# *"We need to take care of our researchers"*: A qualitative exploration of the occupational mental health experiences and support needs of UK academic researchers

Thesis submitted for the degree of Doctor of Philosophy

Division of Psychiatry

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## Declaration

I, Helen Nicholls confirm that the work presented in my thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

## Abstract

Recent findings suggest that researchers can find academia highly stressful. This stressful working environment can cause researchers to leave academia, potentially reducing the progress and advances possible. To enhance researchers' mental health and well-being at work, and therefore attract and retain a "talented" UK academic workforce, there is a need to further explore researchers' experiences and support needs. My qualitative PhD project aimed to do this by 1) systematically exploring relevant qualitative literature across the globe; 2) interviewing researchers working within UK universities about their experiences and support needs, and 3) interviewing members of senior management within UK universities and UK research funding organizations about their views on academic policy and culture. My findings suggest that whilst working in academia can be intellectually stimulating and flexible, factors such as a sense of inequality, excessive workloads, job precarity, and the pressure to regularly secure grant funding can negatively impact researchers' mental health and well-being. To secure a long-term positive change in UK academic researchers' mental health, it is these systemic issues that need to be addressed. To address such complex issues will require a collaborative and system wide effort, and it is therefore important to understand the needs and goals of all those who make up the hierarchical UK higher education system, so that a consensus can be reached on the way forward. Managers and supervisors are influential in determining how supportive a researchers' local work environment can be, and training managers on how to better recognise the health needs of researchers could be effective. However, alternative forms of support (from other trained individuals/changes to the broader context) also need to be considered alongside this. For the UK to maintain its influential position on the international stage of research and innovation, UK academic researchers need to be better supported at work.

## Impact statement

The research carried out by researchers in the UK higher education sector aids both the UK economy and helps to decipher and resolve global societal challenges. Given their contributions both nationally and internationally, it is imperative that UK academic researchers feel supported in terms of their mental health and well-being at work. Nevertheless, evidence suggests that UK academic researchers' mental health and well-being is at risk due to the stressful environment in which they work. This thesis provides a timely, neoteric exploration into the occupational mental health experiences and support needs of UK academic researchers.

**Research impact:** Two of my PhD studies have been published in high impact international journals (Nicholls et al., 2022, 2023). My systematic review and qualitative meta-synthesis exploring the work and health experiences of academic researchers across the world has been cited 22 times at the time of writing. To the best of my knowledge, my final study is one of the first to qualitatively explore the views of senior stakeholders in the UK higher education system with regards to their thoughts on the mental health, well-being, and work experiences of academic researchers. I am currently in the process of preparing this final study for publication. Methodologically, this thesis demonstrates how a "multi-method" (Frerichs et al., 2020) qualitative design can be used to examine experiences situated within complex systems such as the UK higher education sector.

**A broader reach:** I took steps to help ensure my research findings found a large audience by disseminating them across a variety of other mediums such as blogs, conferences, and podcasts. I co-wrote a blog with my supervisors (Professor Jo Billings and Dr Danielle Lamb) for the UCL Institute of Mental Health (link in chapter 6). I have taken part in a podcast series which asks early career researchers about their career journeys so far, their research, and their plans going forwards (link in chapter 6). I have also presented my findings at the 15$^{th}$ Congress of the European Academy of Occupational Health Psychology, and at the inaugural UCL Workplace Mental Health special interest group conference.

**Contributing to changes in practice:** I am a founding member of Workplace Health's Expert Working Group for Staff Mental Health and Wellbeing, at UCL. The group aims to draw from expertise across UCL, and subsequently provide advice on UCL practices and policies which relate to mental health and well-being to UCL senior leadership. I have been a part of discussions regarding implementing an organisation-wide training package for managers at UCL, which is intended to contribute to them feeling more confident in supporting their own and their employee's well-being. Working on this PhD has also enabled me to become a co-investigator on a project funded by the UCL, Bloomsbury and East London Doctoral Training Partnership (UBEL DTP), which aims to create a system-wide toolkit that is intended to aid help-seeking and raise awareness of mental health amongst PhD students, their supervisors, and professional services staff associated with the UBEL DTP.

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   Dr Danielle Lamb: "Conceptualization, Formal analysis, Methodology, Supervision, Writing – review & editing"

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**“**Helen Nicholls: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Wrote the paper.

Dr Danielle Lamb, Professor Sonia Johnson, Professor Paul Higgs, Professor Jo Billings: Conceived and designed the experiments; Analyzed and interpreted the data; Commented on drafts of the paper.

Dr Vanessa Pinfold: Conceived and designed the experiments; Analyzed and interpreted the data”.

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This project would not have been possible without all of the participants who kindly gave their time to take part in this research. Thank you for sharing your experiences, your views, and for providing such an important look into the UK higher education system.

To my family (Mum, Dad, Matt, and Fluffy) and my partner Sion, I couldn't have done this without you.

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# Chapter 1 Introduction

## 1.1 Mental health and well-being at work

The mental health and well-being of employees is an important topic across the globe, and interest in occupational health has risen in recent years. In the United Kingdom (UK), a notable catalyst for this rise in interest was the release of a report by Stevenson and Farmer, which explored UK worker mental health (Stevenson & Farmer, 2017). This report was commissioned by the then prime minister Theresa May in 2017, and it arguably remains one of the key pieces of work which indicates that there is a 'mental health crisis' amongst UK workforces; 15% of employees in England were noted as experiencing difficulties with their mental health (Stevenson & Farmer, 2017). As highlighted by the 2017 report, and earlier UK-focused occupational health studies, those in specific jobs (military, police/correctional services, and health and social care) are more at risk of experiencing increased stress and subsequently poor psychological health due to the challenging environments in which they work (Johnson et al., 2005; Stevenson & Farmer, 2017). Indeed, the high levels of distress experienced within the police and emergency services have been well-documented across the international occupational health literature (Petrie et al., 2018; Syed et al., 2020).

Interest in the field of occupational health further accelerated around March 2020, when a global emergency arose in the form of the COVID-19 pandemic (Giorgi et al., 2020). This event altered the working landscape for many individuals and added additional mental strain (Jiskrova, 2022). Research found that female employees, employees with minority ethnic backgrounds, employees with caring duties, those working in health, and those in the service industry bore the brunt of the fallout from the pandemic (Greene et al., 2021; Jiskrova, 2022; Peters et al., 2022; Rosemberg et al., 2021). Financial/job instability, expectations to take on more work, a reduced ability to separate work and personal time, and anxiety around contracting the COVID-19 virus were some of the key "stressors" noted to have placed additional strain on employee mental health and well-being (Greene et al., 2021; Peters et al., 2022; Rosemberg et al., 2021).

Working in surroundings that are detrimental to good mental health or well-being does not only have negative ramifications for the individual. Their family and the organisation they work for can also suffer negative consequences (Stevenson &

Farmer, 2017; Tekin et al., 2022). The Stevenson and Farmer (2017) report indicated that, yearly, organisations can lose £33-42 billion due to mental health difficulties amongst their workforce which result in "presenteeism", sick leave, and leaving the organisation all together (Stevenson & Farmer, 2017).

Not all mental health/well-being difficulties experienced by employees will have been caused by their work environment (Stevenson & Farmer, 2017). However, difficult interpersonal relationships, stress, and strain can be encountered at work, and steps need to be taken in order to minimise/mitigate the potentially negative ramifications of this (Stevenson & Farmer, 2017). Indeed, to echo Stevenson and Farmer (2017) "good work" (often associated with "fair pay", a level of freedom at work, feeling able to have a home life and move up the career ladder, and no form of mistreatment) "is good for mental health", and this is something we should strive for across the world of work (Stevenson & Farmer, 2017).

Nevertheless, whilst organisations and researchers have started to really think about how to safeguard the mental health of workers (Pieper et al., 2019; Stevenson & Farmer, 2017), the interventions created have often concentrated on the individual (i.e., the provision of sessions on mindfulness, Cognitive Behavioural Therapy (CBT) etc) (Peters et al., 2022; Pieper et al., 2019). A 2019 systematic review of reviews found that interventions based on CBT showed some promise in elevating employee well-being (Pieper et al., 2019). However, literature prior to the pandemic (<2020) and post-pandemic have suggested that there should be more of a focus on developing organisational initiatives, which will support a positive change in conditions across the workforce (Peters et al., 2022; Pieper et al., 2019).

Particularly in the context of this new, "unpredictable" working landscape that has emerged from the COVID-19 pandemic (the full effect of which is still yet to be determined) (Jiskrova, 2022), there is a moral, ethical, and financial obligation to conduct further research into the mental health and well-being of workers to help form (and implement) protective policies, structures, and practices. A thriving workforce can then subsequently support organisational goals.

In sections 1.2-1.4, I outline the definitions of mental health and well-being, the current ways in which mental health and wellbeing are examined at work, and the gap in our knowledge regarding the experiences of specific occupational groups (namely, the experiences of those working in higher education (HE)).

## 1.2 Defining well-being and mental health

Well-being and mental health are generally thought to be complimentary yet distinguishable concepts (Hughes & Spanner, 2019; Keller, 2020). However, there is no one accepted definition for either amongst the literature, and the use of these terms and how they are defined will often depend on what is being studied, the setting in which it is being studied, and theoretical stance (Galderisi et al., 2015; Manwell et al., 2015).

Several prominent theories and definitions of mental health including those provided by the World Health Organization (WHO), The University Mental Health Charter, and Keyes (2002), suggest that mental health is on a "continuum" or a "spectrum" (Hughes & Spanner, 2019; Keyes, 2002; World Health Organization (WHO), 2022).

> *"Mental health refers to a full spectrum of experience ranging from good mental health to mental illness"*
>
> The University Mental Health Charter (Hughes & Spanner, 2019)

Importantly, thriving mental health is thought not to be just the dearth of a mental health difficulty or illness (Galderisi et al., 2015; Hughes & Spanner, 2019; Keller, 2020; Keyes, 2002; World Health Organization (WHO), 2022). Rather, looking across these current, prominent definitions in the literature, thriving, "good", or "flourishing" mental health broadly refers to where an individual feels able to manage stressors in their environment, they feel able to fulfil their capabilities, they are able to "contribute to their community", and they often experience good affect, thoughts and behaviours (Hughes & Spanner, 2019; Keyes, 2002; World Health Organization (WHO), 2022).

Building on the first works by 'Keyes (2002)', the term "languishing" is sometimes used to describe poorer mental, and refers to "the absence of positive mental health"

(Mjøsund, 2021). The University Mental Health Charter on the other hand, describes "poor mental health" as reflecting:

> *"... a broader range of individuals experiencing levels of emotional and/ or psychological distress beyond normal experience and beyond their current ability to effectively manage. It will include those who are experiencing mental illness and those whose experiences fall below this threshold, but whose mental health is not good"*
>
> The University Mental Health Charter (Hughes & Spanner, 2019)

Mental ill-health or "mental illness" are broadly described as referring to the experience of high levels of "distress" which impedes one's ability to function. (Hughes & Spanner, 2019; World Health Organization (WHO), 2022). This can then negatively affect an individual's daily life (Hughes & Spanner, 2019). These experiences can be assigned a "clinical diagnosis" (Hughes & Spanner, 2019) such as depression, anxiety or post-traumatic stress disorder (PTSD).

Well-being, defined by both the WHO and The University Mental Health Chater below, is a more aggregate term, and it includes experiences related to the mental, physical, and social:

> *"Wellbeing will encompass a wider framework, of which mental health is an integral part, but which also includes physical and social wellbeing. This uses a model provided by Richard Kraut (Kraut, 2009), in which optimum wellbeing is defined by the ability of an individual to fully exercise their cognitive, emotional, physical and social powers, leading to flourishing".*
>
> The University Mental Health Charter (Hughes & Spanner, 2019).

> *"Well-being is a positive state experienced by individuals and societies. Similar to health, it is a resource for daily life and is determined by social, economic and environmental conditions. Well-being encompasses quality*

> *of life and the ability of people and societies to contribute to the world with a sense of meaning and purpose".*
>
> WHO (World Health Organization (WHO), 2023)

The two extracts above define well-being in a broad sense. However, it is worth noting that some of the existing literature goes on to think about the nuances within this term. For example, the ideas of "subjective" and "objective" well-being are present in the literature (Western & Tomaszewski, 2016). Objective well-being relates to 'outside' factors such as accommodation, finances, food availability, and social life, whilst subjective well-being is more concerned with 'inside' factors such as "happiness", sadness, and personal fulfilment (Lamb, 2018; Western & Tomaszewski, 2016). In the literature, subjective well-being is also sometimes split into "eudaimonic" and "hedonic" elements (Lamb, 2018; Papastergiou et al., 2023). The hedonic element of subjective well-being attends to positive and negative feelings, and an appraisal of how fulfilled one is in life (Li et al., 2023; Papastergiou et al., 2023; Ryff et al., 2021). The eudaimonic element attends to life aspirations, and the extent to which one can meet these aspirations (Papastergiou et al., 2023; Ryff et al., 2021).

But how does mental health fit into well-being? In an earlier (2004) definition, the WHO described mental health as: "... a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community" (World Health Organization (WHO), 2004). This definition was criticised as it can be interpreted as saying that good mental health is the same as having a sense of well-being (Keller, 2020). Keller argues that it is not unfeasible to have a sense of well-being, even with weaker "positive mental health" (Keller, 2020). Nevertheless, Keller (2020) goes on to state that, whilst the two concepts ('good mental health' and 'well-being') should be taken as discrete, one will understandably have some influence over the other (Keller, 2020). That is, an individual with "positive mental health" will probably have better well-being (Keller, 2020). Later 'mental health' definitions from the WHO appear to have acknowledged Kellers' point somewhat; the WHO now also state that individuals with mental ill-health will probably experience reduced "mental

well-being", however, this is by no means universal or inevitable (World Health Organization (WHO), 2022).

The purpose of this thesis is not to solve the quandaries and debates around defining mental health and well-being, but rather to examine these concepts broadly in the context of a work environment. Nevertheless, based on the available definitions and critiques above, I have chosen to conceptualise mental health as being on a "spectrum" (with positive mental health and mental ill-health on opposite ends). I have also chosen to conceptualise well-being as a multi-faceted, broad concept of thriving (where mental health is a distinct, but influential component). Specifically, I have chosen to align my conceptualisation of these terms with those of The University Mental Health Charter (their full definitions for mental health and well-being are provided in the text above).

My use of the terms 'mental health' and 'well-being' throughout this thesis have been guided by The University Mental Health Charter's conceptualisations of these terms. However, I have also taken additional steps to try to make it clearer where experiences, ideas, and/or opinions relate to either the concept of mental health or well-being (or both). If a finding or idea was mentioned as being related to a specific aspect of mental health or well-being, I tried to draw this out and mention it explicitly throughout the thesis. When conducting my research, I also invited participants to consider how these terms are defined and thought about, to provide further context to their responses (described further in chapter 3).

### 1.3 Examining mental health and well-being at work

The "psychosocial" elements of a workplace are thought to be highly involved in the forming or alleviation of individual mental health difficulties (Fan et al., 2019; Hanna & Mona, 2014). Examples of these psychosocial elements include autonomy, job demands, workplace culture, and relationships with colleagues and senior staff members (Hanna & Mona, 2014). Three key models (the job demands-control (-support) (JDC(S)) model (Johnson & Hall, 1988; Karasek, 1979); the effort-reward imbalance (ERI) model (Siegrist, 1996); the job-demands-resources (JD-R) model (Demerouti et al., 2001)) have been used throughout the occupational health literature

to show how these psychosocial elements interact to influence key individual and organisational outcomes. These outcomes can include employee engagement, the presence of mental health difficulties, stress, burnout, and individual well-being (Fan et al., 2019; Hanna & Mona, 2014).

The JDC model suggests that "job demands" (i.e. time allocated to carry out tasks), and "job control" (i.e., making one's own choices at work), are key elements of the workplace which can influence individual health (Stansfeld & Candy, 2006; Van der Doef & Maes, 1999). One key hypothesis of this model is that elevated job demands and reduced individual control over work duties can result in a job being considered very strenuous and likely to negatively impact health (Stansfeld & Candy, 2006; Van der Doef & Maes, 1999). Another key hypothesis of this model is that the negative impact of a highly demanding job on individual health can be 'buffered' by the presence of job control (Van der Doef & Maes, 1999). The JDC model was later re-worked to include work-based peer support (JDCS model) (Johnson & Hall, 1988; Stansfeld & Candy, 2006; Van der Doef & Maes, 1999). This new model hypothesised that social support at work could act as a buffer between high job demands/low job control and poor psychological health (Stansfeld & Candy, 2006; Van der Doef & Maes, 1999). A 1999 narrative review synthesised data from 63 cases which reflected a highly diverse set of occupations, and found evidence to support the JDC hypothesis that individual mental well-being is most at risk when job demands are elevated and job control reduced (Van der Doef & Maes, 1999). Using a UK sample (n=19,441) which reflected multiple employment sectors, another study found evidence in support of job control acting as a buffer between job demands and individual health (Zou et al., 2022). However, the JDC and JDCS models have their critics. Perhaps the biggest criticism of these models is their elementary nature, in that the models do not allow for other job traits to be included, and nor do they account for the impact of other personal attributes such as personality (Jonge & Kompier, 1997).

Siegrist's ERI model suggests that negative affect (and subsequently stress) can occur when an individual believes there is an asymmetry between the amount effort they put into their job, and the "reward" they get from it (Ge et al., 2021). The model also suggests that a worker who is more 'committed' to the job will have an increased negative response to this asymmetry (Ge et al., 2021). There is evidence to support

this model. A recent (2017) systematic review and meta-analysis synthesised eight cohort studies (comprising 84,963 workers from multiple countries), and found that the individual risk of experiencing depression was elevated ("1.5-fold") as a result of experiencing effort-reward imbalance at work (Rugulies et al., 2017). However, as acknowledged by Rugulies et al., (2017) this review only included a small number of studies, and all of them investigated ERI at one timepoint only. The latter could have resulted in an "underestimation" as to how closely ERI and depression are linked, and, as such, Rugulies et al., (2017) call for more longitudinal studies which investigate ERI at more than one timepoint (Rugulies et al., 2017). Another systematic review and meta-analysis conducted in 2016 collated seven studies and found that reduced immunity against disease was connected with experiencing higher levels of ERI and "overcommitment" (not being able to switch off from work) (Eddy et al., 2016).

The ERI model does allow for personality to be considered as a factor (through "overcommitment"), when thinking about work-related stress (Bakker & Demerouti, 2007). However, critics of this model have commented on ERI model's rudimentary nature – ultimately, only some work-related/individual characteristics are able to be considered when using this model (Bakker & Demerouti, 2007). For example, the "reward" aspect of the ERI model places great emphasis on pay, "esteem reward" and job dependability, but not on other key elements such as level of freedom at work (Bakker & Demerouti, 2007). As Bakker and Demerouti (2007) highlight, the "reality" of the workplace is far messier, encompassing a range of (sometimes occupation specific) "demands" and "resources" which can impact on worker well-being (Bakker & Demerouti, 2007).

The JD-R model posits health at work can depend on two elements, "job demands" and "job resources" (Hakanen et al., 2005). Job demands reflect the arduous elements of a workplace, which can be either (a) "physical", (b) "social", (c) "psychological" or (d) "organizational" in nature (i.e., unreasonable workloads, a poor physical space in which to work etc) (Bakker & Demerouti, 2007). The "health impairment process" of the JDR model proposes fatigue and ill-health can result from ongoing job demands that reduce workers' "physical" and psychological capacities (Bakker & Demerouti, 2007).

Job resources can also belong to one of the four categories listed above, and they can help to both attenuate the impact of job demands, and foster fulfilment personally and professionally (i.e., autonomy, job dependability, good peer relationships) (Bakker & Demerouti, 2007). Indeed, another process that forms part of the JD-R model is the "motivational process", wherein the presence of job resources results in worker engagement which then results in good outcomes like doing well at work (Lesener et al., 2019). The JD-R model is arguably more versatile than the ERI and JDC(S) models, as lots of discrete, relevant psychosocial characteristics can be included (Hakanen et al., 2005). In the context of dentistry, a JD-R study was able to depict that, although dentists work in a strenuous job, they are able to stay focused on their work when job resources are present (i.e., good work relationship with patients) (Hakanen et al., 2005). A 2019 meta-analysis of 74 longitudinal studies from across the globe also corroborated the key premises of the JD-R model: the presence of high job demands results in fatigue, job resources results in employee engagement, and a lack of job resources advances fatigue (Lesener et al., 2019).

The JD-R model has been expanded since its conception to include "personal resources" (i.e., confidence in oneself) (Xanthopoulou et al., 2007). A study of 714 'electronics' workers based in the Netherlands found that the differences observed across employee engagement and fatigue could be explained by both job-related demands and resources, *and* personal resources (Xanthopoulou et al., 2007).

Overall, there is evidence to support the key premises of the JD-R model, and it has been noted as being a good foundation from which to examine worker health (Lesener et al., 2019). However, there has also been a call for more higher quality studies which use the JD-R model, to mitigate bias that can result from less meticulous study procedures (i.e., employing self-report measures to examine health and work-related components) (Lesener et al., 2019).

The three models discussed above are by no means the only theoretical models used when it comes to examining health at work, but they are among the most commonly cited, and are widely used to quantitatively explore the relationship between the presence of specific factors at work and employee mental health (Lamb, 2018; Weston, 2022). This is why I believed it important to discuss these models in this thesis. One

of the key learnings I took from researching these models and the way that they are used in the occupational health literature, is that it is important to think about the way different factors *interact* to produce an outcome (an idea I kept in mind throughout the process of conducting my PhD, particularly during the analyses). Nevertheless, some other researchers in the field of occupational health have suggested that we remain undecided on what psychosocial elements are most important to consider when examining mental health and well-being at work (Harvey et al., 2017), and it can be difficult therefore to choose which specific factors at work to investigate. Ultimately, further echoing the thoughts of Harvey et al., (2017), the experience of either well-being or psychological ill-health will depend on many different elements such as: hazards at work, resources at work, personal temperament, and how one deals with adversity (Harvey et al., 2017). I therefore concluded that to use one of these models (ERI, JD-R or JDC/S) as the basis for my whole PhD (and to produce only quantitative data) could be too restrictive and would not enable me to take the broad and exploratory approach I believed to be necessary to investigate (in-depth) these many different elements, how they "interact", and the impact they have on employee mental health/well-being. I decided, therefore, that the use of a qualitative methodology would be most appropriate, in order to fully facilitate this in-depth exploration. Additionally, in cases where there is a lack of research into a specific work setting/population, it is important to first identify (qualitatively) the factors most pertinent to understanding mental health in this specific work setting, before then using models such as the ones above to identify links between these factors and employee mental health on a large scale. The latter points relating to a dearth of existing literature and the importance of qualitative research are further discussed in the context of my study population in sections 1.10 and 1.12.

A key psychosocial characteristic which can influence mental health at work, and particularly mental health in the HE environment, is workplace culture (Wellcome, 2020). As such, it is important to draw out what is meant by workplace culture explicitly. Workplace culture, broadly speaking, typically refers to the "shared beliefs" of workers in an organisation, and the communal manner in which they conduct themselves (De Bono et al., 2014; Gabriel et al., 2018). There are many different models and ways of examining workplace culture, and two of the most prominent are discussed here. Hofstede et al., (2010) (Hofstede et al., 2010) depicted workplace

culture through the creation of the "onion model" (De Bono et al., 2014). The onion model consists of the unobservable "values" (which form the 'heart' of a culture), and the more observable "practices" which include: "rituals" ("socially" necessary shared tasks to fulfil), "heroes" (a person to look up to, because they showcase esteemed qualities and attributes), and "symbols" (significant (but modifiable) behaviours, things, or speech which are representative of those belonging to the same culture) (De Bono et al., 2014; Gabriel et al., 2018; Hofstede et al., 2010; Rajala et al., 2012).

Johnson's (2008) "cultural web" (Johnson et al., 2008) model can also be used to examine workplace culture and, crucially, could also help with ensuring that any new well-being schemes put into practice are well-received (Hesketh & Cooper, 2023). In the cultural web model, the "paradigm" (a collection of presumed shared beliefs) sits at the centre, and this is surrounded by "stories" (the sharing of narratives within and outside of the organisation which concern past triumphs, failures, who to look up to, who not to look up to), "symbols" (behaviours, things, or individuals which denote the essence of an organisation), "power structures" (influential/authoritative people/groups of people that strongly represent the presumed beliefs), "organisational structures" (depicts powerful positions and key social connections), "control systems" ("measurements and reward" mechanisms that indicate the key organisational values), and "rituals and routines" (practices which showcase organisational values (rituals); longstanding modes of conduct (routines)) (Johnson et al., 2008; Morris, 2020). Culture at work is further discussed in the context of my study population in section 1.9.

## 1.4 Working in a university: what don't we know?

When thinking about mental health and well-being in the HE environment, the attention tends to be directed towards the experiences of undergraduate and postgraduate students (Guthrie et al., 2017) – and the evidence is concerning. Evans et al., (2018) found that around 40% of 2,279 postgraduate students internationally had mid-high levels of anxiety and depression (Evans et al., 2018). In England, the number of UK-based students indicating that they have a mental health difficulty in the year 2021 (~5%) was around seven times higher compared to 10 years previously (~1%) (Lewis & Bolton, 2023). Although the rates of psychological ill-health reported by

students rose year by year from 2010, the COVID-19 pandemic is likely to have influenced the rates reported in 2020-2021 (Lewis & Bolton, 2023).

The limited literature which examines the mental health and well-being of staff in the HE environment does not paint a much better picture. Over a time-frame of seven years (2009-2016), and using counselling/occupational health referrals as a barometer, a UK report found that HE staff from 59 universities displayed increased levels of psychological ill-health (Morrish, 2019). Factors contributing to this increased level of psychological ill-health include demanding levels of work and "audit culture" (Morrish, 2019) (both further explored in sections 1.7, 1.9). Nevertheless, not all HE staff, and indeed not all academics, fulfil the same duties, and a key criticism of this body of work is that studies rarely differentiate between the myriad of staff roles in a university (Guthrie et al., 2017). This makes it difficult to tease apart the pressures faced by different occupational groups within this environment, how these pressures impact on their mental health, and what their support needs might be.

Researchers are an occupational group within the university environment that are of particular interest, and it is only in the last decade or so that academic researchers have turned inwards to examine their own mental health and well-being experiences at work. In sections 1.5-1.11 , I provide a brief background on UK HE with a particular focus on research funding and careers, I highlight what was known about the working environment and health of academic researchers at the point where I began this PhD and, finally, I go on to state why it is important to further examine the experiences and support needs of UK academic researchers.

## 1.5 UK universities: the broader context

There are approximately 175 "higher education providers" in the UK (comprising mainly of universities and a few colleges) who can officially grant a qualification at degree level (Atherton et al., 2023; Quality Assurance Agency, 2018). UK universities are independent organisations who manage their workforce and institutional strategy as they see fit (Atherton et al., 2023). However, they must abide by policies determined by four national bodies: "The Office for Students (OfS)" (England); "The Higher Education Funding Council for Wales (HEFCW) – although, this will become the

"Commission for Tertiary Education and Research (CTER)" in the near future; "The Scottish Funding Council (SFC)"; "The Higher Education Division of the Department for the Economy in Northern Ireland" (Atherton et al., 2023). As each UK nation is in charge of creating the system within which their HE organisations operate, UK HE policy, structures, and processes can be quite disparate (Atherton et al., 2023) and difficult to understand.

Universities in the UK are not only shaped and defined in terms of where they are located geographically. 24 universities throughout the UK, named the "Russell Group", are "research-intensive" organisations, which are typically found to be amongst the highest-ranked universities in the world (Alderson et al., 2023; Times Higher Education, 2022). Other types of universities in the UK include "post-92" universities (Wolf & Jenkins, 2018). They are named "post-92", as this is when these institutions were recast as universities rather than "polytechnics" (Wolf & Jenkins, 2018). The vast majority of UK universities are public institutions, and it is these 'typical' institutions that I will focus on throughout the thesis.

Nevertheless, it is important to mention the other more 'atypical' types of UK universities, even if they will not be the focus of this thesis. The "open university", although publicly funded, is designed especially for those who need to learn remotely (Wolf & Jenkins, 2018). Birkbeck, University of London is another publicly funded institution, however, it aims to strike the balance between studying and continued employment, and therefore many of the courses are taught in the evening (Times Higher Education, 2024). Additionally, a very small number of universities in the UK are "private" institutions (Wolf & Jenkins, 2018).

### 1.6 Funding research in the UK

Public universities across the UK do share some parallels, one being how their research activity can be funded (Atherton et al., 2023). Commonly, research is funded through external means. For example, research can be funded by the public body UKRI (UK Research and Innovation), which awards money to individuals/projects/programmes (Atherton et al., 2023). The UKRI comprises of multiple research councils representing multiple academic disciplines (Atherton et al., 2023). Research funding

can also be obtained via charities such as Wellcome (Atherton et al., 2023; Wellcome, 2023), or via government departments which focus more specifically on funding research within a specific UK nation (i.e., the NIHR (National Institute for Health and Care Research) for example, receives money from the "Department of Health and Social Care", and focuses on funding health research in England) (Atherton et al., 2023; National Institute for Health and Care Research, 2023). Funding can also be obtained from the private sector and other, global funding schemes such as the European Union's (EU) "Horizon" scheme (Amos, 2023; Atherton et al., 2023).

The research funding on offer by the external entities above is often very competitive. Typically, researchers (in groups or individually) put forward a research proposal, which is then scrutinized and competitively ranked by relevant individuals (i.e., academic peers) (Preston, 2016; Radice, 2013). Many proposals meet (or exceed) the scientific/research standards set for funding applications, but not all will get funded (Preston, 2016). Reduced funds for research and peer reviewer discrepancies/inaccuracy are key reasons for the funding system being considered somewhat unpredictable (Fang & Casadevall, 2009; Preston, 2016; Van Noorden, 2015). The research funding, when awarded, is often called a grant. However, there are some distinctions between the different types of research funding that can be awarded. For example, a 'fellowship' is an award given to an individual researcher who shows exceptional potential, with the aim of helping them to further their career. A fellowship will involve mentoring, a wealth of training, and the means to develop a personal research agenda (UK Research and Innovation, 2023). Nevertheless, fellowships are very competitive, and are not available to very many. Alternatively, a researcher can be given a "project grant" (often a fixed amount of money), in order for them to conduct a study within a fixed schedule (Boster Bio, 2023; UKRI, 2023).

Universities can also be directly awarded "block grants of public funding" (termed "quality-related research (QR) funding" (Pinar & Horne, 2022; Wooding, 2021)), through taking part in the Research Excellence Framework (REF) exercise (Atherton et al., 2023). The REF broadly assesses the standard of the research put out by UK universities (Pinar & Horne, 2022). The results of the REF are then used to dictate the quantity of funding assigned to each university (yearly) to aid their research activities (Gottlieb et al., 2021).

## 1.7 Neoliberalism and the higher education sector

"Neoliberalism" has crept into UK HE culture and practices over the last 40 years. Edwards (2022) talks about neoliberalism in an "economic" and "ideological" sense (Edwards, 2022). Essentially, it is the idea that the productivity of public sector organisations will be higher if "market-like mechanisms" more often aligned with the private sector are put in place (Natow & Dougherty, 2019; Radice, 2013). Indeed, Edwards (2022) suggests that "marketisation" connects neoliberalism with the HE sector (Edwards, 2022). These "market-like mechanisms" are designed to induce a sense of competition, and examples include the use of monetary rewards and numerical measures and "targets" which examine individual and organisational performance (Edwards, 2022; Natow & Dougherty, 2019; Radice, 2013). The REF is particularly reflective of neoliberalism in UK HE, wherein many universities are in direct competition to regularly produce quality, impactful research in order to receive as much public funding (QR funding) as they can (Natow & Dougherty, 2019). It should be noted that it is not just research activity that is monitored and evaluated, other measures like the National Student Survey (NSS) and Teaching Excellence Framework (TEF) in England, also make up this environment of scrutiny in UK HE (Jayman et al., 2022; Office for Students, 2020; University and College Union, 2022). Linked to the TEF and NSS is another by-product of neoliberalism in HE – the notion that the student is a "customer", (Jayman et al., 2022), rather than an individual who is there to learn.

The rise in neoliberal tendencies is not just confined to the UK HE sector (Natow & Dougherty, 2019). HE institutions spanning the globe have been criticised for their business-like attitude, often focusing on meeting performance standards and collecting the financial rewards rather than focusing on the more classic spirit of HE institutions – training and educating the minds of those who cross their thresholds and thinking of ideas that have not been thought before (Santamaría, 2020; Wellcome, 2020). Nevertheless, to reject "performance culture" (in favour of pure scholarship) would be to risk one's career at an individual level and reputation and financial security at the institutional level (Jayman et al., 2022).

Revenue for many UK universities primarily comes from collecting tuition fees from both home and international students and receiving public funds (Atherton et al., 2023). Doing well in performance measures such as the REF, TEF, and NSS can help UK universities to maximise both income revenues in what is currently a fraught financial climate (Atherton et al., 2023; Wellcome, 2020)

A good research output is considered particularly important for securing more revenue. A good performance in the REF will lead to a greater level of QR funding. Additionally, the strength of an institution's research productivity generally signifies where they fall in league tables like the "Times Higher Education" (THE) "World University Rankings" (Tapper & Filippakou, 2009; Times Higher Education, 2022; Wolf & Jenkins, 2018). The better a university's reputation, the more students they are likely to secure (Atherton et al., 2023).

Given the influence research production has over institutional revenue, it is not surprising that it appears imperative to gain a strong individual research reputation as an academic (or become a "star researcher" - defined as an individual who habitually gets awarded grants and publishes research in highly ranked journals such as *nature* and "*Science*"), in order to better secure that next move up the career ladder in HE (Sutherland, 2017; Tapper & Filippakou, 2009).

## 1.8 Research careers in higher education: An overview

The researcher career structure in HE is heterogenous, notoriously difficult to come to terms with, and is rarely linear (Logan et al., 2014; Mantai & Marrone, 2023). However, across the literature there does seem to be some shared language used to describe the different stages of a research career in HE. The phrase 'early career researcher' has no solid definition, but typically means those on the preliminary steps of the career ladder so to speak, such as post-doctoral researchers who have only just (within ~5 years) secured their doctorate (Alderson et al., 2023). Although, the term has been used more broadly in the literature to also encompass doctoral researchers (né PhD students) who have not yet secured their doctorate (Piano et al., 2023). It is even harder to pin down a definition for mid-career researchers and senior researchers. However, the progression through to mid-career, and then through to a more senior

researcher, appears to be characterized by taking on both advisory and leadership activities, and evolving into a more self-sufficient, established researcher (Gould, 2022; Mantai & Marrone, 2023).

For academic researchers based in the UK, their salary is funded by their employing organisation, or it is funded externally via grants awarded by Wellcome, UKRI etc (Gottlieb et al., 2021). Alderson et al., (2023), gives a very helpful indication of what the career structure in UK HE might look like for researchers – after a doctorate, individuals may pursue: a temporary postdoctoral post (either as an "associate" on a study which has been "advertised", or as a fellow on a study they have applied to undertake), a temporary "teaching associate" post, or a lecturer post that can be either permanent or temporary (Alderson et al., 2023). Alderson et al., (2023) goes on to state what are meant to be the more secure roles that often come next in order – "lecturer, senior lecturer, reader/associate professor, professor" (Alderson et al., 2023). The job posts mentioned can either lean more towards research activity, teaching activity or can be a balance of both (Alderson et al., 2023). Nevertheless, as highlighted at the beginning of this section, progressing as an academic researcher is complicated, and many individual careers are not this straightforward (Menard & Shinton, 2022). For example, career stage can influence individual ability to apply for a coveted fellowship (Menard & Shinton, 2022). However, many definitions of career stage (for fellowships) are time elapsed since completing a PhD (i..e., for the "European Commission Marie Sklodowska-Curie postdoctoral fellowships", no more than 8 years can have passed since PhD completion) (Menard & Shinton, 2022). Definitions such as these do not account for those who are coming from a non-traditional pathway, such as those without a PhD, or those who have taken time off from their career (i.e., for other responsibilities at home) (Menard & Shinton, 2022). Currently, lots of funders do take into consideration time taken out, but this is not universal (Menard & Shinton, 2022).

## 1.9 Research and working culture in higher education

How research culture is defined and perceived diverges according to individuals, organisations, and institutions (Wellcome, 2020). Below is a definition for research culture often used in the literature, and one which ties in quite closely with the ideas

of workplace culture set out by the 'onion model' and 'cultural web model' (Hofstede et al., 2010; Johnson et al., 2008):

> *"Research culture encompasses the behaviours, values, expectations, attitudes and norms of our research communities. It influences researchers' career paths and determines the way that research is conducted and communicated"*
>
> (The Royal Society (Royal Society, 2023))

Concerns over research/work culture in HE institutions have steadily been growing in number over the last decade or so. The key issues with research culture noted in this section (1.9), and the idea of a 'mental health crisis' in HE institutions (section 1.10), were being talked about anecdotally and in the media (Shaw & Ward, 2014) before I started this PhD in September 2020. A key report by Wellcome, which examined research culture across the globe, brought these issues into greater prominence in early 2020 (Wellcome, 2020).

Echoing much of the earlier literature (Guthrie et al., 2017)/anecdotal perspectives, the Wellcome (2020) report indicated that HE research culture can be found to be "stressful", "pressured", and at times, "toxic" (Wellcome, 2020). The reasons for this are listed below. The reasons below are all included in the Wellcome (2020) report; however, I have also used additional, relevant, recent references to help illustrate and expand on the points.

- The need to work long hours (including weekends and evenings) in order to complete many different tasks (i.e., teaching) whilst ensuring research production (which can be perceived as crucial for career progression), does not deteriorate (Gottlieb et al., 2021; Kinman & Jones, 2003; Wray & Kinman, 2021).

- The insecurity of the job role. In the 2021-2022 academic year, 233,930 academic staff were registered as working across HE institutions in the UK; of whom 33% were reported to be on contracts that are fixed term (Higher Education Statistics Agency, 2023). In UK HE, early career researchers and individuals whose jobs are

"research only", are most at risk of job insecurity, as they rely on securing and moving from grant to grant (research project to research project) (Gottlieb et al., 2021).

- As indicated by the existing literature, some competition can be helpful and can help individuals unlock their potential to excel (Gottlieb et al., 2021; Wellcome, 2020). However, a rise in "aggressive" competition for resources (i.e., money, posts) has been noted (Wellcome, 2020), as researchers both try to build the research reputation they need in order to progress in their careers, and beat others (in the ever-increasing pool of "doctorates" (Menard & Shinton, 2022)) to secure an academic research post.

- Insufficient diversity and occurrences of mistreatment/bias (i.e., bullying) in a system built on hierarchy and precarity (Gottlieb et al., 2021). It can be challenging to report the negative conduct of senior individuals when starting out on the career ladder in HE, particularly as these more senior individuals (i.e., PI's/supervisors/managers) can often dictate how a researchers' career advances (or doesn't) (Gottlieb et al., 2021; Menard & Shinton, 2022). A general lack of diversity in HE has also been noted, particularly in more senior HE positions (Gottlieb et al., 2021). This may stop researchers from more diverse backgrounds chasing a research career in UK HE (Gottlieb et al., 2021).

- A focus on research output rather than the process of getting there. "Publish or perish" sums up the focus on output, and has often been cited in relation to successfully 'making it' in academia (Gottlieb et al., 2021). Many have also commented on the use of unreliable output metrics (impact factors of journals, individual h-indices) when it comes to awarding funding and selecting individuals for promotion (Wellcome, 2020; Wilsdon et al., 2015).

- Diminishing autonomy over research ideas. For example, UK researchers have mentioned feelings of discontentment when needing to put aside their personal research interests so that they can pursue research which may align more powerfully with what is assessed in the REF (University and College Union, 2013).

The consequences of a poor research culture do not only include a negative impact on individual researcher' health (please see section 1.10). A culture such as the one above can also negatively impact general research quality/integrity (i.e., less attention may be paid to verifying data for example, in favour of getting a project done quickly so that there is enough time to secure the next grant/job contract) (Gottlieb et al., 2021).

In the Wellcome (2020) report, it is stated that 55% of the 2839 individuals who took part in the survey chose negative words to illustrate what research culture is like (Wellcome, 2020). However, others did think research culture could be "exciting", "collaborative" and "rewarding" (Wellcome, 2020). The report identified that researchers feel "passionate", and can see the job as a calling (Wellcome, 2020). However, taking in the report as a whole, it appears these more positive aspects of the job are understandably overshadowed somewhat by the challenges encountered, and worries over what research culture will look like going forward (Wellcome, 2020).

### 1.10 The health of researchers working in higher education

As indicated above, a poor research culture can result in poor mental health and well-being for the researchers working within its confines. Issues regarding stress, burnout, and the difficulty of having a life outside of the job have been cited across the evolving literature which has explored the mental health experiences of UK academics (Kinman & Jones, 2003; University and College Union, 2022; Wray & Kinman, 2021). There are some indications as to the prevalence of common mental health difficulties – a survey of 2,046 UK HE staff (the majority of whom held academic posts (85.9%)), depicted that just over 50% displayed signs of depressive symptomatology (Wray & Kinman, 2021). Hazell et al., (2021) found that doctoral students in the UK were more likely to be anxious and depressed than other workers (Hazell et al., 2021). Just over 50% of 782 UK academics show potentially problematic signs of depression and anxiety symptoms as a result of their General Health Questionnaire (GHQ) scores (Kinman & Jones, 2003).

These concerning levels of psychological ill health are not just confined to HE researchers and academics in the UK. Researchers and academics across the globe have also reported similar struggles. Just over 30% of 4162 researchers (many of

whom worked in universities spanning throughout the world), have obtained help from qualified professionals for symptoms of depression and anxiety (Wellcome, 2020). A recent international survey found that 51% out of 7,600 postdoctoral researchers had wondered if pursing an alternative career was the better option, due to the negative impact their current work was having on their mental health (Woolston, 2020). A 2017 survey conducted in Australasia depicted that around 40% of 451 academics in the field of business experience burning out repeatedly (Tham & Holland, 2018). Potential reasons for this could include high workloads (i.e., "publish or perish", needing to provide teaching in a variety of forms (online/face-face)), and working into evenings and weekends (Tham & Holland, 2018). A systematic review and meta-analysis examining the mental health experiences of doctoral researchers found that common mental health difficulties are "highly prevalent" (Satinsky et al., 2021). The "pooled prevalence" for depression and anxiety was 24% and 17% respectively (Satinsky et al., 2021).

One should also consider the risk of discipline specific factors which could also negatively impact the mental health and well-being of academic researchers. Existing literature has indicated the personal "toll" that can result from investigating tough topics such as "violence", and conducting experiments with animals (Ellison, 2020; Nikischer, 2019; Silverio et al., 2022).

There is some evidence to suggest that academics/researchers are more likely to experience mental health difficulties compared to other members of society. A study conducted in Belgium found that 32% of 3659 doctoral researchers were at risk of experiencing a mental health difficulty (i.e., depression), and this was "2.43 times higher" than "highly educated" members of the public (n=769), and "2.84 times higher" than "highly educated" workers (n=592) (Levecque et al., 2017). In the UK context, 50% of 1,182 employees from UK universities contended with "high" anxiety, one and a half times more than the general population (32%) (the latter based on data from the Office for National Statistics (ONS) 2021 Opinions and Lifestyle Survey) (Dougall et al., 2021).

Several studies have also commented on the parallels that can be drawn between the mental health of researchers/academics, and the mental health of those in well-

documented “high-risk” jobs (Guthrie et al., 2017; Satinsky et al., 2021). Satinsky et al., (2021) found that the prevalence of depression in the doctoral researcher population (24%) was akin to those found in “resident physicians (29%)”, and other groups of researchers (postdocs) (29%) (Satinsky et al., 2021). The prevalence rates of depression found in doctoral researchers (24%) (n=23,469) (Satinsky et al., 2021) and the prevalence rates of depression found in “postdocs” (29%) (n=200) (Gloria & Steinhardt, 2013), was higher than the prevalence rates of depression found in police officers (14.6%) (n=272,463) (Syed et al., 2020), and similar to the prevalence rates of depression found in doctors during the COVID-19 pandemic (20.5%) (n=31,447) (Johns et al., 2022).

As indicated above, the health of academics/researchers has been identified as a problem. However, up to the time-point of 2020 (the beginning of this PhD), a lot of the evidence regarding academic/researcher health often came from surveys, which were concerned with ‘levels’ of poor psychological health and what elements of the work environment are linked with this (Guthrie et al., 2017). However, to echo Harvey et al., (2017) (section 1.3) the experience of good mental health/ill-mental health, and good well-being/poor well-being, will probably be dependent on a multitude of job and personal characteristics, and how these “interact” (Harvey et al., 2017). Up to 2020, there was a general dearth of literature which concerned the mental health/well-being of academic researchers, and very few of these studies appeared to focus (in-depth) on examining job-related or personal resources (and how these may interact with work “stressors” and mental health and well-being) – i.e., asking academic researchers how they manage the “stressors” they encounter (Urbina-Garcia, 2020), what factors help aid their well-being at work, why they began a career in academia, how their mental health and well-being at work could be improved at the workplace etc. Ultimately, the relevant literature up to 2020 was quite narrow in scope, and rarely exploratory. Investigating (in-depth) workplace demands, job resources, personal resources, motivations, thoughts for change, etc, is crucial to help better our understanding of academic researchers’ mental health and well-being at work. This will then subsequently help with the identification of what protective interventions/policies are needed in the academic environment, where they are needed, and how they need to be implemented.

## 1.11 Why study the work, mental health, and well-being experiences of UK academic researchers?

The UK is often considered to be one of the global leaders in research; around 80% of the research undertaken here in the UK has been determined "world leading" and "internationally excellent" (Universities UK, 2023a). Perhaps one of the most world-famous scientific creations which involved a British university in recent times is the COVID-19 vaccine ("Oxford/AstraZeneca") (UKRI, 2021).

UK HE doesn't just facilitate research that could help lives around the world. Universities UK and London Economics found that the UK HE division also supports the UK economy (to the sum of 130 billion pounds) (Booth et al., 2023; Universities UK, 2023b). The research undertaken in the UK HE sector can also help support continued financial prosperity (Booth et al., 2023; Universities UK, 2022).

The research facilitated by UK HE is essential to the UK economy and can help to positively change lives. It is imperative therefore, that the researchers who make this sector the success that it is, are well supported to carry out their work. As section 1.10 highlights, however, UK academic researchers are struggling with their mental health and well-being, and poor working environments appear to play a part in this. Unfortunately, recent research suggests that circumstances have not yet improved (University and College Union, 2022; Wray & Kinman, 2021). Poor research and working culture could also negatively impact the work/research produced, as highlighted in section 1.6 (Gottlieb et al., 2021). The poor working environment could also encourage researchers to move away from UK HE, either to another industry, or to another HE sector across the world (University and College Union, 2022).

It is important therefore, to further examine UK academic researchers' mental health, well-being, and work experiences, along with their support needs, in order to retain researchers in the UK HE sector, retain the quality of our research, and help to generally improve the well-being of the individual researcher.

As indicated in section 1.10, up to 2020, much of the existing relevant data was collated through surveys which were quite narrow in scope. As such, to effectively

examine further, the experiences and support needs of UK academic researchers, there was a need for more exploratory, in-depth research. The use of a qualitative methodology was thought to be well suited to achieve this.

## 1.12 Qualitative research: A brief introduction and what it can add to the evidence base.

The quantitative studies which have examined academic researchers' mental health at work have painted a much needed, but worrying picture (Guthrie et al., 2017). However, quantitative studies often do not fully capture the nuances in researchers' work, mental health, and well-being experiences, due to their focus on producing "numeric" data (Pathak et al., 2013) through a preset question and answer system and the use of well-validated yet rigid measures of mental health/well-being. To truly delve into the "reasons" (Busetto et al., 2020) behind the high prevalence of psychological ill health/poor well-being in the UK academic researcher population (and adequately identify their support needs), a qualitative methodology is needed.

At the most basic level, qualitative research concerns itself with "words" and is "the study of the nature of phenomena" (Busetto et al., 2020). There are lots of qualitative research designs in existence, and many have been used to study the work environment (Billings, Seif, et al., 2021; Kiernan & Hill, 2018; Lamb & Cogan, 2016; Leverton et al., 2021). Frequent methods for data collection can include ethnography, focus groups, and interviews which are structured, semi-structured, or narrative/open in nature. Frequent methods for data analysis can include reflexive thematic analysis, narrative analysis, framework analysis, grounded theory, and interpretative phenomenological analysis. The type(s) of qualitative methodology chosen will depend on what it is you want to explore, and how you want to go about exploring it (Busetto et al., 2020). In chapters 2, 3, and 4, I describe the qualitative methods and analytical techniques I used in-depth, and I also describe why they were the most appropriate method to be chosen for each particular study.

The researcher is the primary tool when it comes to qualitative research, and their position (both theoretically and personally) will impact on the research process (Hammarberg et al., 2016). In qualitative research, the more "objective" terms of

"reliability" and reproducibility are not usually attended to (Hammarberg et al., 2016). Rather, concepts such as "credibility" (are the results truly reflective of the experiences of the study population?), "trustworthiness" (is the research process clear and easy to follow?), and "transferability" (are the results still relevant in circumstances beyond the setting of the study?) are regarded as the key ways in which to examine and ensure good quality qualitative research (Hammarberg et al., 2016). I further describe how I met these quality indicators in the context of each of my PhD studies in chapters 2, 3, and 4.

### 1.13 Reflexivity – getting to know me

Given the important role of the researcher themselves in qualitative research, it is important to be clear about my positioning (theoretically and personally), as this will have impacted (consciously or unconsciously) how I collected, analysed, and drew conclusions from my data (Braun & Clarke, 2021a; Hammarberg et al., 2016; Taylor, 2020). Being clear about my personal and theoretical stance can help to boost the "credibility" of my findings (Hammarberg et al., 2016). My theoretical positioning varied depending on my research question and the qualitative methodology I used, and this is discussed further in the relevant study chapters (2,3 and 4). Given that my PhD is qualitative in nature, it is important for me to include a section where I discuss my general personal experiences and characteristics.

In terms of personal characteristics, I viewed my research and data as a British woman from a White ethnic background who grew up in a middle-class family. My parents on the other hand, both came from working-class homes, but by dint of education and vocational jobs became exemplars of social mobility.

I have had a strong interest in mental health since my undergraduate days, and I have had the opportunity to work on the frontline in a variety of mental health organisations. In terms of personally experiencing difficulties with my own mental health, I experience feelings of anxiety that do not quite reach a clinical threshold, as perhaps many people do. However, I did notice a rise in these feelings when I was in a work environment (particularly when I was working in the National Health Service (NHS)). For me personally, having good work relationships and outside social support were

factors that really helped to temper these anxious feelings. It was around this time that I really started to get interested in mental health at work, and the factors which could influence how an individual experiences their work environment.

My personal experience with the HE sector, on the other hand, was very limited prior to starting my PhD. My interest in the HE sector was something that grew gradually and came from individuals close to home. I have a family member who worked in the HE sphere for central government, and I have also heard about and observed family members having radically different experiences when studying for their PhDs. One had a positive experience, and another had a negative experience, and I was able to hear about and observe how these experiences impacted on their mental health. When the opportunity arose to study for this PhD, I saw it as a unique chance to experience the HE sector for myself, whilst simultaneously examining in-depth what factors can 'make or break' an academic researcher's work environment.

Also of note is that I conducted my PhD during the waves of the COVID-19 pandemic (2020-2023), and I was therefore working remotely a lot of the time. However, this distance from the academic institution is likely to be reflective of the experiences of many other UK academic researchers over that period.

Throughout the thesis, I further examine how my personal experiences and characteristics may have influenced the research process (in chapters 2, 3, and 4).

## 1.14 Thesis aims and objectives.

The overarching goal of this PhD was to (a) explore from a qualitative standpoint the occupational mental health/well-being experiences and support needs of UK academic researchers and, (b) create recommendations for various UK HE stakeholders on how to better support UK academic researchers' mental health and well-being.

I achieved this goal through conducting three studies, which are outlined below with their corresponding objectives. Each study informed the goals and tools of the next, and this process is further explored in the connecting chapters (chapters 2.5 and 3.5).

**Study 1 – Systematic review and qualitative meta-synthesis**

Objective: I aimed to synthesise published findings to explore what do we already know about the work, mental health, and well-being experiences of academic researchers from a qualitative perspective.

**Study 2 – A qualitative study involving UK academic researchers**

Objective: Using a combination of different qualitative methodologies, I aimed to explore UK academic researcher's journeys in depth, as well as their perspectives on how they feel their mental health and well-being could be better supported within the UK HE system.

**Study 3 – A qualitative study involving UK HE senior stakeholders**

Objective: Using a qualitative approach, I aimed to explore UK HE senior stakeholders' knowledge of the work, mental health, and well-being experiences of academic researchers, as well as their thoughts on wider academic policy/culture.

# Chapter 2 The impact of working in academia on researchers' mental health and well-being: A systematic review and qualitative meta-synthesis

## 2.1 Introduction

As chapter 1 highlights, there is a lack of consensus on how 'mental health' and 'well-being' are defined, and academic researchers themselves hold various work duties, work in various disciplines, and are at different stages in their career (the boundaries for the latter being particularly unclear). As such it is perhaps to be expected that the existing qualitative literature on this topic often provides a detailed look into one specific experience, or one specific aspect of mental health or well-being (Chan et al., 2021; Herbert et al., 2014). However, this heterogeneity in the existing qualitative literature does make it hard to picture more generally what we already know about academic researchers 'lived' work, mental health, and well-being experiences. As such, the first step of this PhD was to determine what we already know from the existing qualitative literature about academic researchers' work experiences, and the impact these experiences have on their mental health and well-being.

### 2.1.1 Research objectives

I aimed to systematically bring together and synthesise existing qualitative data, in order to identify key patterns and subsequently improve our understanding of academic researchers' experiences.

## 2.2 Method

The meta-synthesis approach described by Lachal et al., (2017) was used as the foundation for this review (Lachal et al., 2017). This versatile approach was chosen as it enabled me to successfully manage and analyse qualitative data from across heterogenous papers. The process involved six phases: the first involved determining the research question and how papers will be identified as acceptable to be included in the synthesis; the second step involved searching for papers in a systematic manner; during the third step a quality assessment was undertaken on all the included papers; the fourth step involved displaying the key characteristics of the included papers; the fifth step involved analysing the data; and the final step is the write-up of the synthesis process/narration of the findings (Lachal et al., 2017). Whilst carrying out the meta-synthesis, it is worth noting that I undertook the third and fourth step somewhat concurrently.

The review protocol was registered with PROSPERO, the NIHR's International Prospective Register of Systematic Reviews (registration number: CRD42021232480). The guidelines highlighted by PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analyses) were kept in mind throughout the review process (Moher et al., 2009).

### 2.2.1 Search strategy

The following electronic databases were searched for relevant academic papers: PsycINFO (Ovid), EMBASE (Ovid), CINAHL Plus, PubMed, SCOPUS, Web of Science.

I searched the databases from inception to January 2021, with an English language restriction (due to limited resources for translation). Key words related to the research question (including 'mental health', well-being, researcher, and qualitative) were organised under the headings of the SPIDER (Sample, Phenomenon of Interest, Design, Evaluation, and Research type) tool and then elaborated upon to include alternative terms, related constructs, and database specific subject headings. The search terms were combined as necessary using the Boolean operators OR and AND.

In order to capture relevant literature not indexed in the electronic databases I also conducted searches on Google Scholar using key terms relevant to the research question such as 'qualitative', 'researcher', 'academia' and 'mental health'. The results were sorted by relevance and no date restriction was applied. The first 200 results were downloaded and imported into the reference management software EndNoteX9, along with the search results from the electronic databases, where duplicates were then removed. For all included papers, I also employed citation tracking. This involved searching the reference lists of the original included paper and searching for papers which cite the original included paper. Forward citation tracking was completed in May 2021. Please see appendix 1 for the full search strategy.

### 2.2.2 Eligibility criteria

To be included, peer-reviewed research articles reported in English needed to (a) use a qualitative research design or mixed methods design where qualitative data could be

extracted, (b) consist of a sample which clearly identified its population as researchers or individuals with research-related responsibilities (carrying out research, publishing papers, applying for funding), (c) consist of a sample which clearly identifies its population as working in a higher education institution (defined here as an institution which awards degree level certificates or above) and, (d) focus adequately on researchers' mental health and well-being experiences. That is, if the papers' research aim(s)/question(s) involved examining an element of mental health or well-being *and* elements of mental health or well-being were discussed within the (qualitative) results section, the paper would be eligible to be included. It didn't matter what element of mental health or well-being was examined. For example, papers could examine; work-related stress, psychological or physical well-being, emotional health, life/work satisfaction, resilience, coping, or specific mental health difficulties such as depression or anxiety.

This PhD is focused on UK academic researchers, however, based on a preliminary scoping review, it was concluded that there would not be enough papers to make a meta-synthesis feasible if I only included papers from the UK. As a result, papers from across the world were eligible to be included, as long as they met the inclusion criteria above.

Articles were excluded if: (a) they did not focus adequately on researchers' mental health and well-being experiences as detailed above under inclusion criterion (d), (b) they focused primarily on experiences outside of academia, (c) the experiences of researchers who work in higher education institutions could not be extracted, (d) they focused on evaluating a workshop, intervention, or policy change or, (e) the information necessary for the data extraction phase of the review was not present. Corresponding authors were contacted regarding any missing data. Where no response was received in one month, the article was excluded. Whilst research on undergraduate students and masters' students were excluded, literature concerning doctoral researchers was eligible for inclusion, as much of the relevant research cites doctoral researchers as early career researchers, and they are a strong part of the HE research workforce (Andrews et al., 2020; Belavy et al., 2020).

### 2.2.3 Data extraction and analysis

I extracted the following data from the eligible papers: (1) title of the research, (2) author (year) and country, (3) sample size, (4) identifying features of the participants, (5) the aspect(s) of mental health or well-being explored as part of the research aim/question (6) method of qualitative data collection and, (7) method of qualitative data analysis. The extracted data is presented in Table 2-1.

**Reflexive thematic analysis**

To bring together the qualitative data across the included papers and come to a higher understanding of the phenomena under study, I used an analytical technique based on reflexive thematic analysis. Broadly, the six-phase process of reflexive thematic analysis as outlined by Braun et al., (2021a) includes: (1) becoming well acquainted with the data, (2) "coding", (3) collapsing the codes and subsequently identifying themes, (4) "reviewing" the themes, (5) ensuring the themes are labelled effectively and fully capture the dataset and, (6) writing up the findings (Braun & Clarke, 2021a).

There are some key differences between reflexive thematic analysis and other forms of thematic analysis ("codebook" or "coding reliability" thematic analysis) (Braun & Clarke, 2021b), which are worth pulling out, and which I will briefly describe here. With regards to the latter type of thematic analysis, there is often a focus on how closely several researchers 'match' with regards to their coding of the data (Braun & Clarke, 2021a). With regards to the coding reliability and codebook methods, the codes are often much more rigid and decided upon before the analysis (or right at the beginning of the analytical process) (Braun & Clarke, 2021b).

Reflexive thematic analysis on the other hand, sees the researcher's personal stance as an asset to the analytical process, rather than a hinderance (Braun & Clarke, 2021a). The coding process in reflexive thematic analysis is very "open", flexible, and subject to change as the researcher progresses through their analysis (Braun & Clarke, 2021b). Reflexive thematic analysis lends itself well to examining experiences (Braun & Clarke, 2021a). The research question of this systematic review is interested in the experiences of researchers, and the goal is to synthesize published qualitative data in order to come to a higher understanding of both their experiences, and how these

experiences impact on their well-being and mental health. As such, I deemed an inductive reflexive thematic analysis as the most appropriate analytical technique to use to help me answer the research question of this systematic review. An inductive approach refers to the analysis being guided by the data contained within the published papers (Braun & Clarke, 2021a).

**The analytical process**

I first got to know the data well through reading the included papers multiple times. I then exported the included papers into the program NVivo pro version 12. The second phase involved using NVivo to facilitate coding. During this stage, chunks of relevant/interesting text in each paper's results section were assigned a 'label' which summed up what I thought a section or chunk of text was saying. Relevant text included author viewpoints, themes, and quotes which concerned researchers' work, mental health, or well-being experiences. The codes assigned were both descriptive and interpretive in nature.

I collaboratively constructed an initial coding framework with members of the wider research team (Professor Jo Billings (JB), Dr Danielle Lamb (DL), Sahra Tekin (ST) & Matthew Nicholls (MN)). I independently chose eight of the included papers to help us collaboratively develop this provisional coding framework. The eight papers were recent enough to cover current practices in academia (studies conducted within the last 5 years at the time of our analysis (2021)), and diverse in terms of examining different aspects of mental health, well-being, and the researcher experience. I distributed these eight papers amongst the research team members, we coded our given papers independently, and then we shared the codes we had come up with, with each other. Through discussing the similarities/differences between the codes we had each come up with, the initial coding framework was then constructed. It's important to note that we were not looking for high levels of 'inter-rater reliability' when developing this initial coding framework, and nor was this initial coding framework seen as 'fixed' (please see section 2.2.4 for an explanation as to why the initial coding frame was created).

The initial coding framework was used as a starting point to code the rest of the included papers. As I worked through the rest of the papers, this initial coding framework was changed and tweaked. During the third stage I brought the codes together to create themes and sub-themes. The fourth, fifth, and sixth step of the analytical process was done relatively concurrently. I re-read the included papers and made sure that my newly created themes and sub-themes reflected both the shared and varied experiences present in the data. Whilst writing up each theme/sub-theme, I refined the names of the themes and sub-themes (as well as the order in which they were presented). The write up of each theme/sub-theme contained both descriptions of the data and also comments on potential underlying meanings that had been identified. I embedded quotes throughout the analytic write up to help illustrate the points being made. Finally, I considered my results in light of the wider, existing relevant literature. I kept my research question in mind throughout the analytic process.

### 2.2.4 Reflexivity

As indicated by Braun et al., (2021a) whilst an inductive thematic analysis is guided by the data being examined, the process will always be influenced by both the theoretical stance taken and the personal beliefs, and experiences held by the research team (Braun & Clarke, 2021a). As such, I present the theoretical stance taken here, as well as the characteristics of the research team as a whole. I also delve into how my own background may have influenced the process of conducting this systematic review.

Before describing my theoretical stance, it is important to give a brief overview of "epistemology" and "ontology" (Fryer, 2020). Ontology is concerned with what exists/"reality" and can be spilt into "realism" (a universal "reality" exists beyond individual perceptions), and "irrealism" (a universal "reality" does not exist beyond individual perceptions) (Fryer, 2020). Epistemology is concerned with the "knowledge" of what exists, and how this can be uncovered (Fryer, 2020). Epistemology can be split into "objectivist" – one can see the world as it is, and "subjectivist" – one may not be able to view the world impartially (however, a few stances can lay between these points) (Fryer, 2020). A theoretical stance is made by a mix of these ontological and epistemological stances; for example, "positivism" is

"realist" and "objectivist", "constructivism" is "irrealist" and "subjectivist" and "critical realism" is "realist" and "subjectivist" (Fryer, 2020).

At its heart, reflexive thematic analysis leans more towards a "constructivist" stance (Braun & Clarke, 2023; Fryer, 2022; Wiltshire & Ronkainen, 2021), although, researchers can at times allude to clashing "positivist" ideas when employing the method (Braun & Clarke, 2023; McAllum et al., 2019). There is no single way of conducting a thematic analysis (Fryer, 2022), nor indeed a reflexive thematic analysis (Braun & Clarke, 2023), however, what is important is to be transparent with regards to the approach you have taken (Braun & Clarke, 2023). As such, I took a "critical realist" viewpoint. I believed my findings were indicative of both a collective "reality" experienced by academic researchers', and a "reality" seen through the lens of the participants'/authors' (and my own) theoretical and personal positioning (Darabi et al., 2017; Fryer, 2020).

As indicated in chapter 1.13, coming into this PhD I did not have much personal experience with the academic work environment (although I had completed undergraduate and postgraduate (MSc) education). Therefore, there was always a risk that I could have overlooked key distinctions in experience that may have been more apparent to a senior member of academia. Given that I have found social support and peer support personally very helpful in challenging moments at work, there was also a risk that I could pay more attention to these factors when they arose in the data, potentially to the detriment of other protective factors mentioned. Nevertheless, I took steps to try to ensure that the influence of these personal experiences was minimised. I did this primarily through double checking the themes/sub-themes I created against the data in the included papers again, and by involving multiple research team members in my systematic review.

In the context of this study, the research team differed in terms of discipline, career stage, gender, and cultural background. ST is a current doctoral researcher with previous experience in conducting qualitative research, and experience as an assistant psychologist. At the time of conducting the review, JB was a Consultant Clinical Psychologist and Associate Clinical Professor. DL is a Senior Research Fellow. Both JB and DL have extensive experience in conducting qualitative research and

systematic reviews, and they have both worked in HE for a number of years. At the time of conducting the review, MN was a research assistant in the field of molecular medicine. Their participation in this study at various points throughout the process helped me to consider interpretations/insights that I may have overlooked due to my personal background. The collaborative development of the initial coding framework was particularly helpful in enabling me to think about the data in a different way.

## 2.3 Results

### 2.3.1 Screening outcome

Figure 2-1 depicts a PRISMA flow diagram concerning the process of identification, screening, and selection of papers for inclusion (Moher et al., 2009). 13,778 articles were identified through searching the bibliographic databases and Google Scholar. Eight additional articles were identified through citation tracking. Following de-duplication, 8,978 titles and abstracts were screened for relevance by the primary reviewer (HN) using the software tool Rayyan QCRI. Just over 10% (n=905) of the titles and abstracts were screened independently by a second reviewer (MN). Of the 8,978 papers 8,765 were excluded for irrelevance, leaving 213 full text articles to be sourced and read in full.

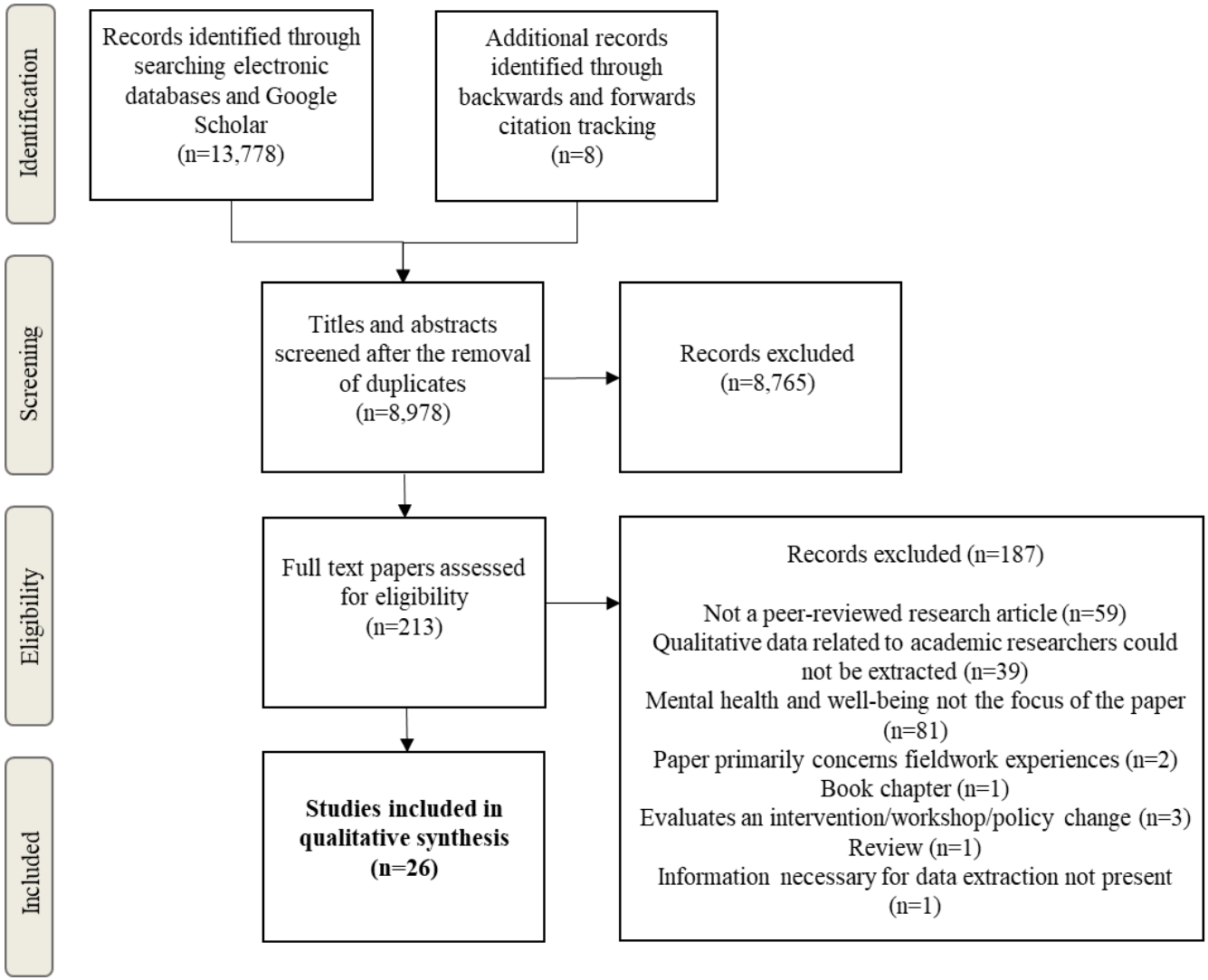


**Figure 2-1. PRISMA diagram reporting the process of identification, screening, and selection of papers for inclusion in the review.**

213 full articles were screened for relevance by the primary (me) and secondary reviewer (MN). At this stage 187 articles were excluded, for not being a peer-reviewed research article (n=59), for not focusing on mental health and well-being (n=81), and for not having extractable qualitative data related to academic researchers (n=39). Articles were also excluded on the basis of not having the information necessary for data extraction (n=1), for focusing primarily on fieldwork experiences (n=2), focusing on evaluating a workshop, intervention, or policy change (n=3), and finally for being a book chapter (n=1), or review (n=1). Any disagreements over eligibility at either the title and abstract stage or the full text stage were resolved through discussion between myself and MN. Where eligibility remained unclear, JB and DL were consulted and a decision was made.

Originally, I intended to include grey literature (1st person commentaries and theses) in the review. This was to ensure I captured sufficient data for a meta-synthesis to be feasible. However, I was able to source a sufficient number of peer reviewed research articles and I therefore decided to exclude the grey literature at the full text screening stage. Including only peer reviewed research articles can help foster belief in the findings of this review, as articles which have gone through the process of peer review are more likely to be of better standing (Kelly et al., 2014). Attempts were made to find peer-reviewed versions of the grey literature, which were then screened for relevance instead.

### 2.3.2 Characteristics of the included studies

Of the 26 papers included in the meta synthesis, five papers included participants based in North America (Canada, USA, Mexico), 13 papers included participants from Europe (UK, Finland, Germany, Sweden, Netherlands, Spain), one paper included participants from Asia (China), and nine papers included participants based in Australia and Oceania (Australia and New Zealand). The methods of data collection employed included: surveys with open-ended questions (n=7), interviews (n=14), focus groups (n=4), and autoethnographic excerpts (n=4). Whilst all participants were associated with conducting research, they varied in terms of career stage and role title. The most common group was that of doctoral researchers, with 14 papers including them as participants. The academic disciplines represented across the papers varied

extensively, as did the aspects of mental health and well-being examined. All of the studies were published between 2011 and 2021. Further details pertaining to the characteristics of the included studies can be found in Table 2-1. The details contained in Table 2-1 refer to the qualitative component of the papers, where papers are mixed methods or report on more than one study. Under the table heading 'participant characteristics', the following information is included: (a) population studied (%/no. of participants), (b) academic discipline(s)/field of study, (c) sex/gender (%/no. of participants). Under the heading 'study design', the following information is captured: (a) method of data collection, (b) method of data analysis.

**Table 2-1. Characteristics of the included studies and quality appraisal outcomes.**

| Author (year) Country | Title | Participant characteristics | Sample size | Aspect(s) of mental health and/or well-being explored | Study design | CASP quality appraisal outcomes (T=totally met, P=partially met, N=not met) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 |
| Barry et al., (2018) (Barry et al., 2018)<br><br>Australia | Psychological health of doctoral candidates, study-related challenges, and perceived performance | Doctoral researchers (n=81)<br><br>Discipline not stated<br><br>Sex/gender not stated clearly, however, the sample was stated as being dominated by female participants | 81 | Psychological distress | Survey questionnaire (included open ended questions)<br><br>Abductive analytical approach | T | T | T | T | T | N | T | T | T | T |
| Berry et al., (2020) (Berry et al., 2020)<br><br>UK | Hanging in the balance: Conceptualising doctoral researcher mental health as a dynamic balance across key tensions characterising the PhD experience | Doctoral researchers (n=12)<br><br>Science, Arts and Humanities, Social Science<br><br>Male (n=9), Female (n=23) | 32 | Mental health and mental health problems | Focus groups<br><br>Thematic analysis | T | T | T | T | T | T | T | T | T | T |
| Campbell (2018) (Campbell, 2018)<br><br>UK | Reconstructing my identity: An autoethnographic exploration of depression and anxiety in academia | An academic (n=1)<br><br>Law<br><br>Sex/gender not stated | 1 | Mental health illness | Diary entries<br><br>Evocative autoethnography | T | T | T | T | T | T | P | T | T | P |

| Author (year) Country | Title | Participant characteristics | Sample size | Aspect(s) of mental health and/or well-being explored | Study design | CASP quality appraisal outcomes (T=totally met, P=partially met, N=not met) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 |
| Chan et al., (2021) (Chan et al., 2021)<br><br>Australia | The battle-hardened academic: an exploration of the resilience of university academics in the face of ongoing criticism and rejection of their research | Professor (n=4), Associate Professor (n=2), Senior Lecturer (n=5), Lecturer (n=1)<br><br>Health Sciences<br><br>Male (n=4), Female (n=8) | 12 | Resilience | Semi-structured interviews<br><br>Thematic analysis | T | T | T | T | T | T | T | T | T | T |
| Chubb et al., (2017) (Chubb et al., 2017)<br><br>UK & Australia | Fear and loathing in the academy? The role of emotion in response to an impact agenda in the UK and Australia | Mid-senior career academics, specifically those who have been Principal or co-Investigators on grant applications) (n=51)<br><br>Arts and Humanities, Social Sciences, Engineering and the Physical Sciences, Life and Natural Sciences.<br><br>Male (n=31), Female (n=20) | 51 | Emotion | Semi-structured interviews<br><br>Thematic analysis | T | T | T | T | T | N | T | T | P | P |

| Author (year) Country | Title | Participant characteristics | Sample size | Aspect(s) of mental health and/or well-being explored | Study design | CASP quality appraisal outcomes (T=totally met, P=partially met, N=not met) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 |
| Cornwall et al., (2019) (Cornwall et al., 2019)<br><br>New Zealand | Stressors in early-stage doctoral students | Early-stage doctoral researchers (n=152)<br><br>Discipline not stated<br><br>Sex/gender not stated | 152 | Stress | Online questionnaire (included two questions which required free-text responses)<br><br>Thematic analysis | T | T | P | T | P | P | T | T | T | T |
| Cotterall et al., (2013) (Cotterall, 2013)<br><br>Australia | More than just a brain: emotions and the doctoral experience | International doctoral researchers (n=6)<br><br>Science, Human Science, Business and Economics<br><br>Male (n=3), Female (n=3) | 6 | Emotion | Multiple interviews conducted over a 2-year period (x3 interviews per year)<br><br>The data was analysed through the view of activity theory, and involved identifying all "emotion-related episodes" using "linguistic, non-linguistic, and contextual cues" | T | T | T | T | T | P | N | T | T | P |

| Author (year) Country | Title | Participant characteristics | Sample size | Aspect(s) of mental health and/or well-being explored | Study design | CASP quality appraisal outcomes (T=totally met, P=partially met, N=not met) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 |
| Darabi et al., (2017) (Darabi et al., 2017)<br><br>UK | A qualitative study of the UK academic role: positive features, negative aspects and associated stressors in a mainly teaching-focused university | Associate Lecturers (n=2), Lecturers (n=6), Senior Lecturers (n=16), Principal Lecturers (n=5), Professors (n=2).<br><br>Discipline not stated.<br><br>Male (n=12), Female (n=18) Transgender (n=1) | 31 | Coping | Structured interviews (online)<br><br>Thematic analysis | T | T | T | T | T | P | T | T | T | T |
| Herbert et al., (2014) (Herbert et al., 2014)<br><br>Australia | The impact of funding deadlines on personal workloads, stress, and family relationships: a qualitative study of Australian researchers | Early career researchers (e.g., Assistant Lecturer, Lecturer) (26%) mid-career researchers (e.g., Senior Lecturer) (27%), senior level researchers (e.g., Associate Professor, Professor) (39%), role not stated (8%). "The target group was researchers with experience of applying for a NHMRC Project Grant".<br><br>Discipline not stated<br><br>Sex/gender not stated | 215 | Stress | Online survey (included an open-ended question)<br><br>Thematic analysis | T | T | T | T | T | N | P | T | T | T |

| Author (year) Country | Title | Participant characteristics | Sample size | Aspect(s) of mental health and/or well-being explored | Study design | CASP quality appraisal outcomes (T=totally met, P=partially met, N=not met) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 |
| McGee et al., (2019) (McGee et al., 2019)<br><br>USA | "I Know I Have to Work Twice as Hard and Hope That Makes Me Good Enough": Exploring the Stress and Strain of Black Doctoral Students in Engineering and Computing | Black doctoral researchers (n=38), postdoctoral researchers (n=3), recently awarded PhD/graduated (n=1), role not stated (n=6)<br><br>Engineering and Computing fields<br><br>Male (n=29), Female (n=19) | 48 | Stress and coping | Semi-structured interviews & focus groups<br><br>"Transcendental phenomenology" | T | T | P | P | T | T | T | T | T | T |
| Medina et al., (2016) (Medina et al., 2016)<br><br>Mexico | Emotional Burnout Syndrome in Women Researchers: The case of the Juarez Autonomous University of Tabasco | Researchers with symptoms of Emotional Distress Syndrome (EDS) (n=13)<br><br>Discipline not stated.<br><br>Female (n-13) | 13 | Emotional Distress Syndrome | Semi-structured interviews<br><br>Open, axial, and selective coding | T | T | T | T | T | T | N | T | T | T |
| Muir et al., (2021) (Muir et al., 2021)<br><br>North America & Australia | Examining Professional Development among Faculty Members across Varying Career Stages in Kinesiology | Assistant Professor (n=1), Associate Professor (n=1), Professor (n=1)<br><br>Kinesiology<br><br>Sex/gender not stated | 3 | Coping | Semi-structured phone interviews<br><br>Abductive analysis | T | T | P | T | T | N | P | P | T | T |

| Author (year) Country | Title | Participant characteristics | Sample size | Aspect(s) of mental health and/or well-being explored | Study design | CASP quality appraisal outcomes (T=totally met, P=partially met, N=not met) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 |
| Nikischer, (2019) (Nikischer, 2019)<br><br>USA | Vicarious trauma inside the academe: understanding the impact of teaching, researching, and writing violence | Tenure-track faculty member (n=1)<br><br>Field of violence against women<br><br>Sex/gender not stated | 1 | Vicarious and secondary trauma | Reflective journals<br><br>Analytic autoethnography (not explicitly stated) | T | T | T | T | T | P | N | T | T | T |
| Pappa et al., (2020) (Pappa et al., 2020)<br><br>Finland | Sources of stress and scholarly identity: the case of international doctoral students of education in Finland | International doctoral researchers (n=11)<br><br>Educational Sciences<br><br>Male (n=1), Female (n=10) | 11 | Stress | Semi-structured interviews<br><br>Thematic analysis | T | T | P | T | P | T | T | T | T | T |
| Schmidt et al., (2014) (Schmidt & Umans, 2014)<br><br>Sweden | Experiences of well-being among female doctoral students in Sweden | Doctoral researchers (n=12)<br><br>Biology, Business Administration, Health Sciences, Nursing, Informatics, Public Health.<br><br>Female (n=12) | 12 | Well-being | Focus groups<br><br>Structural analysis | T | T | T | T | T | T | T | T | T | T |

| Author (year) Country | Title | Participant characteristics | Sample size | Aspect(s) of mental health and/or well-being explored | Study design | CASP quality appraisal outcomes (T=totally met, P=partially met, N=not met) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 |
| Skakni et al., (2017) (Skakni & McAlpine, 2017)<br><br>UK | Post-PhD researchers' experiences: an emotionally rocky road. | Post-PhD researchers (n=71)<br><br>Social sciences, Humanities, Education, Life Science, Health Sciences and Engineering<br><br>Male (35%), Female (65%) | 71 | Emotion | Online survey (included open ended questions) & semi-structured interviews<br><br>"Four-step iterative process inspired by a thematic analysis" | T | T | T | T | T | P | P | T | T | T |
| Stubb et al., (2011) (Stubb et al., 2011)<br><br>Finland | Balancing between inspiration and exhaustion: PhD students' experienced socio-psychological well-being | Doctoral researchers (n=383)<br><br>Humanities, Medicine, Behavioural Sciences<br><br>Male, Female (numbers not stated for the qualitative component) | 383 | Socio-psychological well-being. | Online survey (included open ended questions)<br><br>Content analysis (through an "abductive strategy") | T | T | P | P | P | N | N | T | T | T |
| Todd, (2021) (Todd, 2021)<br><br>UK | Experiencing and embodying anxiety in spaces of academia and social research | Doctoral researcher (n=1)<br><br>Social Sciences (Human Geography).<br><br>Male (n=1) | 1 | Anxiety | Autoethnographic excerpts from field notes<br><br>Analytic autoethnography (not explicitly stated) | T | T | P | T | T | P | N | T | T | T |

| Author (year) Country | Title | Participant characteristics | Sample size | Aspect(s) of mental health and/or well-being explored | Study design | CASP quality appraisal outcomes (T=totally met, P=partially met, N=not met) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 |
| van der Weijden et al., (2016) (van der Weijden et al., 2016)<br><br>Netherlands | Career satisfaction of postdoctoral researchers in relation to their expectations for the future | Postdoctoral researchers (n=21)<br><br>Sciences (e.g., Chemistry, Mathematics, Computer Science, Astronomy, Physics, Biology, Environmental Science), Technical Sciences and Engineering, Humanities, Social and Behavioural Sciences, Archaeology<br><br>Male (n=134), Female (n=91) | 225 total respondents (the number of respondents who contributed to the qualitative component is unknown) | Job satisfaction | Online survey (includes open-ended questions)<br><br>Open coding | T | T | T | T | T | P | N | P | N | T |

| Author (year) Country | Title | Participant characteristics | Sample size | Aspect(s) of mental health and/or well-being explored | Study design | CASP quality appraisal outcomes (T=totally met, P=partially met, N=not met) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 |
| Waight et al., (2018) (Waight & Giordano, 2018)<br><br>UK | Doctoral students' access to non-academic support for mental health | Doctoral researchers (n=594)<br><br>Discipline not stated<br><br>Online survey (sex/gender not stated), Focus group (Male n=11, Female n=24) | Online survey (559 total respondents – the number of respondents who contributed to the qualitative component is unknown)<br><br>Focus group (35) | Mental health | Online survey (included open comments section) & focus groups<br><br>Coding using an "inductive, interpretative approach" | T | T | T | T | T | T | P | T | T | T |
| Wang et al., (2019) (Wang et al., 2019)<br><br>China | Towards the contributing factors for stress confronting Chinese PhD students | Doctoral researchers (n=10)<br><br>Humanities and Social Science<br><br>Male (n=5), Female (n=5) | 10 | Stress | Semi-structured interviews<br><br>Open, axial, and selective coding | T | T | T | T | T | T | T | T | T | T |

| Author (year) Country | Title | Participant characteristics | Sample size | Aspect(s) of mental health and/or well-being explored | Study design | CASP quality appraisal outcomes (T=totally met, P=partially met, N=not met) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 |
| Weise et al., (2020) (Weise et al., 2020)<br><br>Spain | Significant events and the role of emotion along doctoral researcher personal trajectories | Doctoral researchers (n=10)<br><br>Social Sciences<br><br>Female (n=7), sex/gender not stated (n=3) | 10 | Emotion | Multimodal, semi-structured interviews<br><br>"Qualitative interpretative approach of a transversal nature" | T | T | T | T | T | P | T | T | T | T |
| White, (2018) (White, 2018)<br><br>Australia | Are New Career Models for Science Research Emerging | Research scientists including doctoral researchers in the third year of their candidature, early post docs, mid-career postdocs, and senior Principal Investigators/lab heads/divisional heads (numbers not stated)<br><br>Sciences<br><br>Male, Female (number not stated) | 40 | Job satisfaction | Interviews<br><br>Qualitative content analysis | T | T | T | T | T | T | T | T | T | P |

| Author (year) Country | Title | Participant characteristics | Sample size | Aspect(s) of mental health and/or well-being explored | Study design | CASP quality appraisal outcomes (T=totally met, P=partially met, N=not met) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 |
| Yang et al., (2020) (Yang & Bai, 2020)<br><br>Australia | Psychological Adjustment of Chinese PhD Students: A Narrative Study | Chinese doctoral researchers based in Australia (n=6)<br><br>Marketing, Education, Management, Linguistics, Communications, Economics<br><br>Male (n=1), Female (n=5) | 6 | Stress-coping strategies | Narrative inquiry method (3 stages of individual interviews)<br><br>Open, axial, and selective coding | T | T | T | T | T | P | N | T | T | T |
| Young et al., (2017) (Young et al., 2017)<br><br>Canada | Women Reflect on Being Well in Academia: Challenges and Supports | Academics – on contract (n=3), tenure track (n=5), tenured (n=5).<br><br>Education, Social Studies, Counselling Psychology<br><br>Female (n=13) | 13 | Health and wellness | Personal narratives<br><br>Thematic analysis | T | T | T | P | P | N | N | T | T | P |

| Author (year) Country | Title | Participant characteristics | Sample size | Aspect(s) of mental health and/or well-being explored | Study design | CASP quality appraisal outcomes (T=totally met, P=partially met, N=not met) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 |
| Ysseldyk et al., (2019) (Ysseldyk et al., 2019)<br><br>Canada & Germany | A Leak in the Academic Pipeline: Identity and Health Among Postdoctoral Women | Postdoctoral researchers (n=21)<br><br>Psychology, Physics, Political Science, Natural Sciences.<br><br>Female (n=21) | 21 | Mental health | Semi-structured interviews<br><br>Thematic analysis | T | T | T | T | T | N | T | P | T | T |

### 2.3.3 Quality appraisal

At the time of this review, research into the mental health and wellbeing of researchers in academia was still in the early stages, with limited literature published. As such, no paper was excluded from this review due to its quality. However, each study was given a quality rating through the use of the Critical Appraisal Skills Program (CASP) checklist. The Critical Appraisal Skills Program (CASP) checklist is often endorsed by the Cochrane Collaboration, and it captures the foundations of qualitative research well (Long et al., 2020).

The CASP criteria are as follow: Q1: "Was there a clear statement of the aims of the research?" Q2: "Is a qualitative methodology appropriate?" Q3: "Was the research design appropriate to address the aims of the research?" Q4: "Was the recruitment strategy appropriate to the aims of the research?" Q5: "Was the data collected in a way that addressed the research issue?" Q6: "Has the relationship between researcher and participants been adequately considered?" Q7: "Have ethical issues been taken into consideration?" Q8: "Was the data analysis sufficiently rigorous?" Q9: "Is there a clear statement of findings?" Q10: "How valuable is the research?" We answered the questions using the scale of : "totally met" (T), "partially met" (P), or "not met" (N) (Lachal et al., 2017).

The studies were independently assessed on quality by myself and ST. Any disagreements were resolved through discussion. Individual study quality ratings can be found in Table 2-1.

### 2.3.4 Meta-synthesis

I identified seven key themes through the reflexive thematic analysis. The key themes along with their corresponding sub-themes (which are highlighted in bold and italicised in the text) are reported below with illustrative extracts. Figure 2-2 visually depicts the interconnected nature of the main themes and sub-themes.

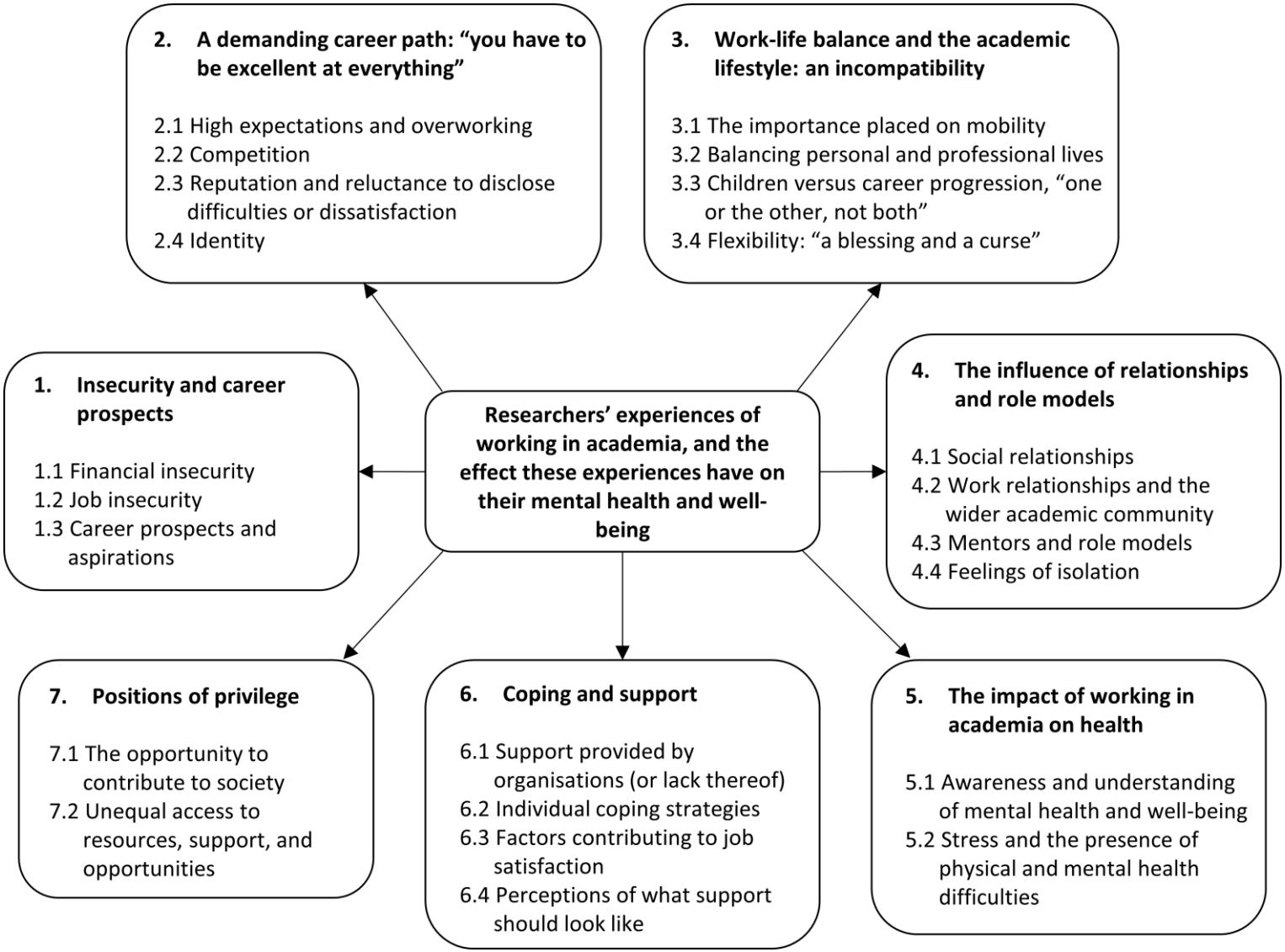


**Figure 2-2. A visual representation of the main themes and sub-themes identified through the meta-synthesis.**

## 1. Insecurity and career prospects

Issues with ***financial insecurity*** spanned researchers' experiences across countries, disciplines, and career stages, and often resulted in feelings of worry and stress. Researchers from the UK commented on a scarcity of funding to effectively support students at undergraduate level and above (Darabi et al., 2017), whilst professors at varying levels from North America and Australia commented on a lack of funding to support professional development activities (Muir et al., 2021). Doctoral researchers', on the other hand, commented on the low funds they received during their studies as part of their scholarship or stipend :

> *"… receiving "a stipend that can barely […] support your living' as a doctoral student is not the same as other people earning money, like, real money by working""*
>
> (Doctoral researcher, Educational Sciences, Finland - (Pappa et al., 2020)).

For many post-doctoral researchers and those in the later stages of their career, economic precarity was also linked directly to ***job insecurity***. Researchers from Australia in the later stages of their career (Herbert et al., 2014; White, 2018) drew attention to the importance of successfully obtaining a grant to fund research activity, which helps to maintain both current job contracts and research personnel. Their job being dependent on the outcome of a funding round or securing a grant – the process of which was not always considered fair – placed extensive "*pressure*" on researchers, which ultimately impacted negatively on their well-being:

> *"… the chance of anyone with even a modicum of expertise in your field reviewing your grant is basically zero"*
>
> (Mid-career researcher, Australia - (Herbert et al., 2014)).

> *"… Many people anxiously await the grant outcome to see if they are out of work in six weeks"*
>
> (Senior researcher, Australia - (Herbert et al., 2014)).

The stressful nature of precarious work contracts was further compounded by a lack of communication from the universities around extending contracts:

> *"… my contract was coming up for renewal, and my university just messed me around…they weren't telling me anything…"*
>
> (Post-doctoral researcher, Education, UK - (Skakni & McAlpine, 2017)).

Others felt that this precariousness also prevented researchers from expressing dissatisfaction with current work practices at an institution:

> *"… you can lose your job if you question practices of a higher level…."*
>
> (Professor, Engineering Education, Australia - (Chubb et al., 2017)).

Both financial and job insecurity impacted on researchers' ***career prospects and aspirations***. Unsurprisingly, perceptions of career prospects were influenced by the dependability of funding. However, they were also influenced by the lack of "*tenure-track*" (Ysseldyk et al., 2019) and secure jobs available in academia. Indeed, some researchers felt that the work they put in, the successes they had had, and the expertise they developed should secure them the possibility of a secure job:

> *"… it is not weird…to expect after such long studies and with such a great CV, to get a permanent position as reward and acknowledgement…"*
>
> (Post-doctoral Researcher, Netherlands - (van der Weijden et al., 2016)).

Nevertheless, despite reduced career opportunities which may compromise mental health and well-being, a number of researchers, particularly those in the post-doctoral stage, stated that it was their intention to stay in academia. Doctoral researchers, however, were more wary in committing to a career path:

> *"I am green with envy and stressful when I see my classmates at college are well-settled down in their career while I am still struggling for a PhD, my career still being an illusion"*

(Doctoral researcher, China - (Wang et al., 2019)).

It is important to keep in mind that sparse access to career workshops or "*coaching*" (van der Weijden et al., 2016) and thus a lack of knowledge about career paths outside of academia, may influence a researcher's intent to stay on the academic path:

> *"… I feel I have little to offer outside of the university sector and am unsure what I could realistically go for!"*

(Participant 12, UK - (Darabi et al., 2017)),

**2. A demanding career path: "you have to be excellent at everything"**

The sub-theme ***high expectations and overworking*** was present across all 26 of the included papers. High expectations encapsulates the pressure to engage with the three domains of research, teaching, and service (for example conducting a review of a program (Young et al., 2017)), whether trained in these domains or not, the pressure to handle competing demands with strict deadlines, to work unpredictable and long hours, to be independent, to handle multiple counts of criticism and rejection (Chan et al., 2021), and to be resilient in the face of these expectations. Ultimately, researchers were expected to be focused on impact and productivity (Todd, 2021) rather than on their own well-being/capacity.

These expectations were set by the system, and consequently by colleagues and the researcher themselves. Prominent factors which made meeting these expectations difficult, particularly for post-doctoral researchers and researchers in the later stages of their career included the introduction of new research policies which were not conducive to all disciplines, increased student numbers without the necessary resources in place to manage this, increased administrative loads, and the expectation to provide pastoral support to students. The expectation to produce research that is 'impactful' appeared to more negatively impact the well-being of those from less applied/theoretical disciplines (Chubb et al., 2017), whilst the expectation to provide pastoral support fell more on female researchers:

*"… she had people queuing out the door for office hours even if they weren't really her students …"*

(Doctoral researcher, Arts & Humanities, UK - (Berry et al., 2020)).

To meet the job demands of academia and/or have the 'success' necessary to secure an ever-elusive permanent position, researchers across countries, career stages, and disciplines described the extra duties taken on, long working hours, and the 'productivity guilt' that ensued when they were not able to meet their own or others' expectations. This left them at risk of stress and burnout:

*"…if it's like 4 pm and…my experiment hasn't worked, immediately my brain is like "Well you should start it again and leave work at 10pm…finish it, get it right…"*

(Doctoral researcher, Science, UK - (Berry et al., 2020)).

Research cultures characterised by high expectations, job precarity, and reduced opportunities for permanent positions engendered a sense of ***competition*** among the research community often described as "*nasty, aggressive and unpleasant"* (White, 2018). Nevertheless, it was difficult not to perpetuate this sense of competition, so as not to feel at a disadvantage career-wise:

*"… I will still secretly judge if somebody always goes home at 4pm, and I know I shouldn't… But there is this… highly competitive spirit that everybody sort of expects, that if you want to be the best then you have to work 80 h a week …"*

(Post-doctoral researcher, Canada - (Ysseldyk et al., 2019)).

In the interest of career progression, both early career researchers and researchers at more senior levels expressed wanting to maintain a ***reputation*** of being able to meet the high expectations set:

*"… I have known academics who have hidden their mental distress for fear of being pigeonholed as flimsy and undependable"*

(Campbell, 2018).

Interestingly, career stage did not appear to impact researchers' ***reluctance to disclose difficulties or dissatisfaction*** (that is, difficulties of an academic, mental health, or well-being related nature):

*"…I don't want to give the impression that I'm already failing"*

(Doctoral researcher, Science, UK - (Berry et al., 2020)).

Due to this general reluctance to disclose, researchers were left at risk of condemning themselves for any job-related difficulties or a lack of job satisfaction. This risk was further compounded by encountering, or feeling like they will encounter, negative reactions from colleagues or supervisors when difficulties or dissatisfaction related to the workplace were shared:

*"I just felt like… they wouldn't listen to me as a person and they would just say, "Hey, see these Black kids can't cut it"*

(Post-doctoral researcher, Mechanical Engineering, USA - (McGee et al., 2019)).

For doctoral researchers specifically, the reluctance to disclose was also related to not being sure whether the supervisor was available for pastoral support, concerns around information remaining confidential, and worries that they may further overload others:

*"…they're stressed and it feels like a lot to say to them…'Can we talk to you more…?"*

(Doctoral researcher, Arts & Humanities, UK - (Berry et al., 2020)).

It is important to note that some researchers encountered both reassurance and help from their colleagues and supervisors following the disclosure of difficulties (Berry et

al., 2020; Campbell, 2018). However, the extent to which this lasted was limited in some cases:

> *"…two focus group participants with chronic mental health conditions stated that although supervisory teams were sympathetic when they first learned of the student's condition, participants felt that this was soon forgotten or dismissed with the expectation that they must surely be 'over it' after a period of time"*
>
> (Waight & Giordano, 2018).

Ultimately, being perceived as meeting or not meeting the expectations set by themselves, colleagues, or the system as a whole may have an impact on a researcher's confidence in their ability to do their job, not only affecting their well-being, but also their sense of ***identity*** as an academic, and thus their feelings around whether they belong in academia.

> *"Receiving an award from a research society based on my presentation and work [...] I felt that I was recognised as an experienced researcher who could convey my research and was becoming an expert in my field"*
>
> (Post-doctoral researcher, Oncology, UK - (Skakni & McAlpine, 2017)).

Indeed, some researchers commented on feeling that they were not reaching the level of the perceived 'proper' or 'ideal' academic. Doubting oneself despite successes is indicative of imposter syndrome, a common occurrence in academia that can impact negatively on mental health:

> *"In some cases, women also explicitly attributed mental health issues to imposter syndrome, as in the case of a Canadian postdoc who reported: "Mentally I think definitely there's been some bouts of depression. You know, definitely some imposter syndrome… So with that, you know, definitely some anxiety…""*
>
> (Ysseldyk et al., 2019).

A factor which further impacted doctoral researchers' identity and sense of belonging at work was uncertainty around whether they are student or faculty:

> *"…we are like ghosts in the campus. We are part of the faculty, but we are not"*
>
> (Doctoral researcher, Arts & Humanities, UK - (Berry et al., 2020)).

**3. Work-life balance and the academic lifestyle: an incompatibility**

The high expectations set by academia coupled with ***the importance placed on mobility*** for continued employment: "*I'm working in a city for 2 years and then I'm expected to move to a whole new country... "* (Post-doctoral researcher, Germany - (Ysseldyk et al., 2019)), networking, and career progression: *"One of the requirements for the fellowship above my level specifically says you have had to work overseas"* (Participant, Sciences, Australia - (White, 2018)) often made ***balancing personal and professional lives***, difficult. Researchers across career stages, academic disciplines, and countries described academia as unyielding in this regard:

> *"…You are either expected to play the game in full or get out"*
>
> (Post-doctoral researcher, Canada - (Ysseldyk et al., 2019)).

Feeling unable to step away from the job/academia and engage with other important activities had the potential to lead to high levels of stress and burnout. Feelings of frustration and guilt were also particularly prevalent in responses which mentioned *"conflict"* between job demands and family systems:

> *"…my family is the most important to me, but so is my career, and there is when I go into conflict…I do not want to leave either of them but I cannot be in both places at the same time..."*
>
> (Participant, Mexico - (Medina et al., 2016)).

Indeed, a key stressor spoken about primarily by female researchers, was that of when to start a family. Early career researchers in particular described the following tension: ***children versus career progression, "one or the other not both".*** It was perceived that having children was not often encouraged within the academic environment due to the potential for it to have a negative impact on work duties:

> *"The gossip in my department was that. . . the climate was not very conducive for women to become pregnant … they become less useful for the department during their time off…"*
>
> (Post-doctoral researcher, Germany - (Ysseldyk et al., 2019)).

Ultimately, in the context of their job/academic duties (i.e., funding (White, 2018), publishing (Ysseldyk et al., 2019)); pregnancy, taking maternity leave, and raising a child left female researchers feeling delayed in their efforts to progress:

> *"… I feel like that does harm your career. Because I don't think it's recognized. . . you're still expected to be producing a certain number of publications even if you are taking time off to have kids..."*
>
> (Post-doctoral researcher, Canada - (Ysseldyk et al., 2019)).

Nevertheless, flexibility over ideas and work hours appeared to be associated with good well-being as it allowed academic researchers to retain some control over their personal and professional lives. However, the tension, ***flexibility: "a blessing and a curse"*** was prevalent in the literature. Some early career researchers including doctoral researchers and post-doctoral researchers, associated this autonomy with finding it tough to stay on track and complete tasks:

> *"The flexibility, it's both a blessing and a curse really, every day you kind of plan for yourself, and it's a blank slate. But admittedly a lot of times I wake up and I'm not sure what I'm going to achieve that day and I don't achieve anything"*
>
> (Post-doctoral researcher, Canada - (Ysseldyk et al., 2019)).

## 4. The influence of relationships and role models

Researchers' ***social relationships*** were often described as being sources of support. Social relationships were described as protective against the experience of mental health or well-being-related difficulties, and often aided in maintaining a good work life balance:

> *"…my husband and children allowed me to stay sane because it forced me to make time for other things than work"*
>
> (Professor, Kinesiology - (Muir et al., 2021)).

However, social relationships could also be a source of stress. Due to the demands and high expectations associated with the academic job role, establishing, or maintaining social relationships outside of academia could be complex:

> *"Only the strongest relationships survive…I focus on only the closest family members [for] maintaining relationships. Other relationships have had to adapt…or, more often, disintegrate"*
>
> (Senior researcher, Australia - (Herbert et al., 2014)).

Researchers' also spoke about their ***work relationships and the wider academic community*** in the context of being protective against the demands of the job. Positive interactions at work helped to combat feelings of loneliness, isolation, and mental distress. Having supportive peers within the same discipline, at a similar career stage, or with similar personal characteristics was considered particularly beneficial, as it led to a feeling of camaraderie:

> *"… there is no one else that understands you as well as another doctoral student …"*
>
> (Doctoral researcher, Sweden - (Schmidt & Umans, 2014)).

Nevertheless, researchers' work relationships could also be stressful. The competition to get ahead in academia can encourage both *"negative self-comparisons"* (Berry et al., 2020) and fractious relationships to form between colleagues, which could sometimes prevent peer support from occurring:

> *"Colleagues take advantage…It made me understand the kind of person I find difficult to work with"*
>
> (Post-doctoral researcher, Medical Sciences, UK - (Skakni & McAlpine, 2017)).

For researchers who also taught, their interactions with students were described as similarly double edged, being both a source of job satisfaction and stress:

> *"There is a lack of respect with some. They disrupt lectures and send quite rude emails demanding attention"*
>
> (Participant 28, UK - (Darabi et al., 2017)).

Researchers from all career stages spoke about the importance of ***mentors and role models***, that is, having someone to show them the ropes as they navigated the academic pathway. For doctoral researchers, the supervisor was seen as an individual who could keep them on track, and increase their self-belief/confidence. However, supervision could negatively impact mental health and well-being if it was perceived as not meeting the doctoral researchers' own needs and expectations or was considered unhelpful or harmful. A lack of set procedures to follow and a lack of training were thought to encourage negative supervisory practices:

> *"[supervisors] might be amazing scientists, but they have never been trained in… managing collective people"*
>
> (Doctoral researcher, Science, UK - (Berry et al., 2020)).

Role models were particularly important for both women and those from a Black ethnic background, who are under-represented among the senior levels in academia.

This lack of representation at the higher levels led to feelings of not belonging amongst early career researchers who share these characteristics:

> *"…I feel like engineering in general is much harder for minorities because they don't have a lot of people they can look up to…"*
>
> (Doctoral researcher, Computer Science, USA - (McGee et al., 2019)).

The absence of either good supervision, role models, or peer or social networks led to ***feelings of isolation*** and loneliness, which had the potential to significantly impact not only researchers' mental health and well-being, but also their productivity at work (Nikischer, 2019). In the context of this review, particular groups at risk of isolation included female researchers (Ysseldyk et al., 2019), researchers from a Black Ethnic background (McGee et al., 2019), and part-time or international doctoral researchers (Waight & Giordano, 2018):

> *"…you end up being totally isolated and I think it's easier to some extent for British or when you have your family because even if they don't know anything what you're doing they are still there to support you…"*
>
> (Doctoral researcher, UK - (Waight & Giordano, 2018)).

**5. The impact of working in academia on health**

Researchers' ***awareness and understanding of mental health and well-being*** varied across the included papers. Indeed, the 'normalizing' of chronic stress in academia left some researchers unsure as to whether they were at risk of developing, or currently experiencing, difficulties with their health or well-being:

> *"…even those women who said that they did not experience negative effects on their health due to their academic careers mentioned that they experienced great amounts of stress and contended with sleepless nights, suggesting that those women came to expect extreme stress and lack of sleep as a part of the normal postdoctoral experience"*

(Ysseldyk et al., 2019).

Overall, there was a general call for more openness with regards to managing mental health and well-being in the context of academia:

> *"[A]t high levels there's not very much vulnerability and transparency about how people actually approach their daily work lives and how they actually go about maintaining their wellbeing at the same time as achieving as a researcher"*

(Doctoral researcher, Science, UK – (Berry et al., 2020)).

Due to feelings of uncertainty, and varying levels of "*mental health literacy*", doctoral researchers highlighted the key role of the supervisor in helping them get support for their mental health or well-being:

> *"…it really saved me… they weren't going to be my therapist, of course…but they were there to make sure that I addressed my issues"*

(Doctoral researcher, Arts & Humanities, UK - (Berry et al., 2020)).

The lack of open discourse around mental health and well-being related difficulties seemed to perpetuate the idea that a successful academic is infallible and immune to such difficulties. However, this is often not the case, and a large majority of researchers across countries, disciplines and career stages described experiencing ***stress and the presence of physical and mental health difficulties***:

> *"…she's got all these publications and she's had grants – …actually my life is a bloody nervous wreck"*

(Professor, Music, Australia - (Chubb et al., 2017)).

> *"I suffered severe pain and unknown skin irritations and allergy symptoms. The doctor said everything was caused by stress…"*

(Participant, Canada - (Young et al., 2017)).

There were some exceptions in the research. For example, when managed using "*personal resources*", the presence of stress was sometimes seen as helpful in pushing an individual forward to achieve their goals:

> *'…seeing stress as "a motivation by itself" urges one to "try harder" and "become more competent and more efficient"…'*

(Doctoral researcher, Education, Finland - (Pappa et al., 2020)).

**6. Coping and support**

***Support provided by organisations (or lack thereof)*** was touched upon across many of the included papers. Overall, there appeared to be a disconnect between the high expectations set by the HE system, and the space and tools given to researchers in order to reach these expectations:

> *"Just when most academics are due for a break, right when most universities shut down and take offline all of their support services, RGMS [online application process] opens up"*

(Senior researcher, Australia - (Herbert et al., 2014)).

Interestingly, UK doctoral researchers (Berry et al., 2020) perceived that universities were more focused on their institutional renown, rather than addressing their mental health and well-being. Early career researchers across Canada, Germany and the USA also indicated a level of frustration over the lack of movement in policy or practice which could help to counteract the known difficulties faced by under-represented groups in academia (including women and those from a Black ethnic background):

> *"…Structural barriers. . . are documented and real, and yet the universities still have this gender bias problem"*

(Post-doctoral researcher - (Ysseldyk et al., 2019)).

There were varying levels of awareness as to what institutional support was currently available (either in terms of mental health or professional development). Some researchers appeared to encounter difficulties in accessing the support provided either due to the support information not being easily accessible (Waight & Giordano, 2018), or due to their career stage (Ysseldyk et al., 2019). A post-doctoral researcher mentioned:

> *"My officemate actually was particularly anxious and he called some kind of help line at [the university] looking for support and they denied him anything as a postdoc. They told him if he were a student okay, or faculty okay, but as a postdoc we can't help you. . .."*
>
> (Post-doctoral researcher, Canada - (Ysseldyk et al., 2019)).

Queries were also raised as to the effectiveness of 'student services' in handling the challenges of doctoral researchers:

> *"My experience with student services was they didn't know what they could do, they'd say 'I'll look into it'. Granted I'm in quite a unique situation right now, they are multiple things going on. They said 'I don't know if we can do anything to help you, I can look into it and get back to you"*
>
> (Doctoral researcher, UK - (Waight & Giordano, 2018)).

However, others did describe university-based support they had found helpful:

> *'the counselling was great. She really helped me'*
>
> (Doctoral researcher, UK - (Waight & Giordano, 2018)).

The lack of support provided by organisations necessitated the use of ***individual coping strategies*** to counteract the stress of working in academia. Here, researchers focused on both what they were able to change and taking charge where they could. The most common coping strategy mentioned was perseverance, however, a mixture

of other cognitive and more practical coping strategies were also used, such as positively re-framing the experience and getting support from professionals.

> *"My stick-to-it-ive nature . . . has kept me and gotten me to the point where I am, and gotten me to the point where I can finish…"*
>
> (Doctoral researcher, USA - (McGee et al., 2019)).

Although not an individual coping strategy per se, over time the potency of negative emotions tended to decrease:

> *"I don't care anymore; I've kind of forgotten about it, to be honest. [.. .] At the time, I was very frustrated and irritated…"*
>
> (Post-doctoral researcher, Sociology, UK - (Skakni & McAlpine, 2017)).

***Factors contributing to job satisfaction*** including a passion for science, recognition of hard work from peers or institutions, seeing students develop, or a paper being accepted for publication, also aided in attempts to maintain positive well-being at work:

> *"The science gives me the greatest satisfaction … the satisfaction of pitching a question, seeing the results come through"*
>
> (Senior researcher, Science, Australia – (White, 2018)).

***Perceptions of what support should look like*** were included across many of the studies in this review. Most prominent among the suggestions which could improve researchers' mental health and well-being at work was a call for organisations to assess *"productivity relative to opportunity"* (White, 2018), and clarity regarding promotional processes so pragmatic goals can be worked towards (Young et al., 2017). Researchers at different career stages also commented on the importance of their physical workspaces engendering a sense of belonging and well-being:

*"…there no space on this campus where…five of us can sit down and just yap without the undergrads constantly taking that space…we talk so much about informal learning and…we don't have a space for PhD students…Places need to grow"*

(Doctoral researcher, Social sciences, UK - (Berry et al., 2020)).

Some suggestions for support were specific to particular academic researcher populations. Post-doctoral researchers explicitly called for more support which could help them to progress their careers (van der Weijden et al., 2016), whilst doctoral researchers called for supervisors to receive supervisory training. Allocating a supervisor(s) after taking into account both the research and support needs of the doctoral researcher, was also suggested.

**7. Positions of privilege**

Academics from different career stages felt privileged to be in a position where they had ***the opportunity to contribute to society*** through their research. Nevertheless, feeling a moral obligation to help improve society had the potential to negatively impact upon well-being through contributing to overwork, and tensions could be found between colleagues and social support networks when moral opinions were out of sync:

*"Someone I know who got one of the largest grants ever said, 'I don't care if my research has impact – I'm doing this because I'm curious about this' and I just thought that was an appalling waste of tax payer's money…"*

(Professor, Education, UK - (Chubb et al., 2017)).

Feelings of tension could also arise when immediate benefits to society or individuals could not be observed, particularly when the research involves discussing sensitive topics such as trauma:

*"…. the promise of the potential for positive change years down the road does little to help a researcher sleep at night"*

(Nikischer, 2019).

Although already touched upon in other key themes (notably ‘work-life balance and the academic lifestyle: an incompatibility’ and ‘the influence of relationships and role models’), the included papers indicated a sense of inequality in academia that should be drawn out more explicitly.

This sense of inequality was particularly prevalent among responses from female researchers and researchers from a Black ethnic background, who are under-represented among the senior levels in academia, and who often described encountering, or expecting to encounter, incidents of harassment, bias, or discrimination. This left them at risk of ***unequal access to resources, support, and opportunities***, and reduced well-being at work:

> *“… I’m the only Black guy in the group . . . and the only one being treated this way. So, you’re like, “What?!” you know”*

(Doctoral researcher, USA - (McGee et al., 2019)).

These experiences were considered reflective of society in general. Consequently, it was thought that both society and HE organisations (Ysseldyk et al., 2019) need to evolve in order to help foster a more supportive and equal research culture:

> *“… students reported feeling the need to combat stereotypes that seeped from society at large into their engineering and computing programs”*

(McGee et al., 2019).

Ultimately a few researchers felt that:

> *“‘there’s definitely a boys/girls’ club’ and being part of that group ‘can help your career’”*

(White, 2018).

## 2.4 Discussion

I aimed to better understand how researchers experience working in academia, and the effect these experiences have on their mental health and well-being. I identified seven key themes as a result of conducting a meta synthesis across 26 papers which met our inclusion criteria.

The seven key themes spanned across the countries, disciplines and career stages mentioned in the included papers, and shed light on factors at an 'individual', 'interpersonal', and 'systemic' level which appear to impact the mental health and well-being of the academic researcher population (Hazell et al., 2020). However, throughout the analysis, I took care to also highlight where researchers' experiences diverged. Taking into consideration both the parallels and divergences in experience can have important implications for HE policy and can help highlight areas where interventions and better practice should be developed.

Job insecurity, a lack of family-friendly policies, inflexible requirements for funding and promotions, and a push for productivity above all else left many researchers stressed and experiencing (or at risk of experiencing), mental and physical health difficulties. These systemic stressors are highlighted across the wider, albeit limited, literature on this topic (Guthrie et al., 2017; Wellcome, 2020), and it is unsurprising therefore, that suggestions for support and change across the included studies in this review focused on addressing these systemic issues, as opposed to implementing interventions at the individual level. There was a sense across the included studies that it is scientific/academic practice, and the system's concept of what a successful researcher should look like, that needs to change, rather than putting the onus on the individual to cope in this environment (White, 2018).

Nevertheless, recent evidence suggests that many of these systemic issues continue to pervade academic spaces (Gibson et al., 2020). Indeed, there remains an expectation to meet high academic performance standards, despite the ongoing disruptions the COVID-19 pandemic has caused across researchers' personal and professional lives (Plotnikof & Utoft, 2021). The impact of COVID-19 on the higher education system should continue to be monitored, as evidence suggests that the pandemic has both

illuminated and exacerbated the risk particular systemic issues highlighted in this review (such as financial and job insecurity, as well as gender and ethnicity) can have on researchers' mental health and well-being (Gewin, 2021; Gibson et al., 2020).

This review has also highlighted the pressure researchers feel to maintain a reputation of being able to cope with the high expectations set in a competitive academic environment. The stigma that appears to exist with regards to experiencing mental health difficulties in academia, coupled with the normalizing of chronic stress, likely prevents researchers from accessing support when needed (Hazell et al., 2020; O'Brien & Guiney, 2019). Fostering an environment where mental health and well-being at work can be talked about openly and safely, will likely aid in the detection, treatment, and ultimately prevention, of mental health difficulties (O'Brien & Guiney, 2019). Nevertheless, this review has also highlighted a lack of awareness as to what mental health-based support is currently offered by academic institutions, which represents another barrier to accessing support. Institutions need to ensure that any support currently offered is visible and the process of accessing this support is clear and straightforward. Further research is needed with regards to doctoral researchers and post-doctoral researcher's hopes and expectations for mental health-based support at work, as some of the included papers in this review (Waight & Giordano, 2018; Ysseldyk et al., 2019) have highlighted that they may not be able to access or benefit from the institutional support already provided for students or faculty.

The importance of both peer and social networks in maintaining positive well-being is stated throughout the included papers. Interventions at both an individual and systemic level would help to ensure that researchers do not need to pick their academic identity over other key purposes and activities, which may in turn limit their access to social support networks (Ysseldyk et al., 2019). Indeed, associating with many social groups can bolster mental health and well-being (Jetten et al., 2015; Ysseldyk et al., 2019).

Without strong support from HE institutions, evidence has shown that early career researchers in particular have developed their own groups for peer support, an example being Scholar Minds in Germany (Naumann et al., 2022), where teamwork and the sharing of practices is encouraged and events related to the PhD journey are discussed (Masefield, 2019; Woolston, 2020). These groups help engender a sense of

camaraderie (Masefield, 2019). Whilst it is imperative to further develop peer support where possible (Moulin, 2020), it is important to note that this review has highlighted that peers can also be a source of competition and stress. Any peer support interventions will therefore need to be monitored to make sure that these interventions do not overburden an already overburdened workforce (Billings, Ching, et al., 2021).

Despite finding multiple similarities across career stages, disciplines and countries, this review also highlighted some notable differences in experience between certain subgroups of the academic researcher population.

Across the included studies which commented on the experiences of doctoral researchers, the key role of the supervisor was highlighted, a sentiment which is echoed across the wider literature on doctoral researchers' mental health and well-being (Hazell et al., 2020; Jackman et al., 2021). As such, it is important for HE institutions to give supervisors the training and knowledge to support their students, whilst also ensuring that student and supervisor are well matched in terms of the students' research and personal support needs. Whilst some universities may already have procedures linked to these suggestions in place (Hutchings & Michailova, 2022), this review suggests that the supervisory relationship can still be a source of tension for doctoral researchers. Further research is needed to examine the supervisor/supervisee relationship from both points of view (Wisker & Robinson, 2016), so that ways can be identified to make sure this is a mutually beneficial relationship.

This review also highlighted the difficulties faced by female researchers and researchers from a Black ethnic background in particular, although it is important to note that other under-represented groups in academia including those from the LGBTQ+ community and those with disabilities also experience similar systemic challenges with regards to a lack of role models (English & Fenby-Hulse, 2019) and experiences of bias and discrimination (English & Fenby-Hulse, 2019; Wellcome, 2020).

Initiatives to reduce inequality in HE have been implemented across the UK, Europe, North America, and Australia (Kalpazidou Schmidt et al., 2020; Ovseiko et al., 2017).

A notable example is the Athena SWAN Charter, introduced in the UK in 2005, which asks HE institutions to showcase and then actively dimmish gender inequality across different academic fields (Kalpazidou Schmidt et al., 2020). Engaging in these initiatives has enabled the issue of general inequality in HE to come to the fore, and some action has been taken to reduce bias/discrimination (Kalpazidou Schmidt et al., 2020). However, the results of this review, with all papers published since 2011, suggest that researchers from under-represented groups in academia still experience the academic research environment as unequal and unsupportive. Indeed, the wider literature suggests that these initiatives (in the short-term) may not be enough to eradicate the ongoing disparities in key areas such as pay, promotions and "power" (Kalpazidou Schmidt et al., 2020; Rosser et al., 2019). Making society in general more inclusive was commented on in both this review and the wider literature (Ovseiko et al., 2017). Whilst changing society would be too large a job for any HE system, further research does need to explore in greater depth the work experiences of those from under-represented groups, along with their perspectives on what more effective support could look like.

### 2.4.1 Strengths and limitations of the included papers

In terms of quality, the majority of papers included in this review were moderate to strong. Each paper highlighted how working in academia could impact on a researchers' well-being and mental health. Nevertheless, there are limitations in these papers. First, noting the research teams' characteristics, and reflecting on the theoretical lens through which a research team has viewed the data, is important in qualitative research (Anderson et al., 2019). In the included papers, these reflections were not always present. Second, the link between work experiences and researchers' mental health and wellbeing was not always explicitly stated in the papers, and it therefore fell to us as a research team to draw our own conclusions. The conclusions I drew may not be what was intended by the participant's/authors. Due to the differences in how mental health and well-being were conceptualised and discussed across the included papers, it was also difficult at times to maintain a distinction between the two concepts when conducting the analysis/write up. Finally, only 26 papers were included in this review, highlighting the general scarcity of qualitative research which explores academic researchers' mental health and well-being experiences.

### 2.4.2 Strengths and limitations of the meta-synthesis

The meta-synthesis itself also has limitations. Due to the searches containing an English language restriction, the papers often included researchers from predominantly Western, English-speaking countries. As such, the findings from this review may not reflect the views and experiences of researchers working in HE globally. However, research exploring the stressors faced by academic researchers suggests that there are similarities between the experiences of those in Western countries and the rest of the world, particularly with regards to unequal access to resources, support, and opportunities (Cactus Foundation, 2020). As I aimed to provide an inclusive and in-depth examination of the status of academic researchers' mental health and well-being, the search strategy was wide-reaching. As a result, I included a range of academic researcher groups, methodologies, constructs related to mental health and well-being, and places/institutions of higher education (Anderson et al., 2019). Nevertheless, specific practices and experiences could have been examined through a more focused search strategy (Anderson et al., 2019). This could be a potential avenue for further systematic research in this area.

Well-being and mental health are difficult terms to define, with many different terms attached to them. As such, the search strategy used here is likely to have missed some of these terms. By not including a more comprehensive list of terms related to mental health and well-being, I may have missed further relevant papers. Nevertheless, to help ensure that I captured as many relevant papers as possible, an informal literature search was done to gather information on how existing relevant studies define and use these terms.

In this review, the views and experiences of doctoral researchers may come through more strongly than other academic groups, as many of the papers included doctoral researchers as participants in their study (n=14). A relatively small number (n=12) of the included papers in this review focused specifically on one academic researcher group past PhD level, highlighting a dearth of exploratory research into the well-being and support needs of post-doctoral researchers and those in the later stages of their career which, again, may form an avenue for future research. It should also be noted that the views of researchers who have experienced difficulties with their mental health

or well-being may arguably be more prevalent across the included papers (and thus, more represented in our analysis), as these experiences may make them more inclined to participate in research exploring these concepts (Waight & Giordano, 2018). Similarly, some of the included papers specifically sought out participants with symptoms of a mental health difficulty (Medina et al., 2016), and others specifically focused on examining more negative constructs which could contribute to poorer mental health and well-being, such as stress (Wang et al., 2019).

Finally, whilst the impact of researching trauma on mental health was noted explicitly (Nikischer, 2019), as was the negative impact of the 'impact agenda' on researchers in fields where direct impact is difficult to determine (Chubb et al., 2017), any other discipline specific experiences were hard to uncover. Exact disciplines were not always stated in the papers, and often the research questions were not targeted towards uncovering any differences between fields.

### 2.4.3 Conclusion

The findings of this systematic review and qualitative meta-synthesis highlight the 'individual', 'interpersonal', and 'systemic' factors that can impact the mental health and well-being of researchers who work in academia. Attempts to navigate the high expectations set by the academic system, continued job insecurity, and incidents of bias and discrimination have left researchers experiencing, or at risk of experiencing, physical and mental health difficulties. This review has highlighted areas where better support could be implemented, including encouraging both social and peer connections, and tackling systemic issues. Further high-quality qualitative research is needed to better understand how systemic change, including tackling inequality, can be brought about more immediately and effectively from a researcher's perspective. This review indicates that research (and particularly qualitative research) does need to focus on drawing out the mental health experiences of postdoctoral researchers and more senior researchers, as the existing literature is skewed towards investigating the (also important) experiences of postgraduate researchers. Encouragingly, since this review was conducted in 2021, there have been more papers published on the topic of more senior researchers. Van der Weijden et al., (2023) for example, has investigated postdoctoral well-being in the Netherlands (van der Weijden & Teelken, 2023).

## Chapter 2.5 Connecting chapter: how did my first study inform the second?

Conducting my systematic review and meta synthesis enabled me to get a good grounding in the experiences and challenges faced by academic researchers. It also enabled me to think about gaps in the existing literature which pertain to academic researchers' mental health and wellbeing. Through conducting my systematic review, I identified two primary avenues for further research. The smaller proportion of papers which focused on researchers beyond PhD level (n=12) suggested that there was a need to further explore the mental health and well-being experiences of postdoctoral researchers, lecturers, and professors (etc), as their experiences appeared to be underrepresented across the evidence base at the time. Second, whilst some of the included papers discussed coping strategies (i.e., (Yang & Bai, 2020)), very few qualitatively explored researchers' views on support at work (i.e., (Waight & Giordano, 2018)). As a result, I decided to focus my second study (and thus my interview topic guide) on support at work. That is, I wanted to get an idea of what support currently works for researchers, what doesn't, and how they believe the support offered should evolve. I also felt it was important to keep my inclusion criteria broad in this study, so that researchers from all levels could have the opportunity to discuss both their experiences and how they feel they could be better supported in terms of their mental health and well-being. Through focusing on support at work and encouraging researchers at all levels to make their voices heard, I hoped to provide relevant UK HE organisations with important information that they could use to develop targeted and relevant mental health interventions.

# Chapter 3 "Fix the system… the people who are in it are not the ones that are broken": A qualitative study exploring UK academic researchers' views on support at work

## 3.1 Introduction

As the evidence base continues to evolve, there has been some activity and movement towards boosting academic researchers' mental health and well-being at work. Individual-level interventions, such as "well-being services", counselling, mindfulness classes, and yoga classes, have been piloted in Western universities (Guthrie et al., 2017; Hanna et al., 2022a; Wray & Kinman, 2021). Despite showing some promise in improving well-being (Marais et al., 2020), the long-term efficacy and acceptability of these interventions is rarely evaluated, and their ability to address the root causes of stress in the HE environment has been called into question (Hanna et al., 2022a). Indeed, a UK survey of 2046 "academic and academic-related staff" (including those with research responsibilities) revealed that structural interventions designed to tackle the origins of workplace stress were perceived as more helpful than individual-level interventions (Wray & Kinman, 2021).

Various HE authorities in the UK are taking steps towards systemic, structural change. Universities UK (Universities UK, 2020) has set out a plan to integrate mental health support systems into HE institutions for members of staff and students. The "Future Research Assessment Programme", now launched in the UK, endeavours to find new ways to make research evaluations less onerous and conducive to a healthier research culture (UKRI, 2022). This may include rewarding honesty and collaboration in research, as well as impact and value (Nature, 2022). Nevertheless, the degree to which current structural initiatives have led to improvements in the mental health and well-being of researchers at a grassroots level, is difficult to determine (thus far). Recent evidence suggests that it remains challenging to preserve well-being in the context of the HE system (Erickson et al., 2021), particularly in light of the COVID-19 pandemic (Hanna et al., 2022a). The HE system cannot change overnight, but as indicated by both the results of my systematic review (chapter 2) and the wider literature (sections 1.9, 1.10), it continues to present a risk to researchers' mental health and well-being, suggesting a need to further explore what constitutes more rapid and effective support from a researchers' point of view. Whilst my qualitative systematic review did identify some papers that concerned support at work i.e., (Waight & Giordano, 2018), it also highlighted a general dearth of qualitative literature which explores the mental health and well-being of academic researchers, and thus, a dearth of literature which explores

from their perspective how they could be better supported at work. This chapter aims to address this gap.

### 3.1.1 Research objectives

Using a "multi-method qualitative approach" (Frerichs et al., 2020), I aimed to explore academic researchers' perspectives on how they feel their mental health and well-being could be better supported within the UK HE system. I also explored researchers' HE journeys in-depth, to provide added context and to account for varied personal and professional characteristics. The UK HE system is the focal point of this study, however, the results may be of value to individuals associated with HE globally, given some similarities in academic culture to other countries (Guthrie et al., 2017), and given the UK's strong global contributions to science and research (Jackman et al., 2022).

## 3.2 Materials and methods

### 3.2.1 Participants and recruitment

This study was registered with the University College London Research Ethics Committee (Ref. 21043/001) (Appendix 2). Advertisements for the study were placed on the social media platform Twitter, and in a London-based university newsletter. A snowball sampling technique was also used wherein the study was promoted through the research teams' and study participants' own networks. Individuals were encouraged to contact the research team should they wish to take part. Individuals were eligible to participate if: (1) they currently worked (salaried or funded) at a UK university or UK university affiliated research institute; and (2) they carried out research as part of their job role. Doctoral researchers (otherwise known as PhD students) are an important part of the research workforce and were therefore also eligible to participate in the study. I sought the experiences and views of final year doctoral researchers (rather than those in the earlier stages of completing their PhD) in particular, as myself and members of the research team (JB, DL) considered that they would be in a better position to reflect on the entire doctoral journey. I excluded individuals who did not work at a UK university or UK university affiliated research

institute, and individuals who were without research responsibilities. Doctoral researchers not in their final year of study were also excluded.

To gather a diverse range of experiences and views, I purposively sought to recruit academics from across multiple disciplines, career stages and UK universities. I also sought demographic diversity in terms of ethnicity, gender, and age. I was "pragmatic" in approach to sample size, and I continually examined the quality of the data throughout the data collection period - aiming for a sample that was adequate in both "breadth" and "depth" (Braun & Clarke, 2021b).

### 3.2.2 Data collection

A full participant information sheet and link to an online consent form were shared via email with individuals who indicated an interest in taking part in the study (appendix 3 and 4). All participants gave informed consent before partaking in an interview. The questions in the interview schedule were developed by considering both the existing literature on this topic area (Moran & Wild, 2020; Nicholls et al., 2022), and other literature examining support experiences (Gee et al., 2022). The questions were refined and finalised through multiple research team discussions and following the first few interviews.

The interview consisted of a narrative interview phase and a semi-structured interview phase (please see appendix 5 for the full interview schedule).

#### Narrative interview

A narrative interview is concerned with enabling the participant to take the interviewer through their 'story'. It consists of an initial "open" question that enables the participant to share the information they want, in the way that they want, ultimately enabling a more in-depth understanding of a participant's experiences (Anderson & Kirkpatrick, 2016). I therefore considered that the use of a narrative interviewing technique would help me to achieve my goal of providing important added context to my participants' views on mental health and-well-being-related support at work (Anderson & Kirkpatrick, 2016).

The purpose of the narrative interview in my study was to enable participants to lead the discussion on what was important to them when thinking about their mental health, well-being, and working in HE. My initial question – "would you be able to describe to me any events throughout your career as an academic researcher so far which significantly relate to your personal mental health or well-being, in either a positive or negative way?" – was designed to help participants do this.

As indicated by my systematic review (chapter 2), and the wider literature (section 1.2), how mental health and well-being are defined can vary depending on the person or study context. As a result, in the narrative interview, I also included a question which asked how participants define the terms well-being and mental health. This additional information helped me to identify and articulate clearer links between participants' experiences/support needs and their mental health and/or well-being.

**Semi-structured interview**

I also included a semi structured interview phase, which immediately followed the narrative interview phase (the two phases were conducted within the same interview). I wanted to specifically explore academic researchers' views on support at work. A semi-structured interview guide enabled me to stay on track with regards to this objective (Jamshed, 2014), and still allowed me to pose additional questions to further explore participant responses. The semi-structured interview was designed to capture researchers' views on what helps or hinders feeling effectively supported at work, maintaining well-being at work, their experiences of existing support (if applicable), and their suggestions, hopes, and expectations for support going forwards.

**The process of interviewing and collecting additional data**

All interviews were conducted remotely via Microsoft Teams or Zoom and were digitally audio-recorded. The interviews were conducted and carefully transcribed by myself - any potentially identifiable information was removed in the transcription process. The transcription process was aided through the use of 'NVivo Transcription' software.

Sociodemographic data was collected via questions attached to the online consent form and through questions asked at the beginning of the interview. Data gathered included participants' age range, gender, ethnicity, the number of years they had been working in academia (Lauchlan, 2019), current job title, academic discipline, whether or not they are affiliated with a Russell Group university, the geographic location of their employing university, and whether or not they belonged to a university-affiliated research institute or centre. To gather information on gender identity and sex, I used guidelines provided by the Office for National Statistics (Office for National Statistics, 2021). This information was gathered to add further context to participants' experiences and was stored separately from the anonymised interview transcripts.

### 3.2.3 Data analysis

Two qualitative approaches were used to help interpret and understand the dataset. Thematic analysis and narrative analysis have been used together in past studies (Shukla et al., 2014), including in studies which explore aspects of mental health (Frerichs et al., 2020). Similarly to these two studies (Frerichs et al., 2020; Shukla et al., 2014), I conducted a reflexive thematic analysis to identify 'patterns' throughout the dataset, and subsequently create a 'broader' picture of UK academic researchers' experiences and support needs. I conducted a narrative analysis to enable a more thorough look into the key themes identified by the reflexive thematic analysis – that is, how these themes fit into singular narratives, and in what manner they are talked about.

#### Reflexive thematic analysis: the process

First, a reflexive thematic analysis was conducted to search for key patterns throughout the dataset (Braun & Clarke, 2021b, 2021a). I followed a similar process as outlined in section 2.2.3. I exported the interview transcripts into NVivo Pro 12, and I read the interview transcripts multiple times before starting the coding process. I then coded the data in the transcripts (codes were both interpretive and descriptive, and I kept in mind the goals of my research throughout this process). I then went through the codes created and collated them into groups which would then form my initial themes/sub-themes. I re-read the transcripts again to make sure that my themes and sub-themes

effectively captured the experiences and support needs of the participants. I met with other members of the research team at different time-points (JB, DL, Professor Sonia Johnson (SJ), Professor Paul Higgs (PH), Dr Vanessa Pinfold (VP)), to share my initial findings and to discuss whether there were other ways to think about/collate the data. I refined the themes and sub-themes as necessary during these latter stages, and during the write-up process. The development of the codes and themes occurred through examining material contained within the interview transcripts only, making the analysis inductive and exploratory.

**Narrative analysis: the process**

Second, a narrative analysis was conducted on two purposively selected interviews. As highlighted by Newman et al., (2011), how one conducts a narrative analysis will be contingent on your study goals (Newman et al., 2011). I outline my process below.

The selection of the two interviews to analyse was handled by myself with help from members of the wider research team (JB and DL). The process of choosing the two interviews to analyse, and the way in which the narrative analysis was conducted, were informed by the following purpose – to help better our understanding of academic job role characteristics, work relationships and university-based support, and how these factors are positioned and comprehended in singular narratives that concern mental health and well-being in HE (Shukla et al., 2014). The two interviews I chose to analyse, and the manner in which I conducted the narrative analysis, helped me to fulfil this purpose. More specifically, the two interviews I chose to narratively analyse helped to illustrate the themes from the reflexive thematic analysis in more depth and helped to depict the key roles of both the immediate and wider work environment in influencing researcher' mental health and well-being.

While familiar with the two participants' stories due to having already conducted a reflexive thematic analysis, I still re-read the two participants' transcripts again, to help remind myself of the key moments in their stories (Newman et al., 2011). For each of the two transcripts, I then noted down the key narrative elements of the participant's story. This included identifying the "core narrative", "tone" and "narrative genre" in both stories (McAllum et al., 2019; Newman et al., 2011; Thornhill * et al., 2004). The

"core narrative" is what I consider to be the primary "theme" that runs throughout the story, the "narrative genre" is how I see the story has evolved over the course of the interview, and the "tone" denotes how the story is recounted (Newman et al., 2011). These notes were then collated into narrative "summaries" (Frerichs et al., 2020), which were then distributed to the wider research team, and to the two participants, for further comment.

### 3.2.4 Quality and reflexivity

In line with the standards expected of qualitative research, I report my theoretical and personal stance here. I also report the research teams' characteristics, and how I met particular quality indicators.

Interpretivism suggests that the 'real' world is divergent, as we all look at and interpret things in our own way (ontological stance) (McAllum et al., 2019). It also suggests that the 'knowledge' generated about the world will be subjective, determined by both the participants' and researchers' own stances and experiences (epistemological stance) (McAllum et al., 2019). I embraced a more constructivist/interpretivist stance when conducting this study. Indeed, narrative approaches to analysis are "interpretative" at their core, and I acknowledge that the findings of the narrative analysis presented in this chapter represent a single interpretation of the two stories (McAllum et al., 2019; Shukla et al., 2014).

When conducting the reflexive thematic analysis, I again approached the data from an epistemologically subjectivist stance. That is, I believed that both the participants who took part in this study and myself played a key role in determining what parts of "reality" are important to mention and draw out (McAllum et al., 2019). However, I also believed that the patterns that I identified when conducting the reflexive thematic analysis were reflective of a universal reality experienced by academic researchers, which leans more towards the critical realist viewpoint (Darabi et al., 2017; Fryer, 2020).

As such, although I did not fully embrace the constructivist/interpretivist paradigm, the use of two different qualitative approaches enabled me to gain a more in-depth understanding of the data and the phenomena under examination (academic

researchers' personal journeys and support needs), than if I had used just one method on its own.

As a PhD student, I could be classed as an 'insider' – someone who is currently working within and experiencing the academic environment, like my participants. This may have put participants at ease with regards to sharing their journeys and views with me. However, I also approached collecting the data as a White, British, middle-class woman, who is on the first rung of the academic career ladder. This may have potentially impacted my ability to recognise and pursue important/relevant lines of enquiry during the interviews. For example, as an early career researcher, I have very limited experience with key academic duties such as managing a teaching load. I was mindful throughout the interviews of my personal position, and maintained an open and curious manner, to try to ensure that participants felt comfortable to share as much of their academic journeys as they wanted to, with me.

Although I grew up middle class, having family members who had grown up working class meant that I was aware of some of the challenges this can bring. This did help enable me to feel more confident in discussing with participants their own experiences of being from a working-class background, and how this interacts with working in academia.

Engaging with multiple research team members (JB, DL, SJ, PH, VP) throughout the process of designing, conducting, and analysing the data, helped me to consider different ways of engaging with the research process/data, that may not have been initially apparent to me due to my personal background. The personal and professional backgrounds of JB and DL are highlighted in the second chapter (section 2.2.4). SJ and PH are professors in the discipline of psychiatry, and VP is a research director and co-founder of a mental health research charity. All have substantial experience in qualitative and mental health research. Although there are differences in work setting, career stage and gender, it is worth noting that the research team were all from a White ethnic background and working within the discipline of social or medical sciences.

To further check the "credibility" (Nowell et al., 2017) of our results, the initial findings resulting from the reflexive thematic analysis were presented to research

colleagues at an academic conference and to peers in a research lab meeting. The results of the narrative analysis were also sent to the two participants for further thoughts/comment. This was not necessarily to fulfil the purpose of "member checking" (which is more in line with a "positivist" viewpoint), but rather to elicit a two-way dialogue about the interpretation, and discern whether any new observations/interpretations could be reached (Braun & Clarke, 2023; McAllum et al., 2019).

I purposefully attempted to recruit participants with varied sociodemographic and work-related characteristics, to help improve the "transferability" (Nowell et al., 2017) of our results.

### 3.3 Results

Twenty-six academic researchers took part in the study. Interviews were conducted between September 2021 - February 2022 and lasted between 43 minutes to just over 2 hours. The majority of participants reported being from a White ethnic background. The location of participants' employing institutions ranged from London, East England, the Midlands, North West England, to Scotland and Wales. Further participant sociodemographic characteristics are presented in Table 3-1.

**Table 3-1. Participant characteristics (interviews with researchers across the UK)**

| | |
|---|---|
| **Gender** | |
| Female | 20 |
| Male | 6 |
| **Age** | |
| 18 - 24 | 1 |
| 25 - 34 | 15 |
| 35 - 44 | 4 |
| 45 - 54 | 4 |

| | |
|---|---|
| 55 - 64 | 2 |
| **Number of years spent working in academia** | |
| 1 - 2 years | 2 |
| 3 - 5 years | 8 |
| 6 - 10 years | 10 |
| 11 - 20 years | 5 |
| 21 - 30 years | 1 |
| **Role** | |
| Research assistant | 1 |
| Final-year doctoral researcher | 6 |
| Postdoctoral researcher | 1 |
| Research associate | 4 |
| Research fellow | 5 |
| Senior research fellow | 2 |
| Senior technician | 1 |
| Lecturer | 1 |
| Senior Lecturer | 3 |
| Assistant professor | 1 |
| Associate professor | 1 |
| **Discipline*** | |
| Psychology | 11 |
| Biosciences | 3 |

| | |
|---|---|
| Sociology, Social policy & Anthropology | 7 |
| Education & Teaching | 1 |
| Health & Social Care | 2 |
| Medical Sciences | 1 |
| Allied Health | 1 |
| **Currently affiliated with a Russell Group university?** | |
| Yes | 15 |
| No | 11 |
| **Currently working within a university-affiliated research institute?** | |
| Yes | 14 |
| No | 12 |

*Participants' disciplines were categorised according to the Common Aggregation Hierarchy (CAH) framework. More information can be found on the Higher Education Statistics Agency website; https://www.hesa.ac.uk/support/documentation/hecos/cah.

### 3.3.1 What comes to mind when you think of the term(s) well-being or mental health?

This section summarises researchers' responses to the following question in the interview topic guide: "What comes to mind when you think of the term(s) well-being or mental health?". Well-being was often seen as the more 'positive' construct, with terms/phrases such as *"happiness"*, and *"absence of any particular problems"* associated with it. Well-being was also thought of as more "*holistic*" and was attached to both feeling a purpose and being able to do meaningful tasks/self-care, such as engaging with social networks, hiking, running, practicing music, and having time to oneself.

The term mental health on the other hand, was talked about in a positive, neutral, and negative light. The way in which mental health was described varied from being associated with a capability to 'handle' the general environment, to being attached to negative affect and specific mental health difficulties such as depression and anxiety.

Ultimately, some researchers felt that mental health was dynamic. Further comments highlighted concerns that mental health remains quite misunderstood:

> *"... I find that I see talk of mental health in the news all the time, and I feel that it gets misrepresented sometimes"*

(Senior lecturer)

Whilst some researchers saw the terms as distinct, others questioned the extent to which the terms could be separated. Indeed, some researchers described both terms together, whilst others explicitly described their interlinked nature and pondered the impact of well-being on mental health and vice versa:

> *"... I mean , they're very heavily overlapping... I feel like some things affect my well-being, that maybe, don't impact my mental health as much , if that makes sense, so there are things that happen on a day to day basis , which means maybe I don't get a chance to, you know, go for a run or have a workout or have a shower... so those things affect my well-being, but I don't feel that it necessarily affects my mental health on a day to day basis, I think perhaps if it happened cumulatively, then it might"*

(Associate professor)

The differences in the way these terms were interpreted and experienced, highlight how *"personal"* the terms mental health and well-being can be. Indeed, for several researchers, their thoughts on mental health were expressed as being influenced by their personal circumstances *"... for me, certainly depression, but that's just because I've got a history of it"* (Senior technician), or the experiences of friends and family.

I supervised an MSc project (2023) which explored participants' responses to the question 'what comes to mind when you think of the term(s) well-being or mental health', in greater depth. Some of the themes captured in this section also reflect the themes and ideas identified in the MSc project.

### 3.3.2 Reflexive thematic analysis

Six themes were identified using reflexive thematic analysis. The six themes and the sub-themes contained within them are reported in Table 3-2. They are then expanded upon below with extracts from participant' transcripts. The sub-themes are in bold and italicised within the text. Participant' quotes have been amended to include correct grammar. Repeat words and 'filler' words such as 'um' or 'uh' have also been removed. Participant accounts were rich and diverse, containing a variety of experiences and a wealth of ideas. Here, I have primarily focused on the themes most pertinent to understanding and supporting their mental health and well-being in the HE environment.

**Table 3-2. Inductive themes and sub-themes identified (interviews with researchers across the UK)**

| Themes | Sub-themes |
|---|---|
| 1. “We’re not machines” A flawed system | 1.1 A lack of stability<br><br>1.2 Continually reaching for excellence: “You've got to always be pushing yourself forwards academically”<br><br>1.3 Inequality, discrimination, and isolation<br><br>1.4 The consequences: disillusionment and a negative impact on mental health and well-being |
| 2. “We wouldn't all be here doing it if we didn't enjoy it in some way or didn't get some sort of reward out of it” Factors that aid survival | 2.1 Autonomy<br><br>2.2 Why academia? Passion, feeling a sense of achievement, and being able to help others<br><br>2.3 A sense of security and not being overloaded<br><br>2.4 Individual coping strategies<br><br>2.5 Social support<br><br>2.6 Effective support provided by a higher education organisation |
| 3. Work relationships and the importance of “having somebody on the inside that you trust” | 3.1 The power of work relationships - a risk or a protective factor<br><br>3.2 Supervisors and managers “they make or break it really”<br><br>3.3 The perspectives of managers and supervisors |

| | |
|---|---|
| 4. “It’s putting a band-aid on essentially what is a wound that needs like operating on” The limitations of existing support offered by higher education organisations | 4.1 Accessing existing support: concerns, uncertainty, and finding the time<br><br>4.2 “Fix the system… the people who are in it are not the ones that are broken” “The gap” between existing support and the needs of researchers |
| 5. “We need to take care of our researchers” Expectations, hopes, and suggestions for future support | 5.1 “Employee assistance… access to counselling… that's a realistic expectation” Researchers’ expectations for support<br><br>5.2 The importance of encouraging and fostering positive work relationships<br><br>5.3 A need for greater practical support<br><br>5.4 Beyond what support is offered: the importance of being proactive, and effectively promoting and monitoring the support offered<br><br>5.5 “You just have to find what works, I think, for you” One size doesn’t fit all |
| 6. The impact of COVID-19 | - |

**1. “We’re not machines” A flawed system**

Although it was noted that work experiences can vary depending on the institution or lab a researcher presides in, (and that some of these issues are not necessarily unique to HE), many of the participants in this study highlighted that academia can be a difficult environment to navigate. This theme reflects some of the key issues encountered, the first being, ***a lack of stability.*** The earlier stages of a research career in particular appear to be characterised by unmet “*basic needs*” such as having a stable

place to live/work and a steady source of income that meets the cost of living. Insecure job contracts, expectations from funders to have moved between academic research institutions: (*"... they all seem to want you to have moved around as if you can't progress your research from just staying in one place"* (Senior technician)), and often inadequate PhD stipends, were primarily cited for these needs going unmet. Greater stability or a permanent job was, understandably, a desirable objective. However, career paths both inside and outside of academia were often described as being shrouded in mystery. This sense of mystery was compounded in particular, by a lack of openness and uniformity when it comes to academic employment policies and promotions. Ultimately, as highlighted by a final-year doctoral researcher, academia was seen as: *"...not an easy sort of place to remain unless you-, you are lucky"*, surrounded by the right people and opportunities.

The physical work environment could also contribute to feelings of instability:

> *"... the hot desking situation had come into play and not always having a desk and having to move around a lot was really unsettling and I found it really unproductive"*
>
> (Research associate)

Often, when thinking about achieving greater stability or progression in academia, researchers noted an *"expectation"* to be ***continually reaching for excellence: "You've got to always be pushing yourself forwards academically"***. A senior research fellow highlighted the weight many researchers felt to singly cope with, and excel at, the multitudinous tasks expected of them within research, teaching, and/or student support roles:

> *"... to publish, to bring in funding, to do all of those things on top of all the extracurricular things that we're supposed to do for our CVs, I think there's just an inordinate amount of pressure and expectation on people... you could just do your job to the minimum, but then you wouldn't progress in your career"*

This culture of excellence and expectation, when coupled with job precarity in particular, was associated with a competitive work climate and an: *"atmosphere of… overwork"*. Incidents of self-criticism or doubt also arose if researchers perceived themselves to be falling short of what was expected. Some researchers described a hesitation and/or an inability to take breaks from work as a result of this culture: *"So, taking two weeks of leave, doesn't feel like you could just relax because you're just thinking of what is not being done"* (Research associate).

Nevertheless, the effort researchers made to reach for excellence across a variety of roles was not always recognised or rewarded. Indeed, participants noted that *"success"* in HE was strongly linked to what is "countable" (Sutherland, 2017), such as publications or grants awarded. Many participants spoke of a misalignment between the deadlines, expectations, and workloads set by HE authorities, compared to the amount of time and energy they were able to give:

> *"I think the people higher up in the university, they don't appreciate how much time and effort goes in to doing things well and so then they overload you, so we've got a workload model which is woefully inadequate"*
>
> (Assistant professor)

Descriptions of ***inequality, discrimination, and isolation***, also featured across researcher's narratives, with some participants voicing that the HE system appears geared towards those who are already *"advantaged"*: *"… the reality is the only academics who can manage to be in the job are people who have come from-, they've got money already"* (Research associate).

Some female participants and participants from a working-class background described experiencing incidents of misogyny and discrimination: *"… he had made some very sexist comments"* (Assistant professor). There were also indications of isolation, often due to the absence of clear representation in HE at different grades. This led to a greater risk of overwork and imposter syndrome:

> *"… I don't feel good enough… it's awful. And… I'm not saying that people from a middle-class background don't-, that they feel good enough, but I think it's harder if you are from a class background that's not represented in university"*

(Senior lecturer)

Indeed, some female researchers felt that academia: *"still leans towards the male perspective"* (Research fellow). Reasons for this "leaky pipeline" (Ysseldyk et al., 2019) were thought to center primarily on academic culture being unconducive to taking maternity leave and childcare responsibilities. As an associate professor recounted:

> *" … funders who then proclaim to at times, you know, we-, we're wanting to take a stand and only fund institutions that have a silver in Athena Swan. But your deadlines mean that people are going to work through their holidays and that's predominantly going to affect women… they do the bulk of the childcare".*

Some participants also wondered if efforts to improve diversity in HE could be broadened:

> *"… I'm not saying that there shouldn't be a focus on gender but … the people that have benefited from this focus on gender is actually middle-class women… whereas other people have got left behind quite a bit"*

(Senior lecturer).

Further expanding on the finding of inequality, researchers working in a teaching-focused university did not always feel acknowledged for their work. Also, some researchers without a clinical professional background working in a clinical discipline, and *"early career researchers"* described feeling at a disadvantage when it came to applying for funding:

*"… early career researchers are so disadvantaged. So, what I'm finding now is that I'm coming up with all the ideas… but I can't be the P.I. or the lead researcher… How do you develop if you're having to give ownership of your ideas to somebody else?"*

(Research associate)

Being on the boundary between staff and student could cause feelings of isolation among doctoral researchers, as could the often *"personal"* nature of completing a PhD: *"… it goes back to that fact that doing a PhD is very personal and therefore very isolating because you haven't got that many people to share specific experiences with"* (Final-year doctoral researcher).

Many researchers spoke of the ***consequences*** of encountering a combination of the issues above, which included ***disillusionment and a negative impact on mental health and well-being***. A final-year doctoral researcher sums up a level of disenchantment experienced by some researchers: *"… it has made me to an extent disillusioned in academia… all these disadvantages that people deal with"*. Several researchers also described experiencing stress/burnout, sleep difficulties, depression, anxiety, and an exacerbation of existing health issues. Although, some explicitly perceived these difficulties to be sub-clinical: *"… I suffer from stress and being anxious in a non-clinical way like the next person , and I think there are elements of academia that really bring that out"* (Research associate), whilst others noted the difficulty in pinpointing the cause of these difficulties, particularly if challenges outside of work are experienced at the same time. Researchers also described little opportunity for self-care, less time to engage with family, friends, and hobbies, and delays in achieving other life goals such as buying a house or starting a family.

**2. "We wouldn't all be here doing it if we didn't enjoy it in some way or didn't get some sort of reward out of it" Factors that aid survival**

This theme highlights key factors that helped researchers to cope with the more negative aspects of the system in which they work, a prominent factor being *autonomy,* flexibility, and a level of freedom over work schedules, duties, and research topics.

Nevertheless, a senior technician reflects on the dilemma of developing one's own research interest's versus taking what job opportunities are available for stability: *"... a massive negative impact on it [mental health], would be having to move into a field for which I have very little interest whatsoever"*.

Despite some researchers initially going down a different career path or being unsure of the career path they wanted to take, when asked ***'why academia?'***, many spoke of a ***passion*** for their job role, ***feeling a sense of achievement, and***/or ***being able to help others***. Researchers often highlighted the fulfilment that can come from progressing their discipline, and positively impacting individuals or the wider population through their research, teaching, or student support role (even if these roles can be emotionally demanding at times: *"Violence research… the job is-, it can become emotionally heavy"* (Research fellow)). For some, conducting these roles could also positively re-direct their focus away from personal challenges unrelated to their work. However, a research associate depicts concerns that the academic system can exploit their passion:

> *"Academics often do work very long hours and do so because they're passionate about their work… that shouldn't be taken advantage of, and it completely is inside academia"*

A smaller number of researchers described having ***a sense of security and not being overloaded*** in terms of their workload, which helped to aid their survival: *"Whatever happens with my research, I should still have my teaching salary…that's given me a level of security that I honestly never thought I'd have in academia"* (Lecturer)

When it came to further coping with some of the pressures of working in academia**,** ***individual coping strategies*** and ***social support*** were often the first strategies employed or reached for. Individual strategies included exercise, persevering through uncertain or challenging moments at work, and not having an email app downloaded onto their phone. Whilst social support from friends and family could aid in taking a break from work, a senior lecturer also said: *"... I notice my family just always say 'just leave it for a bit', and it's like, well, they don't understand. I can't leave it for a bit"*.

Counselling provided through universities was the primary form of ***effective support provided by a higher education organisation*** mentioned by researchers, as it helped with understanding and coping with the symptoms of anxiety, stress, and depression, whether these symptoms arose from personal or work-related challenges.

Careers advice and support directed towards those in the earlier stages of their career, was also described as particularly beneficial. Examples included presentations which helped to demystify the academic career path, access to an early career researcher coaching scheme, and the presence of:

> *"… internal funding mechanisms… I think that is just hugely invaluable to-, especially early career researchers. It gives you a foot on the ladder to say that I'm actually-, I'm getting some practice writing proposals and getting some money"*
>
> (Research fellow)

Also found to be of benefit was the offering of seminars and conferences which encourage collaboration, the offering of conflict resolution services and, the offering of *"well-being days"*. With regards to the impact agenda, a research fellow said: *"it takes the pressure off publishing your* Nature *papers … some of the work just won't-, is not going to be suitable for those journals"* .

**3. Work relationships and the importance of "having somebody on the inside that you trust"**

***The power of work relationships*** as either ***a risk or a protective factor***, was depicted by the majority of the interviewees. Having trusted colleagues in the workplace, whether a fellow researcher, a safety officer, or a member of the administration team, aided with the disclosure of any mental health difficulties experienced, with problem solving and creativity, with boosting mental health and well-being, and with the sharing of good practice and resources: *"… she put together an equality, diversity, and inclusion support resource pack… it's the most amazing resource I think I've ever had access to since I joined"* (Senior lecturer). A research associate further highlighted

how the presence of a flatter hierarchy can be particularly protective for those in the earlier stages of their career*: "It's a difficult terrain to navigate, and like friends are only knowledgeable so far, but if you've got somebody who's higher up, who's like fighting your case, that can be really supportive"*. Nevertheless, the competitive climate created by the HE system was noted as one of the primary factors preventing these collaborative and positive work relationships: *"... the amount of time people trying to scoop one another, it's just-, it's just toxic"* (Final-year doctoral researcher).

Directly related to work relationships as a risk or a protective factor, was the impact of ***supervisors and managers*** in either helping or hindering a researchers' mental health and well-being. Given the more direct sway they could have on lab or department culture, workloads, autonomy, providing support and training around research processes, and achieving career goals, it appeared that: ***"they make or break it really"***. A research fellow highlights the positive impact of their manager's flexibility: *"...I was spending the Friday doing my thesis… but then she gave me another day a week to do that…So that sort of flexibility from a manager's point of view made it a lot less stressful than it could have been",* whilst a senior research fellow highlights the negative impact of a very difficult work relationship:

> *"My supervisor was very difficult to work with… she pretty clearly blamed me for not trying hard enough and she would shout a lot… I was pretty confident that the study, just, you couldn't recruit to it, but I was worried about her negative perception of me and how that would impact me in the long term… in one meeting, I quit my job and my PhD"*

Many of the researchers discussed the characteristics of good supervision/management, along with the characteristics/factors that can prevent good supervision and management. Good managers/supervisors were described as being *"accommodating"* to other work or personal responsibilities, they were *"approachable"*, accessible, proactive with checking in, trusting, truthful, encouraged autonomy, and they invested time in helping to progress a researcher's career. They were also described as *"genuine"* in their concern. Factors which hindered effective management or supervision were disinterest and a lack of awareness around who they are managing and their respective career goals, a lack of positive feedback, getting in

touch ‘out of hours’, a lack of time invested in training and support around research processes, verbal aggression, and not implementing suggestions for improved feedback and support.

For some researchers, managers’/supervisors’ high workloads were thought to be a contributing factor to less effective management, whilst others believed this could be down to a lack of management training.

A senior research fellow sums up ***the perspectives of managers and supervisors***, who often described the role as *“rewarding”*, and who also mentioned being aware of (and trying to mitigate) the challenges faced by those they manage:

> *“ I make sure that I'm incredibly flexible in terms of whatever she needs to do with, you know, family and home life. Because… she's a young woman who's coming into research, and I know what it's like… I have a lot of responsibilities at home and I know how difficult that can be”.*

**4. “It’s putting a band-aid on essentially what is a wound that needs like operating on” The limitations of existing support offered by higher education organisations**

With regards to ***accessing existing support***, researchers described ***concerns, uncertainty, and finding the time***. As depicted by a research associate, concerns primarily centred on the information flows of disclosures, particularly, whether a disclosure about a colleague may get back to them*: “… we're her only students. So, if he goes to her and says students have been complaining , it's essentially the same thing as like us going to her and complaining”*. A research fellow also highlights concerns that the disclosure of a mental health or well-being-related difficulty may impede career progression: *“… they might be in the first place saying yeah we are very supporting… but… if they were to choose between you and another person, they might choose another person. I may be wrong, but it's better not to risk it”.*

Uncertainty surrounding what university-offered support currently exists, and who it is for, was common. This uncertainty was exacerbated by a lack of effective signposting (e.g., email advertisements that blend *“into the wallpaper”*), and not

having the time to pursue accessing the support offered, due to high workloads. For others, the uncertainty stemmed from not having felt that they needed to look for, or access, university-offered support for their mental health or well-being. The perceived severity of the mental health or well-being difficulties they experienced also played a role in whether or not researchers felt the support available would be either open to them, or effective:

> *"I don't feel like I have a right to access things like the university counselling because… you're not someone who doesn't need any support, but you're not, kind of, so bad that you need a lot of support"*

(Final-year doctoral researcher)

***"Fix the system… the people who are in it are not the ones that are broken"*** sums up ***"the gap" between existing support and the needs of researchers***. Many researchers perceived some of the individual interventions offered such as mindfulness, art, or mental health workshops, as *"tokenistic"* and limited in their ability to tackle systemic issues or difficult work relationships which can lead to poorer mental health and well-being. This gap was also reflected in some of the more negative experience's researchers had had, with regards to university-offered support. For some researchers, inexperienced facilitators that existed in university counselling spaces and occupational health services meant that this support was described as not as effective as it could have been. In some cases, as highlighted by a lecturer below, researchers also felt unable to re-disclose mental health difficulties or other work-related challenges when there was a lack of action from the university in following through with suggested or promised support: *"… it was a very, very near miss…to tell them once that I needed that help was one thing, but I didn't feel the following week, you know, that I could do that again".*

Interestingly, some researchers from a Psychology discipline also wondered if mental health departments could do more to promote a mental health friendly culture in the department: *"… given that is the work that we do"* (research associate).

## 5. "We need to take care of our researchers" Expectations, hopes, and suggestions for future support

The following quote - ***"Employee assistance… access to counselling… that's a realistic expectation"*** - encompasses many ***researchers' expectations for support***. Suggestions were made as to how these services could be made more effective such as, having shorter waiting times, arranging the availability of more sessions, being matched with the right counsellor/facilitator, implementing cognitive behavioural therapy approaches, and ensuring that the service in general has an idea of the types of difficulties researcher's face. For some researchers, thinking about expectations and hopes for support led them to reflect on the discrepancy between staff and student support:

> *"I think that they should offer at least some kind of, not necessarily counselling service, but someone you can talk to confidentially if you need to. But again, they do this for students, but I haven't seen anything like that for staff"*
>
> (Senior technician)

Ultimately, it was seen as important to have someone trained and *"accessible"* to talk to about any mental health/well-being difficulties encountered.

Incidentally, whilst questions were raised as to whether a sense of community and good work relationships can be *"artificially"* created, ***the importance of encouraging and fostering positive work relationships*** could not be overstated by some researchers when it came to positively influencing mental health and well-being at work. Enabling relationships to bloom between those in the earlier stages of their career and more senior researchers (for example, through considering office layouts) appeared to be particularly important, as senior researchers were looked to as key influencers with regards to encouraging collaboration, rejecting expectations to overwork and normalising having a life outside of academia.

Suggestions related to improving management and supervision included having: *"... dedicated roles within an academic department for staff well-being or management"* (Lecturer), or: *"... having a sort of separate manager, a place to go, which is just there for development"* (Senior lecturer). Providing training for managers and supervisors on how to effectively conduct these roles was suggested, however, questions were raised as to the extent to which mental health training for managers could be imposed from the top-down:

> *"...people resent training because it just adds to their workload... if you send a bunch of scientists on a kind of course that they perceive as being a bit fluffy, it will just-, they will just resent it"*
>
> (Lecturer)

Another key comment related to fostering positive connections at work included promoting and encouraging diversity in the workplace:

> *"... visibility is important. We need to have female professors, we need to have ethnic minority professors, we need to have openly gay professors, things like that so that you can see that academia is for everyone... it is getting better, but it's still got a way to go."*
>
> (Assistant professor).

A further quote by the assistant professor: *"...actual genuine investment in people"* summed up ***a need for greater practical support*** inclusive of (but not limited to); an end to insecure job contracts, a stipend/salary/pension reflective of expertise and time dedicated, greater recognition for the amount of work taken on and individual strengths, and better advice and support for pursuing careers inside and outside of academia - so that researchers can see a path for progression. As suggested by a lecturer: *"... have a career structure where it's OK to be a postdoc for 20 years, if that's what you want to do"*, or: *"... allow some flexibility where they could do a week's work shadowing of somebody in industry or something different"*.

The assistant professor goes on to highlight researchers' views on the need to foster stronger relationships and levels of communication between senior leaders and themselves, the need to tackle inadequate workload models/unrealistically high workloads (in this case, by hiring more people), and the need for a greater level of openness when it comes to promotions:

> *"I think that kind of feeling like the people higher up are actually listening because it doesn't feel like they are at all, and if you say we've got poor well-being amongst our staff, they'll just put an online course on, that you've then got to try and find 2 hours to do, which you don't have anywhere because you're overworked. So I think… more bodies on the ground, you know, I think that would make people feel a lot more supported. And more transparency as well because a lot of the times in academia it feels like people get promoted or held back for very obscure reasons, you know, and its bizarre"*

Practical suggestions related to doctoral researchers primarily centred on treating them more as members of staff (for example, clearly stating their annual/sick leave entitlement). With regards to changes that could be made by funders, a research associate said: *"… this rule from funder's that you can't be a PI if you don't have a permanent job, because it's just a cycle of never being able to develop"*, whilst a senior lecturer mentioned including a section on the application form dedicated to how researcher mental health and well-being will be managed during a study: *"I think there should be a section where… you outline almost like your exit plan if something-, if you needed time off"*. There were also calls for the UK government to provide greater investment in research and education in general. Nevertheless, as highlighted by an associate professor, it was at times difficult to determine if practical, systemic change was possible, and who might be responsible for setting these changes in motion: *"… you almost have to break the system down again and rebuild it differently, but I don't know if anybody knows how you would even do that"*. The need for more practical support also extended to role/research topic specific scenarios. This included having: *"the structures and the training and the supervision"* in place to enable researchers who work in emotionally challenging research areas (such as violence or mental health research) to develop necessary *"clinical skills"*.

Many researchers went ***beyond* what *support is offered***, and discussed ***the importance of being proactive, and effectively promoting and monitoring the support offered***:

> *"… they can have fantastic policies, you know, everyone's got policies. But unless you have a committee that monitors how the policy is implemented, you may as well not have it"*
>
> (Final-year doctoral researcher)

Good organisational support was thought to be proactive and offered more than once: *"I honestly think we should be having more check ins"* (Senior lecturer). The importance of effectively promoting the support offered was also discussed. Specifically, that confidentiality should be highlighted and advertisements need to be memorable. When promoting support, some researchers also felt there was a need to clarify what is meant by key support terms such as mental health, well-being, or reasonable adjustments. The latter is particularly important, given the subtle differences in the ways in which researchers defined mental health and well-being:

> *"… I think mental health to me is more of a clinical thing… a mental illness or problem…"*
>
> (Research associate)

> *"… mental health is just literally how-, how you're coping…"*
>
> (Research assistant)

On a similar vein, some researchers felt that there was a need for universities to actively help alter the "*clinical perception*" attached to mental health and/or well-being support – through explicitly highlighting that the support offered is for everyone.

***"You just have to find what works, I think, for you" One size doesn't fit all*** highlights the importance of taking into consideration individual needs and preferences. Some researchers felt that effective support could involve universities and other HE

authorities giving researchers the time, space, and means to do things which are good for their own personal mental health and well-being:

> *"… You might be better off just saying to people, we'll-, we'll pay for you to have a day out walking in the Peak District or… like you know-, something that is not-, it doesn't feel like an administration task, it actually feels like we care about you looking after yourself"*
>
> (Research fellow)

Indeed, the research fellow goes on to sum up below that what works for some in terms of work patterns and supporting their mental health and well-being, will not always work for others:

> *"… there'll be people that are quite like vociferous about don't do emails outside of work time… don't set these expectations… And then you have other people replying saying, well, I do those things and it's a bit like… you just have to find what works, I think, for you. And that will… depend partly on your family situation and your priorities and that sort of stuff."*

**6. The impact of COVID-19**

The COVID-19 pandemic was described as having exacerbated the lack of stability (as a result of delayed promotions, reduced funding opportunities, delays in the completion of existing studies), and appeared to further highlight the inflexibility of academia when it comes to reaching for excellence: *"I was trying to be like a human who was living through an unprecedented global event and it didn't feel like there was room for that in-, in academia"* (Final-year doctoral researcher).

Work from home (WFH) rules meant it was often harder to transition between work and home life, particularly for those with caring responsibilities: *"… it might be like go down for a little break, transition to daddy mode, and then ten minutes later…I've got to go back to work… which is still in the house"* (Research fellow). There was also a decrease in formal and informal work conversations that can boost mental health, well-being, creativity, and problem solving. However, for others, WFH rules

somewhat improved supervisory relationships: *"... it formalized our meetings with her... we would start to see her on a more regular basis on Zoom"* (Research associate) and enabled better engagement in some work-based or personal activities of value*: "... I was just sort of clearing things that I've been meaning to write for a long time"* (Postdoctoral researcher).

The pandemic also highlighted a general lack of practical support for researchers, with some mentioning difficulties with securing funding extensions and a lack of help when it came to setting up their WFH space. The general negative ramifications of the COVID-19 pandemic on personal mental health and well-being were also noted outside of the context of work. Some researchers understandably noted heightened feelings of isolation, anxiety, and concern as they watched the pandemic unfold across the world.

### 3.3.3 Narrative analysis

Following being sent their respective narrative summaries, the two participants reported that they were happy with what had been written, and that these summaries captured their stories thus far. The two narrative summaries are presented below. Pseudonyms have been used.

**Case study 1 – Survival**

For Ricky, a researcher in the earlier stages of his career, at the core of his narrative was the importance of good *"people skills"*. Ricky gave multiple examples throughout his narrative of where ineffective and effective communication hindered and helped his mental health, respectively. Perhaps the most significant form of ineffective communication described was within the managerial/supervisory relationship. Ricky described a *"series of events"* which*: "... just kind of built up and built up and built up because neither of us had the correct communication skills to deal with one another"*. To improve their relationship, both Ricky and his supervisor engaged with informal support provided through the university.

Ricky perceived the support offered as effective: *"It worked really well"*. He described the positive transformation they had both gone through with regards to their

communication skills, with the university-offered support appearing to act as a catalyst for this growth: *"It has taught me a lot… a lot of people skills that I don't think I would have been able to learn anywhere else"*.

Differing communication styles found within university-offered counselling spaces also featured within Ricky's narrative. When first accessing counselling, he encountered a space which allowed him to better understand his current feelings and past experiences. However, upon accessing the support for a second time, he described the experience as: *"probably the worst kind of turning point"* for his mental health. The facilitator appeared to be at the heart of why this experience was negative, as they were perceived to be not actively engaging and communicating with him:

> *"… the session became just about suicidal thoughts… this series of questions which just felt completely out of place from what I said before and also out of place from the answers I was giving"*

When thinking about how researchers could be better supported, Ricky understandably stressed the importance of training managers and supervisors, especially with regards to developing their communication skills around mental health:

> *"The whole management training, and wellness and mental health training in understanding not only what the university can provide, but how to approach certain situations… how to cope with others…"*

For Ricky, the narrative genre of his account seemed to be that of a 'survivor'. Ricky detailed the *"roller coaster"* he experienced with regards to his mental health as he navigated personal challenges, his research, work relationships, and university-based support. Nevertheless, Ricky ultimately described his journey as being: *"very much a success story…, you know, I've been able to solve all this stuff , especially with the counselling".*

The central tone of Ricky's narrative was 'reflective', due to his comprehensive interview answers, his clear ordered version of events, and his thoughtful manner during the interview.

**Case study 2 – Connected and disconnected**

For Maxine, a senior researcher, her core narrative centred on the importance of *"connectedness"*. Whilst having a permanent job was a significant factor that contributed positively to her well-being at work, it was also her sense of connectedness within her immediate environment which enabled her to feel valued, able to progress, and feel well in herself. At the centre of this feeling of connectedness was her strong relationships with her colleagues and her manager, all of whom were noted to be aware of, and respectful of, her responsibilities outside of work. A passion for her job role within the department she worked for, also contributed to her sense of connectedness:

> *"… there is definitely that feeling of connectedness to my team and also to the [department]… it helps with my well-being to really believe in what I'm doing and to share the values, I think, that are generally shared by the people that are working on… research in the way we are… people understanding that I have a home life and respecting that…"*

Her experiences of connectedness within her immediate environment starkly juxtaposed with the disconnection she had felt and observed within the academic system as a whole. The system was ultimately depicted as one which is not accommodating of researcher' needs: *"… academia in general have created a system whereby people are often overworked, at times can feel undervalued and very stressed and on precarious contracts… it's a broken system"*.

Her experiences of connection and disconnection were not only reflected in what was said during the interview, but also through the tone of her narrative. When describing her immediate work environment, the narrative tone was that of passion and warmth. However, the tone of her narrative switched to frustration – *"bullshit"*, *"fucked-up system"* – when describing the academic system as a whole.

The narrative genre encapsulating Maxine's story was 'a call to action'. Whilst she highlighted that existing psychological services and strong relationships between colleagues play a role in supporting researchers at work, she was clear that, ultimately, systemic change needs to happen which bridges *"the gap"* between the needs of

researchers and the ways in which various HE authorities (for example; policy makers, funding bodies and senior management) operate:

> *"… But to be honest with you, what really needs to happen is that the system needs to be changed because it's a bit like we can provide people with… all these solutions for mental health problems, let's stop giving them frigging mental health problems in the first place, like let's pay people adequately, let's give them permanent contracts and make them feel valued and make them feel secure…"*

### 3.4 Discussion

Using qualitative approaches, I explored academic researchers' perspectives on how they feel their mental health and well-being could be better supported within the UK HE system. The systemic issues highlighted by the researchers in our study were consistent with those evident in existing literature (Limas et al., 2022; Nicholls et al., 2022; Wellcome, 2020). Many of the researchers in this study indicated that systemic (and often practical) change, needs to accompany those factors which aid their survival in the academic environment, such as autonomy. Suggestions for systemic change included an end to insecure job contracts, embedding equality, diversity, and inclusion (EDI) training and policies in work culture that effect real change in this regard, more realistic workloads, and clear, accessible routes for career progression. Case study two in particular reflects the strong, emotive views some researchers had around implementing tangible, systemic change to better support their mental health and well-being at work. However, as highlighted by those who took part in our study, it can be difficult to determine who might be responsible for directing these changes. Some participants in our study, and existing research, have found that it is a "shared responsibility" (research fellow), with recommendations directed towards different individuals, HE authorities and stakeholders (Kent et al., 2022; Metcalfe et al., 2018; Wray & Kinman, 2021). Nevertheless, the views of particular HE stakeholders and authorities, inclusive of senior management in universities, funding bodies, and academic policy makers, have not been well-explored. It is imperative to qualitatively explore their views on systemic change and mental health/well-being in HE (in addition to the views of researchers, academics, and other HE groups), to identify any

discrepancies, and to ensure that mutual objectives can be worked towards. Fostering stronger relationships and levels of communication between researchers and these other elements of the HE system is particularly important, as, for those who took part in our study, it was felt that the challenges they encountered were not always heeded or acted upon. It is critical to communicate where positive systemic change is being strived for (an example being the "Future Research Assessment Programme", UKRI (UKRI, 2022)), given the recent exacerbation of systemic issues as a consequence of the COVID-19 pandemic, and the increasing number of researchers who are considering leaving HE. A recent survey of 7,000 UCU members found that 75% of individuals with research responsibilities were "likely" to depart HE (University and College Union, 2022).

The key influence of immediate managers and supervisors has been highlighted by this study and others (Hazell et al., 2020; McCarthy & Dragouni, 2021). Training managers and supervisors on how to manage effectively was essential for some of the researchers in the present study. Despite this, Wellcome (Wellcome, 2020) found that only 48% of managers in research institutions had received management training. Concerns over mandating management training were understandably raised in this study, particularly as researchers often described being over 100% capacity in terms of their workloads. That said, case study one does depict how university-offered support which teaches effective communication can have a positive impact on these types of relationships, and, in this case, subsequently improve the researchers' mental health.

Related to participants' suggestions of having more than one manager, is the concept of mentoring. Mentoring is not a novel suggestion, however, proffers and occurrences of mentorship are not ubiquitous (Merga & Mason, 2021). Mentorship can help to foster relationships between early career researchers and senior researchers, and can aid in keeping "underrepresented" groups in the science workforce (Diggs-Andrews et al., 2021). Being able to access the support of a trusted senior researcher could promote tendencies to discuss mental health/well-being difficulties or promote disclosures of mistreatment such as bullying. The latter could be particularly important, given the "power" dynamics that can exist between early career researchers and their immediate management or principal investigator (Fleming, 2022).

Being proactive with offering mental health or well-being support is vital, given that this study and others (Waight & Giordano, 2018) have identified uncertainty surrounding university-offered support (often due to poor signposting, and poorly defined key support terms such as ‘mental health’ ‘well-being’ and ‘reasonable adjustments’).

There was also diversity in researchers’ individual situations. Similar to Jackman et al (2022) (Jackman et al., 2022), this is perhaps best demonstrated in the context of COVID-19. Where some researchers mentioned a poorer work life balance as a result of WFH rules, others commented on an ability to partake in important hobbies and pursuits they would not normally have been able to do. As such, there still needs to be a level of flexibility when it comes to support, ensuring that individual requirements and preferences are accounted for. To further echo Jackman et al (2022) (Jackman et al., 2022), immediate and senior management in universities, and other HE authorities, need to determine how they can foster a healthy, caring environment for researchers working in the HE sector going forwards. The below recommendations created from this research are not exhaustive, however, I hope they can be considered in conjunction with the recommendations listed across other existing relevant literature, to help better support researchers at work.

- There needs to be stronger communication from senior management, funders, national governments, and other HE authorities about how systemic issues such as job precarity, challenges related to EDI, and unrealistically high workloads are being tackled, and any progress made. If this work is not being carried out, those with the power to effect change must consider how to do so.

- Increase the visibility and accessibility of existing support. University-offered support needs to be explicitly confidential; it needs to be promoted in a memorable way; and key support terms such as ‘reasonable adjustments’ and ‘mental health/well-being’ should also be clearly defined.

- Further development of management and supervision skills. This could be achieved through providing relevant training and supervision for supervisors/managers.

Providing researchers with the option of having more than one manager, or a mentor, could also be considered.

- Encourage an open and compassionate working culture, so that those who want to, feel comfortable sharing their own experiences of mental health or well-being difficulties. Particularly senior members of staff, who can help to positively influence working culture.

- Provide more opportunities for careers advice and support. Help de-mystify career paths both inside and outside of academia.

- Implement check ins and follow ups with researchers to help identify any emerging support needs proactively, whether these relate to careers, mental health, or well-being. Check in's and follow ups could be carried out by managers/supervisors, occupational health services, or mentors.

- One approach does not fit all. Support offered needs to be flexible, balancing organisational/institutional needs and goals, with the needs and preferences of individuals.

### 3.4.1 Strengths and limitations

This study had both strengths and limitations. Steps were taken to boost the "credibility" and "transferability" (Nowell et al., 2017) of our findings, including discussing and amending initial findings as a team. Using two qualitative approaches allowed me to search for patterns across the dataset, whilst also exploring in more depth how the themes slotted into personal stories. Nevertheless, I acknowledge that the experiences and views contained within the two cases selected for the narrative analysis may not be representative of the researchers interviewed in this study, nor researchers within UK HE as a whole (Shukla et al., 2014).

Whilst the study sample was diverse in a number of ways including in terms of career stage and UK university type, the sample did not differ greatly in terms of ethnic background, gender, and discipline – potentially limiting how transferable our results

are. Reasons for the lack of diversity in these areas and thus limited transferability of our findings, could be partly due to our use of a snowball sampling technique.

Researchers from ethnic minority backgrounds and those working in a humanities discipline, for example, may experience different challenges and have additional or different support needs that are not captured in this study.

### 3.4.2 Conclusions

The challenges facing researchers who work in HE are multi-faceted and complex, as are their support needs. Relationships between researchers and other HE authorities and stakeholders need to be strengthened, to better communicate what challenges are being encountered, and where positive change is being strived for (or implemented). Immediate management plays a key role in how a researcher experiences their working environment, and it is important that managers and supervisors are given the tools and the time to look after their own well-being, as well as the well-being of those they manage. Whilst experiences and therefore support needs can vary individually, it is important that any support offered is proactive, and that it is advertised in a memorable and clear manner.

## Chapter 3.5 Connecting chapter: How did my first and second study inform the third?

For my final PhD study, I originally aimed to conduct a large-scale survey. Through this survey, I wanted to examine the prevalence rates of common mental health difficulties among UCL's researcher population. Within the framework of the JD-R model, I also wanted to examine the impact of job demands on psychological health, whilst also considering the potential moderating effect of job resources. The job demands and job resources to be investigated were to be determined by the results of my first and second PhD studies.

However, whilst preparing to conduct this final quantitative study, I began to reflect on the results of my first two studies. Primarily, I reflected on the results which concerned researchers' discontent with both the manner in which research funding organisations operated, and the support that was provided to them by 'higher ups' in the university. Examples of relevant results can be found in section 2.3.4 – sub-theme 6.1: 'support provided by organisations (or lack thereof)', and section 3.3.2 – theme five: '"we need to take care of our researchers" expectations, hopes, and suggestions for future support'. Ultimately, I detected that researchers felt there was a disconnect between themselves and these other key HE stakeholders (senior leaders in universities, and research funding organisations). To create and maintain a supportive research culture, it is imperative that all parts of the HE system are aware of the challenges that exist, and they are aligned in terms of their goals and visions for a better research culture. However following a quick literature search and to the best of my knowledge at the time, no study had yet examined the views of UK senior leaders in research funding organisations and universities, with regards to the topic of better supporting UK academic researchers' mental health at work. As such, it was difficult to determine the extent to which researchers' and senior leaders' views and goals align. I felt it was important to explore 'the other side', and I therefore changed the focus and methods of my final study.

The new goal of my final study was to qualitatively explore UK HE senior stakeholders' knowledge of the work, mental health, and well-being experiences of academic researchers, as well as their thoughts on wider academic policy/culture.

Ultimately, I felt that this revised final study would provide a novel and important contribution to the existing evidence base.

# Chapter 4 "… underfunded, underrepresented, under-recognised": A qualitative investigation into UK senior stakeholders' views on the work experiences of academic researchers and wider academic culture and policy

## 4.1 Introduction

Calls to provide a better research culture and working environment for researchers in UK HE are increasingly being made. Ideas and recommendations for improving research culture are targeted towards a multitude of different HE stakeholders including researchers themselves, funders, principal investigators (PI's)/supervisors, and senior management (i.e., vice chancellors) (Hughes & Spanner, 2019; Karlin, 2019; Kent et al., 2022). At a local level, immediate management (i.e., PhD supervisors) can play an important role in either helping or hindering a researcher's well-being at work (Berry et al., 2020) and it is important to ensure that this relationship is strong and supportive. It is thought that changes to the wider HE system itself (i.e., addressing job insecurity, unrealistic workloads) could also make a big difference to researchers' well-being and mental health (University and College Union, 2022). The power to really influence academic/research culture at this wider level appears to be held, partly, by key influential HE stakeholders – that is, senior leaders/management in universities, and research funding organisations (Bartlett et al., 2021; Moran & Wild, 2020; University and College Union, 2022). However, there are some indications in the literature that UK academic staff can feel "disconnected" from these key HE stakeholders/'decision-makers' (University and College Union, 2022) (a sentiment that was further supported by the results of my systematic review and qualitative interview study with academic researchers). It is sometimes perceived that these senior HE stakeholders are not always fully aware of the challenges researchers can face on the ground (and nor do they necessarily act to diminish these challenges). Examples include funding organisations moving towards shorter term grants (Wellcome, 2020) which could exacerbate researchers' concerns over job insecurity; funders placing too much focus on research 'impact' (Wellcome, 2020); and senior management/leadership in universities using resources to undertake projects which may not directly help their members of staff (i.e., using funds for "flashy buildings") (Erickson et al., 2021).

Whilst it is clear from existing qualitative literature that some UK researchers can feel they have a "detached" (Hanna et al., 2022b) and unsupportive (Watermeyer et al., 2021) relationship with these influential HE stakeholders, very few studies have qualitatively examined this relationship from the other side. Globally, existing

qualitative research has examined university senior leaders' views on determining research applicability (Malina & Tucker, 2020); their views on the attributes needed to manage at this level and the influence of gender (Bagilhole & White, 2008); and their experiences of the COVID-19 pandemic (Wilkinson & Male, 2023). There are also published accounts of heading up a department (Crawford, 2023), and a qualitative study exploring the personal cost of being a leader in the HE sector (Heffernan & Bosetti, 2020). The views of individuals from funding organisations and leaders in universities were also included in the Russell Groups' "realising our potential" reports, which broadly cover the topic of improving the UK's research environment (Gottlieb et al., 2021). Nevertheless, neither the perspectives of senior leaders in universities or research funding organisations, are well documented in the literature when it comes to the topic of better supporting UK academic researchers' health and well-being at work. This chapter aims to address this gap.

### 4.1.1 Research objectives

I aimed to explore the following questions with influential HE stakeholders (senior leaders working in UK universities/research funding organisations):

- Research question one: What effect do they think working in academia has on the mental health and well-being of researchers?

- Research question two: Do they feel any changes should be made to academic culture/policy, in order to better support researchers' mental health and well-being?

    - To what extent do they feel they can influence academic working culture or policy in this regard?

    - What barriers do they believe are responsible for obstructing academic policy/culture change in this regard?

## 4.2 Methods

I put in a request to extend and amend my original qualitative study which explored the experiences of UK academic research staff (study two, chapter2), (ref. 21043/001) (appendix 2). A minor amendment was requested so that I could interview and gather the views of other UK HE stakeholder groups. Ethical approval for the original study finished on 9/7/2022, so I requested to extend the length of time I was ethically approved to carry out the study. My ethics amendment and extension request was approved on 14/11/2022.

### 4.2.1 Participants and recruitment

Participants were primarily recruited through the research teams' own networks. The research team either reached out directly to eligible individuals about taking part, or we asked others in our networks to reach out to potentially eligible individuals on our behalf. Promotional materials were also sent via email to relevant organisations, and participants also kindly promoted the study within their own networks (snowball recruitment). I was notified and given the contact details (email) of those who had expressed an interest in taking part. I then followed up via email to confirm the individuals' interest, eligibility, and to send further details.

To be included in the study, participants needed to be currently working for a UK university or a UK-based research funding organisation, and they needed to be in a senior position where their job role includes the ability to make decisions that could impact academic policy/culture. Recruitment efforts were targeted towards the following groups: Senior management within UK universities (example job titles include: vice chancellors, vice-provosts, directors of (professional services, graduate studies, institutes), and deans of faculties); Senior management in UK research funding organisations (example job titles include: directors, senior (officers, program managers), chairs, executive chairs); Senior members of staff who currently sit on a UK funding panel or board (employed by either a UK research funding organisation or UK university). Senior members of staff (e.g., professors) with current or recent experience of sitting on funding panels or boards were targeted, as through this role they may be able to influence what types of research get funded (Herbert et al., 2014;

Meadmore et al., 2020), which could then influence academic culture. UK university/funding organisation webpages were searched to get an indication of what types of job roles would fall under 'senior management/leadership'. It is important to note that what counts as leadership can vary (Bryman, 2007). Different organisations will have different names for positions of similar seniority, and the makeup of senior management teams vary depending on the institution. As such, the eligibility of participants was regularly discussed by members of the research team, and a consensus was reached on whether a participant met the inclusion criteria or not. During the recruitment process, no participant who had expressed an interest in taking part was excluded on the basis of not meeting the inclusion criteria.

I sought to include a diverse sample of participants in terms of job role, organisation, and demographics (age, gender, ethnicity), and we (myself and the research team) purposively reached out to senior individuals working across varied UK universities and research funding organisations.

I took a realistic approach to sample size, that is, I aimed for a sample that contained varied views and experiences, but which also explored these views and experiences in ample "depth" (Braun & Clarke, 2021b). The timeframe allocated to complete the study in, also played a role in the decision of when to stop recruitment.

### 4.2.2 Data collection

I emailed participants a copy of the full study information sheet, along with a link to the online consent form (appendix 6 and 7). All participants consented to take part in the study. The interview structure and topic guide was developed collaboratively through multiple research team discussions (JB, DL, HN). The interview was semi-structured in format, containing questions designed around my research objectives (please see appendix 8 for a copy of the interview topic guide). The interview also contained a knowledge exchange component (please see the separate heading below)

The majority of interviews were conducted online via Zoom or Microsoft Teams. One interview was conducted in person at the participant's employing institution. All interviews were audio-recorded. During the online interviews, the evidence summary was shared either as a PDF document or PowerPoint presentation. Due to some

technical difficulties when interviewing online, it wasn't always possible to share the visual aids of the PowerPoint presentation/PDF document. However, I, as the interviewer, was able to verbally share the key parts of the evidence summary with all participants. During the in-person interview, a physical copy of the evidence summary was shared. The interviews were conducted and transcribed by myself. Any details which could potentially identify a participant or their workplace were removed during the transcription process.

To add context, sociodemographic data was gathered including age range, gender, ethnicity, (Lauchlan, 2019; Office for National Statistics, 2021), and the broad location of the participants employing institution (London, East of England, Midlands etc). Participants' job roles were also assigned into the following categories: (a) a member of senior management and employed by a university, (b) a member of senior management and employed by a research funding organisation, (c) a member of staff who currently sits on (or has recently sat on) a funding panel/board. The latter was clarified with some of the participants prior to the start of the interview, and in one case, following the interview.

### 4.2.3 Knowledge exchange

The semi-structured interview also included a knowledge exchange component (as suggested by DL). During the knowledge exchange component, I briefly shared the results of my two previous studies. These studies explored the mental health/well-being experiences (Nicholls et al., 2022) and support needs of researchers working in academia (Nicholls et al., 2023) (please see appendix 9 for a copy of the evidence summary). The purpose of the knowledge exchange was to elicit further discussion on some of the current issues facing researchers. The knowledge exchange component was deliberately placed after the first question which explored participants' thoughts on how researchers experience working in academia, so as not to influence the authenticity of their answer to this first question.

### 4.2.4 Data analysis

Framework analysis was used to analyse the interview data. Framework analysis was created with the intention to be used in a "social policy" context (Midgley et al., 2015).

However, its "transparent" nature and focus on managing and sorting the data has led to it being used in the context of many different research areas, notably in occupational research (e.g., military research) and mental health research (Kiernan & Hill, 2018; Parkinson et al., 2016). Framework analysis also stresses that the creation of the framework should be led by "a priori issues", as well as more inductive "data-driven themes" (Parkinson et al., 2016). This tallied with my research aims, as I wanted to examine specific issues (e.g., the extent to which participants feel they can influence academic policy/culture change), but I also wanted to capture any views, actions, or experiences not on our radar (Parkinson et al., 2016).

The analytical approach I took aligned with that taken by Parkinson et al., (2016). Framework analysis comprises of five steps: "familiarization", "identifying a framework", "indexing", "charting", and "mapping and interpretation" (Parkinson et al., 2016). I followed these steps when analysing the data, although the process involved movement backwards and forwards between each stage. The analysis was primarily carried out by myself, although regular meetings with other research team members were held to discuss the analytic process and preliminary findings. During the "familiarization" stage, I re-read all of the transcripts and wrote down in a word document any interesting or relevant points (Kiernan & Hill, 2018; Parkinson et al., 2016). During the second stage ("identifying a framework"), the focus was on bringing a sense of order to the dataset and ensuring that I did not forget the specific issues I set out to explore (Kiernan & Hill, 2018; Parkinson et al., 2016). As a result, the initial framework categories were based on the questions contained within the interview topic guide (Parkinson et al., 2016). Throughout the earlier stages of analysis (steps 1-4), I remained vigilant to any interesting or relevant points in the transcripts. These inductive points were then used to further fine-tune the framework categories (Parkinson et al., 2016). The final framework categories are listed below under results.

The indexing stage involved using NVivo 12 to allocate sections of interview text to a framework category. The indexed data was then "summarised" and "organised" into a chart using Microsoft Word (participant pseudonyms/assigned job categories were listed in the left-hand column of the chart, whilst the framework categories were listed in a row at the top of the chart) (Parkinson et al., 2016). Remaining conscious of my two primary research questions (what effect do they think working in academia has on

the mental health and well-being of researchers?; do they feel any changes should be made to academic culture/policy, in order to better support researchers' mental health and well-being?), I then used colour coding to map and find patterns across and within the framework categories (Kiernan & Hill, 2018; Parkinson et al., 2016). The patterns identified were then developed into themes (Parkinson et al., 2016).

### 4.2.5 Quality and reflexivity

Framework analysis is one of the more versatile approaches to analysing qualitative data, as it is not necessarily wedded to any one theoretical stance (Baldwin & Bick, 2021; Gale et al., 2013; Parkinson et al., 2016). However, several papers have used critical realism as the underlying theoretical premise when interrogating their data using a framework approach (Baldwin & Bick, 2021; Davda et al., 2018; Roberts et al., 2022). Subsequently, I have also chosen to take a critical realist stance when interrogating my own data, whereby I acknowledge that my understanding of HE senior stakeholders' views will be shaped by both wider sociocultural knowledge, and my personal interpretations (Baldwin & Bick, 2021; Roberts et al., 2022).

Having a family member who worked in the HE sphere for central government has given me some knowledge of how things might work at a broader, 'higher' level in UK HE. This meant that, whilst I had no personal experience as a senior leader in UK HE, I felt confident in engaging in discussions that reflected this higher-level context during the interviews. I had some knowledge regarding the challenges faced by mid-, late-career researchers, due to having conducted a systematic review (chapter 2) and qualitative interviews with researchers (chapter 3). However, as a PhD student, my work experience in academia still remains limited, and this may have impacted my ability to adequately discuss important topics during the interviews (i.e., pursuing HE senior stakeholders' views on workload allocation models, for example). Nevertheless, the knowledge exchange component of the interview helped to make sure that I was able to engage the senior stakeholders in a discussion about some of the key challenges facing researchers at multiple levels in UK HE.

The process of designing and conducting this study was collaborative, involving input from individuals with various experiences and expertise. All members of the research

team (JB, DL, SJ, PH, VP) have significant qualitative and mental health research experience and belong to varying HE and third sector research organisations and academic career stages. At different time-points, I shared my preliminary results with the research team, which enabled me to reflect on my interpretation of the results, and whether any new interpretations could be included. To check the "credibility" (Nowell et al., 2017) of my findings, the preliminary results of this study were presented to peers at a research lab meeting, and the draft research manuscript was also sent to the study participants for comment. As also mentioned in chapter 3, the purpose of sharing the draft manuscript with the participants was not to make sure that the findings were "accurate" (Braun & Clarke, 2023). Instead, it was a chance for participants to provide new thoughts/interpretations that could be included in the manuscript (Braun & Clarke, 2023). It also acted as a validity check, to ensure that I had captured what the participants had wanted to communicate.

## 4.3 Results

Eleven HE senior stakeholders took part in this research. Interviews were conducted from March 2023 – June 2023. The length of the interviews ranged from just over fifteen minutes to just over one hour. The majority of participants were between the ages of 45-64, and most were from a White ethnic background. All of the participants' employing institutions were situated within England. Seven participants were female, and four participants were male. Six participants were 'a member of senior management and employed by a university', three participants were 'a member of senior management and employed by a research funding organisation', and four participants were 'a member of staff who currently sits on (or has recently sat on) a funding panel/board'. Two participants (ID1, ID11) identified as belonging to multiple categories, that is, they are currently a member of senior management within a university, and currently sit on a funding panel/board. Participant pseudonyms (ID number) and their corresponding job category are presented in Table 4-1.

**Table 4-1. Participant pseudonyms (ID number) and corresponding job categories (interviews with UK HE senior stakeholders)**

| Corresponding participant IDs | Job category |
|---|---|
| ID1, ID4, ID8, ID9, ID10, ID11 | A member of senior management and employed by a university |
| ID1, ID2, ID3, ID11 | A member of staff who currently sits on (or has recently sat on) a funding panel/board |
| ID5, ID6, ID7 | A member of senior management and employed by a research funding organisation |

### 4.3.1 Framework analysis

The final framework categories used to chart and organise the data were as follows:

(a) Descriptions of own and others' work experiences and reflections on what can positively or negatively impact the mental health and well-being of academic researchers.

(b) Working towards a positive change in culture and/or policy (describing and reflecting on own and others' actions and influence).

(c) The future - Important points to keep in mind, and thoughts on what would be helpful (or unhelpful) moving forwards.

(d) Obstacles to better support and/or positive changes in policy and culture.

The patterns/themes identified across and within these framework categories were organised into two domains (domain one: 'looking back: reflecting on the impact of working in academia on researchers' mental health and well-being'; domain two: 'looking forward: moving towards a "thriving" academic culture'). These domains were based on my two primary research questions. The data contained within

framework category (a) were primarily used to create the themes listed under domain one. The data contained within and across framework categories (b), (c), and (d), were primarily used to create the themes listed under domain two. Figure 4-1 indicates the links between the domains and the themes contained within them

Below, quotes from participants have been changed to include correct grammar. 'Filler' words such as 'um', 'uh', or 'right' have been removed, to help both readability and further protect participants' anonymity. Repeat words (i.e., "of-, of") were also removed. Care was taken to ensure that these removals did not impact the key message of the quotes. As with my second study, participant interview responses were varied and detailed, containing multiple views and examples. Here, I have focused on the themes that are key to answering my research questions. That is, I have focused on the themes that are key to understanding their views on both academic researchers' work, mental health and well-being experiences, and wider academic culture/policy.

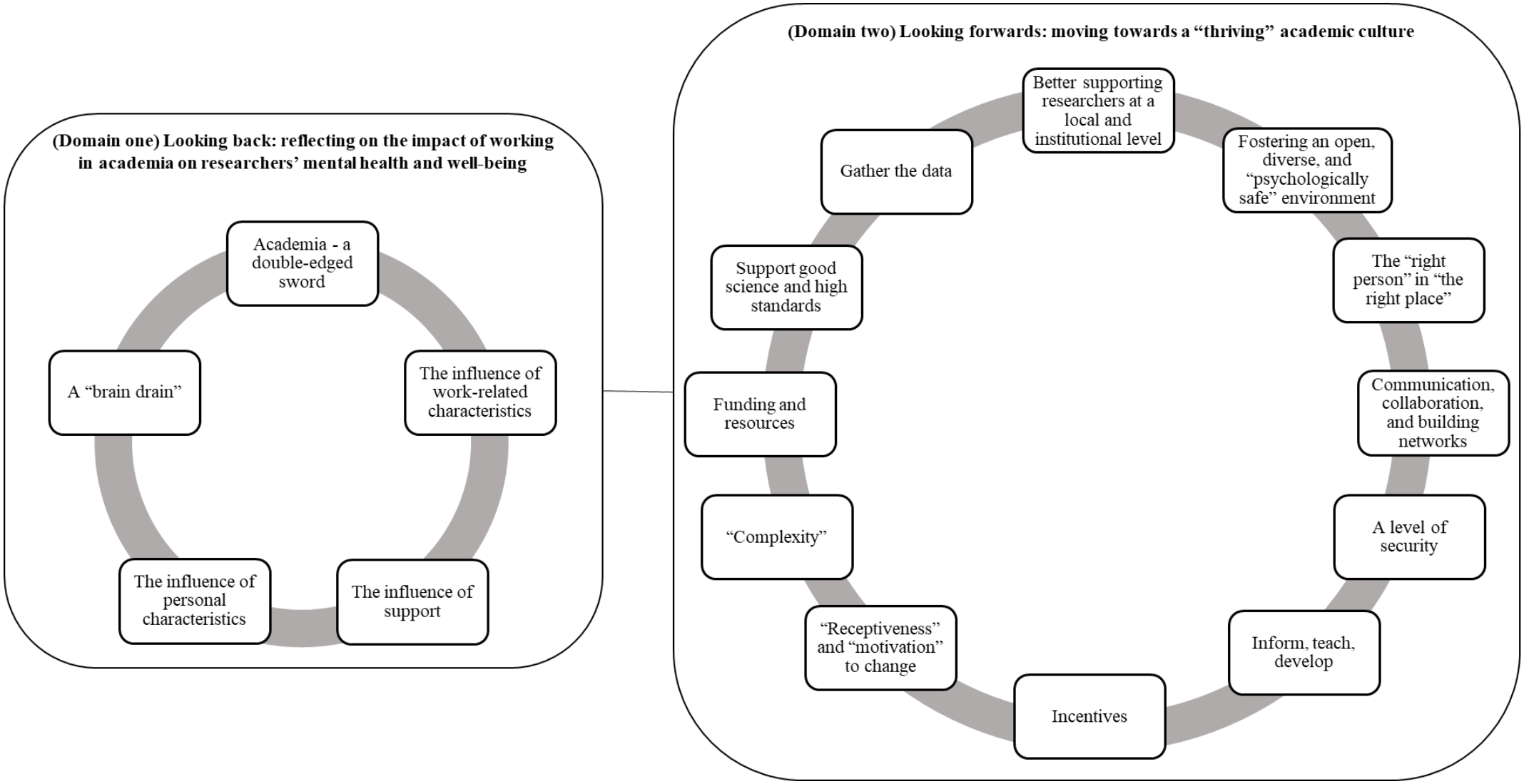


**Figure 4-1. A diagram indicating the relationship between the domains and themes (interviews with UK HE senior stakeholders)**

**(Domain one) Looking back: reflecting on the impact of working in academia on researchers' mental health and well-being**

When discussing academic researchers' work, well-being, and mental health experiences, participants drew from their personal experience as academics/researchers, or from their previous observations/interactions with this group. The themes contained within this domain are intertwined, and touch on the key aspects of these discussions. The themes also include relevant additional comments elicited by the sharing of the evidence summary during the interview. It is worth noting that the majority of participants did not find the information shared as part of the knowledge exchange surprising. Indeed, a participant indicated that the evidence summary *"… could probably transfer across to so many different occupational groups"*. Nevertheless, a few participants mentioned that they found some of the findings unexpected (further discussed below).

**Academia - a double-edged sword**

In summation, 'academia' was described as 'a double-edged sword'. It could be an "*uncertain*", "*inherently precarious*", "*competitive*", "*isolating*" and demanding environment, where individual stats and metrics reign supreme, but it could also be autonomous, "*intellectually stimulating*" and "*rewarding*". A participant highlights this dichotomy below:

> *"…we get to a job where people say teach for which you have no preparation, and think things nobody has ever thought before and that's incredibly stressful… you feel as an academic like you're a sole trader peddling your own brand with the institution as a bit of a backdrop but it's not like a normal employee/employer relationship where if you do well and your line manager thinks you're doing well then you progress, because it really depends upon how the whole world thinks about your research and of course everybody knows the difference between good research and bad research but the difference between good research… and you know really outstanding research, that's much more a matter of fashion… and who publishes your material and all of that kind of stuff… so you're engaged*

*in an activity that is incredibly uncertain and boundaryless… I think it is a job that is inherently precarious in the way that it is structured in the modern university… On the other hand, the great thing about the job is precisely the opposite thing… you're largely your own boss… control over your workday… so there are things that also contribute to a sense of well-being".*

(ID4)

**The influence of work-related characteristics**

Whilst the double-edged nature of academia was touched on across many of the interviews, participants often highlighted that researchers' work, mental health, and well-being experiences can be highly variable and dependent on a combination of factors including their discipline/project types, and career-stage. A senior manager from a funding organisation reflects, for example, on the challenge of researching an emotionally challenging topic: *"… so some of our researchers… are researching very difficult topics, talking to people with lots of… challenging things that feed into the research but actually that's still one person absorbing it all"*.

Insecure employment was particularly associated with those in "*scientific teams*" and those in the "*postdoc space*", and another participant noted a lack of research funding for mid-career scientists/empiricists. Clinical academics were noted as perhaps having a greater level of security. However, for researchers "*straddling*" multiple sectors/fields/communities, it was thought to be challenging to navigate the multiple identities that can come with that, particularly in a system that can be quite "*uni-disciplinary*":

*"… when you said about their roles often seeming like a bit of a mystery, and people not really sure what they do, I think that-, that's something which comes through quite strongly if you talk to clinical academics"*

(ID7)

*"… my topic area… is quite interdisciplinary and all the journals are very uni-disciplinary, it can be hard to find outlets that will accept your work. And so, it's harder to progress because you're not then publishing in the top journals for that-, for that discipline"*

(ID9)

Participants touched on researchers in general having "*a lot on their plate*" and needing to manage workloads which bled into evenings and weekends. A participant mentioned in particular the difficulty of coping with very long work hours whilst managing the upheaval of their home life during the COVID-19 pandemic. The rise of "*compliance culture*", however, was thought to be particularly hard for early/mid-career researchers to balance:

*"…at the moment universities operate like loose federations of college industries where there's a kind of palimpsest of regulation and process and procedure and faff … people are doing a lot of self service and our systems of self-service are pretty ropey, and we've got to shift that… I think for many-, particularly young and mid-career researchers balancing the high transaction costs of being in a university just in terms of the-, well what from their point of view is faff that you have to do… in order to do your research and having the time and the headspace to think and to write… that balance is often hard to find"*

(ID4)

**The influence of support**

The availability of support (either more generally at an institutional level, or within a researchers' more immediate environment), was a factor thought to highly influence researchers' mental health and well-being at work. The importance of a supportive environment at a wider, institutional level is highlighted below:

*"… I think you know it can be entirely positive actually if they've got a really supportive environment for-, that enable them to do their research,*

*to progress their careers, feel like they've got the support around them… and there's lots of places that do that really well… I've also seen examples of where it can have a really bad impact… on their mental health where it's-, where that support's not there you know we've had examples of you know researchers being in tears to us where… things haven't-, you know, that were promised to them in terms of support for example weren't given… I think it all comes down to how they're supported from their-, from a host organisation"*

(ID7)

A few participants expressed surprise that, in the evidence summary presented, academic researchers had found existing institutional support structures not always visible, accessible, or knowledgeable about the challenges they faced. Indeed, some participants had noted well-signposted support in their institution, or, as a result of the COVID-19 pandemic, had noted an increased focus on mental health and well-being support structures:

*"… I'm surprised a bit by the structures at [University] because I think we've worked really hard, but I suppose I can only talk from my own experience… but I think the well-being has been, particularly following the pandemic, has been really strong and I think they've tried really hard, and we talk a lot about mental health and about access to it, and I refer people… I can see if we're not talking just about [University] that may be an issue…"*

(ID1)

Nevertheless, some participants commented on a "*lack of institutional support mechanisms*" – either generally, or for those at more senior positions (i.e., PIs). Others felt that key information about accessing support (i.e., who to talk to) does not always get across, and a few touched upon researchers not wanting to appear "*vulnerable*", and therefore not feeling comfortable to share any challenges faced, or access support

if needed. In one case, it was perceived that it is particularly hard for PIs to talk about any difficulties they are experiencing.

> *"… there's the other big issue… about students and staff declaring their disabilities or declaring their issues and that is I mean we had a discussion at [Organisation] on this only a couple of weeks ago and it's still way lower than you would expect".*

(ID10)

> *"… I think there is quite a lot of support structures in [University] for students, less so for post docs, and even less for group leaders…*
>
> *… it's all documented on the websites and in emails… but it somehow doesn't reach people, where to go, what to do…*
>
> *… and then PIs, when they run into trouble I think there is still quite a bit of a negative view on that, on mental health, its more accepted amongst students and postdocs, than it is among PIs".*

(ID8)

Within a researcher's more immediate environment, supportive work relationships, particularly with managers and supervisors, were thought to be key to good well-being and mental health. Participants mentioned it was important for researchers to have "*emotional support*", and someone to guide them through what can be an "*opaque*" system. Nevertheless, participants had noted a high variability in researchers' work relationships, particularly in the postgraduate researcher space: "*… there could be a huge variety in the time and effort they [Supervisors] put in to providing support, whereas actually you need that to be consistent*". The key role of managers/supervisors/group leaders is summed up below:

> *"… I think it very much depends on your environment or your direct environment and that is very much set by the group leader so if the group leader creates a supportive… you know intellectually stretching culture*

*with sufficient guidance for people to do their projects I think people can thrive… on the other hand there is insufficient guidance… unreasonably negative feedback… no support system, people feel outside of what they do, they don't feel valued… they work too long, get exhausted then I think it's a huge breeding ground for mental health issues…*

*… I think that most labs are okay, then there's a few that are exceptional in that people really, really thrive you know because the supervisors are just amazing people, amazing scientists and also people people… if the science isn't going well, it's very difficult for people in the lab to thrive because obviously it is intertwined, and then there's… unfortunately always a few labs that are less happy places"*

(ID8)

**The influence of personal characteristics**

Individual factors and personal circumstances/experiences/perceptions were also thought to impact the way in which researchers interact with and experience their work environment. Job insecurity was thought to be particularly "*stressful*" and intolerable for individuals with dependents or individuals without someone who can "*pay the mortgage*", whilst a few participants touched on the influence of individual "*life skills*", familial backgrounds, and "*resilience*":

*"… perseverance, resilience, all of these things are really key and not all academics-, not all people have them, and nor indeed are they necessarily… a focus of development for academic staff, and yet they're absolutely critical to success because nobody gets all their grants and everybody has to… work through how to cope with rejection or failure which is how these things are seen"*

(ID10)

*"… I think another contributing factor is that students can come rather young, one often sees a difference between those that come straight out of*

*university with very little working experience and those that have been around a bit longer and have had to fend for themselves a bit more… so life skills, level of life skills that people come with can also affect how well they do, and that's something that the individual group leaders can be more or less aware of and cater for…*

*… students that come out of families where the parents are researchers… vs students that come from totally different backgrounds that can have a big difference in how confident they feel and how much they feel at ease to bring their ideas to the table".*

(ID8)

Many participants were not surprised by the finding presented in the evidence summary which concerned the risk of inequality faced by researchers from a Black ethnic background, female researchers, and researchers from a working-class background. Indeed, participants felt that "*the diversity issue is a real issue*", and underrepresented groups "*by definition don't necessarily have as many people to go to and say you know this is the experience I'm having is it normal*". Participants highlighted some of the challenges faced by female researchers (i.e., "*however hard we try with all the equality with maternity and paternity, it's never the same*"; "*going up the chain there's fewer females*"), however, the finding related to gender in the evidence summary did provoke some surprise in a few female and male participants:

*"… I'm also surprised that women still feel-,… difficulties in academia… you know with Athena Swan and universities just being, more aware of childcare duties and domestic duties-,… but maybe that's because I just think its hugely better than it was 30 years ago"*

(ID2)

Participants further reflected on gender in the context of a particular discipline:

*"… if the vast majority of people working in Psychology are women it may be that men are underrepresented groups which is contrary to I guess a number of findings where women are normally underrepresented"*

(ID3),

and in the context of individual behaviours and perceptions:

*"I'm wondering whether sometimes it's sort of the perception of the females that… partially, that they feel they are seen as different and therefore don't belong…*

*… when you are a group leader do you take on tasks that are going to help your career or do you take on these tasks that are going to hinder your career that are often pushed in the direction of the more caring females… I think you have to be pragmatic about that… if you are interested in them it's a different thing obviously, but… the males that are not typical alpha males, they need the same sort of advice… I don't think it's so much male female its more different types of behaviour of people"*

(ID8)

Ultimately, a participant reflects on the impact of feeling out of place:

*"One thing I will add from my own personal experience… you come into a new environment and… you don't fit, so… your insecurity maybe of where you fit can impact on how you feel about yourself and see your environment".*

**A "brain drain"**

As a result of some of the difficulties listed above, some participants spoke of a "brain drain" (Day et al., 2023), that is, researchers leaving the academic sector: "*We're losing a lot of… really quality people in-, into industry*". The difficulties commonly credited for this 'brain drain' in particular were job insecurity and the difficulty of

getting grants (a process described as long, "*stressful*", "*competitive*", not always equitable: "*... you could get a few people that would really sway… whether funding is approved or not*" (i.e., individuals with "*strong*" personalities), and not as fruitful at the end: "*grants aren't as generous as they used to be*"). Nevertheless, a participant noted that some researchers can feel "*stressed*" to keep their academic job due to an untrue "*perception*" that academia is the only place to have a "*meaningful*" career, whilst another noted the difficulty in choosing another career path: "*... I don't really understand what I could do outside of a university either… I think it's much more simple if you're a chemist or a biologist*".

**(Domain two) Looking forwards: moving towards a "thriving" academic culture**

The themes contained within this domain are intertwined, and are intended to be a map (Midgley et al., 2015) representing participants' key views, key actions, and any obstacles identified, with regards to working towards a more thriving culture in academia.

**Better supporting researchers at a local and institutional level**

Many participants shared their thoughts on 'better supporting researchers at a local and institutional level', and noted actions they or others had taken in order to achieve this. In terms of the wider, institutional level, participants touched on the creation of the "*Researcher Development Concordat*" (an initiative which connected many stakeholders and "*set expectations*" to help better support academic researchers), "*DORA*" (a movement towards reconsidering the use of research metrics), a move to "*narrative CVs*" ("*... where people can discuss and describe what they've done in their research… metrics aren't always the best way of assessing how much potential somebody has to deliver a piece of research*"), and plans to: "*set researchers free of administrative tasks so they're better done by professional staff*". In the context of their role on a panel/board in a smaller funding organisation, a participant commented on the grant application process being more streamlined: "*... we try very hard to minimise any of the admin and the processes that are involved in grant applications… you get the outcome very quickly*". Whilst it was acknowledged that bigger funders do need processes, the same participant wondered whether they needed "*quite so many*".

In line with some of the principles of "*DORA*", some participants wondered whether it would be better to focus on the quality of the research, the process of conducting the research, and developing individuals, rather than focusing on outputs and the journal that the research is published in. A senior manager in a university wondered if funders could better convey the message to "*focus on the process*", that is:

> *"… 'yes we expect outputs, but we expect good science and good culture because the outputs will come with that' … I understand we need metrics to judge people or measure… but I think there has to be a sense of how that metric has come about"*

Positive developments by funders were noted in the sense that the culture of a PI's research group, and the availability of opportunities for staff development, are now taken into consideration when appraising funding applications. Nevertheless, there were some reservations: "*… there is a risk of there being casualties… when there's no clear guidance what you should write about and how that again is going to be measured, or how it can be measured, that it's all depending on the interpretation of the people in the panel*". Similarly, a senior manager in a university mentioned reserving judgement with regards to "*narrative CV's*", wondering whether they would: "*… bias for another group of people who are very good at writing narratives rather than having the publication list, so I guess the jury is still out, but we should not think that replacing one system by another is going to solve all our problems*". The latter is a sentiment further echoed by a senior manager associated with a funding organisation, who pondered how easy or difficult it would be to change the "*whole research system*", and whether or not this would be the right way to go for research in general:

> *"… the first is you know trying to think about you know do you completely change the whole research system which is probably unrealistic but also… you've got to think about… is that the best thing to do for the type of research you're going to get as well-, I think it's a really interesting topic… people have published on this as well, around you know, completely getting rid of you know competitive grant funding or fellowship funding and it should be more done… as a lottery… I mean I don't-, I don't agree with that extreme end of things… the whole you know system of peer*

*review … I think actually has lots of benefits, I think it's not perfect, certainly not and obviously there's definitely things we can do to sort've help mitigate that but I think one-, without sort've completely looking to overhaul that"*

At a more local level, participants commented on a variety of ways in which they have supported researchers through managerial responsibilities. This included providing support emotionally, ensuring workloads are manageable, encouraging "*team cohesiveness*", encouraging individuals to "*sign off*" if they need to and funding them during this period, and leading from the top when it comes to not working very long hours or on weekends. Expanding on the latter, the importance of "*flexibility*" when it comes to working hours was also mentioned:

*"… I think if people choose to work at weekends because that fits in with their work pattern, and their flexibility that's fine but it's-, definitely shouldn't be an expectation"*

(ID2)

*"… maybe more discussion about increased flexibility…*

*…. no one likes having kind of their weekends intruded or working in to, and I get that but sometimes it's the only way to get the data".*

(ID3)

**Fostering an open, diverse, and "psychologically safe" environment**

Many participants reflected on the importance of (and role they, and other senior academics could play) in 'fostering an open, diverse, and "*psychologically safe*" environment' – that is, an environment that is inclusive of differences in background, characteristics, and opinion, is transparent, and has embedded within it mental health and "*EDI*" structures:

*"… I do see some very senior academics and some great presentations that people do now… people will show all the success they've had and then on the second slide they'll then show the even more busy slide of all the things that didn't go to plan"*

(ID6)

*"I think what needs more attention in research is creating psychological safe environments because the problems are so complex that we need everybody's brains and not just the ones of the people that feel comfortable and have been taught one way or another either because of their background or their education or whatever to immediately pitch in and speak up…*

*... psychological safe cultures where there's no hierarchy, where people feel free to say to their supervisor… that they don't agree because that's very important…*

*… you do need some sort of disagreement for you to really think about something and actually for you to question your assumptions-, your basic assumptions that you take for granted which are at the basis of ultimately the culture that bubbles up at the end. And you do have to have these robust discussions but they can be done respectfully…"*

(ID8)

*"… one of the things that I've been keen to do in… institutions I've worked in before is to have… sponsorship programs that is programs where… senior leaders of one kind or another particularly look out for opportunities for researchers from underrepresented backgrounds"*

(ID4)

Participants further described calling out more negative behaviours at a local level (that is, calling out negative supervisory/managerial practices and calling out any negative behaviours observed when interviewing as part of a funding panel).

> *"… I interview a lot with [Redacted] for students and we've changed how we do that and that's changed the tone and the culture at the interview process which I really like… but that was bringing senior academics back into line and saying we don't question like that… people feel like they've been asked questions, interrogated in a nice way rather than going into a lion's den and being spat out the other end"*
>
> (ID11)

However, it was noted by a couple of participants that calling out negative behaviours or practices can be difficult, particularly for less senior members of staff: "*it's a brave person that does it*".

Other key thoughts around building an open, diverse, and "*psychologically safe*" environment included thinking about "*intersectionality*", confidentiality, and taking steps to ensure that individuals "*feel comfortable*" accessing support structures (structures that should be "*universal*", "*available to everybody*", "*easy to access*", and visible).

**"The right person" in "the right place"**

Across the interviews, there was a sense of having '"*the right person*" in "*the right place*"'. Some participants commented on needing (and having) "*the right person at the top*" and "*inspirational leaders*" to move change forwards, whilst others positively reflected on their own abilities to influence change in the context of their personality, their ability to appoint the right individuals to the right posts, and the length of time they had been in an influential role. Also touched on is the individual toll of trying to foster a better culture:

> *"… when there are financial pressures, the tendency is for some of these areas to go-, be moved down the priority list… whereas actually that's the*

*very time you need to keep them at the top and make sure… that they move forward… I would say that… our current [Senior job role], does that very effectively…*

*…. I think we have done quite a lot… on the EDI front… So, I mean have I influenced that, well yeah up to a point, I've certainly enabled and encouraged it, and appointed people capable of doing it in a way that I wouldn't be able to…*

*… I can influence the management committee and I do, I'm a fairly long standing [Senior job role] so perhaps I have a good understanding of how one might try and make change"*

(ID10)

*"I think I have influenced our culture in the [Organisation]… my next challenge is to try and do that at the next level, and to try and replicate that up, I don't know how easy that's going to be, I think it's going to be really hard actually, because you can change things, but it takes a lot of-, I suppose my concern is a lot of what I've done is based on me, my personality, the fact that… I am known by quite a lot of people in the [Organisation]…*

*… I also think it takes a personal toll, so I think you know it was time for me to step down… because I've gone as far as I can really and people have become dependent on me sorting things out and I could see that happening"*

(ID1)

Participants with senior roles within funding organisations commented on the importance of an individual being in the right environment that can support them as they carry out their research. Participants involved with funding panels commented on the importance of having present on the panel an individual with the right research

expertise, and making sure that an applicant has the right skills to manage potentially difficult group dynamics.

> *"... we put quite an emphasis on understanding the support that the host organisation will provide... to a fellow when they are applying for fellowship funding so it's not just about how great their supervisor is in terms of their academic track record, actually we need-, we need to be confident that that person's going to be in an environment that will support them"*

(ID7)

> *"... so I'm part of a panel that interviews... we ask about-, if they're going to employ people, particularly sometimes they put down for employing a postdoc who would be actually more senior to them, how are they going to manage that situation"*

(ID11)

**Communication, collaboration, and building networks**

Another key factor to consider was 'communication, collaboration, and building networks'. For some, better communication was one of the biggest areas for change, that is, fostering a culture where "*open, transparent, bi-directional communication*" is the norm. Linked to communication was "*lobbying*", where the key issues faced by researchers and calls for change are re-iterated to those with the potential power to change things:

> *"[Funding organisation] is very small, so we're not really in that position... to make that much change... however we've got a huge, little black book of contacts and I think it's through that channel that we are able to really start making a bit more... lobbying I suppose, so, to make changes as such, not, but to try and put pressure on others within universities and within the world of academia then... we can try and rattle cages that way"*

(ID5)

Building relationships between individuals at different levels of seniority, within "*cohorts*", and "*across organisations*" (i.e., universities, "*academic membership organisations*") was considered to be particularly supportive for researchers. When thinking about the funder they represent in general, a participant wondered if they could do more: "*… to put people in touch with each other across organisations*", whilst senior managers from both universities and funding organisations spoke about steps they had taken to foster supportive relationships; though implementing mentoring programs, or bringing those with similar characteristics together:

> *"… our PhD students I'm in touch with all the time to keep up to date with them to make sure that they are being supported… keep in touch with them once they've completed their PhDs and again our grant holders have the opportunity to get involved with that as well we have a mentoring programme now that we set up last year… all our PhD students, they have access to a mentor who is… not at their institution and not in their direct area of research… it's an opportunity for them to network"*

(ID5)

> *"… we really tried to bring the PhD students together so that they weren't dependent on their supervisor entirely".*

(ID10)

Ultimately, collaboration was seen as vital in helping to train and develop researchers, and through allowing and enabling people to connect with each other, good practice and culture can spread out beyond the boundaries of a research group or department:

> *"… allow people to be connected, allow them to talk about their data, doesn't mean to say someone else is gonna scoop you…*

*… we need to become collaborative and not siloed you know this siloed thing, I think has many ramifications not least what it does to an individual and how they feel, but, it limits their training"*

(ID11)

*"… I think change happens, when you influence other people who then remind you and remind other people"*

(ID1)

Nevertheless, poor communication could also be considered an obstacle to change, that is, some people were noted as "*… not good at having direct conversations*", whilst others mentioned that researchers need to have the tools to communicate where extra support would be helpful:

*"… it still requires the individual to let us know… communication you know… and that comes back to how does a researcher know where to get support, where to ask, what questions to ask, you know all of those things as well which can be difficult"*

(ID6)

Other examples with regards to collaboration includes funders working together to set expectations and the "*minimum standard*" for support that employing institutions need to provide for researchers – and helping them to meet these requirements.

**A level of security**

For some, 'a level of security' was crucial for researchers' well-being: "*… the real big game changer is if academics could have security… that's the big thing, for people's health*". However, concerns were raised that the issue of job security may not change as quickly as is needed, in order to protect researchers' well-being in the here and now. Below, a participant reflects on the state of job security in academia and more generally:

> *"… I don't see… systemic factors for more job security changing in the next 10 years, and-, sadly. And I know we're going to miss a lot of talents, in that way. I have no job security I should add… I can lose my job and that's not hypothetical because it has happened to [Number] of my colleagues over the last [Number] renewals of our funding… my way of dealing with that was that in year [Number]… I frantically think like what's my plan b, for about a week, and then I find one and then I think okay that's fine then and then I can just continue with writing the renewal…*
>
> *… no job is secure anymore I think… so when you're aware that that's the case then some sort of way in which you feel comfortable that you can change around and pivot and take some other things if needed. That's the best security"*
>
> (ID8)

Participants employed as senior managers within funding organisations spoke of liaising with universities about getting more security for post-docs and supporting "*sustainable job careers*" through using public funds to create schemes "*which then offer career support across the career pathway*" (i.e., senior leadership, pre-doctoral activities). Academic career progression was deemed not to be linear, and lots can be learned from taking a different path or just going "*steady for a while*" (although, it was noted this can be difficult in an 'outputs' driven culture). It was mentioned that researchers should be supported to leave academia if they want to, and the "*transferable skills*" that can be gained in academia were noted.

**Inform, teach, develop**

The sub-theme 'inform, teach, develop', covers a variety of views on training, raising awareness of particular issues, and, crucially, providing opportunities for researchers to develop. Raising awareness and providing training on issues such as implicit bias ("*… a greater awareness among the men that women don't always put themselves forward and therefore ask them to come and join in*"; "*… more unconscious bias*

*training, I think that would be helpful particularly for minority groups*") was touched upon, as was the need for more "*academically focused career support*", and better preparing researchers for the multiple paths they could choose as an academic. Ideas for training further included teaching "*influencing skills*", so that other individuals can "*see your point and that trajectory*", teaching individuals when to quit ("*… yes you have to be resilient… but you also have to realise when it's no longer in your interest or in anybody's interest to just keep bouncing your head against the wall*"), and teaching individuals to be aware of what is personally meaningful, and to not take on tasks that are not of personal interest. A participant reflects on the latter in terms of their own personal experience:

> *"…my entire self-esteem came from how my research was going, which is not a great place to be so I decided I was going to do some other things alongside my research… you have other anchoring points in your life that make you look at yourself… more as a whole person rather than just this person that's working in the lab… and I think that is something that people should be taught more of early on that they basically have to be aware what's important for them"*

(ID8)

Skills such as dealing with rejection and building resilience were seen as a "*learning curve*", requiring both time and space to learn. Also reflected on was the importance of training and supporting managers and supervisors – for example, new PIs could be trained through fostering interactions with more experienced PIs who have been noted to have thriving cultures:

> *"… I would make use of the groups that have excellent research cultures… we introduced an award for supervisors for excellent supervision… only students and postdoc's can nominate people. And that's-, has led to some nice examples coming up so we can then use these examples to bring together groups of new PIs with these people and share experiences and best practice, and to give clout to those meetings, the plan is to have the head of department involved in them as well"*

(ID8)

Some participants also touched on moving away from "*crisis resolution*", and instead focusing on providing the right training, support, and culture early on. A senior manager from a funding organisation spoke about this in the context of providing funds for those working on emotionally difficult topics to access "*... counselling or ongoing clinical supervision*", whilst another participant warned against the use of too many checkboxes and rules:

> *"... if you have a good culture... the culture would perpetuate itself and would maintain itself and create... the right environment, that's the importance of culture, because otherwise you can just bombard everybody with policies and rules... and penalties, but what sort of world are we creating then, horrible world...*
>
> *... tick boxes... are horrible, not looking... at prevention and then putting all these do's and don'ts in place, no scientist like to be told what to do"*

(ID8)

Nevertheless, training may not always be the answer:

> *"... I think some of those more senior people don't actually realise that... I'm not excusing their behaviour but I think some of them actually think they are supportive, it's just what they actually do is not supportive at all... it's very difficult to work out how you get through to that because you know they can go on education, they can do that, but they just don't get it and I've seen that happen"*

(ID1)

**Incentives**

'Incentives' being used to help foster positive culture change was touched upon. Typically, these incentives take the form of funding or promotions. Participants

commented on references from past and current members of an applicant's research group being factored into promotion and funding decisions by organisations and interview panels. Although, it was noted that: "*...you have to give people a chance because some people are not aware how they come across*". A senior manager, meanwhile, highlights the key role funders can play in fostering a supportive culture at institutions:

> *"... we have in the past for example written to host organisations who have been sort've repeat offenders shall we say, to say look if you don't sort yourselves out then there is the possibility of you know loss of funding going forwards-,... I think in summary for funders there's certainly a lot we can do to influence because you know we hold the purse strings at the end of the day... it's a good lever to make changes".*

(ID7)

**"Receptiveness" and "motivation" to change**

For over half of the participants '"*Receptiveness*" and "*motivation*" to change' was a key issue. Participants commented on the hierarchical nature of academia, and the limitations this could impose on an individual's actions. Linked to this was the view that some individuals may be unwilling to change or unreceptive to feedback (notably senior individuals, and, in one case, male individuals who receive feedback from female individuals). Also stated was the importance of having all aspects of the leadership on board with regards to changing things:

> *"... there are some big beasts who don't want to change, and who don't think things should change... I think you can start making differences but you make those differences by bringing people with you and our power lies in the early and mid-career researchers...*
>
> *... you can only do what you can do depending on who's then at the next level up... it depends on whether there is a desire from the wider leadership right up to the top, to make those changes, and I don't just mean*

*you know, provosts… I think some of the most important people are those that are in professional services… if they aren't on board with changing things, you've got no chance"*

(ID1)

Other participants perceived some resistance to learning from other industries (i.e., taking knowledge about management from the world of business), and at times perhaps a reliance on university reputation: "*... whereas you do sometimes see… some of the golden triangle universities say well… we've got the best researchers in the world… we've been doing this for the last 50 years so why wouldn't you give me the money*" (ID7). Ultimately, the importance of acceptance, motivation, and "*positive energy*" was highlighted when it comes to making a change:

*"I think rather than debating whether or not there's an issue… I think-, more rapid acceptance of issues that need to be resolved is a first step…*

*… there's an inherent reluctance to change… it's like, there's an inertia, so if you want to change… you have to have positive energy to move forward on that you know it won't just happen and you have to sustain that"*

(ID10)

**"Complexity"**

Many noted the '"*complexity*"' of higher education institutions, in that universities and funding organisations can be "*multi-layered, complex, not transparent, poorly understood*" and change can therefore get "*stuck*". A senior manager in a university mentioned: "*... quite often every department wants its own solution and that means that the whole system is very complex and costly and if you're going to release the resources you need and make it simpler you need to solve those co-ordination problems*". Interestingly, it was also noted that academics could find change "*potentially threatening*" as they value (and work in) an "*environment of high*

*autonomy*". Attempting to change things in this autonomous environment could become "*time-consuming and difficult*". Although it was noted that:

> *"... to be fair they've [academics] got a lot of experience of change that hasn't necessarily been good for their work life balance or for a whole lot of other things"*
>
> (ID4)

The fact that change in this environment can take a lot of time was not something that was lost amongst many of the participants in this study, however, a participant noted the importance of having "*a sense of momentum, of movement*". Having an "*action plan*" like the "*student mental health charter*" could help foster the sense that steps towards change are being taken. Some participants also wondered if there was a "*tendency to overcomplicate*" and "*expand*" ideas for change and wondered whether starting "*small*" and at a local level would have more impact, rather than "*... yet another initiative, huge initiative, big project, that looks good... but then basically can't be maintained*".

**Funding and resources**

'Funding and resources' was touched on by almost all of the participants in this study. It was felt that higher education is "*... underfunded, underrepresented, under-recognised*", the repercussions of which could include a lack of funds for research activities, management training, and permanent jobs. Participants mentioned a need for "*funding models*" to change and for research and research careers to be "*properly funded*". However, this was thought of as a governmental issue:

> *"... if there was more central funding for universities then the pressure on researchers would be less but that's very wishful thinking...*
>
> *.... the main obstacle is the way that the-, that universities are... funded, and that's such a high level, political obstacle... it will only change if the government of the day decide to do things differently"*

(ID2)

Indeed, various factors were noted as influencing the levels of resources and funding organisations have to work with, in order to help support researchers and academics. Chief amongst these factors included other infrastructure such as the NHS (National Health Service) also needing governmental resources and funding, an inequality in the amount of funding allocated to different disciplines, and the size of a funding organisation.

> *"… research funding is not equally distributed across the disciplines… so the amount of funding that… arts and humanities researchers have-, potentially have access to is very different to anybody working very specifically in biomedical science or… a health-related area"*

(ID6)

> *"… we're tiny you know we can't support everything we can't give everybody-, I'd love to give everybody a contract but we can't"*

(ID5)

> *"… so I spend a huge amount of time in Whitehall… making that case and engaging with politicians and engaging with policy makers and all the rest of it, but I'm also realistic that you know with the NHS needing investment… the government doesn't have a huge amount of money swashing around and… so I also have to work on what we have, to make sure that it's used more efficiently than it is at the moment"*

(ID4)

A participant highlights the importance of recognising "*people*" as one of academia's most important resources: "*…people I guess realising that if people are happy and enjoy what they do, they do their best job, and that that is good for everybody… without the people you won't be able to get the money in*", whilst another highlights that changes can be made without lots of resources: "*… I think resource is often something*

*we fall back on and say well we-, you know we couldn't get the resource and sometimes it's not so critical. So there are things you can do with relatively limited resources*".

**Support good science and high standards**

'Support good science and high standards' reflects participants' views on "*…encouraging people to excel*", and making sure that good support and good science come together:

> *"… not only culture in terms of how supportive are you for your staff, but it's also research integrity is actually another big aspect of the culture, because you don't want people to cut corners"*
>
> (ID8)

> *"… we try and cut through all that red tape to make it easier for people who apply for grants from us, so we don't-, we still hold the same scientific standards"*
>
> (ID2)

**Gather the data**

The sub-theme 'gather the data', first concerns participants' views on the need to monitor the impact of new initiatives so that they can potentially be further developed: "*… I hope they have a benchmark and they can measure the impact of the change that they have done*". Gathering data was also spoken about in terms of monitoring and checking in with researchers with regards to the support they are receiving:

> *"… anecdotally we don't necessarily have brilliant data on this yes we get-, we get examples of poor support when it comes to us, but you know I'm sure there's plenty of examples where we don't know about… where things aren't working for people… do we need to do more annual surveys for example to find out… how people are faring and that sort of thing so I think data is an important part"*

(ID7)

Participants across roles and organisations mentioned having conducted research in order to better understand researchers' experiences (whether examining postgraduate research experiences or the experiences of clinical academics). Participants also noted steps being taken by institutions to further examine research culture: "*... [University]... has appointed several people to look at research culture and to put structures and training in place*", whilst others commented on the need for further research into the experiences of specific groups:

> *"... anyone who is in a minority I think they'd probably feel... that risk of inequality, when it came to accessing opportunities and I think that's something employers have to do more of is... talk to people and find out what would really support and benefit them... because I think sometimes... people put in place improvements without having actually talked to people themselves about what the issues are so... I think that's really important"*

(ID9)

### 4.4 Discussion

In this chapter, I explored influential HE stakeholders' views on both their perceptions of the work experiences of academic researchers, and wider academic policy/culture (specifically, any changes needed, the extent to which they can influence academic culture/policy, and any obstacles identified).

With regards to participants' reflections on the mental health, well-being, and work experiences of academic researchers, much of what was discussed relates strongly to existing literature which explores these experiences from a researchers' perspective. Academic researchers have also noted the double-edged nature of academia in that it is an environment that allows for a degree of professional autonomy, yet it is also precarious, uncertain, and taxing (Hall, 2023; Nicholls et al., 2022). Participants in this study and the wider literature also acknowledged the consequences that could result

from the more negative aspects of the system – an exodus of researchers from academia (Day et al., 2023).

It is clear from the findings of this study that HE stakeholders perceived to be in positions of power (like our participants) are trying to take steps to better support researchers in their institutions and more widely. Whether this is putting things in place to help those from underrepresented groups progress in their academic careers, reducing administrative burden, or setting expectations for support for supervisors and institutions more broadly. There is a way to go; the concerns of academics and researchers in UK HE are both urgent and numerous. Nevertheless, participants in this study and beyond (Wilkinson & Male, 2023) have touched on the importance of communicating effectively and transparently with researchers on the ground. This can help foster a "sense of momentum" (ID10), and feelings of being heard.

It appears that the way in which each of the four UK nations govern their HE sector is likely to become even more disparate over time (Atherton et al., 2023). Even before considering the differences at a national level, universities are complex organisations with various departments, faculties, and job roles. It is therefore perhaps unsurprising that participants in this study commented both on the somewhat "siloed" (ID11) nature of UK HE, and having observed initiatives for change getting "stuck" (ID10). Coordinating positive, impactful change across the UK HE sector is likely to be difficult, particularly given the autonomy that exists across all levels – from the freedom to govern one's own work day as a researcher (Nicholls et al., 2022), to the freedom to decide how to govern one's own institution as vice chancellor (West, 2018) (within reason). However, the importance of collaboration should be stated here, as participants in this study and the wider literature (Gottlieb et al., 2021; Nature, 2023) have explained how positive change and good practice is spread through engaging with, and learning from, other groups, departments, HE institutions, and other organisations outside of the HE sector.

As also suggested by our participants and Casci et al., (Casci & Adams, 2020), a flourishing culture will not be achieved through policy or tick boxes alone. Good research practice, and mental health, well-being, and EDI structures need to be ingrained in the day-to-day operations. Nevertheless, it is not just about having the

structures there, academics and researchers also need to feel comfortable with accessing the support offered – an issue highlighted by both some of our participants and the wider literature (Wray & Kinman, 2021). Even the upper echelons of a university can feel a pressure to act as though they are "impervious" in the face of difficult moments at work (Heffernan & Bosetti, 2020). More attention and further research needs to consider how to create an open and "psychologically safe" (ID8) HE environment where individuals at all career levels (with varied personal characteristics), feel able to share their ideas/opinions, feel able to access support if they need it, and feel able to call out negative behaviors/practices if they see it (Nature, 2023).

Resource and hierarchy, as highlighted in this study, are important. There was a sense that senior HE stakeholders can feel limited (or supported) in what they can do depending on who is above them (and what resource is allocated to them). The government appears to be at the top of this HE tree. In UK government statements and debates, the important place UK universities hold in the economy and society is often cited, not least the crucial role they played in the pandemic (*AUTUMN STATEMENT 2022*, 2022; *Higher Education Reform - Hansard - UK Parliament*, 2023). Nevertheless, "public research funding" is a contribution to a universities' research pursuits and is not meant to cover the full costs (Whiteley, 2022). Universities therefore need to find and use other forms of revenue to meet these costs (Whiteley, 2022), potentially placing them, and their staff, under further burden. Discussions are being carried out with regards to reassessing UK HE funding models (Whiteley, 2022). However, the decision appears to ultimately lie with the government – how the cake is cut so to speak, where the budget is spent, and on whom. Issues around paying for "associate membership" to "Horizon" (the European Union's (EU) research funding scheme), for example, have only just been resolved at the time of writing (Amos, 2023; Ghosh, 2023). Assigning funds and dividing up the budget will likely involve tough decisions. However, without public funds and investment, the maintenance of UK universities as centres for world-leading research will come into question (Richardson & Toope, 2021).

Job insecurity is a real concern for many researchers in HE. A recent report by the Higher Education Policy Institute highlighted that 68% of UK academics deemed

"research only", are on an insecure contract (Ogden, 2023). Participants in this study did discuss job insecurity, but more in the sense of acknowledging it as a key/important issue rather than what could be done to change things. There are emerging ideas in the literature on how to provide researchers with more job security. Elevating the amount of quality-related (QR) research funding assigned to universities has been looked to as one of the potential solutions (Gottlieb et al., 2021). Another suggestion is having a "researcher-bank" where researchers are given more permanent/secure contracts and are then "deployed" on research studies (Tremblett et al., 2023). However, these ideas and others like them were rarely mentioned in our interviews. This doesn't necessarily mean that our participants are not aware of these ideas, but it does highlight a potential gap between the evolving evidence base and those in positions of power.

Participants in this study and in the wider literature (Nilsson, 2014) have also highlighted the importance of giving academic researchers the tools and guidance to consider a "plan b" (ID8), and the means to make the jump elsewhere to another sector if they want to. Nevertheless, it shouldn't be an either-or option, in that once you leave the HE sector, you can't come back. There should also be some provision and guidance available for those who want to return to the HE sector. Ultimately, it is important to make sure that careers support focuses sufficiently on both academic and non-academic career paths, and, crucially, choosing one path over the other should not feel permanent.

### 4.4.1 Strengths and limitations

The findings of this study should be appraised in light of its strengths and limitations. I recognise that the views of the eleven participants in this study will not be "representative" (Hanna et al., 2022b) of all the senior leader's/management working within universities and research funding organisations across the UK. It will also not be representative of all senior individuals who sit on funding panels and boards. The views of those linked to sitting on funding panels/boards also didn't come through very strongly in the analysis. This could be because a few of these participants veered more towards discussing their role as a senior member of university staff or discussed the funder they are associated with in more general terms. A suggestion for further research could be to draw out the views of those linked to funding panels/boards more

explicitly, as applying for funding is an important part of the research job role, and those who sit on panels/boards have power over what type of project gets funded (or not).

I also recognise that the diversity of the sample may have been impacted by recruiting through personal networks and through using a snowball recruitment technique. Although, despite our participant pool primarily comprising of female participants, it should also be noted that there is a general lack of diversity in senior leadership in UK HE, with more men in senior roles than women (Bagilhole & White, 2008).

Nevertheless, this research has investigated the rarely explored other side of what can be a complex relationship between academic researchers and influential HE stakeholders. This study has highlighted that those in positions of power are aware of some of the challenges faced by academic researchers, and it has also helped to highlight some of the steps being taken across different HE organisations to help address these challenges. In addition to further exploring the views of those sitting on funding panels/boards, other avenues for further research have also come to light, such as further exploring how to create a safe and open HE environment. Further research could also investigate the views of those perceived to be at the top of the hierarchy – senior officials in relevant government UK bodies (examples could include senior civil servants such as the director of HE/education, junior ministers for education in England, cabinet ministers responsible for education in Wales). How do they see the future of HE and research in the UK progressing? What are their aims and goals, and do these align with the aims and goals of researchers on the ground, other HE staff, and other influential HE stakeholders such as those in our study?

### 4.4.2 Conclusion

In the context of this study, influential stakeholders in UK HE are aware of some of the challenges faced by academic researchers on the ground, and, those in positions of power are trying to take steps towards helping support researchers at a local or a wider level. Resource and hierarchy can play a role in how much of an impact one can make, and further research could investigate the views of those perceived to be at the top of the tree (UK senior government officials), to determine if their goals match those held

by other relevant HE individuals and organisations. All HE authorities working towards goals that are shared could increase the likelihood of positive initiatives moving forward and could prevent them from becoming stalled. Greater attention needs to be brought to making UK HE an environment where researchers from all career stages and backgrounds feel able to share their ideas and feel able to access support if they need it. To paraphrase a participant in this study, we need everyone's minds to help solve societal problems, and it is imperative that these minds are encouraged and looked after at work.

# Chapter 5 Synthesis

## 5.1 A summary of the program of research conducted as part of this PhD

This chapter will include a brief summary of the three studies I conducted, a discussion around the practical and research implications of this PhD (with 6 key recommendations stated), comments on the strengths and limitations of this PhD, and a conclusion.

Through synthesizing published qualitative data and conducting individual qualitative interviews, my first two studies explored the experiences, support needs, and views of academic researcher themselves. My third study qualitatively examined the views of those perceived to be in positions of power in UK HE (namely senior leaders in universities and research funding organisations). I used a combination of qualitative methods and analyses to collect and interrogate my data including, semi structured and narrative interviewing techniques, reflexive thematic analysis, narrative analysis, and framework analysis. Below, I give a brief overview of the aims, methods, results, and conclusions for each of my three studies.

**Study 1 – Systematic review and qualitative meta-synthesis**

I conducted a systematic review and qualitative meta-synthesis to gain a comprehensive overview of what is currently known about academic researchers' mental health and well-being. Relevant papers were identified through searching electronic databases, Google Scholar, and citation tracking. The quality of the included studies was assessed and the data was synthesised using reflexive thematic analysis. 26 papers were identified and included in this review. Academic researchers' experiences were captured under seven key themes. Job insecurity coupled with the high expectations set by the academic system left researchers at risk of poor mental health and well-being. Access to peer support networks, opportunities for career progression, and mentorship can help mitigate the stress associated with the academic job role, however, under-represented groups in academia (researchers from a Black ethnic background and female researchers) are at risk of unequal access to resources, support, and opportunities. The flexibility of the academic job role was considered to be both a stressor and a protective factor. To improve researchers' well-being at work, scientific/academic practice, and the system's concept of what a successful researcher

should look like, needs to change. Further high-quality qualitative research is needed to better understand how systemic change, including tackling inequality and introducing better support systems, can be brought about in a timely and effective manner. Further research is also needed to better understand the experiences and support needs of post-doctoral and more senior researchers, as there is a paucity of literature in this area.

**Study 2 – A qualitative study involving UK academic researchers**

This study aimed to explore academic researchers' perspectives on how they feel their mental health and well-being could be better supported within the UK higher education system. Using a combination of semi-structured and narrative interviewing techniques, I gathered the perspectives of 26 researchers. I then used narrative and reflexive thematic analysis on the data collected. The findings highlighted that academia could give researchers the opportunity to positively influence society and individuals through their research, teaching, and/or student support roles, which subsequently can have a positive impact on their mental health and well-being. However, the findings also highlighted the need to tackle systemic issues such job insecurity and unrealistically high workloads, given the risk they can pose to researchers' mental health and well-being. Certain groups of researchers also indicated a sense of inequality and/or sense of not belonging at work, particularly female researchers, early career researchers, and researchers from a working-class background. Findings from the narrative analysis in particular indicated a sense of frustration around the systemic issues present in academia. My findings also highlight the key influence of managers and supervisors in creating a supportive environment, and the importance of going beyond *what* support is offered. That is, it is vital to effectively promote any existing or emerging support systems, and to be proactive in offering this support. Although some instances of effective support at work were described (namely counselling), many viewed current efforts to support academic researchers' mental health and well-being at work as 'tokenistic'. Views on what effective support might look like leaned more towards the practical, focusing primarily on finding ways to tackle the systemic issues present in academia (job insecurity, unrealistically high workloads etc). Given the diversity identified in researchers' individual situations, it is important that support is flexible and takes into consideration individual requirements and preferences.

Higher education authorities and institutions need to determine how they can foster a healthy, caring environment for researchers working in this sector going forwards.

**Study 3 – A qualitative study involving UK HE senior stakeholders**

Influential senior stakeholders (university senior leaders and senior individuals in research funding organisations) could play a key role in shaping a more positive academic research environment in the UK. However, evidence suggests that academic researchers can feel unheard by these influential stakeholders. I therefore aimed to explore this relationship from the other side and gather these stakeholders' views on both the work experiences of UK academic researchers, and wider UK academic policy/culture. Eleven semi-structured interviews were carried out with senior managers in UK universities or research funding organizations, or senior academics with experience of sitting on funding boards/panels. The interview also included a knowledge exchange component where current issues facing academic researchers were shared and discussed. Through framework analysis, I identified 17 themes which were organized into two domains: 'looking back: reflecting on the impact of working in academia on researchers' mental health and well-being'; 'looking forward: moving towards a "thriving" academic culture'. Participants were aware of some of the difficulties encountered by academic researchers and reported taking steps towards helping support researchers at a local and a wider level. The hierarchical nature of UK academia was noted as playing a role in how much of an impact one could make, as was the level of resource allocated (particularly by the UK government). The importance of creating an open and "psychologically safe" environment was noted, wherein everyone feels comfortable to access support and share their ideas. Future research could examine the views of UK senior government officials (i.e., senior civil servants such as the director of higher education/education), to ascertain if their goals align with other UK higher education stakeholders.

The below section aims to situate the key findings in a broader context, and to highlight the key practical and research recommendations moving forwards. I have stated six key recommendations which broadly cover: the need to investigate the views of relevant UK civil servants and those who are underrepresented in UK academia, the need to synthesise existing recommendations pertaining to better supporting the

mental health of researchers, the importance of collaboration and diversity, the importance of monitoring new initiatives that are implemented, and the need to consider other avenues for support alongside providing training for managers and supervisors.

## 5.2 Practical and research implications

There are more universities in the UK there than were ~60 years ago, and they are integral to cities, towns, and communities (Ruckenstein et al., 2016; Universities UK, 2023b). The rise in universities has led to a rise in researchers, but there has not been an adequate rise in resources/funding alongside this (Ruckenstein et al., 2016). This has led to a greater level of competition among researchers for both research council funding and QR-funds, a higher pressure to 'perform' (to publish the 'right' kind of research/to be awarded grants), and ultimately less money to go around to pay for research jobs/activities (Ruckenstein et al., 2016). To help fund research, organisations fall back on other forms of revenue such as taking in large numbers of students (who will each need to pay fee's) (Ruckenstein et al., 2016). However, relying on taking in and retaining large numbers of students is unfeasible without significant recruitment of, and investment in, additional staff, as this places significant strain on the academics who then need to deliver the course and meet the support needs of numerous students. The findings from study 1 and 2 of my PhD ultimately indicate that job precarity and having to balance increased (and often unrealistic) research, teaching and/or student support responsibilities, poses a serious risk to researchers' mental health and well-being.

As indicated earlier in chapter 4, the Russell Group's "realising our potential" report has suggested that elevating the amount of QR funding assigned to universities could be a good way to ensure greater security for researchers (Gottlieb et al., 2021). This could ultimately then lessen the pressure to maximise other revenue streams (securing large numbers of students/student fees). Nevertheless, it is not clear that this is on the current UK government's radar or agenda. UK HE is a system that is based on hierarchy, and the UK government ultimately have a strong say in how research is funded, and how much funding it receives. It is therefore essential to better understand the views and goals of those who work in the HE sphere for government, as without

necessary resources and funding in place, it will be challenging to tackle some of these key systemic issues such as job precarity and high workloads, long-term.

***Key recommendation***: Investigate the views and goals of those who work in the HE sphere for (UK) government (e.g., the views of senior civil servants such as the director of HE/education, junior ministers for education in England, cabinet ministers responsible for education in Wales).

There are indications that the UK government is committed to further investing in research. The UK has recently become an 'associate member' of the European Union's "Horizon" scheme (Amos, 2023), and the "Advanced Research and Invention Agency" is set to start their schemes this year (2023) – their budget being £800 million (Advanced Research and Invention Agency, 2023; Atherton et al., 2023). As outlined in the recent "Build Back Better" report, in light of Britain leaving the EU, the government are set on "supercharging" sectors such as research and development which are already highly influential globally (HM Treasury, 2021). Upon reaching the year 2027, they have set out a goal to invest 2.4% of GDP in the research and development sector (HM Treasury, 2021; McGloin & Wynne, 2022). Time will tell with regards to the success of these initiatives, and how impactful they are in helping to tackle the key systemic issues faced by researchers such as job insecurity.

Academia is not the only sector which struggles with job insecurity. The COVID-19 outbreak exacerbated this struggle for many individuals across many different occupational sectors. It is not unreasonable to look beyond the academic sphere and consider if initiatives designed to address this in other occupational sectors, could be implemented in the academic environment. A recent systematic review set out to explore actions designed to address "precarious employment" – which the authors defined as "employment insecurity, inadequate levels of financial compensation or income volatility, and lack of rights and protections in the employment relation" (Gunn et al., 2022). The review concentrates on papers which discuss the impact these actions had on employee well-being (Gunn et al., 2022). The actions taken ranged from a "tax policy" to "employment protection legislation" (Gunn et al., 2022). There was some positive change with regards to employee well-being as a result of these actions, however, only 11 papers were identified, and there was a lot of divergence in type of

occupation, the action taken, and how the impact of these actions was determined (Gunn et al., 2022). This made it difficult for the authors to draw out ways forward (Gunn et al., 2022). The review outcomes suggest that tackling job instability to better support employee well-being is currently an under researched area across the board (Gunn et al., 2022).

As indicated earlier, UK HE is a system, and, ultimately, it will take a system wide approach to fully implement and embed the positive change that will tackle complex issues such as job precarity and unreasonably high workloads. Participants in both my second and third PhD study have alluded to the need to work together, as have multiple relevant reports and research articles (Gottlieb et al., 2021; Hughes & Spanner, 2019; Kent et al., 2022; McAlpine et al., 2023; University and College Union, 2022; Wellcome, 2020; Wray & Kinman, 2021). There is a need for more individuals, and more individuals from a variety of different backgrounds, to be involved in making the key decisions around how universities should be funded, how teaching and research should be delivered, how quality is assessed etc. This could help combat 'group think', and this sense of feeling stuck in the same way of doing things. There is a need to bring together relevant parts of the national governments, senior officials in funding organisations and universities, researchers from all levels, publishers, other university staff, to think about ways forward, what new structures and practices could look like, and how any changes made could be effectively monitored. The latter is particularly important, as recent research has indicated that some existing initiatives put in place can be opaque and can even increase workloads. For example, recent research by Basis Social (delegated by Wellcome, Universities UK, and UKRI), evaluated the different concordats and agreements in place in the UK to help better support researchers (i.e., the Athena Swan Charter, the San Francisco Declaration on Research Assessment (DORA), Concordat to Support the Career Development of Researchers etc). Some of the findings indicated that there can be "administrative burden" associated with these enterprises, and there is also a lack of consensus on how one determines their "success" (Basis Social, 2022).

***Key recommendation***: Collaborate. Involve more individuals, and more individuals from a variety of backgrounds, in making the key decisions.

This is not to say that the above recommendation is not already happening. Across the literature, there are excellent examples of collaboratively made recommendations to help better support researchers in HE (Gottlieb et al., 2021; McAlpine et al., 2023; Wellcome, 2020) – to name just a few examples. Nevertheless, my third study highlighted that there may be a gap between what the advancing evidence base is recommending, and those who are in a position to make these recommended changes. Synthesizing the existing recommendations from across the research and grey literature, could help to provide a useful starting point for those in positions of power.

***Key recommendation***: Synthesise existing recommendations from across the relevant research and grey literature.

Another key systemic issue highlighted by both the wider literature and my three studies, is a sense of inequality felt by some groups in the researcher workforce (Wellcome, 2020). In the context of my three studies, this relates primarily to those from a Black ethnic background, those from a working-class background, female researchers, and early career researchers. Although, as highlighted in section 2.4, underrepresented groups in the academic workforce also include individuals from the LGBTQ+ community, and individuals with a disability, and they are also at risk of having reduced access to support at work (i.e., a lack of role models). It is encouraging to note that participants in my third study, who are in positions of power, are taking steps towards supporting those at risk of experiencing inequality at work, whether this is through the implementation of "sponsorship programs" in universities to aid the career progression of underrepresented groups, or the provision of mentorship programs for early career researchers by funders. Nevertheless, it is imperative to monitor both the implementation, and impact such initiatives have on how researchers from these groups experience the work environment – to ensure that these initiatives are leading towards the planned positive outcomes. Indeed, as highlighted by phases 1 and 2 of the investigation into concordats and agreements, the UK HE system is intricate and convoluted, and different equality enterprises (i.e., the Athena Swan Charter, the Race Equality Charter) are inserted into HE organisations in a varied manner, which means that their impact also varies (Basis Social, 2022; McAlpine et al., 2023). As alluded to by a participant in my third study, it is also important to

continue to return to, and gather the views and experiences of these underrepresented groups, to ensure initiatives are relevant and helpful.

***Key recommendation***: Monitor the acceptability and effectiveness of initiatives designed to address inequality in academia.

***Key recommendation***: Continue to investigate the views and experiences of underrepresented groups, in order to better support these populations at work.

The results of the narrative analysis in chapter 3 (section 3.3.3) provided two stark examples as to how the work relationships in one's immediate work environment can either be a protective or risk factor for mental health and well-being. Indeed, across my three studies, the key impact of work relationships with peers, and managers and supervisors was acknowledged, with managers and supervisors in particular being seen as those who could help to foster a "psychologically safe" environment at work. This is not unique to academia, literature examining the experiences of other 'high-risk' occupational groups (such as the police) have also highlighted the key role of the manager in supporting mental health at work (Edwards & Kotera, 2021). Participants in my second study in particular, commented on the importance of training managers and supervisors with regards to supporting mental health and well-being at work. Such training can be effective. A systematic review and meta-analysis of 10 papers showed that taking part in "manager-specific mental health training" as part of a "controlled trial", positively influenced managers' "knowledge, attitudes, and behaviours" when it comes to worker mental health (Gayed et al., 2018). Nevertheless, some participants in both my second and third PhD study suggested that training is not always the answer and does have its limitations (to quote a participant from my third study: *"… they can go on education, they can do that, but they just don't get it"*). Similarly, it is not always the manager that individuals feel comfortable approaching for help at work. Participants in my second study approached a variety of different individuals for support, whether these were mentors, safety officers, or colleagues in general. Existing literature exploring the experiences and support needs of individuals working in healthcare also found that some individuals may prefer to receive support from someone other than their manager (Billings, Seif, et al., 2021). Ultimately, thinking more broadly around the role of managers/supervisors in 'high-risk' occupations

(including academia), it appears they are a chief source of support at work, but they should not be the only source of support at work.

***Key recommendation***: Training managers and supervisors around recognising mental health/well-being needs, and supporting access to treatment, could help to effectively support academic researchers working in UK HE. However, there needs to also be an acknowledgement of the limitations of training, and other avenues for support should also be explored alongside providing this training for managers.

### 5.3 Strengths and limitations of the PhD

This program of PhD research has some strengths and limitations that are important to draw out. First, the "multi-method" (Frerichs et al., 2020) qualitative design enabled an in-depth exploration into what factors could influence the mental health and well-being of academic researchers at work, and what effective support could look like going forwards. For example, through using a qualitative design, I was able to tease out both positive and negative work experiences, what factors contributed to these experiences, and how these experiences related to personal mental health and well-being (i.e., a manager's flexibility could enable a researcher to better balance key duties, resulting in a positive impact on their mental health (section 3.3.2 – theme three)). This program of research has therefore positively contributed to a body of empirical literature that up until recently mostly consisted of surveys examining 'stress' (Guthrie et al., 2017). A second strength is that the research took a broad approach, examining the perspectives of researchers at all levels, across disciplines, and even going wider to investigate the views of those in positions of power (senior leaders in UK universities and research funding organisations). This broad approach is arguably in-keeping with the growing notion that positive change in HE will take "a whole sector approach" (Hughes & Spanner, 2019). To enable such an approach to be implemented, we need to understand the views and perspectives of all those in the system, and then come to a consensus on what the steps forward should be. To the best of my knowledge, my final study is one of the first to qualitatively explore the views of senior stakeholders in the UK HE system with regards to their thoughts on the health of academic researchers. The inclusion of a knowledge exchange component in study three is a particular strength. Sharing the results of my previous research (study one

and two) with those in positions of power helped to extend the impact and reach of these two studies.

Nevertheless, the broad approach I took could also arguably be a limitation of the research, as by focusing on the bigger picture, discipline or career-stage specific challenges were not as well-explored as they could have been (i.e., the challenges of working on sensitive topics, the challenges of being a mid-career researcher). More focused research into the experiences of specific groups of researchers would enable specific challenges to be drawn out. Subsequently, more targeted, specific support to mitigate these challenges could then be implemented.

Lastly, it is important to acknowledge that every individual is different. The way in which academic researchers will experience the work environment, and the way in which this interacts with their mental health/well-being, will differ depending on their personal characteristics, professional characteristics, opinions, and past experiences. Such a diverse set of individuals will have a diverse set of support needs, as indicated in my second study (section 3.3.2 – theme five). Whilst I made every effort to include a variety of different individuals in my studies, some views were underrepresented in my final sample. Notably, the views of those from ethnic minority backgrounds, those with a disability, and those from an Art and Humanities discipline, were underrepresented in my PhD. It is worth noting that the results of my systematic review do suggest that job precarity and the pressure to 'perform' (for example) are shared challenges across the sector, however, to truly implement a system of support in HE that will be beneficial for all researchers, further research will need to investigate the views and experiences of these groups.

## 5.4 Reflecting on my PhD

As a result of my work experiences in the NHS (section 1.13), I began this PhD with strong beliefs in the importance of having a supportive immediate environment at work (i.e., good work relationships). In light of my PhD findings and my own work experiences in academia, I still believe that this is true. However, my findings have also highlighted to me the importance of the broader context. Prior to the start of this PhD, I was not aware just how insecure and uncertain the academic job role can be.

As indicated by my findings, a lack of job security can lead to stress, worries about finances, concerns about shelter, and concerns around being able to achieve life goals outside of work (e.g., starting a family). As such, it can be much more difficult to maintain global well-being without job security in place. Job security is a longstanding issue for academic researchers – 40 years ago, a family member of mine struggled to secure a postdoc position following completion of their PhD. It is a real and complex issue, and one that is important to try to solve, and I think that is where all parts of the system working together will come into play.

Beginning my PhD during the COVID-19 pandemic meant that there was a level of distance between myself and the academic institution. However, my supportive immediate environment throughout my PhD meant that any feelings of isolation were very much minimised. Nevertheless, through working from home, I may have arguably missed out on being able to fully integrate myself into the department and academic life. However, over the last three years, hybrid working has become the new normal across academia (and indeed across many different working environments), and there is a need to better understand how hybrid working impacts the work experiences and health of academics. Over time and with further research, we will discover how hybrid working impacts personal and professional lives, and organisational goals and outcomes.

Following on from the above point, I could be classed as an 'insider' in relation to my PhD topic area, as I am working in and experiencing academia for myself (as touched upon in section 3.2.4). This enabled me to feel confident when discussing the challenges and positives of academia with my participants, which hopefully positively impacted their level of comfort with regards to sharing their experiences with me. Nevertheless, whilst I could relate to concerns such as job precarity (my PhD being a three-year contract), I could be classed as an 'outsider' in some ways as well. As an early career researcher in the social sciences discipline, there are some challenges and important practices specific to other disciplines and career stages that I will have limited knowledge of. This could have impacted my ability to build a strong interview relationship with my research participants who were at different career stages/embedded within different disciplines. However as highlighted in section 3.2.4,

throughout my interviews I tried to maintain an open/inquisitive manner, to ensure participants felt as comfortable as possible to share their experiences.

Although my own understanding of the term's mental health and well-being was informed by the definitions stated by The University Mental Health Charter (Hughes & Spanner, 2019) (section 1.2), I came to understand just how individual these terms can be throughout this PhD. As highlighted by section 3.3.1, an academic researcher's understanding of mental health and well-being can be influenced by personal past experiences, the past experiences of someone close, or the way in which these terms are represented in society and the media more generally. That the term 'mental health' was sometimes viewed 'negatively' , or as "mental illness", is perhaps unsurprising, given that wider literature found comparable results (Coyle et al., 2017; Watson et al., 2022). I concluded that when discussing mental health and/or well-being support at work, it is important to be clear on what we mean by these terms, so individuals can make an informed decision on whether or not accessing this support is right for them.

Employing qualitative methods and analyses to help answer a research question is something that I had experience with prior to conducting this PhD. However, the majority of my experience was in handling smaller datasets. The interviews I conducted as part of my PhD resulted in large volumes of data, with some interviews going beyond 2 hours. Something I struggled with initially, particularly when analysing data as part of my second PhD study, was having thoughts around making sure that I 'accurately' interpreted the numerous and varied experiences and views of my participants. As described in sections 3.2.4 and 4.2.5, striving for 'accuracy' is a positivist way of viewing the process, which is not compatible with analytical techniques such as reflexive thematic analysis and narrative analysis (both of which lean more towards the constructivist/interpretivist viewpoint). Throughout this PhD, I took a critical realist or interpretivist approach, which stresses that my own personal experiences/beliefs/viewpoints will inevitably shape my data and findings, and that actually my personal lens is a key tool in the analytical process. Indeed, to take reflexive thematic analysis as an example, it requires both strong researcher interaction with the data and 'creative thinking' (Braun & Clarke, 2023):

> *"... the procedures* [of reflexive thematic analysis] *have been designed to support the development of deep understanding and the telling of interpretative stories about meanings (sometimes obvious, sometimes subtle) that cut across a dataset and capture an important aspect of whatever you are trying to understand!"*
>
> (Braun & Clarke, 2023)

Ultimately, to help overcome this struggle with 'accuracy', I found it really beneficial to (a) reflect on this struggle with my supervisory team who are experienced in qualitative research methods, (b) remind myself of my epistemological positioning, and the underlying theoretical positions and purpose of my analytical technique, (c) transparently report my personal and theoretical positioning in each of the study chapters, and, (d) ensure I attend to quality indicators such as "credibility", "transferability", and "trustworthiness" (Hammarberg et al., 2016).

## 5.5 Conclusion

This PhD thesis, to the best of my knowledge, is one of few theses which focus solely on better understanding and supporting the mental health and well-being of academic researchers from a qualitative standpoint. The research contained within this thesis provides an important contribution to the existing knowledge in this area. Reviewing the existing qualitative literature allowed me to identify key gaps relating to our knowledge of researchers' views on support at work, and their experiences beyond PhD level in particular. I subsequently conducted a qualitative study to address these gaps in our knowledge. Through conducting my systematic review and interviewing a wide range of UK academic researchers, I was able to identify evidence to suggest that researchers perceive there to be a disconnect between themselves and other key, powerful personnel in the HE system (senior leaders in universities and research funding organisations). Following an initial literature scoping search, I found no existing study which explored the topic of better supporting UK academic researchers' mental health from the viewpoint of these senior leaders. I therefore designed and conducted a final qualitative study to explore these senior leaders' knowledge of researchers work experiences, and their thoughts on wider academic culture and

policy. I believe this final study offers a particularly valuable and original contribution to the area of academic researcher mental health. It offers a first step to better understanding the views of senior stakeholders in HE, who may have the power to drive forward systemic change that will positively influence researchers' mental health. Below, I provide some concluding remarks on my PhD findings.

Looking across the three studies, it is clear that systemic issues such as job precarity, a high pressure to 'perform' and meet unrealistic demands, and a sense of inequality at work can contribute negatively to academic researchers' mental health and well-being. It is these issues that need to be addressed if a long-term positive change in researchers' mental health is to happen in the HE sector. The HE system is hierarchical, and long term positive change will require a system wide, collaborative effort. It is therefore essential to understand the goals and needs of all those who form a part of this system, particularly those who play a strong role in making key decisions with regards to resource allocation and how research and teaching activity is funded and evaluated. The broader context is important, but the three studies also highlighted the key role of the immediate environment. An academic researchers' immediate work environment can vary, and colleagues, particularly managers and supervisors, play a role in shaping how supportive this environment can be in terms of mental health and well-being. Training managers and supervisors on how to better recognise and support the health needs of staff could be effective, however, alternative forms of support (from other trained individuals/changes to the broader context) also need to be considered alongside this. It is essential that any changes to research structures or practices, and any support offered, are both (a) clearly communicated to all key stakeholders, and (b) effectively monitored. Academic researchers are a diverse set of individuals, with varied personal and professional characteristics. As such, there needs to be some adaptability in the support offered. The UK is currently a key player on the international research and innovation stage. For this to continue, UK academic researchers need to be better supported at work.

# Chapter 6 Outputs

## 6.1 Publications

### Resulting from PhD research

Nicholls, H., Nicholls, M., Tekin, S., Lamb, D., & Billings, J. (2022). The impact of working in academia on researchers' mental health and well-being: A systematic review and qualitative meta-synthesis. *PLOS ONE*, *17*(5), e0268890. https://doi.org/10.1371/journal.pone.0268890

Nicholls, H., Lamb, D., Johnson, S., Higgs, P., Pinfold, V., & Billings, J. (2023). "Fix the system … the people who are in it are not the ones that are broken" A qualitative study exploring UK academic researchers' views on support at work. *Heliyon*, *9*(10). https://doi.org/10.1016/j.heliyon.2023.e20454

### Resulting from involvement in other research projects

Condon, M., Bloomfield, M. A. P., Nicholls, H., & Billings, J. (2023). Expert international trauma clinicians' views on the definition, composition, and delivery of reintegration interventions for complex PTSD. *European Journal of Psychotraumatology*, 14(1), 2165024. https://doi.org/10.1080/20008066.2023.2165024

Billings, J., Zhan Yuen Wong, N., Nicholls, H., Burton, P., Zosmer, M., Albert, I., Grey, N., El-Leithy, S., Murphy, D., Tehrani, N., Wheatley, J., Bloomfield, M. A. P., & Greene, T. (2023). Post-incident psychosocial interventions after a traumatic incident in the workplace: A systematic review of current research evidence and clinical guidance. *European Journal of Psychotraumatology*, *14*(2), 2281751. https://doi.org/10.1080/20008066.2023.2281751

Bommen, S., Nicholls, H. & Billings, J. 'Helper' or 'punisher'? A qualitative study exploring staff experiences of treating severe and complex eating disorder presentations in inpatient settings. J Eat Disord 11, 216 (2023). https://doi.org/10.1186/s40337-023-00938-1

## 6.2 Additional outputs

### Podcasts

Episode 51 - Mental Health in Academia (with Helen Nicholls) - What are YOU going to do with THAT? | Acast

### Blogs

University Mental Health Day – An opportunity to think about our own mental health and wellbeing? | UCL Institute of Mental Health

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# Chapter 8 Appendices

## 8.1 Appendix 1: Search strategy – study one

The SPIDER tool was used to construct a search strategy for each of the following bibliographic databases: PubMed, PsycINFO (Ovid), CINAHL Plus, SCOPUS, Web of Science, and EMBASE (Ovid).

The search syntax is as follows: S AND PI AND (D OR E OR R).

The search terms that were used to search for literature in Google Scholar are also displayed below.

Key:

[ti,ab] – title or abstract

[ti,id,ab] – title or keyword or abstract

[TI,AB] – title or abstract

[TITLE] - title

[TITLE-ABS-KEY] – title or abstract or keyword

[ab,kw,ti] – abstract or keyword or title

Google Scholar search terms

| |
|---|
| "mental health of researchers" |
| (well-being OR wellbeing OR "well being") AND researchers |
| "research environment" AND (university OR academia OR "higher education") AND (stress OR depression OR anxiety) |
| "university staff" AND (stress OR anxiety OR depression) AND qualitative |

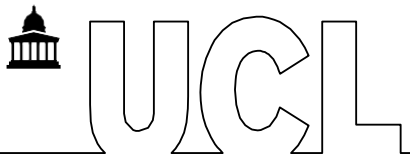
| | **PubMed**<br>[mh] – MeSh Terms | **PsycINFO (Ovid)**<br>/ - subject heading | **CINAHL Plus**<br>MH – CINAHL subject heading |
|---|---|---|---|
| **S**<br>(Sample) | (research personnel[mh] OR education, graduate[mh]) OR ("researcher*" OR "scholar*" OR "lecturer*" OR "facult*" OR "research staff" OR "PhD student" OR "doctoral student" OR "doctorate*" OR "postdoc*" OR "post docs" OR "post doc" OR "post-doc" OR "post-docs" OR "post-doctoral" OR "post doctoral" OR "research associate*" OR "research fellow*" OR "research assistant*" OR "principal investigator" OR "scientist*" OR "professor*" [ti,ab]).<br><br>AND<br><br>(organizational culture[mh]) OR ("job" OR "jobs" OR "employ*" OR "occupation*" OR "career*" OR "workplace*" OR "work-place*" OR "work place*" OR "organizational culture*" OR "organizational climate*" OR "research culture*" OR "research environment*" [ti,ab]).<br><br>**AND**<br><br>("universit*" OR "higher education" OR "academia" OR "academic*" OR "academe" [ti,ab]). | (graduate education/) OR (researcher* OR scholar* OR lecturer* OR facult* OR research staff OR PhD student OR doctoral student OR doctorate* OR postdoc* OR post docs OR post doc OR post-doc OR post-docs OR post-doctoral OR post doctoral OR research associate* OR research fellow* OR research assistant* OR principal investigator OR scientist* OR professor* [ti,id,ab]).<br><br>AND<br><br>(organizational climate/) OR (job OR jobs OR employ* OR occupation* OR career* OR workplace* OR work-place* OR work place* OR organizational culture* OR organizational climate* OR research culture* OR research environment* [ti,id,ab])<br><br>AND<br><br>(universit* OR higher education OR academia OR academic* OR academe [ti,id,ab]). | (MH "Research Personnel" OR MH "Education, Graduate") OR ("researcher*" OR "scholar*" OR "lecturer*" OR "facult*" OR "research staff" OR "PhD student" OR "doctoral student" OR "doctorate*" OR "postdoc*" OR "post docs" OR "post doc" OR "post-doc" OR "post-docs" OR "post-doctoral" OR "post doctoral" OR "research associate*" OR "research fellow*" OR "research assistant*" OR "principal investigator" OR "scientist*" OR "professor*" [TI,AB]).<br><br>AND<br><br>MH ''Organizational Culture'') OR ("job" OR "jobs" OR "employ*" OR "occupation*" OR "career*" OR "workplace*" OR "work-place*" OR "work place*" OR "organizational culture*" OR "organizational climate*" OR "research culture*" OR "research environment*" (TI,AB]).<br><br>AND<br><br>("universit*" OR "higher education" OR "academia" OR "academic*" OR "academe" [TI, AB]). |

| | | | |
|---|---|---|---|
| **PI** (Phenomenon of interest) | (mental health[mh] OR burnout, professional[mh] OR adaptation, psychological[mh] OR resilience, psychological[mh] OR personal satisfaction[mh] OR quality of life[mh] OR job satisfaction[mh]) OR (“mental health” OR “mental illness*” OR “disorder*” OR “depress*” OR “low mood” OR “anxiety” OR “anxious” OR “wellbeing” OR “well being” OR “well-being” OR “stress*” OR “distress*” OR “burnout” OR “resilience” OR “adapt*” OR “cope*” OR “coping” OR “quality of life” OR “life satisfaction” OR “personal satisfaction” OR “job satisfaction” [ti,ab]). | (mental health/ OR well being/ OR “quality of life”/ OR job satisfaction/ OR occupational stress/ OR “resilience (psychological)”/ OR adaptation/ OR life satisfaction/) OR (mental health OR mental illness* OR disorder* OR depress* OR low mood OR anxiety OR anxious OR wellbeing OR well-being OR well being OR stress* OR distress* OR burnout OR resilience OR adapt* OR cope* OR coping OR quality of life OR life satisfaction OR personal satisfaction OR job satisfaction [ti,id,ab]). | (MH “Mental Health” OR MH “Stress, Occupational” OR MH “Quality of Life” OR MH “Adaptation, Psychological” OR MH “Job Satisfaction” OR MH “Personal Satisfaction”) OR (“mental health” OR “mental illness*” OR “disorder*” OR “depress*” OR “low mood” OR “anxiety” OR “anxious” OR “wellbeing” OR “well-being” OR “well being” OR “stress*” OR “distress*” OR “burnout” OR “resilience” OR “adapt*” OR “cope*” OR “coping” OR “quality of life” OR “life satisfaction” OR “personal satisfaction” OR “job satisfaction” [TI,AB]). |
| **D** (Design) | (“thematic analysis” OR “thematic synthesis” OR “grounded theory” OR “discourse analysis” OR “phenomenolog*” OR “content analysis” OR “interview*” OR “focus group*” OR “observation*” OR “ethnograph*” OR “case study” OR “case studies” OR “lived experience” OR “life experience” OR “story” OR “stories” OR “narrative*” OR “narration*” OR “commentar*” [ti,ab]). | (thematic analysis OR thematic synthesis OR grounded theory OR discourse analysis OR phenomenolog* OR content analysis OR interview* OR focus group* OR observation* OR ethnograph* OR case study OR case studies OR lived experience OR life experience OR story OR stories OR narrative* OR narration* OR commentar* [ti,id,ab]). | (“thematic analysis” OR “thematic synthesis” OR “grounded theory” OR “discourse analysis” OR “phenomenolog*” OR “content analysis” OR “interview*” OR “focus group*” OR “observation*” OR “ethnograph*” OR “case study” OR “case studies” OR “lived experience” OR “life experience” OR “story” OR “stories” OR “narrative*” OR “narration*” OR “commentar*” [TI,AB]). |
| **E** (Evaluation) | (“opinion*” OR “perspective*” OR “attitude*” OR “experience*” OR “feel*” OR “belie*” OR “perception*” OR “thought*” OR “view*” OR “expectation*” [ti,ab]). | (opinion* OR perspective* OR attitude* OR experience* OR feel* OR belie* OR perception* OR thought* OR view* OR expectation* [ti,id,ab]). | (“opinion*” OR “perspective*” OR “attitude*” OR “experience*” OR “feel*” OR “belie*” OR “perception*” OR “thought*” OR “view*” OR “expectation*” [TI,AB]) |

| | | | |
|---|---|---|---|
| **R** (Research type) | (“qualitative research”[mh]) OR (“qualitative” [ti,ab]). | (qualitative methods/) OR (qualitative [ti,id,ab]). | (MH “Qualitative Studies”) OR (“qualitative” [TI,AB]). |

## 8.2 Appendix 2: Ethics approval – study two/three

UCL RESEARCH ETHICS COMMITTEE
OFFICE FOR THE VICE PROVOST RESEARCH



9th July 2021

Dr Jo Billings
Division of Psychiatry
UCL

Cc: Helen Nicholls

Dear Dr Billings

**Notification of Ethics Approval with Provisos**
**Project ID/Title: 21043/001: Exploring the mental health and well-being of researchers who work in UK academic institutions.**

Further to your satisfactory responses to the Committee's comments, I am pleased to confirm in my capacity as Chair of the UCL Research Ethics Committee (REC) that your study has been ethically approved by the REC until **9th July 2022.**

Approval is subject to the following conditions:

**Notification of Amendments to the Research**
You must seek Chair's approval for proposed amendments (to include extensions to the duration of the project) to the research for which this approval has been given. Each research project is reviewed separately and if there are significant changes to the research protocol you should seek confirmation of continued ethical approval by completing an 'Amendment Approval Request Form'
http://ethics.grad.ucl.ac.uk/responsibilities.php

**Adverse Event Reporting – Serious and Non-Serious**
It is your responsibility to report to the Committee any unanticipated problems or adverse events involving risks to participants or others. The Ethics Committee should be notified of all serious adverse events via the Ethics Committee Administrator (ethics@ucl.ac.uk) immediately the incident occurs. Where the adverse incident is unexpected and serious, the Joint Chairs will decide whether the study should be terminated pending the opinion of an independent expert. For non-serious adverse events the Joint Chairs of the Ethics Committee should again be notified via the Ethics Committee Administrator within ten days of the incident occurring and provide a full written report that should include any amendments to the participant information sheet and study protocol. The Joint Chairs will confirm that the incident is non-serious and report to the Committee at the next meeting. The final view of the Committee will be communicated to you.

Office of the Vice Provost Research, 2 Taviton Street
University College London
Tel: +44 (0)20 7679 8717
Email: ethics@ucl.ac.uk
http://ethics.grad.ucl.ac.uk/

**Final Report**

At the end of the data collection element of your research we ask that you submit a very brief report (1-2 paragraphs will suffice) which includes in particular issues relating to the ethical implications of the research i.e. issues obtaining consent, participants withdrawing from the research, confidentiality, protection of participants from physical and mental harm etc.

In addition, please:

- ensure that you follow all relevant guidance as laid out in UCL's Code of Conduct for Research: https://www.ucl.ac.uk/srs/file/579
- note that you are required to adhere to all research data/records management and storage procedures agreed as part of your application. This will be expected even after completion of the study.

With best wishes for the research.

Yours sincerely

**Professor Michael Heinrich**
**Joint Chair, UCL Research Ethics Committee**

## 8.3 Appendix 3: Participant information sheet – study two

Participant Information Sheet

*Exploring the mental health and well-being of researchers who work in UK academic institutions.*

You are being invited to take part in a research project. Before you decide whether to take part, we would like to explain to you why the research is being done and what participation will involve. Please read the following information carefully and discuss it with others if you wish. Please ask us if there is anything that is not clear or if you would like more information. Please take time to decide whether or not you wish to take part. Thank you for reading this and for your consideration in taking part in this project.

If you have any questions about any aspect of the research process you can contact the lead researcher Helen Nicholls on helen.nicholls.20@ucl.ac.uk or the Principal Investigator, Dr Jo Billings on j.billings@ucl.ac.uk. If you have any questions about data protection, please contact the data protection office on data-protection@ucl.ac.uk.

**What is this project's purpose?**

Recent research has highlighted that researchers who work in UK academic institutions are feeling under pressure at work due to the presence of multiple stressors including work-life balance, publication pressure, job insecurity, and supporting student distress.

Although key areas of concern have been identified, there remains limited existing research which explores researchers' mental health and well-being in greater detail. Through this project, we hope to deepen our understanding of how researchers' mental health and well-being impacts on, and is impacted by, working in academic research. We also hope to explore researchers' thoughts on what may help or hinder maintaining well-being in the academy, what may help or hinder researchers feeling supported at

work in terms of their mental health, and what support from academic institutions and the wider higher education system should look like going forwards.

**Why have I been chosen?**

You have been invited to take part in this project as you are a research active academic who is currently working in a UK university or UK university affiliated research institute or centre. For the purposes of this project, we have defined a research active academic as a salaried/funded employee who works at an academic institution and carries out a significant proportion of scientific/academic research as part of their job. Final year PhD students are also welcomed to participate. We are interested in your experiences and views regarding mental health and well-being in UK academic institutions.

**Do I have to take part?**

Taking part in this study is entirely voluntary. If you do decide to take part, you will be sent a link via email to an online consent form to fill out before the pre-arranged interview is scheduled to start. You can withdraw your consent to take part up until two weeks after the interview. Following this point, all personal identifiers will have been removed and your data will have been included in the analysis (and it will therefore not be possible to retract the information you have provided).

**What will happen to me if I take part?**

You will be invited to take part in a one-off interview lasting approximately one hour. However, the interview length can be extended if there is a lot you wish to discuss or share. Alternatively, we can also offer you the option of a follow up interview if, due to time constraints or any other reason, we are unable to discuss everything you would like to in the initial interview.

The interview will involve questions which explore how you feel working in UK academic institutions has interacted with your mental health and/or well-being over the course of your career so far. We will also ask you about your hopes and expectations for mental health support, your thoughts on maintaining positive well-

being at work, and your views on what is needed in order to effectively support academic researchers' mental health and well-being.

To both enrich and provide context to your experiences, we will also ask you for the following information: your current general job title (final year PhD student, post-doctoral researcher, professor etc), your current academic discipline (arts & humanities, medical science, engineering, law, education etc), the type of university where you are currently employed (does your employing university belong to the Russell group?), and whether or not you work in a university affiliated research institute/centre (yes/no). **The names of specific institutions will not be recorded**; however, we will ask which general geographical area of the UK the university is situated (London, South East, South Central, South West, Midlands, North East, North West, Scotland, Wales, Northern Ireland). We will also collect additional brief sociodemographic data including age range, gender, ethnic group, and length of time in academia.

Depending on your preference, the interview can be conducted face-to-face if you are geographically close by (London area) or remotely at a time that is convenient for you via telephone or Microsoft Teams. If you would like the interview to be conducted face-to-face, the interview will be held in a meeting room at University College London, a meeting room at your employing academic institution, or a meeting room on The McPin Foundation premises, depending on your preference and ease of access. The interviews will be digitally audio recorded using either a digital voice recording device, or the record functions on Microsoft Teams if the interview is conducted remotely via this platform.

Face to face interviews will only be offered if COVID-19 restrictions allow for this. We will follow both UK government guidance and UCL policy on this matter. Only remote interviews will be offered until COVID- 19 restrictions allow otherwise.

The interviews will be transcribed by the interviewer (Helen Nicholls). You will need to consent to be audio recorded should you decide to take part. The audio data resulting from the interviews will be deleted as soon as it has been transcribed – approximately one week following your interview date. No identifying details of you or your place

of work will be included in the transcripts. Once transcribed, the audio recording will be deleted. Your sociodemographic information, current job title, academic discipline, university type, university location, and research institute status will be stored separately from the transcripts.

**What do I have to do?**

If you would like to take part in this study, please contact the lead researcher, Helen Nicholls on helen.nicholls.20@ucl.ac.uk. We will arrange a convenient time for you to take part in a face-to-face or remote interview via telephone or Microsoft Teams. You will be sent a link to an online consent form via email to complete prior to the date of the scheduled interview.

**What are the possible disadvantages and risks of taking part?**

You will be asked about your experiences of working in academic institutions and how this has interacted with your mental health and/or well-being. This may bring up some difficult memories or emotions, which could be distressing. If you wish to stop the interview or move onto a different question or subject, please let the interviewer know. You will be able to take breaks if needed and can pause, continue the interview at another time, or stop the interview entirely if preferred. You do not have to answer any questions if you do not wish to. In the event that you feel a continued level of distress, the researcher will be able to signpost you to relevant sources of support.

**Where can I get help if I become distressed?**

If at any point during the research process you experience distress you can:

Contact the Samaritans by phone on **116 123**, or email **jo@samaritans.org** for a reply within 24 hours.

Call the Mind Infoline on **0300 123 3393** or email **info@mind.org.uk** (9am to 6pm, Monday to Friday), for information and signposting services.

Contact your GP for support and access local Psychological Therapy Services.

You can also reach out to your employing institution's occupational health or well-being support services, if you feel comfortable to do so.

**What are the possible benefits of taking part?**

Some participants can enjoy discussing their experiences and views. Your views and experiences will also be used to inform the recommendations we create for UK academic institutions and the wider higher education system on how to best support researchers' mental health and well-being.

**What if something goes wrong?**

If you are unhappy with any aspect of the research process, then please contact the lead researcher's supervisor and Principal Investigator, Dr Jo Billings on j.billings@ucl.ac.uk. In the event that your complaint is not handled to your satisfaction then you would be able to contact the UCL Research Ethics Chair on ethics@ucl.ac.uk.

In the unlikely event that concerns are raised about a serious adverse event during your interview, it may be necessary for us to contact your professional body, but this would be discussed in full with you.

**Will my taking part in this project be kept confidential?**

Any information that we collect about you will be kept strictly confidential. Your contact details will be used solely for the purposes of sharing information about the study, obtaining consent, arranging a time and place for the interview, and for sending a research summary following completion of the project (if indicated on your consent form). Following completion of the project and the research summaries being sent, all contact details will have been deleted.

During the interview you will be reminded not to mention any identifying details of your colleagues or place of work. If any potentially identifying information is mentioned, this will be removed during the transcription process. After your interview has been transcribed, the audio recording will be deleted, and the transcript will be

saved under a pseudonym or ID number. The audio recording will be deleted approximately one week following your interview date. You will not be able to be identified in any ensuing reports or publications.

**What will happen to the results of the research project?**

The interview transcripts will be analysed, and the findings will be used to help create general recommendations for UK academic institutions and the wider higher education system. The aim of these recommendations is to help universities and the wider higher education system as a whole to begin to effectively support researchers in managing any mental health difficulties they may be experiencing and promote positive well-being.

The findings of the study will also be written up in more detail for dissemination in a peer reviewed journal. Only the study team involved in this project will have access to your data. The anonymised data will be archived by UCL and kept for 10 years, in line with UCL policy. This data may be accessed at some point in the future, but only with permission and under the supervision of the Principal Investigator, Dr Jo Billings.

**Who is organising the research?**

The study is part of a larger PhD project investigating how to best support researcher's mental health and well-being in academia. The PhD is joint funded by the Economic and Social Research Council and The McPin Foundation. This project is also supported by the National Institute for Health Research ARC North Thames.

This study has been approved by the UCL Research Ethics Committee: Project ID number: - 21043/001.

**Local Data Protection Privacy Notice**

Notice:

The data controller for this project will be University College London (UCL). The UCL Data Protection Office provides oversight of UCL activities involving the processing of personal data and can be contacted at data-protection@ucl.ac.uk.

This 'local' privacy notice sets out the information that applies to this particular study. Further information on how UCL uses participant information can be found in our 'general' privacy notice:

For participants in health and care research studies, click here

The information that is required to be provided to participants under data protection legislation (GDPR and DPA 2018) is provided across both the 'local' and 'general' privacy notices.

The lawful basis that will be used to process your personal data are: 'Public task' for personal data.

Your personal data will be processed so long as it is required for the research project. If we are able to anonymise or pseudonymise the personal data you provide we will undertake this and will endeavour to minimise the processing of personal data wherever possible.

If you are concerned about how your personal data is being processed, or if you would like to contact us about your rights, please contact UCL in the first instance at data-protection@ucl.ac.uk.

## 8.4 Appendix 4: Consent form – study two

# Consent form - Exploring the mental health and well-being of UK academic researchers

Thank you for taking part in this research. Please complete this form after you have read the Participant Information Sheet, and prior to the scheduled interview. If you have any further questions, please do ask the researcher before you decide whether to participate.

I confirm that I understand that by ticking 'yes' to each statement below, I am consenting to this element of the study. I understand that it will be assumed that ticking 'no' or not ticking a box means that I DO NOT consent to that part of the study. I understand that by not giving consent for any one element that I may be deemed ineligible for the study. If you have any remaining questions about any aspect of the research process you can contact the lead researcher Helen Nicholls on helen.nicholls.20@ucl.ac.uk or the Principal Investigator Dr Jo Billings on j.billings@ucl.ac.uk. If you have any questions about data protection, please contact the data protection office on data-protection@ucl.ac.uk.

This study has been approved by the UCL Research Ethics Committee:
Project ID number: - 21043/001

Committee Contact Details:
Helen Dougal, Research Ethics Co-ordinator, Office of the Vice-Provost (Research) UCL
Email: ethics@ucl.ac.uk. Tel: 020 7679 8717

1. I confirm that I have read and understood the Information Sheet for the above study. I have had an opportunity to consider the information and what will be expected of me. I have also had the opportunity to ask questions which have been answered to my satisfaction and am willing to take part in an individual interview.

   ◯ Yes

   ◯ No

2. I understand that my participation is voluntary, and I am free to withdraw without giving a reason up until two weeks after the interview. After two weeks the data will have been included in the analysis and it will not be possible to retract the information.

   ◯ Yes

   ◯ No

3. I consent to participate in the study. I understand that my personal information (interview responses) will be used for the purposes explained to me. I understand that according to data protection legislation, 'public task' will be the lawful basis for processing.

- ◯ Yes
- ◯ No

4. I understand that the interviewer may offer me the option to take part in a follow up interview if, due to time constraints or any other reason, I am unable to share or discuss everything I would like to in my initial interview.

- ◯ Yes
- ◯ No

5. **Use of the information for this project only.**

   I understand that all personal information will remain confidential and that all efforts will be made to ensure I cannot be identified. I understand that my data will be stored securely, and pseudonyms will be applied before the analysis. It will not be possible to identify me in any publications.

- ◯ Yes
- ◯ No

6. I understand that my information may be subject to review by responsible individuals from the University for monitoring and audit purposes.

- ◯ Yes
- ◯ No

7. I understand the potential risks of participating and the support that will be available to me should I become distressed during the course of the interview.

- ◯ Yes
- ◯ No

8. I understand no promise or guarantee of benefits, direct or indirect have been made to encourage me to participate, and I will not benefit financially from this study or from any possible outcome it may result in in the future.

- ◯ Yes
- ◯ No

9. I understand that the data will not be made available to any commercial organisations but is solely the responsibility of the researcher(s) undertaking this study.

- ◯ Yes
- ◯ No

10. I consent to my interview being audio recorded and understand that the recordings will be stored securely, will be used for the specifically stated research purpose and will be destroyed immediately following transcription

- ◯ Yes
- ◯ No

11. I hereby confirm that I understand the inclusion criteria as detailed in the Information Sheet and explained to me by the researcher.

- ◯ Yes
- ◯ No

12. I am aware of who I should contact if I wish to lodge a complaint.

- ◯ Yes
- ◯ No

13. **Use of information for this project and beyond.**

I would be happy for the data I provide to be archived at UCL in accordance with data protection laws. If so, I understand that other authenticated researchers will have access to my anonymized data for research purposes, under the supervision of the Principal Investigator.

- ◯ Yes
- ◯ No

14. I would like to receive a summary of the research results following completion of the study. I understand that my contact details will be retained for this purpose, and following the fulfilment of this purpose, my contact details will then be securely deleted.

- ◯ Yes
- ◯ No

15. Please provide your electronic signature by entering your name in the box below.

Enter your answer

Next

Consent form - Exploring the mental health and well-being of UK academic researchers

## Demographic information sheet

16. Which of the following best describes your age?

- [ ] 18 - 24
- [ ] 25 - 34
- [ ] 35 - 44
- [ ] 45 - 54
- [ ] 55 - 64
- [ ] 65 - 74
- [ ] 74+
- [ ] Prefer not to say

17. What is your sex?

- [ ] Female
- [ ] Male
- [ ] Prefer not to say

18. Is the gender you identify with the same as your sex registered at birth?

- [ ] Yes
- [ ] No
- [ ] Prefer not to say

19. If you answered no to the last question, please enter the term you use to describe your gender

Please leave blank if you would prefer not to say

Enter your answer

20. Which of the following best describes you?

- [ ] White British
- [ ] White Irish
- [ ] Any other White background
- [ ] White and Black Caribbean
- [ ] White and Black African
- [ ] White and Asian
- [ ] Any other mixed background
- [ ] Indian
- [ ] Pakistani
- [ ] Bangladeshi
- [ ] Chinese
- [ ] Any other Asian background
- [ ] Caribbean
- [ ] African
- [ ] Any other Black, African, or Caribbean background
- [ ] Arab
- [ ] Any other Ethnic group
- [ ] Prefer not to say

21. How many years have you been working in academia?

- [ ] Less than one year
- [ ] 1-2 years
- [ ] 3-5 years
- [ ] 6 - 10 years
- [ ] 11 - 20 years
- [ ] 21 - 30 years
- [ ] 30+ years
- [ ] Prefer not to say

Back Submit

## 8.5 Appendix 5: Interview topic guide – study two

Interview Topic Guide

**Initial form(s) to complete:**

During the first stage of the interview, an initial icebreaker/warm-up conversation will be held. During this stage, the interviewer will complete a form with the participant which gathers data around participants' current general job title, academic discipline, university type & location, and research institute status. If participants have not had a chance to fill out the sociodemographic information form (which is attached to the consent form) prior to the interview, this will be completed with the participant here also.

**Narrative interview:**

*During this next stage of the interview, we hope to hear about your experiences as an academic researcher. If you feel comfortable to do so …*

- Would you be able to describe to me any events throughout your career as an academic researcher so far which significantly relate to your personal mental health or well-being, in either a positive or negative way?

*Prompts:*

- *What led you to begin an academic research career?*
- *Do you think you will remain in an academic research career?*
- *Are there any events or experiences that you remember which particularly shaped, or affected your identity as an academic researcher? (Question removed after the 3rd interview due to confusion over how to respond to it)*
- *What comes to mind when you think of the term(s) well-being or mental health?*
- *If you feel comfortable to do so, would you be able to talk me through any mental health difficulties you may have experienced during your career as an academic researcher so far?*

- *How would you say these difficulties have impacted on, or been impacted by, your work as an academic researcher?*

**Semi structured interview:**

*This next stage of the interview will involve me asking more specific questions in order to explore your expectations for mental health support, your thoughts on maintaining positive well-being at work, and your views on what is needed in order to effectively support academic researchers' mental health and well-being.*

**Maintaining positive well-being at work:**

- Is there an aspect of your job that you find particularly effects (or helps or hinders) your ability to maintain positive well-being at work?
- Are there some things that you have personally found helpful in terms of maintaining positive wellbeing at work?

*Prompts:*

- *At a disciplinary level*
- *In terms of the wider job context*

**Barriers/facilitators to feeling supported:**

- Are there any factors that you think can either help or hinder an academic researcher from feeling supported at work in terms of their mental health or well-being?

*Prompts:*

- *At an individual level*
- *In terms of work relationships*
- *In terms of the wider job context*

**Expectations/hopes for support:**

- Is there any sort of mental health support you would expect to be offered by an academic institution?
- Is there any sort of mental health support you would hope to be offered by an academic institution?
- Have you previously experienced support for your mental health or well-being whilst working at an academic institution?

If yes:

**Support offered (Gee et al., 2022):**

- Could I ask a little bit more about [support] and what [it] entailed?
- Were you offered any other types/level of support? - Did they offer to contact any services outside of the university?
- Were you happy with the support that was offered to you?
- "Is there anything you wish you were offered with regards to support?"
- Did it meet your expectations?

**Changes within the higher education system:**

- Are there any aspects of the higher education system that you feel currently work well in terms of supporting academic researcher's mental health or well-being?
- What do you think is needed in order to effectively support academic researchers' mental health and well-being going forwards?

*Prompts:*

- *At a government level*
- *At an institutional level*
- *At an individual level*
- *Funder's responsibilities*

- *The higher education systems' overall engagement with other significant parties such as the public or media.*

**Closing:**

- Is there anything else you would like to add before we finish?

## 8.6 Appendix 6: Participant information sheet – study three

Participant Information Sheet

*Exploring the views of senior leaders who work in UK universities and research funding organisations*

**Who is conducting this research?**

The project is part of a larger PhD project investigating how to best support researcher's mental health and well-being in academia. This project was made possible through funding provided by the UCL, Bloomsbury, and East London Doctoral Training Partnership (an ESRC-funded organisation), in collaboration with The McPin Foundation. This project is also supported by the National Institute for Health Research ARC North Thames.

**What is this project's purpose?**

We would like to invite you to engage in a discussion about your views on the work experiences of academic research staff, and wider academic policy/culture. We aim to use the findings from the discussions to help create recommendations for UK academic institutions and the wider higher education system on how to promote a positive work culture in academia.

**Why have I been chosen?**

You have been invited to take part in this project as you currently work for a UK university/research funding organisation, and your job role involves the capacity to make decisions that impact academic policy/culture.

**Do I have to take part?**

Taking part in this study is entirely voluntary. If you do decide to take part, you will be sent a link via email to an online consent form to fill out before the pre-arranged interview is scheduled to start. You can withdraw your consent to take part up until

two weeks after the interview. Following this point, all personal identifiers will have been removed and your data will have been included in the analysis (and it will therefore not be possible to retract the information you have provided).

**What will happen to me if I take part?**

You will be invited to take part in a one-off interview lasting approximately 20-30 minutes. However, the interview length can be extended, or a follow-up interview can be offered, if there is a lot you wish to discuss or share.

The interview will involve questions which explore (a) your thoughts on how researchers experience working in academia and the impact these experiences have on their mental health and well-being, (b) your thoughts on any changes needed to academic culture and/or policy in order to better support researchers' mental health and well-being, (c) the extent to which you feel you can influence academic culture/policy change and, (d) your thoughts on any barriers obstructing policy/culture change in academia. We would also like to share with you a brief summary of the results gathered from previous research associated with this PhD, concerning the experiences of academic research staff.

To provide further context to your experiences, we will also ask you for the following information via a questionnaire attached to the consent form: age range, sex, ethnic group, and the general location of your employing institution (London, East England, South East, South Central, South West, Midlands, North East, North West, Scotland, Wales, Northern Ireland). This information will only be used in a table to display the general characteristics of the research sample. This information will not be linked to any quotes used in any outputs for the study.

Prior to the start of the recorded interview, we will ask you for some broad information regarding your current job role. Specifically, we will ask which of the following relate to you: a member of senior management and employed by a university, a member of senior management and employed by a research funding organisation, a member of staff who sits on funding panels/boards (employed by either a university or a research funding organisation). **The names of specific institutions will not be noted.**

**You can also elect to 'prefer not to say' when asked any of the above demographic questions.**

Depending on your preference and ease of access, the interview can be:

- conducted face-to-face (in a meeting room at University College London, your employing institution, or the McPin Foundation) if you are geographically close by (London area)
- conducted remotely at a time that is convenient for you via telephone or Microsoft Teams.

The interviews will be audio recorded using a digital voice recording device. The interviews will be transcribed by the interviewer (Helen Nicholls). You will need to consent to be audio recorded should you decide to take part. The audio data resulting from the interviews will be deleted as soon as it has been transcribed – approximately one week following your interview date. No identifying details of you or your place of work will be included in the transcripts. Your demographic information will be stored separately from the transcripts.

**What do I have to do?**

If you would like to take part in this project, please contact the lead researcher, Helen Nicholls on helen.nicholls.20@ucl.ac.uk. We will arrange a convenient time for you to take part in a face-to-face or remote interview. You will be sent a link to an online consent form via email to complete prior to the date of the scheduled interview.

**What are the possible disadvantages and risks of taking part?**

It is unlikely that the interview will provoke distress, however, it is possible that the topics discussed may bring up some difficult memories or emotions. In the unlikely event that distress occurs, you can reach out to your employing institutions' occupational health service, if you feel comfortable to do so.

**What are the possible benefits of taking part?**

We aim to use your views to help create recommendations for UK academic institutions and the wider higher education system on how to promote a positive work culture in academia. The sharing of the results gathered from previous research associated with this PhD may also be of interest.

**What if something goes wrong?**

If you are unhappy with any aspect of the research process, then please contact the Principal Investigator, Dr Jo Billings on j.billings@ucl.ac.uk. In the event that your complaint is not handled to your satisfaction then you would be able to contact the UCL Research Ethics Chair on ethics@ucl.ac.uk.

In the unlikely event that concerns are raised about a serious adverse event during your interview, it may be necessary for us to contact your professional body, but this would be discussed in full with you.

**Will my taking part in this project be kept confidential?**

Any information that we collect about you will be kept strictly confidential. Your contact details will be used solely for the purposes of sharing information about the study, obtaining consent, arranging a time and place for the interview, and for sending a copy of the draft research manuscript following completion of the project (if indicated on your consent form). Following completion of the project and the draft research manuscripts being sent, all contact details will have been deleted.

If any potentially identifying information is mentioned during your interview, this will be removed during the transcription process. After your interview has been transcribed, the audio recording will be deleted, and the transcript will be saved under a pseudonym or ID number. The audio recording will be deleted approximately one week following your interview date. You will not be able to be identified in any ensuing reports or publications.

**What will happen to the results of the research project?**

The interview transcripts will be analysed, and the findings will be used to help create recommendations for UK academic institutions and the wider higher education system on how to promote a positive work culture in academia.

The findings of the study will also be written up in more detail for dissemination in a peer-reviewed journal. Only the study team involved in this project will have access to your data. The anonymised data will be archived by UCL and kept for 10 years, in line with UCL policy. This data may be accessed at some point in the future, but only with permission and under the supervision of Dr Jo Billings.

**Local Data Protection Privacy Notice**

Notice: The data controller for this project will be University College London (UCL). The UCL Data Protection Office provides oversight of UCL activities involving the processing of personal data and can be contacted at data-protection@ucl.ac.uk.

This 'local' privacy notice sets out the information that applies to this particular study. Further information on how UCL uses participant information can be found in our 'general' privacy notice:

For participants in health and care research studies, click here

The information that is required to be provided to participants under data protection legislation (GDPR and DPA 2018) is provided across both the 'local' and 'general' privacy notices.

The lawful basis that will be used to process your personal data are: 'Public task' for personal data.

Your personal data will be processed so long as it is required for the research project. If we are able to anonymise or pseudonymise the personal data you provide we will undertake this and will endeavour to minimise the processing of personal data wherever possible.

If you are concerned about how your personal data is being processed, or if you would like to contact us about your rights, please contact UCL in the first instance at data-protection@ucl.ac.uk.

## 8.7 Appendix 7: Consent form – study three

# Exploring the views of senior leaders in UK universities and research funding organisations

Thank you for considering taking part in this research. Please complete this form after you have read the Participant Information Sheet, and prior to the scheduled interview. If you have any further questions, please do ask the researcher before you decide whether to participate.

I confirm that I understand that by ticking 'yes' to each statement below, I am consenting to this element of the study. I understand that it will be assumed that ticking 'no' or not ticking a box means that I DO NOT consent to that part of the study. I understand that by not giving consent for any one element that I may be deemed ineligible for the study. If you have any remaining questions about any aspect of the research process you can contact the lead researcher Helen Nicholls on helen.nicholls.20@ucl.ac.uk or the Principal Investigator Dr Jo Billings on j.billings@ucl.ac.uk. If you have any questions about data protection, please contact the data protection office on data-protection@ucl.ac.uk.

This study has been approved by the UCL Research Ethics Committee:
Project ID number: - 21043/001

Committee Contact Details:
Helen Dougal, Research Ethics Co-ordinator, Office of the Vice-Provost (Research) UCL
Email: ethics@ucl.ac.uk. Tel: 020 7679 8717

1. I confirm that I have read and understood the Information Sheet for the above study. I have had an opportunity to consider the information and what will be expected of me. I have also had the opportunity to ask questions which have been answered to my satisfaction, and am willing to take part in an individual interview.

   ◯ Yes

   ◯ No

2. I understand that my participation is voluntary, and I am free to withdraw without giving a reason up until two weeks after the interview. After two weeks the data will have been included in the analysis, and it will not be possible to retract the information.

   ◯ Yes

   ◯ No

3. I consent to participate in the study. I understand that my personal information (interview responses) will be used for the purposes explained to me. I understand that according to data protection legislation, 'public task' will be the lawful basis for processing.

- ◯ Yes
- ◯ No

4. I understand that the interviewer may offer me the option to take part in a follow up interview if, due to time constraints or any other reason, I am unable to share or discuss everything I would like to in my initial interview.

- ◯ Yes
- ◯ No

5. **Use of the information for this project only.**

   I understand that all personal information will remain confidential and that all efforts will be made to ensure I cannot be identified. I understand that my data will be stored securely, and pseudonyms will be applied before the analysis. It will not be possible to identify me in any publications.

- ◯ Yes
- ◯ No

6. I understand that my information may be subject to review by responsible individuals from the University for monitoring and audit purposes.

- ◯ Yes
- ◯ No

7. I understand the potential risks of participating and the support that will be available to me should I become distressed during the course of the interview.

- ◯ Yes
- ◯ No

8. I understand that the data will not be made available to any commercial organisations, but is solely the responsibility of the researcher(s) undertaking this study.

- ◯ Yes
- ◯ No

9. I consent to my interview being audio recorded and understand that the recordings will be stored securely, will be used for the specifically stated research purpose, and will be destroyed immediately following transcription.

- ◯ Yes
- ◯ No

10. I hereby confirm that I understand the inclusion criteria as detailed in the Information Sheet and explained to me by the researcher.

- ◯ Yes
- ◯ No

11. I am aware of who I should contact if I wish to lodge a complaint.

- ◯ Yes
- ◯ No

12. **Use of information for this project and beyond.**

I would be happy for the data I provide to be archived at UCL for 10 years in accordance with data protection laws.

- ◯ Yes
- ◯ No

13. **Use of information for this project and beyond**

I would be happy for other authenticated researchers to have access to my anonymized data for research purposes, under the supervision of the Principal Investigator.

- ◯ Yes
- ◯ No

14. I would like to receive a copy of the draft research manuscript following completion of the study. I understand that my contact details will be retained for this purpose, and following the fulfilment of this purpose, my contact details will then be securely deleted.

- ◯ Yes
- ◯ No

15. Please sign the consent form by ticking the box below.

- ☐

Next

Exploring the views of senior leaders in UK universities and research funding organisations

## Demographic information form

16. Which of the following best describes your age:

- [ ] 18-24
- [ ] 25-34
- [ ] 35-44
- [ ] 45-54
- [ ] 55-64
- [ ] 65-74
- [ ] 75+
- [ ] Prefer not to say

17. What is your sex?

- [ ] Female
- [ ] Male
- [ ] Prefer not to say

18. Is the gender you identify with the same as your sex registered at birth?

- [ ] Yes
- [ ] No
- [ ] Prefer not to say

19. If you answered no to the last question, please enter the term you use to describe your gender:

Please leave blank if you would prefer not to say

Enter your answer

20. Which of the following best describes you:

- [ ] White British
- [ ] White Irish
- [ ] Any other White background
- [ ] White and Black Caribbean
- [ ] White and Black African
- [ ] White and Asian
- [ ] Any other mixed background
- [ ] Indian
- [ ] Pakistani
- [ ] Bangladeshi
- [ ] Chinese
- [ ] Any other Asian background
- [ ] Caribbean
- [ ] African
- [ ] Any other Black, African, or Caribbean background
- [ ] Arab
- [ ] Any other ethnic group
- [ ] Prefer not to say

21. Which of the following best describes the location of your employing institution:

- [ ] Wales
- [ ] Scotland
- [ ] Northern Ireland
- [ ] London
- [ ] East of England
- [ ] South East (England)
- [ ] South West (England)
- [ ] Midlands (England)
- [ ] Yorkshire and The Humber
- [ ] North East (England)
- [ ] North West (England)
- [ ] Prefer not to say

Back Submit

## 8.8 Appendix 8: Interview topic guide – study three

Interview Topic Guide

**Semi structured interview:**

**Thoughts on the work experiences of academic research staff:**

- What effect do you think working in academia has on the mental health and well-being of researchers?

*Prompts:*

- *Any key pressures faced?*
- *Any key positives related to the academic job role?*

**Knowledge exchange:**

*Thanks for sharing that. During this next stage of the interview, we would like to share with you a brief summary of the results gathered from previous research associated with this PhD, concerning the experiences of academic research staff.*

- Short presentation of results summary.
- Discussion of results presented.

*Prompts:*

- *Were there any results you expected, any you found surprising?*
- *What are your thoughts on the systemic issues identified?*

**Thoughts on wider academic policy/culture:**

- Are there any changes to academic culture and/or policy that you feel should be made, in order to better support researchers' mental health and well-being?

- To what extent do you feel able to influence academic culture or policy in this regard?
- Do you feel there are any barriers responsible for obstructing academic culture or policy change, in this regard?

*Prompts:*

- *At your employing institution?*
- *At a more general level encompassing other academic institutions?*

**Closing:**

- Is there anything else you would like to add before we finish?

## 8.9 Appendix 9: Knowledge exchange document – PowerPoint version, study three

## Evidence summary

### Key findings

- Researchers from a Black ethnic background, female researchers, and researchers from a working-class background, highlighted a risk of inequality when it came to being able to access opportunities, support, or resources at work.
- Existing structures already in place to support researchers' mental health and well-being are not always visible, accessible, or knowledgeable about the challenges faced by academic researchers - which could impact their effectiveness.
- Systemic factors which negatively impacted on researchers' mental health and well-being include: job precarity, an overwhelming pressure to perform academically and meet high workload demands, and unclear routes for career progression.
- Autonomy over work hours and research ideas, and the ability to positively impact society through research and teaching, were key factors which positively impacted researchers' mental health and well-being.
- Work relationships - particularly with managers or supervisors - could either be a key risk, or protective factor.