them or for their PhD students. This work currently happens informally in most institutions, and usually falls under the expectations of a

Researcher Development or Academic Development professional.

- Institutions should stress the importance of maintaining frequent communication pathways between supervisors and PGRs as a way to prioritise mental health and wellbeing through a 'preventative' approach rather than a reactive, urgent, or deficit-based approach.

- The research team note the vast amounts of experience and expertise that student-facing professional staff in universities have, that complements and supplements supervisor knowledge. These staff members often provide impromptu, informal and flexible support with PRG wellbeing issues, particularly where an international PGR does not feel able to talk to their supervisor or use formal support services, but this vital contribution can be undervalued. This professional group should receive formal recognition for the support they provide, as well as appropriate support and training. Such groups (eg, International Student Support Professionals, Researcher Developers and Doctoral School Managers, PGR Administrators, Students Union Advice Teams, Disability and Counselling Services, and Library Staff etc) should also be consulted in the design of supervisor and PGR development activities, and/or enabled to co-design doctoral processes and policies. These staff groups are ideally placed to provide rich contextualised examples or case studies, to support supervisor development and to strengthen university processes.

9.   Reflections on learning points for other UK institutions and links

To be successful, support for both supervisors and students needs to be at three levels: 'Individual' (increase in mentoring, peer support), 'Department' (training packages and workshops) and 'Organisation' (underpinning policy and pathways).

10.   References

Braun, V. & Clarke, V., 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), p.77-101.

Child, S. T., & Lawton, L., 2017. Loneliness and social isolation among young and late middle-age adults: Associations with personal networks and social participation. *Aging & Mental Health*, 23(2).

Cornwall, J., Mayland, E. C., van der Meer, J., Spronken-Smith, R. A., Tustin, C., & Blyth, P., 2018. Stressors in early-stage doctoral students. *Studies in Continuing Education*.

Eisenberg, D., Golberstein, E., & Gollust, S. E., 2007. *Help-Seeking and Access to Mental Health Care in a University Student Population*. Retrieved from www.lww-medicalcare.com.

Elliot, D. L., Baumfield, V., & Reid, K., 2016. Searching for 'a third space': a creative pathway towards international PhD students' academic acculturation. *Higher Education Research and Development*, 35(6), p.1180–1195.

Elliot, D. L., Baumfield, V., Reid, K., & Makara, K. A., 2016. Hidden treasure: successful international doctoral students who found and harnessed the hidden curriculum. *Oxford Review of Education*, 42(6), p.733–748.

Elliot, D. L., Reid, K., & Baumfield, V., 2016. Beyond the amusement, puzzlement and challenges: an enquiry into international students' academic acculturation. *Studies in Higher Education*, 41(12), p.2198–2217.

Evans, T. M., Bira, L., Gastelum, J. B., Weiss, L. T., & Vanderford, N. L., 2018. Evidence for a mental health crisis in graduate education. *Nature Biotechnology*, 36(3), p.282–284.

Golde, C. (2005) The Role of the Department and Discipline in Doctoral Student Attrition: Lessons from Four Departments. *The Journal of Higher Education*, 76, p.669–700. Retrieved from https://www.jstor.org/stable/pdf/3838782.pdf.

Guccione, K., 2018. *Can I speak to you in confidence? How can PGR tutoring play a role in creating trusting research cultures*. Leadership Foundation for Higher Education. p.1-12. Accessed at: www.lfhe.ac.uk/research-resources/research-hub/small-development-projects/sdp2017-case-studies/sheffield3-cso.cfm

Guthrie, S., Lichten, C. A., Van Belle, J., Ball, S., Knack, A., & Hofman, J., 2017. Understanding mental health in the research environment: A Rapid Evidence Assessment. *Rand Health Quarterly*, 7(3), p.2. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/29607246

HESA., 2018. Higher Education Student Statistics: UK, 2017-18. Retrieved June 19, 2019, from https://www.hesa.ac.uk/news/17-01-2019/sb252-higher-education-student-statistics

Holliday, A., 2017. PhD students, interculturality, reflexivity, community and internationalisation. J*ournal of Multilingual and Multicultural Development*, 38(3), p.206–218. https://doi.org/10.1080/01434632.2015.1134554

Hunter, K. H., & Devine, K., 2016. Doctoral Students' Emotional Exhaustion and Intentions to Leave Academia. *International Journal of Doctoral Studies* (Vol. 11). Retrieved from http://ijds.org/Volume11/IJDSv11p035-

Juniper, B., Walsh, E., Richardson, A., & Morley, B., 2012. A new approach to evaluating the well-being of PhD research students. *Assessment and Evaluation in Higher Education*, 37(5), p.563–576.

Lee, S., 2017. Peer Support for International Doctoral Students in Managing Supervision Relationships. *Journal of International Students 1096 Peer-Reviewed Article*, 7(4), p.1096–1103.

Levecque, K., Anseel, F., De Beuckelaer, A., Van der Heyden, J., & Gisle, L., 2017. Work organization and mental health problems in PhD students. *Research Policy*, 46(4), p.868–879.

Metcalfe, J., Wilson, S., & Levecque, K., 2018. *Exploring wellbeing and mental health and associated support services for postgraduate researchers*. Retrieved from www.vitae.ac.uk

Neves, J., 2018. *2018 Postgraduate Research Experience Survey*. Retrieved from https://www.heacademy.ac.uk/system/files/downloads/Advance HE PRES 2018 results report final_3.pdf

Odena, O., & Burgess, H., 2017. How doctoral students and graduates describe facilitating experiences and strategies for their thesis writing learning process: a qualitative approach. *Studies in Higher Education*, 42(3), 572–590.

Reavey, P., 2011. *Visual Methods in Psychology: using and Creating Images in Qualitative Research*. London: Psychology Press, Routledge.

Shavers, Marjorie C; Moore, J. L., 2014. The Double-Edged Sword: Coping and Resiliency Strategies of African American Women Enrolled in Doctoral Programs at Predominately White Institutions. *Frontier*, 35(3), p.209–210. Retrieved from https://search.proquest.com/docview/1636559682/

Storrie, K., Ahern, K., & Tuckett, A., 2010. A systematic review: Students with mental health problems – a growing problem. *International Journal of Nursing Practice*, 16(1), p.1–6. https://doi.org/10.1111/j.1440-172X.2009.01813.x

Stubbs, W., & Schapper, J., 2011. Two approaches to curriculum development for educating for sustainability and CSR. *International Journal of Sustainability in Higher Education*, 12(3), p.259–268.

Universities UK, 2017. *The economic impact of international students*. Retrieved from https://www.gov.uk/government/news/pm-unveils-plans-for-a-modern-industrial-strategy-fit-for-global-britain

WHO. (2014). WHO | Mental health: a state of well-being. WHO (Online). Retrieved from https://www.who.int/features/factfiles/mental_health/en/

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Appendix 1

Table 1　Participants' demographics

	How many international doctoral students have you supervised?	How many of these international doctoral students have you supervised to completion?
Mean	9.1	6.2
Median	7	5.5
Range (min)	3	2
Range (max)	21	18

Appendix 2

Table 2　Participants' supervisory experience

ID	University	Academic discipline	Country of origin	Experience supervising abroad	International PhD students supervised	International supervised to completion
P001	1	Social sciences (Anthropology, Archaeology, Economics, Human geography, Law, Political science, Psychology, Sociology, Education)	UK	Middle East	10+	7
P002	1	Applied sciences (Engineering and technology, Medicine and health)	UK	Not worked abroad	3	2
P003	2	Social sciences (Anthropology, Archaeology, Economics, Human geography, Law, Political science, Psychology, Sociology, Education)	Oceania	Oceania & UK	7	3
P004	3	Social sciences (Anthropology, Archaeology, Economics, Human geography, Law, Political science, Psychology, Sociology, Education)	Europe (outside UK)	Europe & UK	6	2
P005	1	Natural sciences (Biology, Chemistry, Earth sciences, Space sciences, Physics)	UK	Unassigned	3	2
P006	1	Applied sciences (Engineering and technology, Medicine and health)	UK	Unassigned	10+	10+
P007	4	Formal sciences (Computer science, Mathematics, Statistics)	UK	Europe & UK	8	6
P008	5	Social sciences (Anthropology, Archaeology, Economics, Human geography, Law, Political science, Psychology, Sociology, Education)	UK	Unassigned	10+	10+
P009	1	Applied sciences (Engineering and technology, Medicine and health)	UK	Not worked abroad	7	5
P010	1	Applied sciences (Engineering and technology, Medicine and health)	UK	Europe & UK	10+	10+
P011	2	Social sciences (Anthropology, Archaeology, Economics, Human geography, Law, Political science, Psychology, Sociology, Education)	UK	Not worked abroad	10+	6
P012	6	Social sciences (Anthropology, Archaeology, Economics, Human geography, Law, Political science, Psychology, Sociology, Education)	UK	Not worked abroad	10+	6
P013	7	Social sciences (Anthropology, Archaeology, Economics, Human geography, Law, Political science, Psychology, Sociology, Education)	UK	Europe & UK	5	2
P014	5	Applied sciences (Engineering and technology, Medicine and health)	Europe (outside UK)	Europe & UK	6	2
P015	1	Social sciences (Anthropology, Archaeology, Economics, Human geography, Law, Political science, Psychology, Sociology, Education)	UK	Not worked abroad	4	3

The UK Council for International Student Affairs is the UK's national advisory body serving the interests of international students and those who work with them.