

Mirror mirror on the wall: is the current doctoral researcher well-being crisis being propagated by supervisors' past experiences?

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Structured abstract

Purpose: The purpose of this viewpoint is to evaluate the parallels in challenges facing both postgraduate and staff researchers, and to hypothesise on whether the experiences staff researchers had during their postgraduate researcher time may contribute towards a poor academic research environment.

Approach: The complex relationship between students, supervisors and the academe is one of the key contributors to postgraduate researcher well-being. Following on from our local analysis of postgraduate researcher well-being, we have homed in on the literature pertaining to supervisory relationships across continents and subject fields. We have combined this with anecdotal and evidence-based experiences in higher education to gain a better understanding of the challenges that face both students and staff in higher education as a whole, and how the vicious cycle of poor work-life balance can be broken.

Findings: A number of issues such as financial challenges, isolation and peer pressure, affect researchers regardless of their career stage. The student-supervisory relationship can be a force for good but can also propagate negative career practices that perpetuate overwork and poor well-being for generations to come. We recommend several areas for change, including realistic and honest conversations about supervisor expectations and training needs, providing well-being services equally to students and staff alike, and to stop normalising poor work-life balance as an academic standard.

Originality: This work holds a microscope over one of the key findings from our previous work, namely the common experiences of postgraduate and staff researchers, and how this can either reinforce poor well-being standards, or be a force for change to make the academy more inclusive for all.

Keywords:

Doctoral supervision, research culture, mental well-being, doctoral education, work-life balance, student supervisor relationship

Article classification:

- Viewpoint (content dependent on author's opinion)

Introduction

The doctoral journey is one steeped in history and prestige. It was initially a province of religious institutions and was almost exclusively accessible to men. During the 20th century, the academy started to diversify (Bogle, 2017). Women were allowed to engage in doctoral study and in the closing years of the century, the recruitment of students from low socioeconomic backgrounds began to rise. Altogether, this has led to a marked increase in postgraduate research students (PGR). Of course, the general population has increased alongside this but not as sharply. Consequently, the proportion of the UK population that holds a PhD has increased 6-fold over the last 50 years (Figure 1)

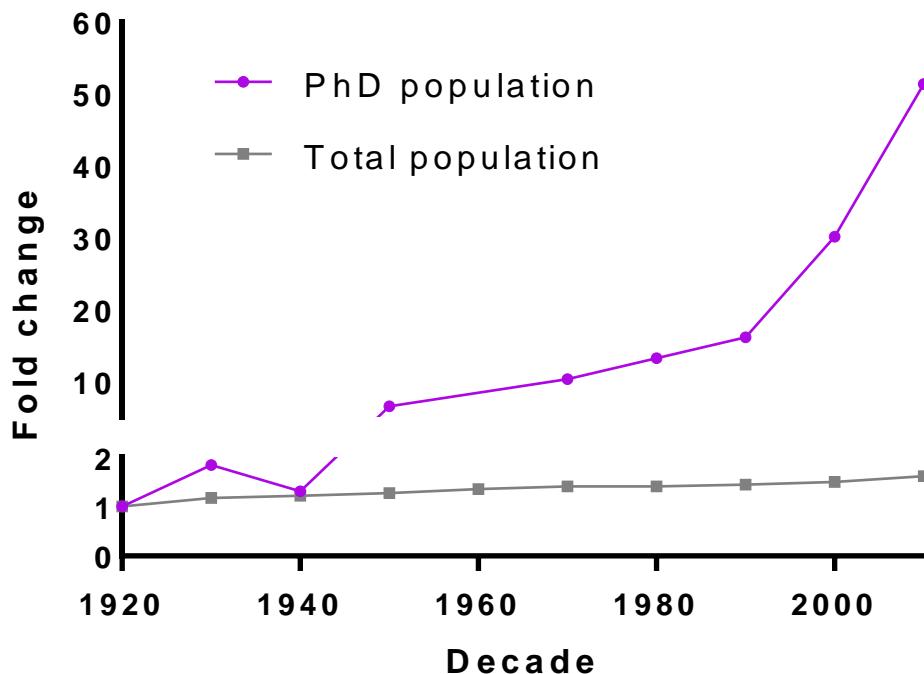


Figure 1: The proportion of the UK population who hold a PhD has increased markedly over the last 90 years. Whilst the population of the UK has increased ~1.6 fold between the 1920s and 2010s (grey line), the PhD population has grown by over 50 fold (purple line). Data is gathered from Bogle, 2017, and the Office for National Statistics.

As the number of PGR has increased, so the nature of academia has evolved. In ‘the olden days’, the relationship between student and supervisor adopted a master and apprentice dynamic, with the focus primarily on the research outcomes. However, over time a more collaborative dynamic of trainer and trainee began to emerge. Now, a PhD is recognised as a training degree which emphasises developing the person as well as the project outcomes. Supervisors are no longer expected to simply be a pioneer in their field but are now also expected to be a supportive friend/counsellor, and are expected to take on more and more administrative responsibilities that were previously provided by university support systems. In many cases, there are no formal training for any of these aspects. Furthermore, some professorial staff have struggled with (or even resisted) this shift in dynamic (Bartlett and Mercer, 2000).

Recognition of poor mental well-being in both PGR and supervisors has recently gained great traction and is now being considered at the governmental level. However, when interrogating this field it is important to understand the definition of well-being. Different research studies use different classifications, and indeed many are based on survey data which is intrinsically

prone to bias (Guthrie *et al.*, 2018). In our perspective, we classify well-being as a dynamic scale that is constantly changing over time according to personal circumstances. Poor well-being therefore, refers to a consistent period of time when individuals are on the low side of this scale.

In this viewpoint article, we hypothesise that the lived experiences of poor supervisory practice experienced by research supervisors from their own PGR days, along with the alleged stressful nature of academia, are being visited upon their students. This is compounded by identification of PGR as 'students', with supervisors being (mainly) academic research staff: two separate groups, each a social division with allegedly differing motivations, behaviours and 'customs'. We refer to these as 'tribes' as a take on the work of Becher and Trowler (2001) who termed disciplines and 'pecking orders' within academia as tribes. Colonial uses of the term, as referring to indigenous communities, have been rightly criticised. However, in Becher's original and subsequent work the notion of a tribe in academia is of boundaried groups that remain separate despite all belonging to academia.

These groups have their own cultures and practices, defend these when questioned, and those new to the groups must learn the conventions and norms that each espouses. It is important to note that Becher's central thesis in *Academic tribes and territories* has been subject to critique and modification over time (Trowler, 2014), and interdisciplinary research is creating new frontiers, but the work remains influential, has been revised in a further new version, and continues to inform those seeking to understand the dynamics and relationships of jobbing academics. Our contention is that for some (not all, we add with haste) supervisors, these two tribes of researchers should remain distinct, with one (PGR) being a rite of passage for joining the other (academic researchers). This is as opposed to a view that PGR is the first step on a longer journey towards becoming a research expert. Of course, such a rite of passage can involve both highs and lows, successes and failures. In the staff tribe, we posit that PGR 'surviving' the lows and failures are perceived, not only as challenges to be supported through and overcome/addressed, but as unwritten, even unspoken, indicators of whether or not someone 'deserves' to work at doctoral level. Among supervisors who experienced tough and unforgiving treatment during their own doctoral journey, we propose there are two main views: those that follow the 'I suffered, so you should suffer too' train of thought and those that follow the 'I suffered so that you don't have to' perspective. These inequities in supervisory provision need to be addressed to make academia a more inclusive and supportive career.

We use this device of 'academic tribes' as a way to express the potential universality of our proposition that supervisors' past PhD experience, along with current stressors and tensions, informs their current supervisory practice. As an idea worth researching, the tribal notion transcends types of institutions and doctoral programme formats. Empirical findings about influences on supervisors' everyday practice are significantly understudied. There is, for instance, no discernible data on supervisor well-being and its impact on the experience they afford their researchers. Nor, to our knowledge, are there reliable studies suggesting that, despite their crucial impact on research cultures and degree completions, supervisors' own doctoral programmes do not go on to influence the way they build a relationship with their PGR. Given that the supervisory relationship is universally the largest factor for PGR happiness and satisfaction, regardless of mode of study, type of institution, or international / home status (Cowling, 2017), it is critical that we can understand how supervisors' past experiences are influencing their current practice. There is some evidence that the commercialised performance culture pervasive in HE has been overlooked in how research degree supervision is modelled and delivered (Holligan, 2007). Early work on doctoral supervision established the centrality of 'beliefs' in what orientated a supervisors preferred style (Murphy *et al.*, 2007). A decade later, 'becoming' was explored, with the supervisor's role woven into the experience of supervision, and a method that promoted shared reflection between both parties on what they 'brought into' the relationship (French and Kendall, 2017).

The emotional work involved in supervision, and the way this is routinely downplayed by supervisors suggests that supervisors' feelings and their own emotional boundaries and skills are implicated within the relationship (Strandler *et al.*, 2014).

The closest this field comes to creating a direct link between the success of doctoral supervision and the supervisor's own identity and well-being has led to insights from the mouths of individual supervisors, such as "I'm not always sure if I'm doing the right thing with them. I would offer them certain theory responses [...] I think that a doctoral student should really be doing their own research." (Wisker and Robinson, 2016, p.132). It has even been suggested that PGR perceive that their supervisors may possess less power than them (Doloriert *et al.*, 2012). Lee's (2007) work has made an important contribution by highlighting that, thus far, either 'research' is conceptualised or 'how to supervise' is conceptualised as a list of performative tasks and checklists. This has left what research supervisors are and do missing from our understanding. The result is a series of models that capture how supervision can be different types of relationships with differing end goals. Further work is bolder with a claim that the supervisory relationship is mired by supervisors attempting to reconcile multiple competing tensions, one such tension being their personal selves (Lee, 2008). This personal self is qualitatively revealed in extracts from supervisors, some positive and nurturing, others candid and distinct: "So don't talk to me about stuff that isn't directly relevant to your doctorate, because I'm not interested and I don't want to be your friend." (Lee, 2018, p.884). There is a common critique of this body of work: why supervisors supervise the way they do appears to be entirely absent.

To illustrate the viewpoint expounded here we begin with the best documented concepts in the doctoral research experience: the postgraduate researchers themselves. This is because the majority of studies, scarce as they are, explore the challenges to PGR, rather than their supervisors. We draw on current literature and our own modest study carried out at our university in a single faculty (for full details of this study, its methods and its findings, please see Delderfield *et al.*, 2020). Our study's findings were consistent with previous findings that supervision and the supervisory relationship were perceived as critical to the PGR experience of learning to become an independent researcher (Williams, 2019). Rather than needlessly replicating our earlier work here, we use it as a conceptual starting point to suggest, tentatively albeit, that for each tension present in the PGR experience, there may be an equivalent experience for an academic acting as a doctoral supervisor. This represents a new formulation of our thinking inspired by our last study on PGRs, as an attempt to bridge to the all-important issue of supervisors and the quality of experience they provide the next generation of researchers. Indeed, we invite readers of this paper to think about their own past and present stressors and negative experiences and consider what impact this may (or may not) have on their approaches to supervising doctorates.

Before proceeding we would like to offer a note about our use of terminology. Across HE as a sector, in the UK and beyond, academics fulfil different roles. Not all academics supervise doctorates. Not all doctoral supervisors are academics. To facilitate our discussion, we refer to (research) supervisors wherever possible. In our discussion we use 'staff researchers' as a complement to 'postgraduate researchers'. This is used to denote juxtaposition and shared experience simultaneously. However, it is useful to point out that not all university staff on research contracts will supervise doctoral projects. We do employ the term 'academic(s)' as a generic noun denoting a member of staff fulfilling teaching, research and administration in a university setting on an academic contract. In the UK and elsewhere it is common that these staff will be engaged in their own research (and therefore are our 'staff researchers') as well as supervising PGR on doctoral degrees. It also adds a little variety, given how often we need to discuss a group of people central to this paper. A final definition is that of the 'early career researcher' as the time post-doctoral award vary significantly around the world. Here we rely on the Arts and Humanities Research Council, UK's definition as "...an individual who is within

eight years of the award of their PhD or equivalent professional training, or an individual who is within six years of their first academic appointment." (AHRC, 2021).

Postgraduate researchers

Mental well-being

Whilst the majority of studies on student well-being have focussed on the larger undergraduate population, there is a growing body of work recognising – and quantifying – well-being in PGR. A landmark study in 2018 of over 2,000 PGR students revealed that 41% of PGR students suffered from anxiety, with a similar number (39%) suffering from depression. This was across fields of study and international boundaries, and used clinically-validated scales (Evans *et al.*, 2018), though it is recognised that there will be inherent variation within these figures due to varying pressures including societal constructs (Liang *et al.*, 2021) and ethnicity (Posselt, 2021). There is also a gender split, with more female PGR reporting poor well-being compared to male PGR, and the proportion of transgender students even higher still (Evans *et al.*, 2018). Interestingly, these figures are markedly higher than data collated by the UK postgraduate research experience survey (PRES). Here, only 3.3% of PGR respondents declared a mental health condition (Metcalfe *et al.*, 2018; Slight, 2017). It is highly improbable that UK PGR well-being is so much better than the global picture. This disparity in number is more likely due to differing terminology ('mental health condition' versus 'depression' or 'anxiety'), a possible reluctance on the part of students to record their poor well-being on 'official' UK documents that guide national policy, and a lack of consistent conceptualisations of well-being (Dodd *et al.*, 2021).

Due to the confounding variables highlighted above, we were interested to discover what the well-being picture was like at our institution. We examined this by sending a short, anonymous survey to our PGR population. Participants were asked about their mental well-being, who they turn to for support, if their supervisors are supportive, whether they were aware of institutional well-being services and finally what, in their opinion, the university could do to help maintain or improve their well-being (Delderfield *et al.*, 2020). This yielded some stark results – whilst the number of depressed PGR at the University of Bradford was similar to the international proportion reported by Evans *et al.*, the prevalence of anxiety was substantially higher at 67%. Furthermore, 72% and 76% of PGR report the perhaps 'milder' poor well-being measures of stress that interferes with life outside the university and difficulty sleeping, respectively (Delderfield *et al.*, 2020).

The reasons underpinning our higher prevalence of anxiety are unclear and could be due to a myriad of factors. Terms such as 'anxiety' are subjective – in the strictest sense, one could suggest that to report as suffering from anxiety you should be on anti-anxiety medication as this is a more clinical definition. However, individuals suffering from poor mental well-being can find it difficult to access formal support and we should not just ignore their self-diagnosis. Furthermore, the framing of survey questions can lead to bias in the responses received (Delderfield *et al.*, 2020). Nevertheless, our data confirm findings from other studies that highlight the well-being of PGR as poor, on a global scale.

It is clear that there is an international, cross-sector problem with well-being in the PGR population. With this greater recognition, it is important to understand the pressures and challenges that PGR students face, to try and institute culture change to improve well-being and mental health.

Challenges to students

The PGR landscape is riddled with challenges that can influence well-being. In their recent study, Schmidt and Hansson (2018) summarised these as peer pressure, low status, high workload, pressure to publish, finances, career uncertainty, poor supervisory relationships and poor work-life balance. Again, this is cross-sector and cross-continental. Within these

stressors, we have focussed on a number that may be detrimental to both PGR and academic staff alike.

Workload and poor work-life balance

The assumption and expectation of unrelenting work that necessitates ubiquitous 18-hours-a-day, 7-days-a-week working is endemic in academia. Approximately 50% of PGR feel that they are expected to work long hours, often through the night, and over 10% of PGR report working 70+ hours per week (Woolston, 2019). This was also borne out in our local study where students complained of a culture that “expected [...] an unhealthy work-life balance” (Delderfield *et al.*, 2020). Interestingly, on the global scale, this impacts female PGR even more as recreational facilities that promote an outlet from study and a space for social interactions are preferentially provided to male PGR students (Alghamadi and McGregor, 2021). This contributes to attrition of PhD graduates in academia – only 25% want to stay in the academy following completion of their studies, as the other 75% want to avoid this toxic expectation (Woolston, 2019). The fact that even less (3.5%) actually go on to secure permanent academic positions is striking (Smaglik, 2018). This varies across continents and fields – a recent Canadian study has highlighted that the probability of becoming a full-time professor within 4 years of PhD graduation varies greatly, with business or economics PGR more likely to receive tenure than those in the sciences (Walters *et al.*, 2020).

Added to this is an over-developed sense of guilt (Hawkins *et al.*, 2014). Receiving emails from a supervisor out-of-hours leads to a feeling of obligation to respond immediately so as not to be perceived as not taking studies seriously. Universities have policies and guidelines around scheduling emails to be sent only during working hours, however the complexity of the academic workload and outside responsibilities (e.g. childcare) means that supervisors can keep unconventional hours. Even when supervisors are explicit that they do not expect responses out-of-hours, students can still experience guilt if they do not respond due to the power imbalance between PGR and supervisor which propagates a negative research culture. This was highlighted by one of the respondents from our survey, who said:

‘There seems to be a culture of expectation to work unsocial hours, for example emails being sent out late in the evenings and weekends. This can make you feel that either you should respond or that you don't want to work in an environment where this is expected as it is an unhealthy work-life balance. If you are at a low point in your PhD journey this can make you question why you are doing it, and despondent about your future career options’ (Respondent 22, Delderfield *et al.* 2020).

The nature of the academy itself also propagates poor work-life balance – conferences, which PGR are strongly encouraged to attend to promote their careers, are all too frequently deliberately scheduled at weekends and in the evenings and have recognised facets that need improving to increase their inclusivity (Tulloch, 2020; De Picker, 2020).

Financial challenges

Funding for PGR projects typically include tuition fees, consumable / bench fees, and a stipend for the student. However, the latter can sometimes fall beneath the threshold for the national living wage (Metcalfe *et al.*, 2018). This can also be compounded for self-funded students who may prioritise paying the formal ‘bills’ of tuition, bench and consumable fees over their own living costs. PGR can be forced into taking part-time hourly-paid work which, whilst it can relieve some of the financial burden, adds considerably to the workload and poor work-life balance issues that many are already suffering from (Metcalfe *et al.*, 2018; Woolston, 2019).

University administrative systems can also contribute to the financial distress of PGR. Subsistence payments can be delayed by administrative changes and given the sector-wide increase in HEIs restructuring their administrative and managerial infrastructure, this problem is likely to increase (Delderfield *et al.*, 2020). Furthermore, the financial burden of attending

conferences often falls to the PGR, with renumeration at a later date. This can be particularly problematic for self-funded students or those on a low stipend. Whilst some funding streams do exist for conference attendance for individuals from a low socioeconomic background, these are difficult to source and time-consuming (Tulloch, 2020).

Supervisory relationships

The student-supervisory relationship (SSR) is undoubtably the most influential relationship that PGR form. A good SSR can engender a sense of belonging and support with the student that provides a good well-being environment that promotes timely completion and minimises the risk of burnout (Cornér et al., 2017; Liang et al., 2021). Conversely, a poor SSR can lead to significant well-being issues including poor work-life balance, impostor syndrome and isolation.

Unfortunately, the perception of a hierarchical relationship throughout academia persists, with bullying and intimidating supervisory practice still being cited as a major threat to PGR mental well-being (Woolston, 2019). This is epitomised in the far east, where the SSR is still implicitly hierarchical and leads to poor measures of well-being (Liang et al., 2021). This unwillingness for PGR to open up about their difficulties to supervisors who they consider as their superior is common, and compounded by institutional policies that do not clearly delineate the realities that both PGR and supervisors can expect in these challenging circumstances (Metcalfe et al., 2018).

PGR can also feel pressure to emulate their mentors and supervisors as they see them as a successful example of what they ultimately want to be (Krause and Harris, 2019; Dunn et al., 2008). When a supervisor has a good work-life balance and provides a supportive and nurturing environment this can be a positive phenomenon, however in cases where supervisors perpetuate academic ‘hazing’, whereby the struggles that they have experienced in the past are inflicted on their current students as an apparent ‘induction’ into academic life (Krause and Harris 2019; Dominguez and Hager, 2013), this can have a considerable negative impact on the future of research culture.

The dynamic of the SSR is different if there is a supervisory team, as opposed to a single supervisor. Whilst 1-2-1 supervision can be beneficial if the personalities and supervision style match between the PGR and supervisor, this can quickly become toxic if there’s a mismatch. Furthermore, it can reinforce the hierarchical model. There has been a move towards more team-based supervision in recent years (evidenced by university policies including at least one associate supervisor) as this exposes the student to different supervisory styles. This is reportedly particularly beneficial for female PGR, however this can also have issues if there is a clash between the supervisory styles or workload balance (Cornér et al., 2017).

The proportion of PGR students who request a change of supervisor is reported to be 4% (Cornér et al., 2017). Whilst this number is low, it is still concerning – for example, in our institution where we have 320 PGR students, this amounts to approximately 13 students. It is reasonable to assume that student-based requests for supervisory change are directly related to the supervisory relationship. Indeed, from personal observations within academia, those students wishing to change supervisor cite a lack of support and not enough time spent with their supervisor, which makes them believe the supervisor is not as invested in their success as the PGR is.

Juniper et al. (2012) argue that the supervisory relationship is not unequivocally related to PGR well-being and, given the substantial variability in SSR according to gender, ethnicity, locality, mode of study etc., this is probably true as other factors described above also contribute to the well-being of the PGR as a whole. Nonetheless, the striking parallels between PGR stressors and supervisor stressors lead us to believe this is an area worthy of further research.

Staff researchers

Mental well-being

Academics report their jobs as being stressful. Of course, increased stress does not automatically lead to an assertion that these stressed individuals are experiencing mental health problems, nor visiting these issues upon their supervisees. However, once the concept of burnout is included, this changes. Burnout is a state of emotional and physical exhaustion impairing normal functioning and is a response to chronic interpersonal stressors, usually as a result of a work role (Maslach and Leiter 2016). Recent survey data reveals that “Levels of burnout appear higher among university staff than in general working populations and are comparable to ‘high-risk’ groups such as healthcare workers.” (Guthrie *et al.* 2018, p.2). Burnout and its risk factors tend to be presented as a syndrome currently, as opposed to a disorder. So, despite its effects on individuals and their families, this in itself might be framed as cultural phenomenon with little basis in medicine. Unfortunately, this is corroborated by a finding that 43% of academic staff appeared to show signs, or rather symptoms, of a mild mental disorder. This prevalence is alarming as it is twice as high as the general populace (Morrish, 2019).

Coupled with this are Freedom of Information requests by the Higher Education Policy Institute reportedly showing that during a six-year period in this last decade, staff using one HEI’s counselling services had increased by 300% and in another institution occupational health referrals had increased by 400% (Morrish and Priaulx, 2020; Weale, 2019). A balanced picture warrants the assertion that where academics feel they have significant work autonomy, management support, and can spend more time on research, burnout was less likely to occur and positive mental health was experienced (Guthrie *et al.* 2018), reflecting that not all HEIs are experiencing a culture of high-stress, unfettered pressure and the resultant consequences. Therefore, claiming a ‘crisis’ in academic mental health may be hyperbole, but it is not an overstatement to suggest that the mental health of academics in the UK is clearly an issue substantial enough to warrant further sustained investigation as evidenced by these changes to staff behaviours and reported experiences.

Challenges to academics

A key challenge in academia is academe itself. Academics who have reached senior positions in their career can be agents for change and forces for good as they mould and inspire the research landscape around them. However, this also means that certain punitive attitudes to the meritocracy of the world of research can, and are, frequently perpetuated.

Workload and poor work-life balance

In academia there does seem to be a gradual awakening of awareness of the deleterious effects of poor work-life balance. Academics who report better balance between time spent on their academic role, are more likely to express a desire to remain in the academic careers (Lindfelt *et al.*, 2018). Conversely, those who share that there is significant encroachment of work responsibilities into non-work time, are also likely to report that they give serious thought to leaving academia for other careers.

When gender is part of this consideration, something else of note occurs: women try to resolve this ‘leakage’ where work bleeds into and pervades home life at a personal level, rather than tackling the systemic and organisational culture that requires them to give over so much extra time to their academic roles (Lendák-Kabók, 2020). We would posit that coping at this personal level can lead to some success but there is also a risk of burnout due to feeling alone in having to constantly negotiate demands and their boundaries. In addition, when individuals retreat to personal resources to manage persistent overwork, these issues can lead to highly destabilising turnover of staff, which is costly for institutions and can impact on PGR, as original supervisory teams disintegrate and change. In effect, universities cannot detect a systemic

issue within its research environment, if workload overwhelm is normalised and perceived to be situated within the individual only.

Financial challenges

There is relatively little on salary and pay for academics, in terms of research-underpinned knowledge. There may be a perception that these roles are well-paid and that academics need not experience their own personal financial problems. Doctoral degrees have always carried a fees implication, long before British governments changed policy to charge fees for other degree qualifications. Following the advent of doctoral loans for UK PhD study in 2018-19, we have no way of knowing if those who have anything up to three degrees' worth of debt (undergraduate, possible postgraduate taught course, and postgraduate research degree) feel financially secure upon obtaining a paid academic post (Bennett, 2020).

These new academics will likely have all of the costs associated with setting up a domestic life, could feasibly be contemplating starting a family, and will begin their first experiences of supervising others who wish to undertake a PhD. Early career academics generally start off at the lowest pay scale of an institution, they often require their doctorate to secure such a post and then are under pressure to ensure their research is not just about outputs but about funding their postgraduate projects and collaborations. Grant-writing is time consuming and a skill in itself – one that is rarely taught during the doctoral qualification that secures an early career researcher (ECR) their initial post. It is important to note, of course, that not all ECR are starting their career immediately after other study in their twenties. Many are entering academia at a later stage of their lives where financial security may not be immediately in question.

When mid- or late-career researchers are considered, we would argue there is also a organisational psychological aspect to the effects of grant-writing, namely that a researcher may secure a funded PhD but no sooner does this individual commence their project supervision than the principal investigator must focus on 'the next project' to secure funding for future work. This interpretation would suggest that it is rare that research supervisors are permitted to be present in the current moment, as there must always be an eye to the future. As such, the challenges faced by research academics are surprisingly similar to PGR, in that they are bound up in accessing public funds and the stresses, constraints, and inevitable rejections that this involves.

Supervisory relationships

Academics pursuing a research career, with advancement that is based on research success and progression, cannot afford to overlook the importance of undertaking research supervision. Supervising the next generation of researchers is perceived to be a fundamental part of the researcher role and features in organisational promotional criteria (Vitae, 2021). The SSR is critical to the success of a research project. Yet, as stated above, the older, apprenticeship model where a more experienced colleague would lead a new scholar through a journey has become a relationship of inequalities, not least because institutions in the UK now enrol PhD researchers as students, not trainee researchers. This hierarchical dimension has already been discussed (see Introduction, above) but there are further observations to be made from the perspective of the supervising academics.

In our research between 2018-2020, we found evidence local to our institution of the value of the SSR and what PGR experience when this is negative or punitive (Delderfield *et al.*, 2020). In preparation for our conference contribution, we (Kirsten and Russell) gathered our experiences, both positive and negative, from encounters with other staff researchers who have shared their viewpoints on research supervision and the SSR. It was discovered that we have both experienced listening to sentiments that can be best captured by a unitary description: 'If I had to suffer, you have to suffer'. This is epitomised in Bartlett and Mercer's account of a "Departmental Head who couldn't believe that a PhD could be fun, and kept

probing for expressions of pain, disappointment and confusion" (2000, p.196). This continues a discourse of 'suffering-as-normal' in the process of achieving a research degree. As we are not suggesting that these anecdotal experiences, despite their frequency and consistency, constitute 'data', we instead worked to summarise these descriptively. These negative opinions include: all PGR should be in a state of anxiety as it denotes that they are working sufficiently hard and taking research seriously enough; using leave entitlement is a sign of weakness (as academics frequently forfeit their leave days each year, often to complete research); working full-time hours plus evenings and weekends is a normal part of the doctoral experience; and, relatedly, if academics must routinely overwork to achieve their research goals, then this is a minimum expectation for all.

This is not to suggest that all experienced academics express opinions akin to these. The point is that these attitudes are present and pretending that these perspectives are a minority, or simply do not exist in modern academia, is a precarious place from which to improve the sustainability of mental health and well-being in the research environment. As such, the first step in addressing any problem is to recognise that there is one.

These opinions also give further credence to the 'silence-is-professional', unspoken knowledge that some research cultures can be, and are in practice, toxic. For every supportive, understanding, and well-informed supervisor, there are those who seem to see a research degree as trial-by-ordeal. This is even evident in the ubiquity of 'survival' seen in doctoral education texts and training: surviving your PhD or surviving your viva. Sometimes, rather than modelling healthy working practices to our PGR, such as staying abreast of their leave taken and leave remaining for the year, sharing work-life balancing practices, attending non-mandatory training to keep supervision skills up-to-date as student populations, aspirations, and motivations shift, supervisors model survivalism to PGR. Emailing late at night at the end of long working days to normalise overwork, constantly reminding our PGR how busy we are whenever a request is made, pushing our teaching or research activities and goals on to doctoral researchers irrespective of their fit with the degree project are all examples of modelling poor practice. These may be an indicator of overwhelmed academics, struggling to keep their own heads above water. They may also be an indicator of non-inclusive and deleterious attitudes that to over-commit, suffer, and endure is to show one's mettle.

It might be noted none of this is helped by changes in the Higher Education sector, where scientists with enquiring minds, committed to grappling with what we do not know are faced with a relentlessly-positive corporate rhetoric that is fundamentally out of balance with realities of research. As we debated and discussed these experiences, we were reminded of the tremendous pressures faced by staff researchers and we decided to map out how these compared with those expressed by PGR. This is what follows before we draw some conclusions from our discussion.

Parallels between postgraduate fears and expectations with academic fears and expectations

Here we compare both tribes to see how they compare. These are tentatively expressed observations that draw on our original empirical work (Delderfield *et al.*, 2020) with PGR, represented by the 'pressure' column from our model, and extend these to staff researchers who supervise them. Our intention is to highlight points of shared experience that can be harnessed by those wishing to improve PGR well-being and to stimulate further discussion about the pressures faced in the research environment that may possibly contribute to the perpetuation of negative supervisor attitudes impacting on PGR for years to come (Table 1).

The pressure	The postgraduate researcher	Anonymous survey supporting statements (Delderfield et al., 2020)	The staff researcher	Supporting literature
Finances	PGR stipends are often lower than the living wage. Conferences cost and renumeration takes a long time. Doctoral loans, while increasing accessibility to PGR study, are a financial burden.	<p>“Pay us on time every month. I've been forced into debt because of delayed repayments” (Respondent 25).</p> <p>“Create a conference bursary fund again - finance stress is a huge burden on postgrads” (Respondent 5)</p> <p>“Reduce the tuition fees so students can focus on studies rather than having depression of how to make next payment” (Respondent 9)</p> <p>“They earn money from us to support our studies, not to put a stone on our way!!!!” (Respondent 3)</p>	The pressure to devote increasing amounts of time to grant-writing and other forms of funding calls so that institution's research outputs are funded by public monies or private agreements with industry before any research can actually be conducted.	Geuna and Martin, 2003
Impostor syndrome	Students from low socioeconomic backgrounds, ethnic minorities, older age groups or LGBTQ+ communities can feel like they don't belong and are there to prop up the diversity measures rather than on their own merit. This is compounded by a lack of specific support for these under-represented groups.	<p>“Work to reduce the highly pressured environment that is essentially designed to result in feelings of failure and impostor syndrome” (Respondent 18)</p> <p>“Mature students who have well being issues for themselves or dependents” (Respondent 10)</p> <p>“More support and understanding of those with carer roles and need</p>	Particularly post-docs and early-to-mid career researchers who may have to document and collate their evidence for career progression but who often feel as if they fall short of what others have to offer. Or that their success is mainly down to ‘luck’ and not their own merits.	Jaremka et al, 2020

		<p>for flexible working” (Respondent 23)</p> <p>“Making it clear that sexist comments and gender bias have no place in today's society and especially not in the university” (Respondent 35)</p>		
Guilt	PGR who witness long working hours and poor work-life balance from their supervisors or peers feel guilt around booking holidays or taking time for self-care.	<p>“To openly and frequently offer advice on well being, diet, exercise, rest and a work life balance.” (Respondent 18)</p> <p>“We see University staff working with large work loads, hear about the process of grant applications, short-term contracts, numbers of publications required etc” (Respondent 22)</p>	<p>From all quarters: spending too much time working on a research career to the detriment of a personal or home life. Prioritising home life and other forms of societal citizenship only to feel guilty about not putting that effort into academic work instead. The guilt of compromising research goals to chase the latest politically-motivated trends in research funding.</p>	<p>Toffoletti and Starr, 2016 Bozzon et al, 2017</p>
Job prospects	The majority of PGR want to continue in academia at the beginning of their research degree, however the reality is that very few will achieve permanent academic positions. Instead, a PhD is increasingly becoming common amongst applicants for lower paid positions such as technicians or administrators.	<p>“you don't want to work in an environment where this is expected [academia] as it is an unhealthy work-life balance. If you are at a low point in your PhD journey this can make you question why you are doing it, and despondent about your future career options” (Respondent 22)</p> <p>“There are so few teaching opportunities I worry that I won't have any experience to develop in my career.” (Respondent 25)</p>	<p>Permanent posts are few, temporary contracts for research work are the norm. Permanent (often called ‘indefinite’) contracts come with a host of other responsibilities that can unbalance a focus on research. CVs are full of achievements and accolades, when if everything were to appear it may be five times as long and reveal a very different story about the failures, misses, and rejections.</p>	<p>Horta 2009 Houston et al 2006</p>

Expectations	<p>At the beginning of their studies, PGR can have high expectations of how 'successful' their PhD will be. Unrealistic expectations on the amount of time spent with their supervisor, how frequently they will publish etc can become a source of conflict.</p>	<p>"I argue that if a PGR student studies hard and PGR supervision team do their responsibilities on time, he/she finished PhD maximum in 3 years. So you should create a control mechanism for PGR supervision team!" (Respondent 3)</p> <p>"We're not expecting counselling sessions from supervisors but we are expecting signposting to resources we may not have found ourselves/forgotten, e.g. do supervisors KNOW what well-being support there is? Perhaps supervisors are too overstretched to really take into account and manage student well-being" (Respondent 23)</p>	<p>Commonly reported is the difference in protected time for research versus discovering the sheer volume of time spent on other academic duties. A researcher may join a HEI that expresses a commitment to research that seems little apparent in the time allocations for daily academic duties: this incongruence can be a source of significant mismatched expectations.</p>	Oleksiyenko and Ros, 2019
Too much independence	<p>The purpose of a PhD is to develop an independent researcher. However, giving independence too early in the doctoral process can lead to poor mental well-being. All PGR are individual and the level of independence they need will be different for each student.</p>	<p>"Communication between the supervisors and the student are the key thing, and it should feel more like the student does have some control over the project that they are doing, and feel like it's theirs and not the supervisors" (Respondent 32)</p> <p>"I think that supervisors in particular need to be aware that these issues can arise, and to be more mindful perhaps of how their behaviour might be affecting this. I know that a few of the situations that I have been in could have been avoided if staff had been more</p>	<p>Competition for time away from other academic duties in order to focus on research, coupled with HE's current issue with genuine performance appraisal of academics can lead to some researchers taking on more 'community' roles and duties, while others can use the often rarified and expert nature of research life to become lone wolves who prize self-sufficiency in a pursuit of research career progression. This is often gendered in its nature, as well as class-, culture- and race-related.</p>	Santos and Phu 2019 Crabtree and Shiel, 2019

		thoughtful of how their actions might create stress, unhappiness and negative feelings in their supervisee” (Respondent 29)		
Isolation	Postgraduate study can be an inherently lonely experience. Students can be consumed by their research question at the neglect of their personal and social development. Competition between peers and the desire to be seen as being ‘successful’ increases the sense of isolation.	<p>“Maybe have regular events during the day for all PhD students to meet and talk about some of the issues they face, but in an informal and comfortable manner? Have an induction between the newcomers and the previous PhD students, to help everyone integrate and feel wanted” (Respondent 37)</p> <p>“physically isolating students – let them feel valued as employees and part of research groups by sitting them WITH research teams rather than in separate offices” (Respondent 23)</p>	<p>Because teaching programmes and modern research often call for team approaches but antiquated career progression measures emphasise an individual’s high-level achievements, researchers can often feel ‘out on a limb’. Rejection is an intrinsic part of research life, yet it can be difficult to admit to colleagues that we are struggling or perhaps that we are not finding research as fulfilling as we had thought. People may even hide their real ‘selves’ to seem as if they are a coping, successful research professional when they don’t feel as such. This creates further feelings of being isolated from others.</p>	Chan et al (2021)

Table 1: Two tribes as one: common pressures facing both postgraduate and staff researchers.

These observations may be fruitful for framing thinking about local and national research cultures and could provide departure points for future empirical investigation. We have included anonymised extracts from our 2020 publication to evidence the pressures on postgraduate researchers. For the concomitant pressures on the staff researchers, who supervise PGR, we provide the scant number of studies exploring these issues within qualified research academics in the ‘supporting literature’ column. It will be of interest to note how many of these staff researcher pressures resonate with readers of this paper.

Conclusions

Two tribes

Postgraduate research and staff researchers are not two separate tribes both battling their own circumstances and pressures, competing for resources, time and achievements, protecting their own domains for fear of engulfment, whilst unreflectively visiting their psychologies upon one-another. At this point the division as two tribes ends as these are a single community: researchers. One group in this community is at the earlier end of a spectrum, beginning to learn the craft and contribute to original knowledge. The other group is at varying stages of career, moving along the continuum with a shared purpose of advancing knowledge, understanding, and scientific problem-solving. What is needed is a transformation in the posited supervisory discourse, from ‘I suffered so you must suffer’ to ‘I suffered so you must *not* suffer’ so that research degrees can become inclusive, person-centred experiences: challenging due to their level of scholarship but not punitive just because some of the community endured at the hands of others in the past.

The following extract about life as a postgraduate researcher almost reads like a to-do list for those who are seeking positive change for those within the research environment.

“Work to reduce the highly pressured environment that is essentially designed to result in feelings of failure and impostor syndrome. For the institution to remember students are human and not thesis machines. To openly and frequently offer advice on well-being, diet, exercise, rest and a work life balance. To eliminate the culture of bad mental health where individuals who are currently not burnt out or suffering from mental illness are considered to be not working hard enough, and where the necessity of prescription drugs to alleviate anxiety and depression are currently seen as the norm.” (Respondent 18, Delderfield et al. 2020).

Recommendations for change

The following capture our five recommendations resulting from this viewpoint discussion:

1. There is growing recognition that academia can be a toxic environment. Both PGR and staff researchers should have the freedom to speak out against this to improve well-being across the sector. We should facilitate safe and honest spaces for academics to share and process the realities of the research environment rather than perpetuating a ‘silence-is-professional’ message that maintains the status quo;
2. Academic supervisors often start their independent careers from post-doctoral work, and will rarely have been given the opportunity to formally supervise PGR, or to navigate the administrative complexities of university supervisory systems. We should actively resist the gross assumption that completing a doctoral qualification means someone is now an expert in effective research supervision, and instead support the development of supervisors in this role;
3. The HE sector has greatly increased the provision of support services to undergraduate students, and is starting to do the same for PGR. Given the common stressors between PGR and staff researchers that we have revealed in this study, we should provide similar mental and physical well-being services to staff that students access;

4. Our study has highlighted the scarcity of research into how supervisors supervise, and why they supervise in this way. This is critical to understanding the complexities of SSR. We should commit resources to producing reliable empirical scholarly evidence on the nature and quality of the supervisory relationship and the role of the supervisors within this;
5. Educate by modelling: whether supervisors like it or not, we are role models for our PGR. We should embrace and share well-being practices with our doctoral researchers and each other to drive forward a more inclusive and accessible research culture for all.

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